

Illustrating difficult concepts using screencasts

Providing additional online supporting learning materials as videos to enhance student understanding and engagement

The aim

The module leader observed that a considerable majority of students taking her module were experiencing problems in learning some core concepts due to their limited exposure to science subjects prior to enrolling on the course. The students considered the module to be too 'scientific' and in addition to that, they were finding it difficult to cope with the tutor's teaching pace. The tutor could not reduce the module content nor get more contact hours to enable her to teach the material slower to match students' expectations, so she decided to look at an e-learning approach that would meet her pedagogical needs.

Benefits

- **Students can access additional support 'anytime' and 'anywhere' as much as they want**
- **Students can learn at their own pace**
- **Videos can be reused for future cohorts**
- **Tutor can remotely monitor student engagement**

The approach

The tutor identified that recording videos of the most difficult aspects of her lectures would help meet the aims, as students could watch the videos multiple times if they needed to. She identified that screencasting would be the most appropriate way of creating these resources.

A colleague who had some experience of using screencasting software (Camtasia) showed her how to use it in about 15 minutes. She practiced using the software on her own a few times and when she gained enough confidence she went on to use it to create the learning resources.

This involved making slides about the content students had the most difficulty with and then used Camtasia to record her voice with the slides. Two lectures of up to 35 minutes each were recorded and to make them clearer and more comprehensible for students, the tutor also added subtitles to the slides.

Use of screencasts was not meant to be a substitute for lectures; instead she used the recorded lectures to explain in more detail the difficult aspects of the learning material to facilitate student understanding. She put a notice on the module Blackboard site informing students about the availability of the two screencasts and how to view them.

The outcome

The tutor was able to track student engagement remotely and she found out that a majority of the students (60 out of 108) made use of the screencasts. After giving the students a phase test, the tutor observed that the students who had used the screencasts performed better than those students who did not view the screencasts, scoring an average score of 62% and 53% respectively. After conducting a statistical analysis of the students' results in the phase test of this module and another module for which no screencasts were available, she found that the use of screencasts had a statistically significant impact on the performance of the students.

The outcome (continued)

Students said the tutor-student relationship was improved as they valued the effort that the tutor invested in preparing the resources and this motivated them to engage more with the module content. Students described the screencasts as being 'informative' and 'very useful'.

Another positive finding by the tutor was that the software was user friendly and did not require much time to learn how to use it. She felt that although preparing the screencasts can be time consuming, it is a worthwhile investment with the potential to save time in future, as the screencasts can be reused with new cohorts. She used the screencasts as a device for dialogue about how much the students are learning, by asking students key questions to assess whether they understood the information in the screencasts.

Using these recordings also alters the power dynamics in learning and teaching as students can have control over their own learning: they can pause, fast forward and replay the video as many times as they want. The tutor credited the technology as an excellent device with the potential to encourage interactivity between students and the learning material, as well as student-student and student-tutor interaction, resulting in enhanced academic performance. She also highlighted that screencasts promote sharing of resources among staff.

Profile

Tutor name:

Cecile Morris

Faculty:

Sheffield Business
School

Size of cohort:

Large (70-150 students)

Technologies used:

Screen casting
software, headsets
and microphone

If you would like your
Technology Enhanced
Learning practice
captured and shared
in a similar case study,
please contact Brian
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Enhancement and
Academic Development

Future development

The tutor has continued to use the technology for her needs. She is contemplating having more screencasts for the module and to extend its use to include her postgraduate students..

Recommendations

The tutor felt that screencasts can be of benefit to all staff and, therefore, recommends the following for those who might consider using them:

- Find someone with experience to show you how the software works
- Planning upfront is helpful; you need to prepare the PowerPoint and the videos to be used
- Students are more likely to absorb the information and watch the entire screencast if it is short, less than 15 minutes
- Provide a link to the screencasts and explain how students can download them
- Avoid unnecessary graphics, text and audio as these will distract the learner's attention
- Make sure that the screencasts' content and activities are appropriate for the students' level of knowledge