

[P4] Instant feedback via peer assessment

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Abstract

Students continue to express dissatisfaction with many aspects of assessment and feedback practices in universities in the UK. In the 2008 National Student Survey whilst 82 % of the students professed to be satisfied with their courses 44 % of students complained that feedback had not been prompt and had not helped them in their studies. For this reason, much effort has been expended across the sector to improve assessment and feedback practice. Here is described a lecturer-directed 'instant feedback' mechanism which is peer assessed designed to improve future performance (especially at graph plotting) whilst at the same time demonstrating clear assessment criteria and a transparent marking scheme. Whilst this relates to a specific laboratory experiment, in principle this kind of instant feedback session could be used for a variety of laboratory sessions.

Introduction

The reality of life in most modern British universities is that lecture theatres are often full to bursting point and even 'seminars' may contain 30 students or more. In this situation the individual student is unlikely to be able to discuss their own work in any detail with the tutor and more importantly the amount of feedback possible to augment student learning and understanding will necessarily be severely curtailed. In fact Hyland (2000) has reported in a study of university history students that 40 % of these students claimed *never* to have had personal feedback from the tutors about their work.

It is no surprise then that students are increasingly disappointed in the quantity and quality of the feedback they receive on their submitted work. This is evident in the results of National Student Surveys where on average 40 % of the respondents registered some form of disappointment with the feedback and assessment they had encountered.

Prompt Feedback?

It is often stated that feedback should be given within a day or two of the assessment deadline and ideally straight away. If feedback is delayed then students will have lost interest in that piece of work as it doesn't relate to their current situation.

Feedback is particularly problematic when students undertake practical sessions on a rota basis with a phased schedule of assignment deadlines. If the assignments are marked quickly and returned to the students, then there is obvious potential for plagiarism to occur as students can pass around corrected work to students who haven't undergone the same assessment yet. This places a possible obstacle in the path of the desired goal of prompt feedback

The question then is how to reconcile these two seemingly opposing objectives, to minimise the plagiarism but give quick feedback.

Feedback is intimately linked to assessment

Boud (1995, p35) has stated that, 'There is probably more bad practice and ignorance of significant issues in the area of assessment than in any other aspect of higher education' and 'we must confront the ways in which assessment tends to *undermine* learning' (my italics)

One of the most influential papers in this field (Sadler, 1989) put forward the notion that there are 3 conditions which must be met for students to benefit from feedback:

- i. the student must understand the standard of the work being aimed for;
- ii. the student must be aware of how their performance matches up with that standard; and
- iii. the student must take steps to bring the above two standards into correspondence.

To do this the student must have, 'some of the same evaluative skills as their teacher' (Nicol and Macfarlane-Dick, 2006, p120). Thus Boud (2000) suggests that peer and self-assessment may play an important role in helping students improve their learning through their use of feedback.

Purpose of feedback

It is unfortunate given the recent emphasis on the importance of feedback in the student learning process that the current workload of tutors militates against what might be thought of as the most effective form of feedback, the face-to-face tutorial. In the UK HE sector today feedback is likely to take the form of written feedback on returned work (Higgins *et al*, 2002). However, and this is certainly true in my own practice, it is unlikely that tutors will check that the student has understood, acted on, or learnt from the feedback. As a first step then it might be deemed to be a good idea to check student's perception and use of the extensive written feedback they may be given. As Mackenzie observed thirty years ago, 'much remains to be known, in any detail, about the average student's use of his tutor's comments' (cited in Higgins *et al*, 2002, p62)

Boud (1990) contends that there are two purposes to student assessment:

- a) to improve the quality of learning - formative assessment
- b) to gain credit for knowledge (passing exams) - summative assessment

and feedback may be unavoidably constrained to serve the purposes of exam passing rather than to enhance the quality of student learning.

Whilst the first may be thought of as being primarily beneficial to the student the second 'serves the needs of the external world'. Boud (1990) makes the very salient point that in our increasingly constrained timetables, assessment for learning invariably loses out to our need to assess for accreditation and progression.

Another problem often found among students, and identified by the literature, is that unless a task is associated with marks which increase total credits in a module, students may be less willing to do the assessment. Elton and Laurillard (1979) demonstrated that assessment makes students focus on tasks that yield marks rather than those which do not. Furthermore, Hounsell (1984) has proposed that the current modular structure of higher education, with its associated increased student work-loads, gives the student little time to reflect on feedback. Because learning is now organised into modular units taught by distinct modular teams generic, transferable skills may be neglected in favour of those which directly relate to each specific module. This means learning in each module is unconnected to the rest of the programme of study and does not give the student skills to move onto subsequent modules (Ding, 1998).

