

[P6] Maintaining quality feedback in the face of increasing student numbers

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Introduction

This study sought to use new and more effective methods of formative feedback to students within the context of Chemistry teaching in order to facilitate student learning. Emphasis was placed on the use of student directed assessment, and in particular, the use of student self- and peer-assessment. During semester 2 of the 2005-06 academic year, a cohort of some 100 Chemistry students and 33 Natural Sciences students attended a series of problem-based workshops designed to test self- and peer- assessment methods.

The number of students in Higher Education in the UK has greatly increased over the last decade. The present government has set a target to continue this growth, requiring a further 17,000 lecturers to be employed by the year 2010 to teach the extra students (Ratchford, 2006). In the current academic context, it is widely accepted that feedback is an essential component in the process of learning and in a student's development (Weaver, 2006). Although in the recent past it has not always been seen this way (Fritz 2000). Unfortunately, despite the best efforts to retain a level of consistency in the quality and amount of feedback given to students, recent surveys carried out on students have highlighted their dissatisfaction with the feedback they receive.

The National Student Survey in 2005 provided a snapshot of one year within the Higher Education sector. The Survey showed that whilst most students were overwhelmingly satisfied with the quality of courses, there was a general dissatisfaction in many Higher Education institutions with the provision of assessment and feedback. Responses to the 'Assessment and Feedback' section of the survey gave 86 out of 128 (67%) participating institutions their lowest score. At the University of Bath, dissatisfaction with feedback amongst students was highlighted by the Student Satisfaction Survey in 2003. A suggested cause of the problem was the increasing student-staff ratio, which has resulted in the decline of feedback to students (Macaskill, 2006).

Method

The students were divided into four independent teaching groups for their workshops, which were timetabled across consecutive weeks; this allowed for consistency in the investigation. These timetabled workshops placed emphasis on improving skills in drawing reaction mechanisms, rather than the frequent format of using knowledge from lectures to answer problems. This in turn made the workshops ideal to investigate both the students' reactions to different methods of feedback.

Two problem papers were designed, the questions on the first paper sought to guide the students through practice in drawing reaction mechanisms with the aim to help them to practise these important skills. It was also essential to allow enough time during the workshop for assessment and feedback to the students and also feedback to be received from the students about the process undertaken.

Four groups of students containing roughly equal numbers (~35) took part in the investigation (three groups of Chemistry students and one group of Natural Sciences students); they each had a different form of assessment method as follows: Group 1 – Peer assessment workshop; Group 2 – Control workshop; Group 3 – Tutor assessed workshop; Group 4 – (Natural Sciences students) – Self assessed workshop.

The control workshop was included for comparison. This was run as a 'normal' workshop in that, as in general departmental workshops, it did not involve any aspect of feedback other than a tutor being available to answer questions, and to go over general group problems on the board.

The Tutor-assessed workshop was given so that comparisons could be made between the groups of the level of satisfaction with the feedback they received. The students received feedback on their answer sheets from the tutor, which they received a week later. This allowed us to investigate how much the students valued a fast feedback response, as received by groups 1 and 4.

Discussion

Tutor comments were not preferred to self or peer-assessment by the students. A perhaps surprising finding from the data collected was that students overwhelmingly felt that they would not like to have a tutor annotate their work individually. This was especially clear for several reasons:

The observed reaction of the students in the tutor-assessed workshop could have been due to the fact that they had to hand in their worksheets at the end. Those students who had not completed the work would be reluctant to hand it in.

All students in the Self and Peer Assessment workshops agreed that they would not like to have a tutor mark their work, but would instead prefer receiving an answer sheet and marking their own work. The students marked the worksheets during the workshop, which meant that they also received fast feedback from the peer and self assessment mechanisms.

Another reason could be that the thought of handing work in to be commented on unsettled the students, as there seemed to be a belief that tutors will think less of them if they did not do well. This perception concerning the tutor-assessed workshop may be linked to the 'fear of failing' as described by Stiggins (1999), who goes on to say that '*the trick is to help students understand that failure holds the seeds of later success.*'

The tutor's feedback in these tutorials was generally in the form of a verbal feedback with no peer assessment involved. Self-assessment may have occurred, but this would have been at the discretion of the individual tutors and the way that they chose to run their feedback tutorials. The interview analysis with our students indicated that they would rate tutor feedback very highly. When probed further, it seemed that there is a difference in the minds of the students between having annotated comments from a tutor and having face-to-face feedback with a tutor. Students claim they would prefer to have either feedback

from a peer or the opportunity to go through their own work with a view to self critique and learn from their mistakes, rather than receive written feedback on their work from a tutor.

Thus the ranking in order of preference for written feedback from the results seems to be *Peer Assessment, followed by Self Assessment, followed by Tutor Assessment*. This observation is largely based on how the students would like the procedure to run in future workshops. This is a very interesting result as it suggests that there is great value in exploring peer- and self-assessment as a method of feedback to students and in doing so to move away from the more conventional use of tutor written feedback.

Conclusion

The study of peer- and self-assessment workshops has shown convincingly that students valued this fast feedback approach and that they appreciated the quality of feedback received from their peers or from the self assessment exercise. Interestingly, the study also revealed that students viewed feedback from peer- and self-assessment more favourably than tutor feedback. Thus the dual aim of giving quality feedback to students, but without adding more time pressures on to tutors was achieved. This will lead to greater enhancement of feedback mechanisms within the programmes of study offered by the Department of Chemistry at the University of Bath.

References

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