Twelve Tips for Online Live Classes

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Abstract

Changes in medical education are constant. Similarly, the use of technology in learning is evolving and becoming more frequent. Some challenges are present when promoting online education. The lack of familiarity with the tools available and an appropriate approach are some of limiting factors that affect the experience. Having a framework that can is key for improving your skills and the teaching sessions. The objective of this article is to provide 12 simple tips for maximizing your teaching during live online classes so that you can increase engagement of your students and continue expanding your toolset as faculty for delivering knowledge.

Keywords: Online Live Classes; Webinar; Professional Development; Faculty Development; Asynchronous Learning; Video Lectures; Online Learning; Zoom Learning; Online Class

Introduction

A lot has been written about changes in medical education and the use of technology over the past decades. Some of them include the use of video and micro-lectures, asynchronous learning and transition to distant learning. Given recent events in the setting of the SARS-CoV2 pandemic, there has been a push for a rapid transition to online activities through different virtual platforms for teaching. Zoom meeting, Microsoft Teams meeting, GoToWebinar, etc. became common words in medicine departments. Despite the previous availability of these platforms, many people were still not familiar with these tools and how to maximize their use in the field of medical teaching.

As with any tool, it is important to know how to optimally use them. A common belief is that new technology might limit the impact of teaching, but there are other benefits that are associated with its use. Millennials seem to have a preference for asynchronous learning. Some medical schools have even transitioned part or most of the curriculum online (Schwartzstein and Roberts, 2017). There are even specialized sites that offer medical education tutoring and preparation for standardized tests online for years now.

Understanding what drives our learners is as important as knowing how to use the technology available. Some suggestions have already been made to maximize learning in Millennials (Roberts, Newman and Schwartzstein,
2012), for using video learning (Dong and Goh, 2015) and on how to conduct courses online (Pickering et al., 2017), but little has been written in regards to live educational sessions. This document includes a suggested list of 12 tips for maximizing your live online classes.

**Tips**

1. **Don’t be afraid of technology. Use it to your advantage.**
   It is well known that over the course of the last 40 years technology has moved at a fast pace. Computers have become more powerful. Smartphones and tablets are available to basically everyone. In medicine, we are not distant from this reality and we see advances in every single realm of medical practice. From tests that are done in minutes or seconds, to handheld devices that allow ultrasound studies to be done, technology continues to be more intertwined with medical practice. Fast internet connections, video standards and software developers have allowed for online meetings with minimal latency which have made these tools useful in academic settings.

   Many of the platforms available allow users to have group meetings and even interactive discussions where in-person sessions are not possible. Additionally, most platforms allow for content to be shared between participants. This creates a unique opportunity for teaching in different ways.

2. **Know your platform. Keep up with them and maybe help improve it.**
   These apps or platforms have created new ways of working. Some institutions might be tied to a specific platform due to organizational agreements or security features, but most of them allow for online live sessions in the shape of a meeting or a webinar.

   Most of them have communication channels such as polls, chat rooms, private chats that allow for live interactions between participants and presenters. There are possibilities also to add other functionality through protocols and tools known as API’s that are easily programmable to tailor to the needs of the users. This might even be facilitated by IT departments at bigger institutions or through fee-for-service for building it in a freelance form.

3. **Check your settings (including audio and video).**
   A traditional approach is to use voice only for presentations as it was done in the past with webinars, but video is an invaluable tool that can increase engagement. Being less comfortable with videoconferencing should not dissuade you from using it. Video is a powerful tool to connect with your audience, it can help create a connection that can be as strong as live interaction. People will feel more engaged when they see who they are talking too.

   Platforms also allow for different ways to show the users videos through presenter view, active conversation (where the video transitions between who is actively speaking), webinar and a general view of all the participants.

   The settings can be easily modified and there are even possibilities to change one's background to create a different environment or provide some additional privacy.

4. **Have support. Have a Moderator.**
   Whether it's from IT for the equipment during the session or in some cases a moderator for comments, a frictionless session can make your virtual teaching unforgettable. Check your connection settings, network reliability, privacy prior to the starting.

   Managing discussions and moderating comments can become difficult depending on the size of the group. Some
platforms include the possibility of controlling attendees' microphones. Webinar mode is another option where participants can only send messages to a moderator (or presenter). Some general comments can include questions, troubleshooting, feedback, and even trivia.

Over time presenters can become familiarized with different workflows that allow for troubleshooting of common technical issues, but initially, it does not hurt to have support. Later on, it can be evaluated if there is a need for live IT support during your sessions.

5. **Now that you are prepared, give instructions to others prior to starting.**
When you are ready to teach online always remember that everyone might not be ready for you. It is important to explain some basics of how the session will be carried on. There is always an option to send instructions prior to the session. Although some advocate against this practice (given that it could take some of the experience of "on-the-fly" learning), it can maximize your teaching and increase engagement from your audience. Some of these communications can include reading material or pre-recorded videos.

6. **Make it interactive**
Although the virtual experience might have some limitations, making it interactive is not one of them. Whether it is through infographics, photos, videos, polling systems, competitions or video, making sure that your audience feels like they are interactive is possible during online teaching sessions. There are multiple tools for polling and gamification of your teaching. Some of these include: PollEV, MeetPS, Kahoot!, Quizziz, Quizlet and Socrative. These platforms allow to show results during your presentation the same way as they would be used during an in-person session. The benefits of gamification in medical teaching have been shown before (Felszeghy et al., 2019) and we all have seen it through medical knowledge challenges in training programs, conferences, and online resources such as "NEJM image challenge".