Much work (e.g. Mackenzie (1974) has provided research evidence for the benefits of timely feedback. However, in today's higher education sector feedback for a specific piece of work may not be received by the student until the end of the semester. This makes the feedback less relevant to the student who has probably forgotten about the nature of the course-work and who will now simply be interested in the grade as a means of progressing onto the next modular units (Higgins *et al*, 2002).

Aim

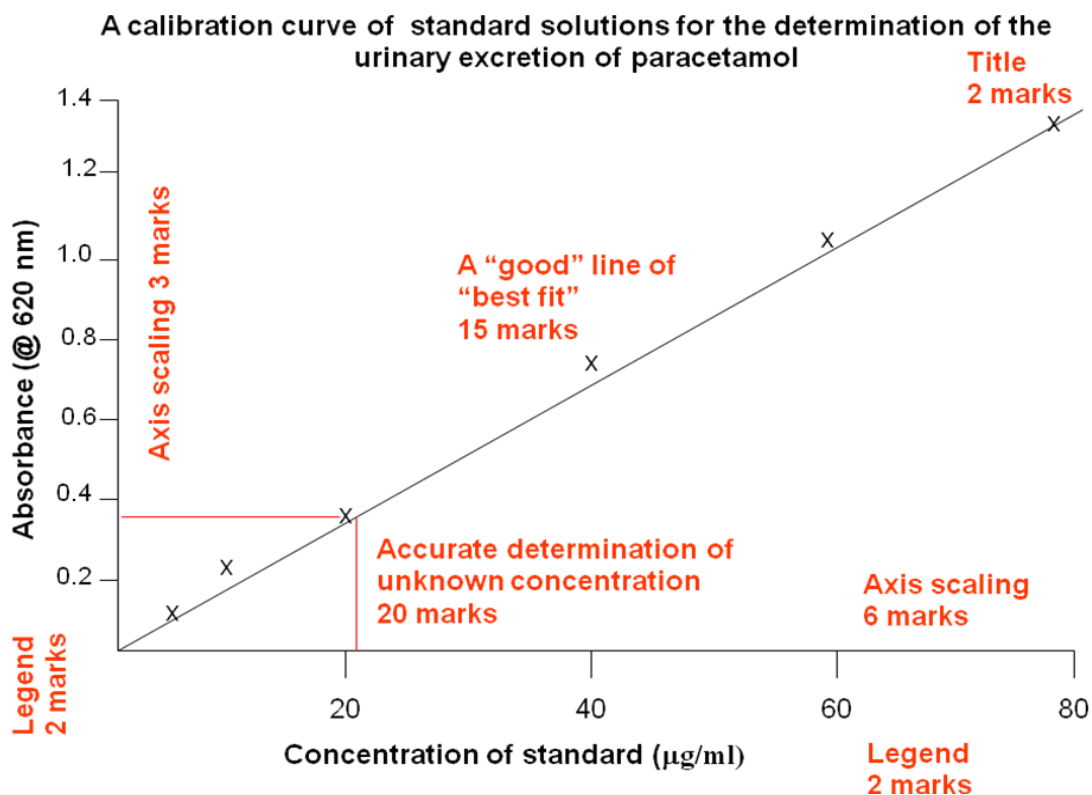
In order to provide timely feedback and address other suggestions in the literature on feedback a tutor-directed 'instant feedback' process using peer assessment was developed. This was designed

to inform and improve future performance by giving clear assessment criteria and a transparent marking scheme. Thus the aims of this study were:

1. To speed up the feedback process to address the dissatisfaction revealed by recent National Student Surveys.
2. To introduce peer assessment and thereby inculcate critical and evaluative skills in undergraduate students.

Method

In this case, Level 4 students (usually a cohort of approximately 100 students do this practical in groups of 20 in sessions a week apart) undertake a practical with the aim of determining the concentration of a biological analyte. Students use a spectrophotometric method to construct a standard curve (5, 10, 20, 40, 60, 80 $\mu\text{g/ml}$ standards) from which they can determine the concentration of the unknown analyte. After the practical component of the session students are told to immediately plot the data and thus work out the concentration of the unknown analyte from the standard curve. These graphs and the raw data, identifiable only by the student's university number and not by name, are then collected by the lecturer and redistributed randomly throughout the group. The lecturer then presents data showing how the plot should look. Students are told to mark their peer's work based on criteria presented on the lecturer's 'idealised' plot as shown below (appropriate title, axis legends and units, linearity of plot and accuracy of unknown determination etc.). The unknown analyte concentration is changed each session.



