

e-Feedback for formative assessment:

Can it improve student learning
and assessment efficiency?

Findings of Sound Good

- Rotheram's (2009) final report into the Sounds Good found the following:
 - Feedback could be made quicker. However a significant proportion of the feedback took the same time or longer
 - Majority of the students were overwhelmingly positive about audio feedback
 - Staff were in favour of audio feedback, with most continuing with its use after conclusion of the study
 - Issues that still need to be addressed in the study include loss of novelty of the medium, and improvements to logistics
 - Crucially the study did not look at whether audio feedback improved actual student learning

Findings of Sound Good

- Rotheram concludes “It is probably fair to say most UK higher education lecturers would find it worthwhile giving audio feedback an extended trial”

e-Feedback

- What is it?
- It hasn't be defined yet (at least according to Wikipedia)
- Here it is used to describe any feedback that can be transmitted electronically
 - it can include word processed documents, html files, PDF, audio MP3, Audiovisual MP4 and other formats

7 Principle of effective feedback

1. Facilitates the development of self-assessment (reflection) in learning.
2. Encourages teacher and peer dialogue around learning.
3. Helps clarify what good performance is (goals, criteria, expected standards).
4. Provides opportunities to close the gap between current and desired performance.
5. Delivers high quality information to students about their learning.
6. Encourages positive motivational beliefs and self-esteem .
7. Provides information to teachers that can be used to help shape the teaching.

McNicol, D (n.d.)

- e-Feedback can help deliver these principles

e-Feedback case study

- The study involved the investigation of different styles of feedback for a single assessment
- The investigation would look at these areas
- Tutor impressions on giving new styles of feedback
 - Advantages
 - Disadvantages
 - Logistics
- Assessment and feedback efficiency
 - Time taken
 - Amount of feedback produced
- Student impressions on feedback
 - Anonymous survey

Assessment chosen

- Taken from PW203 – Winemaking 2
- 20 credit level 2 module taught over the year
- 29 Level 2 students
 - FdSc Wine Production
 - BSc Oenology & Viticulture
- Lab trial report – 2500 word + extensive appendices
- First piece of assessed work for the module
- While it was a summative piece of work, the formative aspect of it was of most interest
 - For example correcting mistakes, celebrating success and highlighting areas for improvement

e-feedback techniques

1. Standard feedback. Hand written feedback on Plumpton College feedback & rubric sheet
 - Notes hand annotated onto student work
2. Word processed feedback on Plumpton College feedback & rubric sheet
 - Notes hand annotated onto student work
3. Audio feedback
 - Final grade provided on Plumpton College rubric
 - Notes hand annotated onto student work
4. Audiovisual feedback
 - Final grade provided on Plumpton College rubric
 - Notes hand annotated onto student work
5. Word processed feedback via GradeMark function of Turnitin
 - Notes computer annotated onto student work

Standard feedback

- Here the reports were assessed physically
- Correction/successes marked directly onto the student work
- The assessment overview was then handwritten onto the Plumpton College assessment and rubric sheet
- Work was returned to student via pigeon hole



Plumpton
College

Assessment
Reference:

PW203-1

Higher Education Assessment Feedback Sheet

PART A (Students to complete)		Student Name			
Course FDSc Wine Production BSc Viticulture & Oenology		Assessor			
Module PW203 Winemaking 2		Tony Milanowski			
Assessment Title Winemaking trial					
Launch Date	Date due in 23.1.09 (or agreed extension date)	Date submitted 23.1.09			
This assignment is my own work, any contribution by a fellow student, member of staff or anyone else has been acknowledged Signed					
PART B (Assessor to complete - please tick appropriate boxes)					
	<39%	40 - 49%	50 - 59%	60 - 69%	> 70%
Subject knowledge and understanding					
Evidence of research/referencing					
Communication Skills/academic writing					
Application to other contexts					
Evaluative and analytical skills					
Ability to solve problems and generate conclusions					
Presentation skills (where relevant)					
Practical skills (where relevant)					
Assessor's comments: Not much room for feedback. The space limits the number of words placed on a sheet to 100.					
XX%					
Assessor(s) signature(s),				Date (s) 22/2/09	

Word processed feedback

- Here the reports were assessed physically
- Correction/successes marked directly onto the student work
- The assessment overview was then word processed and spell checked onto the Plumpton College assessment and rubric sheet
- Work was returned to student via pigeon hole
- Feedback was electronically filed into Gradebook on StudentCentral



**Plumpton
College**

Assessment
Reference:
PW203-1

Higher Education Assessment Feedback Sheet

PART A (Students to complete)		Student Name			
Course FDSc Wine Production BSc Viticulture & Oenology		Assessor			
Module PW203 Winemaking 2		Tony Milanowski			
Assessment Title Winemaking trial					
Launch Date	Date due in 23.1.09 (or agreed extension date)	Date submitted 23.1.09			
"This assignment is my own work, any contribution by a fellow student, member of staff or anyone else has been acknowledged" Signed					
PART B (Assessor to complete - please tick appropriate boxes)					
	<39%	40 - 49%	50 - 59%	60 - 69%	> .70%
Subject knowledge and understanding					
Evidence of research/referencing					
Communication Skills/academic writing					
Application to other contexts					
Evaluative and analytical skills					
Ability to solve problems and generate conclusions					
Presentation skills (where relevant)					
Practical skills (where relevant)					
Assessor's comments: This allows much more feedback to be returned than hand written. Using 8-9pt allows up to 250 words to be placed on a single feedback sheet.					
				XX%	
Assessor(s) signature(s),				Date (s) 22/2/09	

