

Research Article

Student Engagement with Feedback

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Abstract

This report considers Biological Sciences students' perceptions of feedback, compared with those of the University as a whole, this includes what forms of feedback were considered most useful and how feedback used. Compared with data from previous studies, Biological Sciences students gave much greater recognition to oral feedback, placing it on a par with written forms. Compared with the university as a whole, Biological Sciences students showed stronger preferences for feedback that addressed technical issues such as assignment structure and referencing rather than more reflective aspects. These observations are discussed in relation to expressed preferences for feedback promoting deeper or more superficial subject engagement.

Keywords: feedback, student engagement, feedforward

Introduction

There is substantial, long-standing evidence that good quality feedback plays a key role in supporting student learning (Hattie *et al.*, 1996; Black and William, 1998; Hattie and Jaeger, 1998; Weaver, 2006; Duncan, 2007) and, more recently, that students place significance on feedback in terms of the personal dimension: the response of the teacher to them as individuals (Rowe, 2009). There is clear guidance and identification of good practice in the provision of feedback, in particular its timeliness and utility, both in the correction of subject-based and presentational errors and the provision of 'feed-forward' guidance that students can use in order to improve on subsequent pieces of work (e.g. Glover and Brown, 2006; Gibbs and Simpson, 2004; Nicol, 2010). However, it is also evident that this is an on-going issue: in the National Student Surveys in the UK (2005 - 2011) feedback continues to be rated at a lower level than the other elements of educational provision, a situation that appears not unique to the UK (Krause *et al.*, 2005). A significant contributing factor to the current levels of dissatisfaction expressed by both students and academic staff may be attributed to the 'massification' of higher education and the resultant slide towards one-way communication in the provision of feedback (Nicol, 2010). In his report, Nicol (2010) discusses the significance of forms of dialogue as a means of enhancing the experience and engagement with feedback and identifies approaches whereby the slide to the monologue may be addressed. Linked with this, Duncan (2007) observed that much of the feedback provided by academic staff addressed mechanical aspects of the students' work, such as grammar and layout, and that where other aspects were addressed, the comments were often difficult to understand, thereby contributing to the perception of a feedback monologue rather than an engaged dialogue.

In a previous paper we described findings of a study comparing the perceptions of 1st year bioscience students with those of the staff teaching them regarding the feedback provided on coursework in terms of its format and utility (Bevan *et al.*, 2008). This noted the different perceptions between staff and students regarding the forms of feedback that were provided: in particular the students predominantly identified feedback as coming from comments on written work and, compared with the staff view, were much less likely to recognise more immediate sources such as oral feedback in practical classes or tutorials (Bevan *et al.*, 2008), aligning with the observations of Gibbs and Simpson (2003) that forms of feedback other than in writing were less likely to be recognised by students.

Relatively few studies have examined student approaches to and preferences for different types of feedback (Millar, 2005), even though an appreciation of these issues could be a useful part of informing feedback provision. Among the studies that have been undertaken, some common findings have emerged. In a survey of History students, Hyland (2000) found that students valued most highly the written annotations on their work, with 90% believing this type of feedback could help them to identify academic strengths and weaknesses and achieve higher grades in later assignments. Higgins *et al.* (2002) attempted to examine more closely what students want from feedback and observed that the majority rated as important feedback that explained mistakes, focused on the level of critical analysis and told them what they needed to do to improve. Their findings suggest that students are not (simply) interested in their grades, but in developing authentic, generic skills (Higgins *et al.*, 2002). This conclusion is echoed in Hodgson and Bermingham's (2004) study, which found that of 437 Law students questioned, 302 placed a high value on feedback that helped them to improve their performance, compared to only seven who placed a high value on feedback that explained the mark awarded. Rowe (2010) further concluded that the type of feedback preferred by students and the importance placed on feedback is a reflection of the learning styles of the students. Rowe also observed that deep learners place significant importance on feedback and, compared to superficial learners, prefer participating in discussions and for tutors to focus on the questions the student got wrong (Rowe and Wood, 2008; Rowe, 2010).

