

Extending ACCESS

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HEAT funding for ACCESS (Audio Content Creation for Educational Success) provided a pool of microphones and two digital mp3 recorders to encourage the inclusion of audio in online teaching materials. Following feedback from students and an exploration of the types of content presented using audio; we concluded that some content required video and image content to make it understandable. This follow up project focuses on increasing the use of video, and supporting transcripts in learning materials in the School of Biological Sciences.

Background

Our previous HEAT project, ACCESS (Audio Content Creation for Educational Success) aimed to enhance the accessibility of online materials for all students by promoting increased online use of audio teaching materials via the VLE. We employed the same peer-to-peer strategy which was so successful in rapid adoption of the VLE in the School of Biological Sciences. We were concerned that this move to eLearning did not disadvantage any of our students, in particular those who may be dyslexic. The pool of ten microphones and two portable digital recorders were used by staff in the School of Biological Sciences and the use of audio content in online materials in the School has increased as a result.

In one particular project, the portable digital recorder was used to try to capture student voices during help sessions conducted in computer laboratories so as to provide an alternative means of feedback via audio podcasts for students on the module. Student response indicated that the take-up of the podcasts was poor, and this was in part due to the poor audio quality. In addition, the loss of visual information was a major problem for these computer-based sessions. The audio only approach was superseded by the provision of short online videos containing both audio and visual information from screen recordings (see: www.microbiologybytes.com/maths/videos.html). However, these videos would still be inaccessible to students with visual impairments.

This feedback and the success of the trial of video support have highlighted the need to encourage the use of both visual and audio material online. We therefore propose to promote the use of video, to further increase the accessibility of our online materials in the School. To encourage the use of the system, we will also promote the production of transcripts to supplement the video and audio materials. These can be produced from a pre-written script, or via www.podzinger.com/ or using Dragon Naturally speaking. One to one support will be offered to staff engaged in projects making use of video in their teaching.

Projects

1. Statsvision

One project had already made use of video in undergraduate and was the launch for the HEAT2 project. The development of materials using video and screen capture to teach statistics has continued and has further developed into a stand alone module for postgraduate students. The existing materials have been extended and repackaged so that they offer a more generic presentation of the materials that is not tied to a particular module. The material was made available via Blackboard in January 2008 in two different presentations on Blackboard. One site, for taught postgraduate students, taking MSc courses in the School of Biological Sciences, is presented in a structured way, so that each section of the course is presented in a sequential order. The progression from one section of the course to the next is determined by students successfully completing online assessments on each topic. Basic concepts of statistics are therefore covered in detail prior to the students progressing to more complex issues. Each section of the course has a video and exercise to complete. A second blackboard site has been created with exactly the same materials which will be presented to postgraduate research students in the first year of advance postgraduate training. In contrast, this course will allow students to freely choose between sections of the course, with no structure enforced upon them. The online assessments are still available on this course, but they are not linked to progression. Both courses are being monitored and tracked for student usage patterns and both will be evaluated by online questionnaires. This section of the project is still on going but preliminary data suggests that as these are extra curricular activities for both sets of students, participation is low.

2. Second year undergraduates producing videos on ethics

A second year undergraduate module required students to work in teams of 5 to produce short videos (4-5 minutes) on bioethical topics assigned by the course convenor. This replaced a previous activity on web-authoring and accounted 20% of the total module mark. The format used was open and students were given examples of other videos which included drama, PowerPoint slides and interviews. It was stressed that both the science and the ethics relating to the issue must be clearly conveyed. Topics included: Gene therapy, Xenotransplantation, pharmacogenetics/ personalised medicine, Healthcare and developing countries, Use of human material, Transhumanism/ posthumanism (genetic enhancement), Neuroethics and Preimplantation genetic diagnosis.

Students presented their videos at the end of the session (March 2008) and completed a feedback questionnaire about the project. Students were asked to estimate how many hours they had spent on this project, with answers ranging from 6 to 60 hours. In a feedback exercise on the previous format of the assessment, designing web pages as a team activity, students were asked if they thought that they had done sufficient research to be able to write an essay under exam conditions on the given topic. The large majority of students thought that they would not be able to answer an exam question in this case, however when the same question was asked of the students undertaking the video project, the majority answered that they would feel confident answering an exam question on the topic.

A follow up email survey solicited a 34% response rate (12/35). All the respondents said that they had used the equipment provided, however, all but one stated that they also used

Available from:

www.techdis.ac.uk/getheatscheme

www.bioscience.heacademy.ac.uk/resources/disability/heatprojects.aspx

their own equipment as well. This was mainly due to convenience and for ease of recording, or adding voice-overs at the editing stage. When asked to list three good things about the activity, students were very positive:

- *learn new skills, apply other skills to a situation in which we don't get in our medicine course, teamworking.*
- *Brought the groups together. Gave students more enthusiasm toward learning the topic.*
- *learning through fun, involves teamwork, can be done easily*
- *Fun, allowing us to express our abilities, good teamworking task*
- *Touching up my video editing skills. researching a topic i had previously thought was tedious, but now realise that its very interesting. working in a team where we could share ideas.*
- *It was something different and new, it was a great way to work with new people and use new software and equipment.*
- *Creative, Informative, Enjoyable*
- *Was good that the groups were mixed with people who knew how to edit were put with those who didnt have a clue.*
- *Fun, different and allows more creativity.*
- *we get to be creative, good team work, organisation skills improved*
- *new skills (video), communication, new friends etc.*
- *Allowed creativity. Something 'different'.*

Being creative and working together as a team were clearly something that the students enjoyed. Students were asked 'The nature of this activity was very different from other assessed activities in your degree. Please comment as to whether you think this was a positive or negative experience for you.'

All the responses were positive (for example: '*i think it was a good way to bring the group together as a whole and a novel way to develop concepts of bioethics. I feel it gave most people more of a boost to try and learn and understand the topic.*') but three noted that the activity as hard work and time consuming (e.g. : *the negative aspect was that it took a long time to do this project, it should have been worth more marks*).

Stills from some of the student videos:



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Conclusions and Recommendations

This project sought to increase the use of video across the School of Biological Sciences in the same way that we promoted the use of audio in our teaching. Uptake from staff was low, even with one to one support and over two semesters, two projects were undertaken. Staff were more reluctant to use video than they were sound, as the time commitment and new skills required for recording and editing were seen as too great an investment of time. Feedback from the instructors involved in the video projects does bare this perception out, as both were already skilled in video editing and were willing to commit their own time to the projects.

We are now looking to promote the use of video in teaching in other ways and recent developments in web2.0 technology and freely available online tools may provide a solution. Software such as jing (www.jingproject.com) can very quickly and easily create screencast videos that can be shared instantly on a webpage or uploaded to online video services. These could provide added multimedia content for online teaching in a simple and effective way which staff may be more receptive to than full scale video editing and production.

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