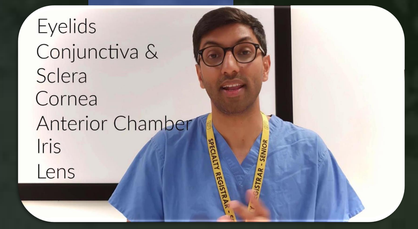


Creating a High Quality Slit Lamp Video Tutorial Without Costly Professional Equipment for Online Teaching During the Pandemic

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Introduction

Face-to-face tutorials for students are currently not permitted due to social distancing rules. As a result, the delivery of teaching for practical skills has been challenging. The shift to online learning may be a daunting task for teachers due to inexperience and the lack of professional equipment.

Aims

We aim to demonstrate that it is possible to create a high quality video tutorial on performing a slit lamp examination without using expensive videography equipment or resources.

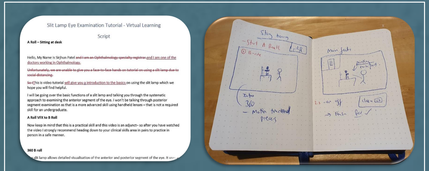
Methods

The video was recorded with a smart phone camera and a £40 microphone.

The post-production editing was completed on a free video editing software.

Learners were asked to answer a pre-video and post-video survey for feedback. The questions asked them to rate their confidence at approaching different aspects of the slit lamp examination from 1 – 5.

YouTube analytics was used to audit the video over 7 months.



Scripting and Storyboarding

Left: Voice script with videography directions
Right: Storyboard to plan camera movements, transitions, and animations.



Video and Voice Recording

Left: Equipment set up for video recording - £10 smartphone mount.
Right: Audio recording equipment - £40 microphone



Video Editing and Audio Mixing

Captured footage analysed and edited using free online software on standard personal laptop.

Results

Over 7 months the completed video has been viewed internationally over **16,500 times** and accumulated **790 hours** of watch time. Viewer engagement has been excellent, with a like : dislike ratio of 145, and views from Europe, North America, Asia, and beyond. (Note the above figures have been updated and differ from the original abstract submitted)

Participants of the local survey included medical students, foundation doctors, nurses and a GP trainee. Table 1 show the results of 22 pre-video and 10 post-video surveys were completed. The mean score increased for all areas in the post-video survey. The **overall average increase in score was 1.7**. All written feedback was positive.

SCAN QR CODE

Slit Lamp Exam Tutorial - Virtual Learning
16,655 26 437 3

Take a photo of this QR code to watch the full YouTube Video

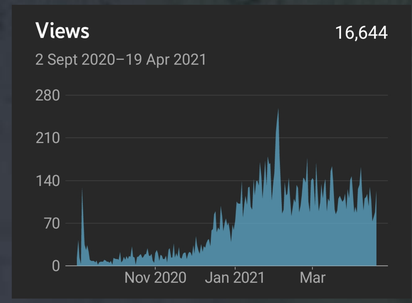




Table 1	Survey Mean Score (1-5)		
	Pre-video	Post-video	Score change
Adjusting slit lamp position	2.7	4.3	+1.6
Illumination settings	2.1	3.9	+1.8
Eyepiece adjustments	2.5	4.5	+2
Focusing slit lamp	2.2	3.6	+1.4
Anterior segment examination	2.1	3.3	+1.2
Utilise cobalt blue light	2.2	4.1	+1.9
Average scores	2.3	4	+1.7

Conclusion

We were able to successfully create a quality medical educational video without professional resources or equipment. Participants of the survey had a subjective improvement of all aspects of skills taught in slit lamp the video. The video tutorial has been utilised beyond our department and has been watched by thousands of learners on an international level. Video tutorials can be a feasible and a powerful adjunct for teachers in a time where face-face tutorials are challenging.