In the study of bioscience students by Bevan *et al.* (2008), although the students generally responded positively regarding the quantity of feedback received, they were less satisfied with its utility. In a subsequent comparison of the views of 1st and 2nd year students, the two cohorts displayed similar levels of satisfaction regarding the quantity and timing of feedback, but the 2nd year students expressed markedly lower levels of satisfaction regarding the utility of the feedback received (Scott *et al.*, 2010). Associated with this finding was evidence that students may not engage effectively with the feedback they are given (Wojtas, 1998). For example, although the majority of students reported reading written feedback that was provided, only about half of those surveyed agreed that they used the feedback to go back over what they had done in their assignments and almost half reported that, whilst they had good intentions to use the feedback, they had forgotten about it by the time they came to undertake the next assignment (Bevan *et al.*, 2008). The perception that students often do not engage effectively with the feedback provided was reflected in the views of academic staff (Bevan *et al.*, 2008). This failure to engage effectively may be attributable to a number of reasons, for example it may be because the feedback arrives too late to be considered useful or lacks clear advice on how to improve (Bevan *et al.*, 2008; Higgins *et al.*, 2001), however, there is also evidence that students have received little training in using feedback and find their tutors' comments hard to understand (Weaver, 2006).

In the light of the outcomes of the two previous studies in the School of Biological Sciences (Bevan *et al.*, 2008; Scott *et al.*, 2010), more emphasis has been placed on advising students regarding the recognition of, and engagement with feedback, including specific material incorporated in the 1st semester study skills programme. The latter is focused on guiding students regarding the differences between feedback provision at university by comparison with their experiences at school, highlighting the variety of ways in which feedback is provided and advising on approaches to engagement with that feedback. At the same time, a parallel campaign has been run with academic staff, involving a peer observation of feedback scheme and also dissemination of guidance on 'quick win' ways of improving the quality of feedback provision without increasing the staff workload. The study reported here aimed to compare the current views of Biological Sciences students, following implementation of these interventions, across the year groups and with the overall perceptions of the students across the University

as a whole in terms of the types of feedback they receive, which feedback they value the most and how they use it.

Methods

The survey took the form of a postcard campaign which was undertaken in conjunction with the Students' Union, who represented the public face of the operation and undertook the design of the postcards and associated publicity. The survey was advertised on digital displays around the university for two weeks in advance, and postcards containing survey questions were distributed on two consecutive days at key points around the campus by student representatives. As an incentive to participate, there was a prize draw of an Apple iPad™. Students could answer the survey questions either on the postcards or using an online survey. The three questions were: (1) Name five types of feedback you receive on your work; (2) What is the most useful piece of feedback you have received?; and (3) Name one way in which you have used feedback to improve your learning.

It was decided that the questions should be open-ended in order to allow flexibility in responses and to gain insight into the students' opinions on their feedback without providing any prompts such as would be given if the respondents were invited to choose from lists. The students were also asked to name their department and their stage of study. Following completion of the survey, the postcards and online responses were transcribed and aggregated. Initially this was done verbatim, prior to grouping of the responses within cognate categories.

Results

The numbers of students who responded to the survey are given in Table 1 below, divided up into year groups.

Table 1 Numbers of undergraduate students responding to the Postcard survey

Year Group	University	Biological Sciences
1	232	48
2	145	24
3	207	40

Since the questions on the survey were open questions, the students named a large number of different forms in which they received feedback, with different phrasing. For the purposes of this report, to enable an overview comparison between the cohorts, these were aggregated into cognate groups. For example 'written comments on assignment', 'cover sheet' and 'written comments on lab report' were aggregated as 'written comments'. Analysis of the relative proportions of the responses from the students identifying different generic routes of feedback provision shows that the most common forms were oral and written (Figure 1), each accounting for more than 25% of the responses, and that there was no marked difference between the biological scientists and the University as a whole in the proportions named by the students. The other forms of feedback, including the grades/marks awarded were all named markedly less frequently.

