Developing the students' ability to construct feedback

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The power of teacher feedback

While much has been written about the power of teacher feedback as a means of enhancing learning, evidence of its effectiveness as currently practised in higher education [HE] is not compelling, at least for the majority of institutions with large student cohorts. The UK National Student Survey [NSS] shows that students are less satisfied with the quality of teacher feedback than with any other aspect of their course. Each year across all disciplines, and across most institutions, students show concern about the timeliness of teacher feedback, about its level of detail and about its failure to clarify things they did not understand. Institutions have responded with interventions such as faster turnaround times for assignments, extra feedback on examination scripts, electronic feedback to automate delivery, feedback calendars to clarify the timing of feedback and structured feedback rubrics to improve efficiency.

Although the NSS has usefully highlighted feedback as an important aspect of learning, the interventions brought about in HE as a result of that survey are not without their problems. Firstly, such interventions usually require a significant increase in staff workload, which is problematic given current resource reductions. Secondly, they do not always result in enhanced learning or higher student satisfaction. Indeed, academics are still finding that students, even those who are vocal in requesting more feedback, still do not pick up their corrected assignments or appear to act on the teacher comments. Also, for some students feedback is never enough or of the right type. Thirdly, to many researchers, increasing opportunities to 'tell' students what is right and wrong and what can be improved in their assignments will not on its own enhance learning and develop disciplinary expertise (Sadler, 2010: Boud, 2000). Nicol (2010a) for example argues that feedback must be conceptualised as a dialogue not a one-way transmission process. If students are to learn from feedback they must also have opportunities to construct their own meaning from the transmitted information: they must do something with it, analyse the message, ask questions about it, discuss it with others and connect it with prior knowledge. Hence interventions must go beyond enhancing teacher delivery. Fourthly, it is arguable that educational interventions that focus only on enhancing the quality and quantity of teacher-feedback are not sufficient if we wish to develop the students' ability to make their own judgements about the quality of work. To achieve this, students also need direct practice in assessing work and generating feedback on it.

The case for developing the students' capacity to make qualitative judgements has been adduced recently by two international groups of assessment researchers: Boud and Associates (2010) in Australia have produced Assessment 2010: Seven propositions for assessment reform and the Osney Grange Group (2009) in the UK have produced Feedback: An agenda for change. Both these groups see the ability to make judgements about the quality of work as fundamental for life beyond university where graduates will be exposed to complex information and events in personal, professional and global contexts (see also Nicol 2010b: Cowan, 2010).

The case for peer feedback

An alternative response to improving feedback in higher education is to enhance opportunities for peer feedback, that is, students evaluating and giving feedback on each other's work. Peer feedback can address some of the issues raised earlier. It can add significantly to the amount and variety of feedback students receive, without a corresponding increase in teacher workload.

As well as increasing quantity, peer feedback can also address the timeliness issue. For example, if students engage in collaborative projects, then they will receive feedback in a timely manner, while it still matters and with the opportunity to act on it. It has also been shown that feedback from peers is often more helpful than that provided by teachers because peers are able to provide commentaries on work at a level, and in a discourse, that is more understandable than that of the teacher. The receipt of feedback from multiple sources (peers) rather than a single source (the teacher) also mimics more closely the reality of life beyond university. In employment settings, professionals must decide which feedback to respond to and how to reconcile different feedback perspectives.

While there are unquestionably benefits in the feedback that students receive from peers, over and above that which they receive from teachers, the foregoing analysis still locates feedback within a 'telling' or 'delivery' paradigm. However, peer feedback is not just about enhanced delivery: it also involves students themselves constructing feedback.

Students as constructors of feedback

Active Learning
The unique feature of peer feedback is that students are not just consumers of feedback they are also producers. Engaging students in the construction of peer feedback is a high-level activity that is cognitively very demanding. You cannot be passive when producing feedback. Think of the effort required to review a journal article in your own discipline. While students can avoid paying attention to the feedback they receive, even if it is provided by peers, they cannot avoid engagement if they are required to produce commentaries on the work of others. Feedback construction is therefore a qualitatively different cognitive process from reading feedback provided by others.

Active engagement with criteria and standards
A second aspect of peer feedback production is that it requires that students actively engage with assessment criteria and standards. They must exercise criteria from multiple perspectives as they review and comment on different examples of the same work. Hence criteria and standards are likely to become internalised in a way not possible through feedback consumption. Research shows that the main reason for the under-performance of students in assessment tasks is that they do not know what is expected of them. Feedback construction, with its focus on criteria and standards, helps address this issue in a powerful and compelling way.

Reciprocity: producing and receiving feedback
Peer feedback is especially effective because students normally give and receive feedback on the same piece of work. This adds considerably to the learning benefits. First, when students review the work of others they learn about different approaches and tactics to the same assignment they have produced. These insights are often transferred to their own future assignment productions. Secondly, seeing a range of approaches to the same assignment helps students realise that quality is not a fixed attribute but can be produced in different ways. Thirdly, peer feedback, both giving and receiving it, encourages students to take more responsibility for learning, their own learning and that of others.