Finally, a full report is written up by the students in the normal manner and the work assessed by the tutor to make up the rest of the marks and quality control the peer marking process.

Findings

A possible resolution to the conundrum that the twin objectives of prompt feedback and preventing plagiarism may be incompatible was quickly identified by one of the respondents:

'It was for the practical that works on a rota basis. For students to get quicker feedback about their work, just change the experiment slightly from one week to another (sic), with different questions asked, different calculations or measurements made.'

Indeed many academics may already employ this or similar strategies. Another student said that the purpose of feedback was to, *'find ways of bridging the gap between your answer and the ideal answer'* which ties in very closely to Sadler's (1989) three conditions necessary for students to benefit from feedback.

The following comments are representative of what many of the students thought:

- *'It showed in what fashion work is marked, and explained why marks could be lost due to seemingly insignificant errors.'*
- *'I gained an insight into the positive and negative aspects of my work and how this affected my overall mark. This will aid me in future assignments.'*

Discussion

Quantity and quality of feedback

It is evident there can never be a standardised approach to providing feedback to assessed work given the multi-disciplinary context of the higher education institution, the diverse range of needs of the student population and the personal characteristics of the assessor (time management, level of other responsibilities, diligence, experience etc.). However, irrespective of these factors it is also apparent that there is an unacceptable degree of variation in the nature and extent of feedback in this sector (Mackenzie, 1974; Higgins *et al*, 2001; Ivanic *et al*, 2000) which may lead to the whole process being viewed negatively by the student. Something as simple as the legibility of feedback comments may play an influential role in how feedback is perceived by the students. For instance in the study by Higgins *et al* (2002) 40 % of the students found feedback comments simply too difficult to read!

One of the reasons why students may not read feedback is that they are unaware of how they are assessed and the criteria by which the merits of their work are judged (Baldwin, 1993). Higgins *et al* (2002) found that 67 % of their respondents admitted they did not understand the assessment criteria. *'So the very language of assessment criteria, and consequently of feedback comments, can be difficult for students to grasp'* (Higgins *et al*, 2002, p56). Despite these perceived barriers to the use of feedback as a learning tool Higgins *et al* (2002) nevertheless discovered that students still read their feedback comments and attempted to act upon them (97 % of students read comments and 82 % paid close attention to the feedback). Again Hyland (2000) found that the majority of students attempted to use feedback to improve their learning.

Indeed, the literature finds that students place great store on receiving feedback (e.g. Higgins *et al* [2002] 80 % of students thought that feedback was useful). A majority of students have been shown to believe that feedback will help them gain better marks in the future (Hyland, 2000) and are not only interested in their grades but value the associated feedback comments (Ding, 1998). However, Butler (1998) has also shown that students ignore feedback comments when a mark is given for a piece of work. Perhaps then student learning would be enhanced by giving comments first without marks and then letting students redraft their work and then assign a mark to the resubmitted work (Black and Harrison, 2001). This does lead however, to increased workloads as the tutor has to think more deeply about the nature of the feedback given as the students in the first instance can only measure their progress by the tutor comments in the absence of grades.

The increasing perception that with the advent of tuition fees students will come to see themselves as 'consumers' of a 'service' is borne out by the Higgins *et al* study (2002). Evidence has also been provided though that students do not simply want feedback that will improve their marks directly but

that they want to improve themselves as learners (Higgins *et al*, 2002) by improving upon generic deep learning skills. One way to develop such skills might be to enable students to more fully understand assessment criteria through the process of self and peer assessment as described here.

Suggestions for improvement

Large class sizes need not obviate the ability to initiate feedback discussion. Nicol and Boyle (2003) have suggested some strategies to increase feedback dialogue with students. These include giving feedback to the group and then structuring group discussions to talk about this feedback or by using technology to collate and display student responses in real time.

In the work of Nicol and Macfarlane-Dick (2006) good feedback:

1. Develops skills of self assessment
2. Encourages dialogue between teacher and student and student and peers
3. Sets goals and standards to be achieved
4. Provides a way of improving performance so those goals and standards can be met.
5. Gives students high quality information about their learning
6. Improves self-esteem and motivation
7. Enables teachers to draw up strategies to improve learning

It is apparent then that there is a need to reflect upon our feedback and assessment practices so they both improve and support student learning. In particular it is noted that formative and 'small stakes' summative assessments and accompanying feedback as presented here are important in developing the kind of deep learning we want in students (Higgins *et al*, 2002) and which provides the necessary skills for life-long learning. Such feedback, 'has the capacity to turn each item of assessed work into an instrument for the further development of each student's learning' (Hyland (2000) cited in Higgins *et al*, 2002, p54).