7. **Use additional aids during your presentation**
The fact that this is a presentation does not mean that it has to be static. Video presentations, audio, live feeds, social media comments or props can be used.

8. **It's ok to pause and take a break.**
As with many activities, there can be an intent to try to cram as much content as possible during the allotted time. In some cases, the amount of information can be overwhelming and users can become tired and disconnected. There can also be back-to-back teaching sessions or meetings that make the virtual realm difficult to sustain. Using pauses or breaks between topics or discussions allows people to connect to learning. Many can experience eye strain due to prolonged screen time exposure. Promoting an appropriate posture, encouraging short breaks in prolonged sessions and stretching or walks can decrease the risk of injury and allow for a safe learning environment and help maintain the audience concentration and engagement.

9. **Be flexible on time.**
Be punctual, the same way that you would for an in-person lecture. Flexibility can be made for the duration of the session. This will allow time for additional interaction with the audience or, even help in cases of technical difficulties. Learners and teachers can experience issues with audio, camera or screen sharing. Having additional time will help you complete the teaching points you initially had planned for.

10. **Make it available after for review.**
Most platforms will allow for presentations to be recorded. This is an extremely helpful aspect to distribute your work. It can serve as a review of the session and can allow for additional questions or follow up comments after live teaching is over.
Recordings can also be used as a tool to review one’s performance and help improve your teaching technique and approach. In the future, it might serve as a portfolio of activities for career advancement. Sessions recorded can be broken up micro lecture and distributed through different platforms, including social media.

11. Get Feedback
There is no reason why not to get feedback on your teaching from an online session. From the audience who attended the class, to others who watch it later. It offers a unique possibility for creating a "PDSA-Like" cycle for improvement for your talks. Some comments can be related to topics, content delivery, and teaching style.

A simple 3-5 questionnaire after the presentation can yield significant information on how to increase your engagement, your impact and overall performance. Anonymity, short answers are key so that most of your attendees participate.

12. Teach and Coach others.
One of the reasons that we are in this profession is our love for teaching. If you excel in the use of one of these platforms you can serve as a teacher or coach to others who might not be as familiar with the use of technology.

Conclusion

Many feel that technology can be limiting to their teaching. Every single day, tools are made for recreating the live experience in a virtual world. Teaching does not escape this reality and as facilitators of this process, we should always keep a growth mindset that allows us to learn new abilities. To maximize our teaching we need to be familiar with the use of different tools and technology is one of them.

Outside of medicine, platforms have emerged due to the learning needs of the population. The SARS-CoV2 pandemic might have only been an accelerator for online learning in medicine. It is expected that this trend will continue to expand even when there is a return to normal activities. There will still be a need for virtual or distance live learning. The same way creating education videos became common thanks to increased access to less expensive, more reliable, and higher quality resources, live online teaching will continue to evolve over the next couple of years. These 12 tips presented here will serve as a starting point for improving your current online live classes.

Remember that although the medium for distribution is different it does not have to take away from the overall experience of learning.

Take Home Messages

- The use of technology is advancing in medical education.
- Online classes are common and will continue to increase. Teachers have to become comfortable using different tools to maximize learning.
- Platforms should not affect the quality or the interactivity of the class.
- Online learning can improve students understanding of topics through the use of multimedia.
- Basic knowledge of the tools available for online live class delivery allows the teacher to be more effective in communicating knowledge.
Notes On Contributors

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Bibliography/References

Dong, C. and Goh, P. S. (2015) ‘Twelve tips for the effective use of videos in medical education’, Medical Teacher. Taylor & Francis, 37(2), pp. 140–145. https://doi.org/10.3109/0142159X.2014.943709.

Felszeghy, S., Pasonen-Seppänen, S., Koskela, A., Nieminen, P., et al. (2019) ‘Using online game-based platforms to improve student performance and engagement in histology teaching’, BMC Medical Education, 19(1), p. 273. https://doi.org/10.1186/s12909-019-1701-0.

Pickering, J. D., Henningsohn, L., DeRuiter, M. C., Jong, P. G. M. de, et al. (2017) ‘Twelve tips for developing and delivering a massive open online course in medical education’, Medical Teacher. Taylor & Francis, 39(7), pp. 691–696. https://doi.org/10.1080/0142159X.2017.1322189.

Roberts, D. H., Newman, L. R. and Schwartzstein, R. M. (2012) ‘Twelve tips for facilitating Millennials’ learning’, Medical Teacher. Taylor & Francis, 34(4), pp. 274–278. https://doi.org/10.3109/0142159X.2011.613498.

Schwartzstein, R. M. and Roberts, D. H. (2017) ‘Saying Goodbye to Lectures in Medical School — Paradigm Shift or Passing Fad?’, New England Journal of Medicine. Massachusetts Medical Society, 377(7), pp. 605–607. https://doi.org/10.1056/NEJMp1706474.

Appendices

None.

Declarations

The author has declared that there are no conflicts of interest.

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