Separating out the forms of feedback by the year group of the students for Biological Sciences (Figure 2) showed that the relative proportions of written feedback remained the same but there was a clear trend of increasing recognition of oral feedback rising from 21% of 1st year responses to 27% of 2nd years and 30% of third years. Group feedback also showed a similar, though smaller pattern of increase. Also of note is that the 1st year, and to a lesser extent the 2nd year students identified 'Friendfeed' as a specific source of feedback. The 'Friendfeed' project is incorporated into the skills modules in the 1st year of the Biological Sciences programme as a means of providing peer support and dialogue (Badge and Cann, 2011) through moderated

posts using 'Friendfeed' as the social network. This was first introduced as part of the peer development for the 2nd year cohort when they were in their 1st year (hence it is not referred to by the final year students) and may also be reflected in the responses related to peer feedback which were highest for the 1st years.

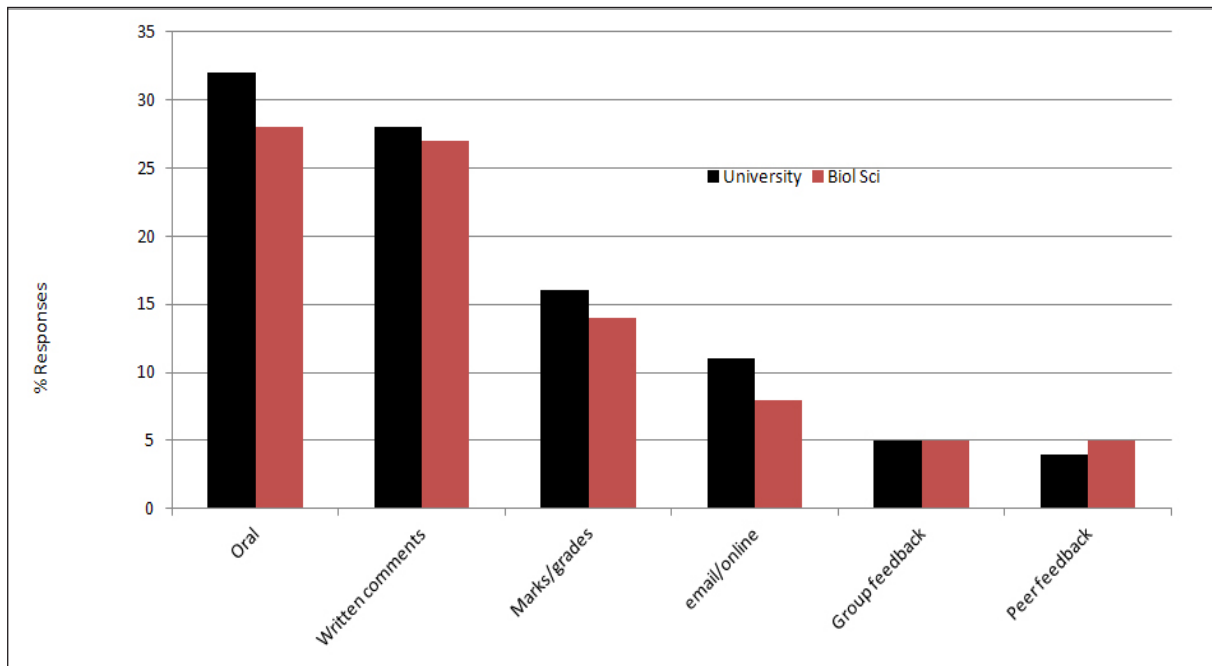


Figure 1 Bar chart illustrating the most common generic forms of feedback provision named by the students in the postcard survey. Note that the total percentage in each grouping is less than 100% because responses occurring at less than 5% for both groups have been excluded