Audio feedback

- Here the reports were assessed physically
- Correction/successes marked directly onto the student work
- The assessment overview was then recorded onto MP3
- Plumpton College assessment and rubric sheet completed
- Work was returned to student via pigeon hole
- Feedback and Rubric was electronically filed into Gradebook on StudentCentral

Sanyo ICR-A181M Digital Voice Recorder



Audiovisual feedback

- Here the reports were assessed physically
- Correction/successes marked directly onto the student work
- The assessment overview was then recorded onto AVI file. Areas of interest within the report were shown visually while being discussed by the tutor
- Plumpton College assessment and rubric sheet completed
- Work was returned to student via pigeon hole
- Feedback & Rubric was electronically filed into Gradebook on StudentCentral

Flip Mino camcorder



GradeMark feedback

- Here the reports were assessed electronically
- Correction/successes marked directly onto the student work by computer interface
- The assessment overview was then written into the general comments section
- Plumpton College assessment and rubric sheet completed
- Work was returned to student via pigeon hole
- Feedback was electronically filed into GradeMark in Turnitin
- Rubric was electronically filed into Gradebook on StudentCentral



GradeMark[®]
by Turnitin

GradeMark is Turnitin WriteCycle's innovative paperless grading tool that allows instructors to leave the days of red ink and stacks of papers behind. GradeMark is a time-saving alternative to traditional pen and paper grading, making it easy for instructors to give students the valuable, time sensitive feedback that is so essential for building quality writing skills.

Features & Benefits

- 100% Paperless System
- Real Time Grading & Mark-up
- Track Grades With GradeBook
- Faster Than Traditional Grading
- Standardized Editing Marks
- Assess Students Over Time
- Fully Customizable Rubrics
- Works With All Subjects
- Share Rubrics & Editing Marks

Student Friendly Assessment

"Turnitin has completely revamped the GradeMark program. What had been a reasonably healthy assessment tool is now a turbo-charged, rip-roaring monster truck of a program that provides the answer to all our problems (and all our prayers) in the English Department."

- Dr. Norman Carey, Cushing Academy

Planned outcomes of study

- For each piece of work the following was noted
 - Time taken to read and annotate work
 - Total number of words in report
 - Time taken to produce general feedback
 - Total number of words in general feedback
 - General thoughts on the process

Findings

- Assessment rates are all similar when reading and hand annotating
- GradeMark is slightly slower when it comes to annotation
- Written rate for feedback is about the same whether hand written or typed
- Word processed feedback allows 1.5-2x more feedback
- Audio & audiovisual feedback provides significantly more quantity of content

Feedback style	Assess time (min)	Assessment rate (words/min)	Feedback Time (min)	Feedback Length (words)	Feedback rate (words/min)
Standard	24.6	137	7	100	14.3
Word Processed	18.6	170	12	191	15.9
Audio	23	153	8.4	1470*	175
Audio visual	26.6	158	8	1200*	150
GradeMark	26.4	131	12.2	173	14.2

Assessment time = time taken to read and annotate work

Assessment rate = report word count /assessment rate

Feedback time = time take to generate general feedback and rubric

Feedback length = number of words in feedback session

Feedback rate = Feedback length /feedback time

* Feedback length is an estimation a based upon average talking speed WPM

Logistics

- Returning student work was a consideration
- Standard feed back
 - Quick (1 min), semi-secure, robust, easy
- Word processed
 - Quick (1-2 min), secure, potential for misdirection & corruption, easy
- Audio
 - Slow (5 min to upload 4-10 MB files), secure, potential for misdirection & corruption, easy
- Audiovisual
 - Very slow (10-20 min to upload 7-44 MB files), secure, potential for misdirection & corruption
- GradeMark
 - Quick (1 min), secure, robust, easy

Standard

- Very small feedback area – encourages brevity and speed
- Rubric is very useful to cover all important areas
- Difficult to make changes/fix mistakes - carbon copies
- No spell check
- Easy record keeping – 1 copy for student, carbon copies for filing
- Returning student work takes ~ 1 minute each

Student feedback

- 3 responses out of 5 students polled
- The students generally could understand most of the annotations and feedback
- 1 student was disappointed not to receive audio feedback

Word processed

- Allows more feedback to be placed on the sheet
- Encourages more feedback
- Rubric still useful
- Easy to correct spelling, mistakes and make changes
- Potential for deleting or overwriting files
- Potential to email out feedback to wrong students
- Returning student work takes 1-2 mins each

