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Project Title	A system to deliver oral and visual feedback on-line, personal to each student
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Abstract

We show that screen recording with simultaneous commentary can be successfully delivered as feedback on a large undergraduate course. We found that it was most appropriately delivered as a summary given at the end of conventional written feedback. In this way the strengths, weaknesses and options for remedy could be delivered to the students in a way that might be more engaging than if the same information was written. Students rated the overall quality of feedback more highly if it were in video form. Some markers had great facility with this method, but others found that they needed more practice. The system worked with Microsoft products, Excel and Word, and was integrated with screen recording software (Camtasia from Techsmith) in a seamless package that launched with button clicks.

Outcomes

- Produced seamless recording of screen and marker's voice, which is launched by a click from a Microsoft Word file containing the student's work.
- We have provided electronically, video recordings and written comments for 90 students. The feedback is accessible to each student, only, through a web link
- We have questionnaire results in electronic form completed by students who received video feedback, and from a control group.
- We have produced training material for use of the software and written practical guidance notes on the pedagogy of delivering the recorded feedback.
- The work has been presented in a paper published and presented at the International Computer Assisted Assessment Conference (CAA), 2008

We quickly decided that video feedback in real time on the whole submission would not work. The essays we were marking, despite being for a 1st year course, required deeper thought to analyse than could be achieved "off the cuff". Instead we decided that it would be most appropriate to record the markers' views on the overall merit of the essay, what was good and why; what was less good, and what steps could be made to improve it.

In retrospect this now appears to have been the best decision. Our previous analysis of students' comments on the same course, when the essay was marked conventionally, showed that these were the questions that students most wanted answering. There were some impressive examples in the recorded videos in which markers' appear to connect with both the student on a personal level and with the issues they want addressed.

The software, help materials, and analysis of feedback are all available at www.bioscience.heacademy.ac.uk/resources/projects/mclaughlin.aspx

Evaluation

Compared to the control group, students who received video summaries from the marker were more likely to agree that:

- the feedback was better than expected; and
- the comments made addressed generic points about their essay writing

We ran student questionnaires and focus groups with students who had received the video marking, and from a control group. The class contained roughly 480 students, all of whom had their electronic copies marked on-line; of these roughly 90 received screen movies with audio feedback in place of a summary paragraph. Of the 90, roughly 2/5 replied to the questionnaire.

Compared to the control group, those who receive video feedback more commonly agreed that overall the feedback was better than expected, but that there was less of it, and agreed that the markers' comments also applied generally to their essay writing. In retrospect, the question about whether they felt the amount of feedback was "More than expected" required more unpacking. It may be that students consider that only written comments constitute feedback (a criticism that is often made about the National Student Survey, particularly by institutions that do badly in the students' assessment of their feedback).

The majority of comments were very positive:

- "I found it a lot more useful than the handwritten feedback on my essay"
- "I thought that it was quite helpful and gave me a better understanding of where I went wrong and which points were correct"
- "I thought it was very useful , it made me look more critically at the essay and it helps considerably in seeing why the maker has given a certain mark and knowing exactly where you went wrong"
- "It was helpful as it gave more in depth feedback than the comments alone"

There were only three negative comments:

- "It could have just as easily been typed into my examiners written remarks.."
- "I was ok with just the written feedback as the video feedback was exactly the same"
- "My video feedback was just one sentence"

This might be attributable to one marker (out of four) who gave very short summaries. The others each delivered about two minutes of feedback. This was equivalent to roughly an A4 page of typed text, which would need a typing speed of 150 wpm to deliver in the same time.

One of us was teaching the same cohort on another course in the following semester. One student approached this marker to ask for clarification of his feedback on a conventionally marked essay the student had just received from him. In the course of this discussion, the marker asked if the student had revisited any essays he had done in the first semester. The student replied that he had and that he was "lucky enough" to have had video feedback. The marker asked if that was not a chore, since the student had to listen again to the video, whereas if he had been given written comments he would just have to read them. But the student replied that he was not put out because he made notes on what the marker had said(!). If this behaviour is replicated, it means that (i) the student engages more with the feedback and (ii) they are not discomfited by the method. This is rather a counterintuitive but fortuitous benefit of the method, which we had not foreseen. Ironically, by conveying the information in an ostensibly less user-friendly mode, we might foster more learning and engagement (particularly when the student does not perceive the delivery as less user-friendly).

We also sent a questionnaire to markers. We only recruited 4 out of 20 to take part in video marking, while the remainder opted to provide written comments only. We will do better this year now that we have an evidence-base to convince them that this is worthwhile and because we will have more time to devote to training now that the software is written.

Those who did use video marking were very positive:

- “I found this a more natural way to give feedback on the general structure of the essay. A bit like one to one feedback.”
- “It was relatively easy to do if I spent a few minutes first just rehearsing the points I wanted to make ...”
- “... the ability to leave spoken comments has, for the first time, made this an improvement over paper and pen, rather than just an attempt to imitate it.”

Those who gave reasons for not using video marking mostly cited time constraints.

- “Less time pressure in getting through all the essays”

However one marker said:

- “I think it is a pointless measure. There is no need for the students to receive audio feedback – written comments are sufficient. It is up to the students to read them”.

Future plans

We intend to run the system again this year. We will have more time to devote to persuading markers to try the system, and we now have an evidence-base to convince them that it is worthwhile.

We are looking at ways to scale this trial. At the moment, providing Tablet PCs for courses marking at the same time is a hurdle. The evidence we have from student questionnaires shows that one of the perceived benefits of Tablet PCs for markers is actually a distinct disadvantage to students. We considered that the ability to use handwriting was crucial to bring our colleagues on board. But the students much prefer typed comments and often complain about unreadable handwriting. Since more colleagues do type than handwrite, it is clear that we have a basis to persuade all markers that a PC Tablet is not necessary. A further benefit of Tablet PCs is that they can use the screen in portrait mode, such that a full A4 page can be seen in one screen, which reduces tiresome scrolling. But flat screens capable of displaying an entire A4 page at a readable resolution are becoming affordable. Our software can run on any PC and does not require a Tablet PC. Given the success of student feedback on the system we can build up a dynamic to persuade markers that they must sacrifice some of their sacred cows. So the barriers, both mental and technological, are coming down.

A major part of organising the work flow involves the scripts we have developed in Excel files. This works but we feel that we should be looking for a longer term solution. We would like to develop peer marking by students working in groups to mark other groups for formative assessment. This would be most flexible if we had a database system on a server to handle the flow of files. The development of such a system would require funding of a programmer to achieve.

An unexpected benefit of the project is the wealth of feedback that it captures, both video and typed, which is rarely achieved with paper marked versions. We want to analyse this more fully to discern best practice in this relatively new medium, and to continue to improve our advice to novice markers.

A further project we would like to develop is to compare video and audio feedback. One has to ask does the visual add anything? One may argue that the visual allows the student to see exactly the part of the text that the marker is referring to. But perhaps, like the difference between Radio and TV, the viewer/listener might interact in different ways, one of which might lead to more learning. It might be possible to present the same feedback in text only, video and sound only, and sound only, and then to assess the students' engagement with each.