



Giving audio-visual feedback using Jing and GradeMark

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Activity: Using Jing screen capture software to provide audiovisual feedback for essays

Student Group: 2nd year Biology and Biomedical Science students on a Human Genetics module

Aim: To explore a novel way of providing quality feedback to students whilst at the same time reducing total marking time

Context / Background:

In student surveys, such as the National Student Survey (NSS) and our own internal surveys, feedback is often an area highlighted by students as needing improvement and so tackling this issue was one of the themes of a recent School of Life Sciences Away Day. Having been shown a video of students discussing different types of feedback, some of the main issues that emerged were:

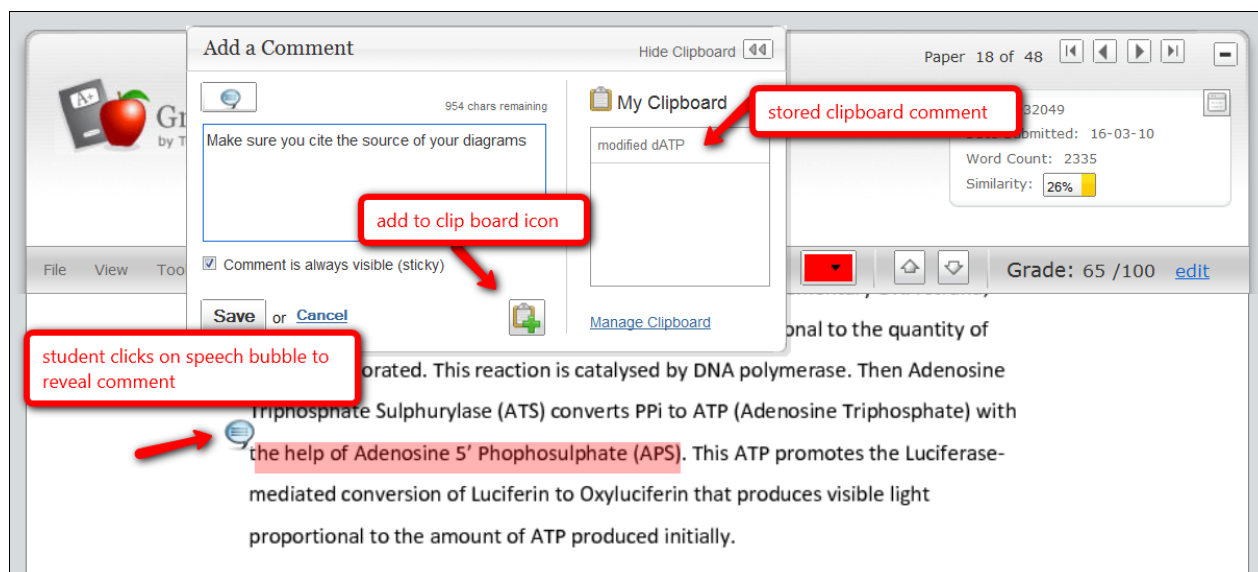
- a) feedback was often not received in time for it to be helpful for the next exercise;
- b) often staff handwriting was difficult to decipher; and
- c) typed or one to one oral feedback was preferable.

The challenge then is to provide good quality, legible, feedback within a reasonable timeframe (three working weeks is our current standard).

Fortuitously, one of the other themes of the Life Sciences Away Day was the use of IT in teaching, particularly new Web2.0 technologies, and it was aimed at helping us to make better use of the Keele virtual learning environment (KLE) based on the Blackboard Learning System originally known as WebCT. Each module has its own KLE page and whilst the School of Life Sciences is certainly one of the most active users of KLE at Keele, use of the system is still highly variable across the School. One of the Web2.0 applications we were introduced to was Screenr (<http://screenr.com>), a screen capture programme that allows you to record an audio commentary and upload it to Flickr. Whilst this was promoted as being useful as a way to do on-screen demonstrations, I immediately thought that, combined with GradeMark, it could perhaps be a useful tool for providing audiovisual feedback to students. In a 2007 UK Centre for Bioscience project by Stephen Merry, students were e-mailed mp3 audio files recorded using Audacity (<http://audacity.softwaredl.net/>) giving them feedback on their work. The students found this type of feedback extremely useful and I thought we could build on this by using the screen capture software to record an audio commentary with the students' work on the screen in front of them.