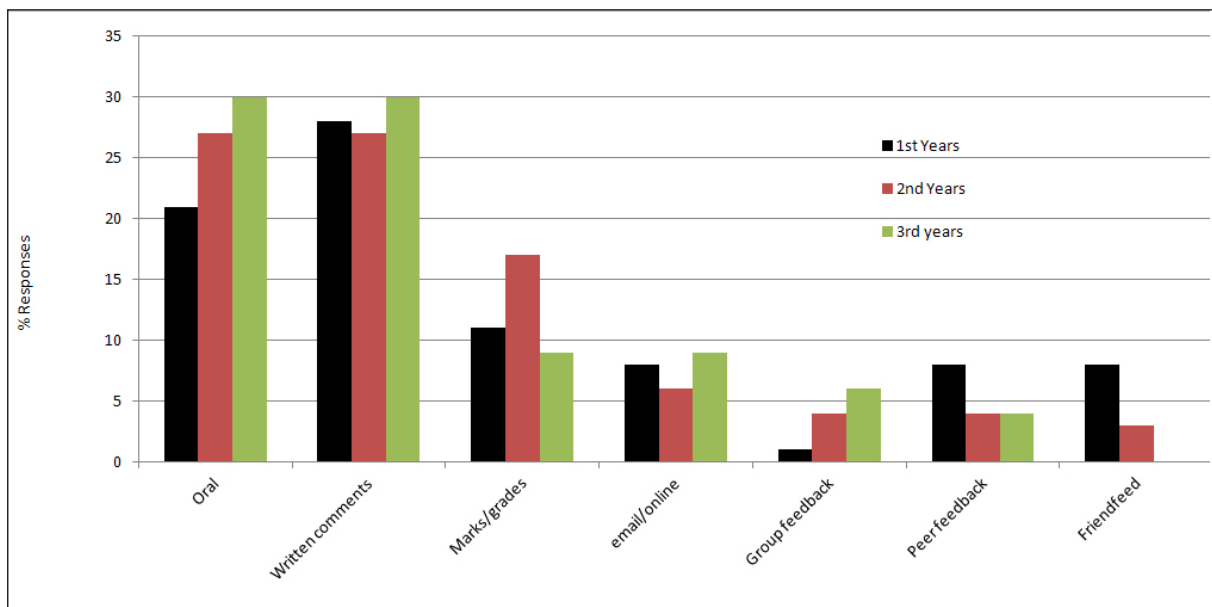


Figure 2 Bar chart illustrating the proportions of responses from each year group of biological science students identifying each form of feedback provision

In terms of the students' views regarding the most useful piece of feedback, there was a wide range of answers but the most common for both the University as a whole and Biological Sciences was guidance on how better to structure the assignment (Table 2). For the University, this was closely followed by a generic statement 'how to improve', in other words a non-specific response from the students simply identifying feedback that gave some specific guidance

on improvement, however, this was ranked fourth in terms of responses from the Biological Scientists. The other two most common for both cohorts were the identification of strengths and weaknesses and advice on referencing, the latter being identified by 17% of Biological Scientists compared with only 8% for the University as a whole.

Table 2 Most common responses to the question 'What is the most useful piece of feedback you have received?'

Most useful piece of feedback	University	Biological Sciences
Better structuring of assignment	14%	23%
How to improve	13%	9%
Identification of strengths and weaknesses	10%	11%
Advice on referencing	8%	17%

Linked to these perceptions of the utility of feedback, in response to the third question, 'Name one way in which you have used feedback to improve your learning', improved writing skills and reading more were both actions that appeared relatively commonly from both groups (Figure 3). The most common response for the University as a whole, though, was 'reflecting on feedback when preparing the next assignment', which was the answer given by 32% of the students compared with only 19% of students in Biological Sciences. Comparing across the years for both groupings revealed no change in these proportions.