With peer and self assessment the student takes responsibility for their own learning and gives themselves and colleagues feedback on their performance which may give them the skills to become life-long and active learners not dependent upon the academic or expert for the gaining of knowledge and expertise. When students can understand the criteria by which they can objectively measure their own and their colleagues' progress then they can become more actively involved in the learning enterprise and gain cognitive skills relevant to their future professional and academic practice.

The literature in this field is growing and consistently shows that our traditional feedback practices are not conducive to student learning whilst also pointing to the many ways that feedback practices can be improved. The ever-increasing student numbers are a problem but they should not be used as an excuse to neglect this important area of teaching and learning. Indeed the research is out there to help us improve our practice and to stimulate deep and life-long learning in our students.

References

Baldwin (1993) cited in Brown, S. and Knight, P. (1994) *Assessing Learners in Higher Education* (London, Kogan Page).

Black, P. and Harrison, C. (2001) Feedback in questioning and marking: the science teacher's role in formative assessment. *School Science Review*, **82**, 55-61

Boud, D., (1990) Assessment and the promotion of academic values. *Studies in Higher Education*, **15**, 101-111

Boud, D., (1995) Enhancing learning through self-assessment. London, Kogan Page cited in Taras, M., (2001) The use of tutor feedback and student self-assessment in summative assessment tasks:

towards transparency for students and for tutors. *Assessment and Evaluation in Higher Education*, **26**, 605-614

Boud, D., (2000) Sustainable assessment: rethinking assessment for the learning society. *Studies in Continuing Education*, **22**, 151-167

Butler, R. (1998) Enhancing an undermining intrinsic motivation: the effects of task-involving and ego-involving evaluation on interest and performance. *British Journal of Educational Psychology*, **58**, 1-14 cited in Black, P. and Harrison, C. (2001) Feedback in questioning and marking: the science teacher's role in formative assessment. *School Science Review*, **82**, 55-61

Ding, L. (1998) *Revisiting assessment and learning: implications of students' perspectives on assessment feedback*. Scottish Educational Research Association Annual Conference, September, 1998 cited in Higgins, R., Hartley, P., Skelton, A. (2002) The conscientious consumer: reconsidering the role of assessment feedback in student learning. *Studies in Higher Education* **27**, 53-64

Elton, L. and Laurillard, D.M. (1979) Trends in research on student learning, *Studies in Higher Education* **4**, 87-102

Higgins, R., Hartley, P. and Skelton, A. (2001) Getting the message across: the problem of communicating assessment feedback. *Teaching in Higher Education* **27**, 53-64

Higgins, R., Hartley, P., Skelton, A. (2002) The conscientious consumer: reconsidering the role of assessment feedback in student learning. *Studies in Higher Education* **27**, 53-64

Hounsell, D. (1984) Essay planning and essay writing. *Higher Education Research and Development* , **3**, 13-31.

Hyland, K. (2000) *Disciplinary Discourses: Social interactions in academic writing*, London, Longman Press

Ivanic, R., Clark, R., Rimmershaw, R. (2000) What am I supposed to make of this? The messages conveyed to students by tutors' written comments, in: Lea, M.R. and Stierer, B. (Eds) *Student writing in Higher Education: new contexts*, Open University Press, Buckingham cited in Higgins, R., Hartley, P., Skelton, A. (2002) The conscientious consumer: reconsidering the role of assessment feedback in student learning. *Studies in Higher Education* **27**, 53-64

Mackenzie, K., (1974), Some thoughts on tutoring by written correspondence in the Open University. *Teaching at a Distance*, **1**,45-51

Nicol, DJ. and Boyle, JT., (2003) Peer Instruction versus Class-wide Discussion in large classes: a comparison of two interaction methods in the wired classroom. *Studies in Higher Education*, **28**, 457-473

Nicol, D, J. & Macfarlane-Dick (2006) Formative assessment and self-regulated learning: A model and seven principles of good feedback practice, *Studies in Higher Education* **30**,171-180

Sadler, DR., (1989) Formative assessment and the design of instructional systems. *Instructional Science*, **18**,119-144 cited in Higgins, R., Hartley, P., Skelton, A. (2002) The conscientious consumer: reconsidering the role of assessment feedback in student learning. *Studies in Higher Education* **27**, 53-64