All students in the School of Life Sciences submit their work to Turnitin via the module KLE page so we have an easily accessible electronic copy of their work. GradeMark is a feature of the Turnitin platform that allows you to open the students' work online and either highlight sections of the work and type a comment in a speech bubble or insert typed comments. One of the great features of GradeMark is that you can also build up a bank of comments on the clipboard that can be inserted with a click of the mouse - ideal for correcting common mistakes. When you type a comment you think you'll use again, just hit the 'add to clipboard' icon (see annotated screenshot 1). I have been using GradeMark for 2 years now and there is no doubt that this

type of feedback is a bit slower than handwritten feedback, although once the clipboard comment bank has been built up, the process gets a bit quicker. Thus whilst I feel that by using GradeMark the quality and legibility of feedback has improved, it takes me longer to do and 5 minutes more per essay soon adds up when you have 50 essays to mark! My idea was to combine the highlighter feature of GradeMark with the screen capture feature of Screenr to record an audio commentary of the essays, rather than having to type the individual comments.

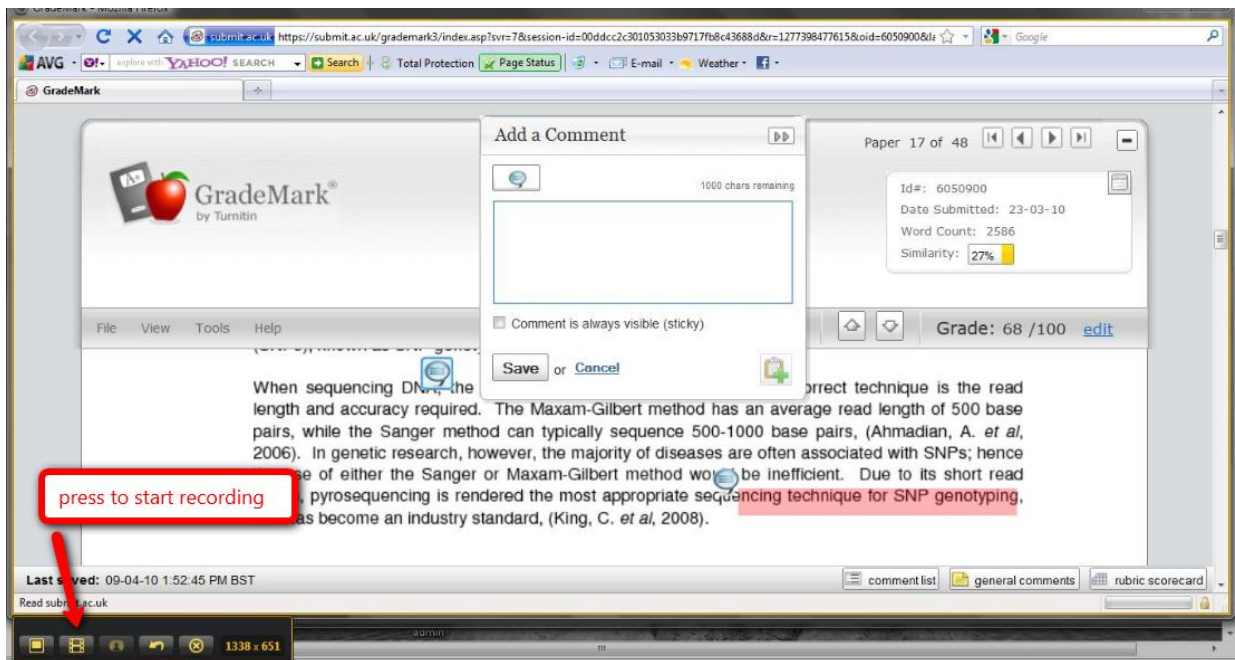


Screenshot 1. Building a comment bank in GradeMark

Example description:

Having decided to run a pilot study with a 20% sample of 2000-word essays submitted by students on my second year Human Genetics module, I investigated several screen capture programmes and decided that Jing, rather than Screenr, was more suitable for my purposes because I had a few concerns about privacy issues of uploading files to Flickr. Jing is a freely available application (available from www.jingproject.com/) used primarily to produce short videos for upload to Screencast.com. However it can also be used to save files in swf format and then upload them onto your own webpage or a VLE where they are viewed with the Shockwave Flash plug-in (freely available and already installed in most browsers). The Pro version, with a modest annual subscription, also allows files to be stored in the more versatile M-PEG4 format.

Jing is simple to use. First you open the file you want to capture (e.g. the Grademark file), then you open the Jing programme and select "Capture". A sizing grid appears on the screen and you adjust the size to frame the area you wish to capture, which in my case was the full screen. You then select "Capture video" from the toolbar and you get a three second countdown until recording starts (see screenshot 2). You can pause the recording if you need to and you get up to 5 minutes recording time. You can then save the file in swf format or post it directly to screencast.com. The swf files are quite large, especially if they are the full 5 minutes in length so they can take a few minutes to upload on a broadband connection.



