

Improving Student Engagement via Interactive Videos.

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Background

Video presentation is a critical feature of online distance learning. Various publications have reported how online videos are useful educational tools that enhance knowledge. Despite this, the viewing of online videos tends to be a passive activity for students; this is antithetical to pedagogical studies that suggest how active learning promotes the understanding of the material. Furthermore, watching long videos can negatively impact cognitive load and thus reduce an individual's ability to encode and retain learned information into memory.

We will test whether dividing online videos into multiple interactive segments improves understanding of course material. We will take a selection of course videos (SDK100; 18J, October 2018 – June 2019; 19B, February 2019 – September 2019) and embed questions into them. During playback, the video will pause following the presentation of valuable information and the student will be required to answer a question before resuming.

Hypotheses

This proposal addresses eSTeEM's 'Learning Design' strategic priority with 3 main hypotheses:

- 1) Interactive videos increase engagement with modules.
- 2) Interactive videos enhance the quality of learning.
- 3) Interactive videos improve student satisfaction.

Procedures

The VLE 'Conditional Activities' tool will randomly assign students to groups that either experience traditional or interactive videos. We will be using H5P and/or Wirewax to create question-embedded videos. Students viewing the traditional videos will be quizzed after the video with identical questions as posed during the interactive video. This design ensures that all students experience the same module material.

All questions will be software-marked. We will assess the effectiveness of interactive/traditional videos by comparing student performance on the questions. Also, we will determine if presenting interactive videos early in the module encourages viewership later in the module. Finally, some students will be surveyed regarding their opinions on the videos.

Results & Future Directions

At the moment no modules at The Open University use interactive videos (although a few OU library sites do use video-embedded questions).

If our study indicates that interactive videos are helpful to students, improve learning, and increase satisfaction, then we hope that modules (both in presentation and under production) will start to incorporate this form of media.

Given the ease of converting old videos into interactive multimedia, interactive videos can quickly and positively influence current and future module presentation

