USE CASE

Enriching recorded lectures using Interactive Video

Using Interactive Video

Class size 14  Instructor workload 📐 📐 📐 Learner workload 📐 📐 📐 📐

Context

This epidemiology course for first year medical students employed blended learning to introduce foundational ideas within the domain. The instructor wanted to reach a large number of learners while also changing the way that the course was normally given. To this end, the instructor recorded short, focused videos of their lectures by making screencasts and using the Interactive Video tool to enhance and encourage interaction with this content. This activity was a weekly preparation step for team-based learning activities, employing the flipped-classroom approach. Other aims of the instructor included focusing on learning rather than knowledge transfer, and activating students’ deeper understanding of materials.

Constructive alignment

Learning objectives

- Students are able to memorize, classify, discuss, and demonstrate knowledge and understanding of epidemiology.
- Students are able to describe the different phases in the medical process related to individuals and populations.
- Students can build a foundation for their professional development and take responsibility for their own learning.
- Students are able to apply (descriptive and analytical) epidemiological concepts, including calculations.

Learning activities

The instructor prepares weekly interactive lectures which students use as a preparation exercise for team-based learning (TBL) activities. Students view the lecture video inside the tool and answer in-line practice questions designed to stimulate critical thinking and reflection. These can be both multiple choice and open questions. They are also able to add comments and reply to each other’s remarks within the platform.

Learner activities based on the Bloom taxonomy are mainly at the level of:

- Remembering information through listening and memorising.
- Understanding and interpreting information, to effectively discuss topics.
- Applying knowledge by answering and classifying information, and demonstrating direct knowledge of the information in the subsequent TBL activities.

Assessment of learning outcomes

- There was no formal evaluation of the answers and input given in the Interactive Video, however the activity was used to prepare for later TBL activities.
- Students’ answers to practice questions are visible to the instructor and can be used to gauge the interaction with the material, including whether material had been properly understood. In this sense the tool was used indirectly to assist in the formation of the first two learning objectives.
The role of the instructor

- The instructor recorded videos of their lectures using a webcam and screencast, uploaded them inside the Interactive Video tool, and added practice questions at appropriate points.
- The instructor explained the setup of the exercise to students as well as writing instructions for them within the tool. They also made it known to students that these activities were to be used as preparation for in-class TBL exercises.
- The screencasted lectures created by the instructor are saved and reused for following classes. They are also available to students as revision material.

Quote from the instructor

“There has been a noticeable spike in the overall average grade in the class compared with previous years.”

Notable outcomes

- Previously the course was not interactive and both instructors and students reported dissatisfaction with the lectures. Additionally, knowledge transfer was under expectation. Through experimenting with the screencasts and adding questions, students found the material more interesting, specifically mentioning that it kept their attention and focus.
- Overall, there was a noticeable increase in the amount of discussion and the demonstration of knowledge and ideas, implying that the instructor’s chosen method was majorly successful.
- Using the flipped classroom approach, students were made more responsible for their own learning trajectory. Unlike with traditional lectures, they could participate in their own time and be guided in a streamlined manner by the added practice questions.

Added value of technology

- The instructor reported that, despite the initial familiarisation and setup of the tool taking some time, subsequent activity creation became more straightforward and took less and less time investment.
- Through using their screencasts alongside the tool, the instructor activated and engaged students to a greater extent than before.
- “[This] has given me the opportunity to actively focus on important topics, and at the same time, saves me from conducting the same lecture every semester.”

Possible variation

Instructors using this setup can include a (summative) assessment component to this activity. In this way, students’ interaction with questions and their number of right or wrong answers contribute towards a score which forms an overall grade for this activity.