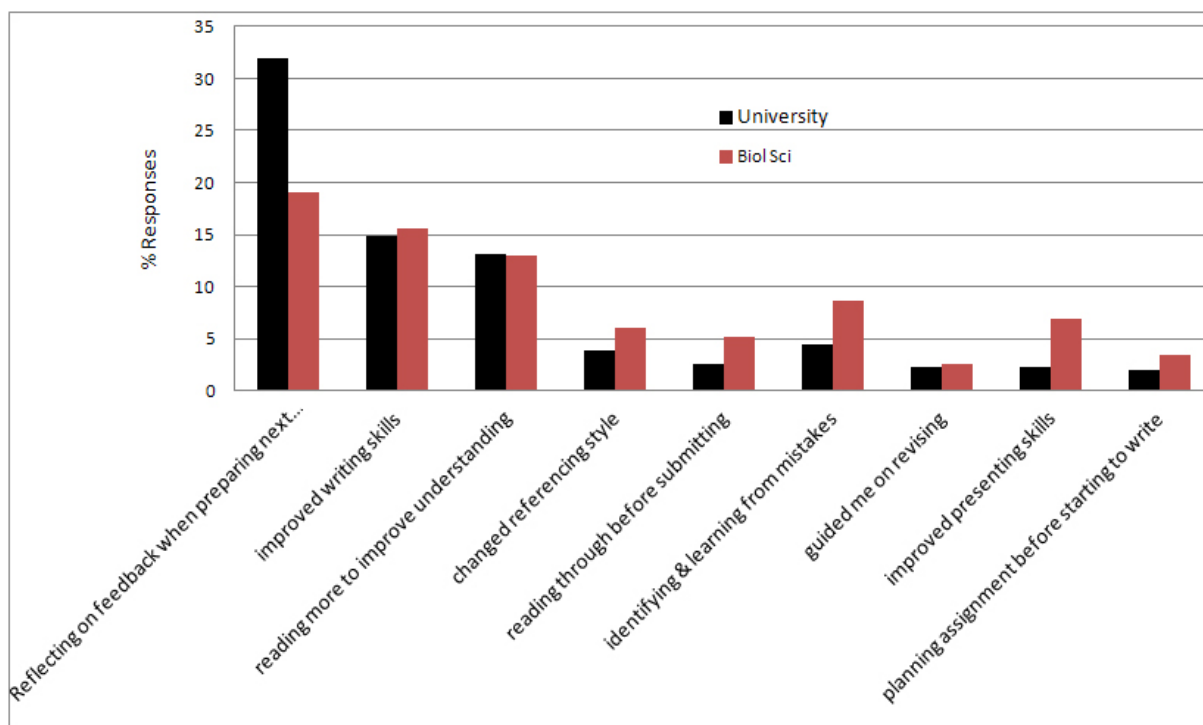


Figure 3 Bar chart illustrating the most common responses to the question 'Name one way in which you have used feedback to improve your learning'

Discussion

This report presents the results of an overview postcard survey of the views of campus-based students at the University of Leicester, undertaken in the autumn term of the academic year 2010–11, regarding the feedback they had experienced. The survey invited students to give unprompted, open answers to three questions relating to their experiences of receiving and using feedback from assessments. When considering the forms in which feedback was received, the most common forms were written and oral feedback for both the University as a whole and for Biological Sciences, with there being no significant difference between the proportions of responses for the two forms of feedback. The relatively large proportion of respondents identifying oral forms of feedback contrasts with the outcomes of previous studies (Bevan *et al.*, 2008; Gibbs *et al.*, 2003) which have indicated that written feedback is a much more commonly recognised form of feedback than other forms. One possible explanation for this observation could be that, during the last two academic years, in response to the findings of the previous survey (Bevan *et al.*, 2008), there has been a concerted effort to raise the level of awareness among students regarding the variety of ways in which oral feedback is provided including discussions in practical classes, module and personal tutorials and seminars. This has been carried out as a part of formal teaching in study skills sessions, through specific reference to the forms of oral feedback in programme handbooks and in briefing sessions and through flagging of oral feedback at the time of delivery.

Comparison of the responses of the Biological Sciences students across the three years of study revealed some specific features. For example, the recognition of oral feedback increased over the three years from 21% of responses in year 1 to 30% in the third year. In the 1st semester of the first year, much of the coursework is based around frequent, low-stakes assessments for which there is a rapid turn-round (within a week) with written feedback. Although oral feedback will be given, for example in the practical classes, the students have less direct contact with academic staff than do the 2nd and, particularly the final year students. For the final year students, the combination of relatively small module groups and significant individual support in the research projects, mean that the amount of individual oral feedback received is likely to be significantly greater, more directed and more individually focused than that experienced by the 1st year students.