Student feedback

- 1 response out of 5 students polled
- The students generally could understand most of the annotations and feedback
- General overview more of it and easier to read
- Difficulty in find feedback in Gradebook section of StudentCentral

Audio

- Not as easy as it first seems, but gets easier
- Allows a lot of feedback
- Doesn't encourage concise or focussed feedback
- Occasionally too much feedback provided
- Rubric still useful
- Difficult to redo feedback – best just to correct mistakes as you go
- Need a good structure to stick to or else feedback can ramble
- Potential to email out feedback to wrong students
- Returning student work takes up to 5 mins each
- Large files size generated 4-10 MB

Student feedback

- 4 responses out of 6 students polled
- The students generally could understand most of the annotations and feedback
- 3 students found the general overview expansive, more detailed, easier to understand
- 1 student found it awkward
- 1 student found it too long
- 2 students found difficulty in accessing feedback

Audiovisual

As per audio but also

- Very difficult to watch, very jumpy and hard to focus close into work
- Useful when linking comments to specific parts of student work
- Encourages links between feedback and the work
- When providing more general comments there is nothing to film
- Doesn't appear to add much additional quality to the feedback
- Returning work takes 10-20mins
- Huge file size 7-44 MB (through compression software this can be reduced)

Student feedback

- 2 questionnaires from 5 students polled
- The students generally could understand most of the annotations and feedback
- 1 student found vague annotation well explained in the AV feedback
- 1 student found the general overview expansive, more detailed, easier to understand
- 1 student found it cut out halfway through
- 1 student found it difficult to follow and “re-read”
- 1 student found difficulty with large file

GradeMark

- Some teething difficulties – logging in, and losing feedback
- Surprisingly easy to read on screen – not much worse than paper
- Need active broadband link – goes via Turnitin server
- Initially marking was slow but gets faster and easier
- Allows plenty of space for annotation (not just margins)

GradeMark

- Allows the use of comment banks
- Needs a separate rubric, but this can be done within program
- Easy to correct spelling, mistakes and make changes
- Excellent student security
- Automatic uploading of grades to StudentCentral
- Automatic plagiarism checks

Student feedback

- 1 response out of 5 students polled
- Easy to access, and follow
- Student liked that it was paperless
- Better than traditional methods

Overall

- The results were as expected, and were similar to those found within the Sounds Good project (Rotheram, 2009)
 - All e-feedback methods seem to offer more quantity of feedback to students
 - Most students preferred it to standard feedback
- Other results identified include:
 - Most written feedback generated at the same speed
 - Most of the e-feedback seems to offer better quality of feedback
 - Audio/audiovisual feedbacks offer substantially more quantity of feedback (>10x) for same time investment
 - GradeMark system offers surprisingly good functionality

However there was downsides to e-Feedback

- A minority of students didn't like the feedback
 - This was also a finding in the Sounds Good project (Rotheram, 2009)
- The logistics of e-Feedback delivery can be problematic:
 - Time consuming
 - Deleted , overwritten and corrupted files
 - Incorrectly addressed feedback
 - Not so much of an issue with GradeMark
- Digital discrimination
 - While not considered in the study, anecdotally not all students have the ability to access feedback, which is an area that would need to be addressed

Where to now

- Continuing to use 4 of the 5 styles of feedback
- Improvements to generating feedback
 - Quicker, smaller files, more focussed audio etc
- Further experiments with GradeMark
 - Build up a large comment bank for quick use
 - Set up custom rubric in accordance with Plumpton College feedback
 - Look to integrate audio files into feedback

Finding out more

- GradeMark tutorial
 - Email me for a link to video tutorial
- Using audio feedback
 - See the tips on how to do it from the Sounds Good project
 - <http://tinyurl.com/audiofeedback>

Further digital projects

- Recording all lectures with Flip Mino to stream via sTV on StudentCentral
- Audio introductions to assessment briefs
- Use of Camtasia relay, PC based audiovisual recording software
 - Used to deliver additional lecture material especially when lectures run out of time or are cancelled
- Computer assessment via StudentCentral, with automatic audio feedback
- “A word in your ear” conference 2009

References

- Brown, G., Bull, J., & Pendlebury, M., 1997. *Assessing student learning in higher education*. London: Routledge.
- Kender, D., 2008. *Pure digital flip Mino camcorder review* [online] camcorderinfo.com <http://www.camcorderinfo.com/content/Pure-Digital-Flip-Mino-Camcorder-Review-35297/Handling-and-Use.htm#>
[date accessed 8.6.09]
- McNicol, D., n.d. *Rethinking Formative Assessment in HE: a theoretical model and seven principles of good feedback practice*. [online] HE Academy
http://www.heacademy.ac.uk/assets/York/documents/ourwork/tla/assessment/web0015_rethinking_formative_assessment_in_he.pdf, [date accessed 8.6.09]
- Rotheram, B., 2009. *Sounds Good – Final report* [online] Soundgood.org <http://tinyurl.com/Soundsgoodreport>
[date accessed 8.6.09]