Screenshot 2. Making a recording using Jing

When the students submitted their essays, a random 20% sample was chosen for audiovisual feedback. An experienced user could probably have a quick scan through the GradeMark essay then start recording and scroll through the essay highlighting areas in real-time and giving an audio commentary. However, I found it easier to highlight the areas that I wanted to comment on first, jot down a few words to remind me what to say e.g. "citations" or "diagrams" and then start recording. I scrolled down the page using the cursor to point to the highlighted area I was referring to. For most of the essays I marked in this way, I was able to record the commentary in a single take - and for this type of feedback to be quicker than typed feedback, you can't afford to be re-recording your commentary to get it absolutely word perfect! For the perfectionist, the commentaries can be edited using TechSmith's Camtasia Studio (www.techsmith.com/camtasia.asp), but figured that I can occasionally stumble over words when I am talking to students face to face, so does it really matter if I get a bit tongue-twisted when I am recording as long as I say "sorry I'll repeat that again"? However there were a few cases where I did have to re-record my commentary - once, when my mobile phone rang half way through recording and another where I ran out of recording time.

Once the recording was complete, I uploaded the files onto the feedback folder on the module KLE page and restricted access so students could only see their own feedback. The students then clicked on the file and the video opened in a separate window. I used the Jing commentary mainly as a correction tool, so apart from a few places where I complimented a well chosen diagram or interesting example, most of the comments were picking up on problem areas. The students therefore also received a typed copy of the standard essay feedback form, which highlighted strengths and weaknesses and suggestions for improvement.

Results / Feedback:

The students who had received audiovisual feedback were e-mailed a questionnaire polling their opinions of the technology. Those who responded were unanimous in thinking that this was a great way to receive feedback. They particularly liked the "real-time" nature of the feedback, where the audio commentary was accompanied by a screenshot of the relevant part of their work. I think this is an important point as students have often told me that they don't usually refer back to their essay when they read their general feedback form!

They were of the opinion the feedback was possibly more detailed than written comments and felt it was more personalised than the general feedback sheet. Moreover, one dyslexic student - who did not get audiovisual feedback on her own essay, but viewed the file her friend had received, told me that she would find audiovisual

feedback much more accessible than written feedback. One student did pick up on the fact that there were more negative comments than positive ones, but I explained that the audio comments were meant to accompany the general feedback form on which the positive aspects of the essay were highlighted. The plan is to eventually use only the audiovisual feedback, so I will need to ensure I use GradeMark as an appraisal tool, rather than just a correction tool.

The aim of the pilot study was to trial audiovisual feedback to see if it was a quicker alternative to providing quality feedback than typed comments and my general feeling is that yes, with a bit of practice, it could be. To a new user, I would strongly recommend you have a play around with the software and have a few practice runs before you start using it for marking. Be sure to take your phone off the hook, switch your mobile to silent and put a "do not disturb sign" on the door. You don't want to have to re-record a commentary because of an unplanned interruption! I found there was a short delay (less than a second) between the recording light coming on and the actual audio recording starting, so wait a second until you start to speak. Then, speak clearly and deliberately, but don't be too bothered about being word perfect. Use intonation on your voice as this can often convey as much information as the words you use.

There are a few downsides to the technology too. You do need to be comfortable sitting and talking at the computer screen. For someone who has problems talking on a mobile phone in public, the concept of talking to my computer was quite alien at first, but I soon got used to it.

Perhaps more of a potential pitfall is that you are totally reliant on the technology. There was a very frustrating instance when I was unable to access the KLE page for a day and a half. During this time, I could not open GradeMark, so I could not mark any essays. Technical hitches like this cannot be predicted and so if you are working to a strict deadline, perhaps you might want to use the original files submitted by the students as your Jing screenshots rather than GradeMark. Indeed the UK Centre for Bioscience project lead by Paul McLaughlin at Edinburgh University used Camtasia Studio to record short audio summaries of screen shots of MSWord files that had been corrected using a bespoke correction tool to type comments on the essays.

Another limitation is that the recording time is restricted to 5 minutes, so a single recording is unlikely to be suitable for marking longer pieces of work like laboratory reports, project reports or dissertations. One solution to this could be to produce several shorter recordings covering discrete sections of the work, but that would increase file upload time.

In conclusion, I believe audiovisual feedback using Jing and GradeMark could be an effective way to deliver quality feedback to students. It is technically simple to do and has been favourably received by the students. Indeed, I think it may be a particularly useful form of feedback for dyslexic students and I may extend my pilot study by recruiting willing dyslexic students.

Further comments or information

Stephen Merry's project report "Does providing academic feedback to students via mp3 audio files enhance learning?" available from www.bioscience.heacademy.ac.uk/resources/projects/merry.aspx

Paul McLaughlin's project report "A system to deliver oral and visual feedback on-line, personal to each student" available from www.bioscience.heacademy.ac.uk/resources/projects/mclaughlin.aspx

For more information on Turnitin and GradeMark see <http://turnitin.com/static/products.html>

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Case study published: July 2010