Although the numbers are small, it is interesting to note that some of the 1st and 2nd year students in Biological Sciences identified the use of 'Friendfeed' as a form of feedback. This social media application has been introduced as an open commentary system for the 1st year students, with mentoring support from the 2nd years, involving them posting about their scientific reading and also about the current topics being covered in the lectures (Badge and Cann, 2011). Given that these discussions involve significant peer input, this may well also explain the higher level accorded to peer feedback by the 1st year students compared with the other cohorts.

In response to the request to name the most useful piece of feedback that had been received, the top two responses from the Biological Sciences students both reflect factors involving technical skills rather than subject-based development *per se*. These two areas of guidance relate to structuring of the assignment and the approach to referencing (Table 2) and together they represented 40% of the responses compared with 22% for the University as a whole. In their analysis of student preferences regarding feedback, Rowe and Wood (2008) identified two categories of preference which they correlated with deep and surface approaches to learning. Thus the responses of the deep group were categorised by the desire for feedback that enabled them to learn more about the subject and through which they were able to develop more independent learning, whereas the surface approach looked for feedback that directly enabled them to improve their performance (Rowe and Wood, 2008). The two pieces of feedback that, in

this study, were identified by the Biological Sciences students as being most useful both reflect surface approaches to learning in that they are relatively mechanistic changes to practice which have the potential of improving marks but do not involve any deeper engagement with the subject. Duncan (2007) noted that the feedback provided often focuses on the mechanistic features of students' work, perhaps because these are relatively easy aspects for staff to comment on and for students to act on, hence the students' perception that these were also the most useful. Furthermore, when considering the usage of the feedback only 19% of the Biological Scientists reported reflecting on feedback when preparing the next assignment, an activity that could be considered as indicating engagement with deeper learning, compared with 32% for the University as a whole (Figure 3). The second most commonly stated usage of feedback, for both groups, was related to improving writing skills (Figure 3), which is commensurate with the identification of better structuring of assignments as one of the most useful pieces of feedback. The more generic response 'how to improve' is harder to interpret, though again this would appear to fit more closely with Rowe and Wood's (2008) definitions of superficial approaches.

A number of reports have noted that students may not appreciate the 'feedforward' aspects of feedback, especially when this crosses over different modules, and that they do not interpret the feedback in the way intended by their tutors (e.g. Hartley and Chesworth, 2000; Weaver, 2006; Bevan *et al.*, 2008). This may be reflected in an inability of students to make the critical link between their work and the feedback provided and, so, the channel of one-way communication fails (Sadler, 2010). In part this may be linked to the observation that students reported not receiving sufficient guidance in how to engage with feedback (Weaver, 2006; Bevan *et al.*, 2008) and may, as a consequence have relatively unsophisticated strategies for dealing with the feedback they receive (Burke, 2009). The overall preferences expressed by the Biological Sciences students in the current study for the more mechanistic forms of feedback and their usage may reflect the more obvious feedforward nature of this type of feedback in that improving writing skills, assignment structure and referencing style; reading through before submitting and, indeed, engaging in more reading are all ways in which students can see clearly how to improve, and which would be perceived as being easily transferable across modules. The reports of studies into students' preferred forms of and engagement with feedback in history and law were more closely allied to the university-wide results, reflecting preferences for feedback that enabled the students to identify and correct academic strengths and weaknesses and the desire to develop generic academic skills (Hyland, 2000; Higgins *et al.*, 2002; Hodgson and Bermingham, 2004). As noted above, a further possible consideration for students regarding their engagement with feedback, perception of its utility and ease of understanding could be that the technical guidance, for example regarding referencing, is relatively easy to understand by comparison with commentaries related to deeper approaches to learning, and so the more superficial guidance is the form most likely to be considered useful and so acted on.

While the results from this survey indicate that the actions taken to promote recognition of oral feedback and engagement with feedback have had some success, though there was still a relative failure to effect deeper engagement with the feedback. However, as Sadler (2010) observes, closing the gap between students' appreciation of feedback and its actual significance by formal teaching processes, often separate from the assessment exercise, is likely to be of limited impact. To achieve this goal students need to be engaged in making the same evaluative assessments as the academic staff through, for example, structured peer assessment (Sadler, 2010), which is a future route to be explored.

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