Cool Idea: “To build engagement amongst medical students in online learning by developing modern, highly produced videos in place of traditional PowerPoint”

The advent of the Covid-19 pandemic necessitated a rapid expansion into the realm of online learning, with a resultant need to review the curriculum and develop modalities that were suitable for an online, distanced model of learning. Simply recording teaching that works effectively in a face to face format does not lead to the same results when delivered online, and prolonged exposure to narrated powerpoint presentations does not produce an effective and engaging learning experience. Online learning has many inherent advantages, not least its portability and the flexibility in when and where learners engage, but has also been shown to improve overall academic outcomes. To make the best use of the opportunities online learning presents, we must actively produce content and materials that are built from conception with the online medium in mind.

As a university teaching hospital, Aberdeen Royal Infirmary hosts medical students for their clinical rotations. We targeted this project at our year four (of five) students, attending for clinical experience in anaesthesia within our department.

Curriculum development was already underway to utilise a flipped classroom model, whereby students observe recorded tutorials to cover theoretical learning before attending simulation or clinical work. The tutorials and clinical sessions are delivered by a mixture of trainees and consultants (equivalent to attending anaesthesiologists). Whilst concise and functional, these presentations were based on recorded narration over a background of PowerPoint slides. In an environment where learners are facing a deluge of similar content, we hypothesised that a more engaging mode of delivery would improve learner engagement, and subsequently the quality of the learning undertaken. We took our inspiration from engaging and successful content producers on YouTube and subsequently the quality of the learning undertaken. We took our more engaging mode of delivery would improve learner engagement, learners are facing a deluge of similar content, we hypothesised that a

Video was shot on a variety of cameras owned by faculty, with three angles typically shot at once and synchronised together. Editing was undertaken using Final Cut Pro (Apple), audio editing with Logic Pro (Apple).

A core set of subtitle animations, along with a title screen and animation, were selected to maintain a consistent theme. Videos were designed with clear sections, and timestamped at the beginning, to allow review of complex topics in a targeted manner.

Handwriting animations were created by recording handwriting on a tablet overlaying a green screen which was eliminated with a keyer.

Method

We set about producing our video material with some key themes:

- Presenter face visible the majority of the time, with “B roll” content intersecting the dialogue to introduce a sense of pace
- Conversational tone to dialogue, avoiding the feeling of “lecturing”
- Superimposed animations, diagrams or handwriting
- Simulations and demonstrations shot in high definition video, from multiple angles, with an attempt to make these cuts dynamic

Results

When surveyed, students gave overwhelmingly positive feedback regarding the videos produced for the curriculum. Of note, all students surveyed said they would like more of the curriculum to be delivered in this style.

Lessons Learned

This project remains in its infancy, with the concept now being expanded across curriculum development processes in various departments. It has also led to a rapid expansion of inter-speciality and multidisciplinary team learning within our hospital. Building on existing evidence, we have learned to target our video length to below ten minutes to maximise engagement in response to feedback from YouTube analytics. The advent of social media and mass circulation of video content means this medium is very familiar to modern learners, and there is no reason for medical education to be left behind when the advantages of dynamic, creative online content are plain to see.

References


This QR code will take you directly to our YouTube video list to sample the tutorials we have produced.

www.aberdeenanaesthesia.org