Disciplinary expertise
Giving students regular experience in making evaluative judgements and writing feedback commentaries also develops disciplinary expertise. In critically analysing the outputs of others and in making judgements, students are put into the same decision space as experts. Writing feedback commentaries also helps deepen students' understanding. Through these processes, students not only acquire explicit understanding but they also acquire the tacit knowledge that experts use when tackling a task.

Learning communities
Peer feedback production requires a movement away from learning, and indeed assessment, as a private activity. Engaging students in reviewing and giving feedback to each other in a safe and trusting environment can help develop social cohesion and foster learning communities.

Self-assessment skills and professional life
Finally, when students are given regular practice in evaluating the work of peers, they also develop the capacity to review and assess their own work – as exactly the same skills are involved. Being able to make qualitative judgements and to provide feedback on them is a core skill in professional settings. It also underpins the development of most, if not all, graduate attributes (Nicol, 2010b). Therefore it is surprising that this skill is rarely explicitly stated as a learning outcome in course and programme documentation.

Implementing peer feedback

New lecturers often raise issues about how to implement peer feedback. Some are concerned that students do not have the knowledge or skill to comment on other students' work. Others argue that students can be too critical and harsh in their comments. Still others lament that peer review might compromise the academic integrity of individually produced work: that is students will be able to plagiarise from others. All these concerns have been addressed through well-designed peer review tasks.

Ideally, peer feedback should begin in the first year with some simple review tasks with complexity and depth being enhanced in later years. Peer feedback need not be about asking students to 'criticize' each other's work: the task might be as simple as suggesting something that might improve an assignment or the highlighting of an issue or perspective not addressed in the work. One can address academic integrity and circumvent plagiarism by having students review assignments produced by peers and then comment on their own assignment, but without having the opportunity to rewrite. A specific question concerns the administrative workload involved in peer review. Many software systems can ease this burden. Further suggestions on task design and software can be found in the literature [see Pearce, Mulder and Baik, 2009 and www.reap.ac.uk/peer.aspx]

In the context of this paper, peer feedback refers to scenarios where students construct a feedback response in relation to the work of other students. This would usually be a written response based on an evaluative judgement of the work against some criteria. Sometimes students would be given the criteria and at other times they may be responsible for formulating them. The latter would have more fidelity in relation to how work is evaluated in the professions. In that context, peer feedback will generally be more productive for future learning if the peer task is authentic and calls on knowledge and skills relevant to the discipline and when it simulates the kinds of peer processes that occur in professional practice.

There are numerous ways of implementing peer feedback that can be easily integrated into current teaching practices. Here are two brief examples, one easy to implement and one slightly more complex.

Examples

Gibbs (www.testa.ac.uk/resources/videos) describes a scenario where a lecturer who was concerned about the poor quality of students' lab reports in science redesigned the task by asking students in groups to produce their lab report as a poster. All the posters were pinned to the walls in the lab class and the lecturer asked students to walk round look at the posters and scribble feedback comments on them. This led to significant learning gains in lab reporting and in the exams. This study emphasises a number of factors. Students learned week-by-week from evaluating and constructing a feedback responses to each others' posters, it was a regular activity so they had opportunities to use their learning in subsequent reporting, it was a required

classroom task so there was a high level of engagement, it was public so it enhanced students' motivation - it encouraged positive competitiveness across groups who didn't want their work to look stupid in public – and it created a positive social climate for classroom learning.

Hammer, Kell and Spence (2007) describe peer review and feedback for draft essays in an English class with 80 students where peer review and feedback were implemented using Aropa software, which manages the anonymous distribution of assignments. Marks were awarded for participating in the reviews but not for the quality of participation. Students selected a topic from six for their assignment and carried out three reviews, hence the reviews were not on the same topic. The lecturer provided a rubric for the review. Responses were required to the following: What issue is the essay addressing? What is the main argument or suggest an argument? What support does the writer offer for the argument? Suggest a counterargument: Identify a characteristic sentence in the draft and suggest how it might be improved.

In surveys and interviews the students were positive about this experience. They reported that doing the review and using the rubric gave them insights into the way lectures evaluated their work, They believed that providing feedback would help them become more critical, detached, analytical and logical in their own writing. They reported that reviewing revealed blind spots in their own writing and that they learned from the writing styles and ideas of others.

Assessment and peer feedback

In reviewing the literature on peer feedback, it is clear that its learning potential has not been fully realised. One reason for this is that most published implementations of peer feedback focus on scenarios whereby students award each other grades rather than scenarios where it has been implemented for formative reasons as described above. This literature is, in fact, dominated by studies of peer-tutor grade correlations, often with the sole purpose being to show that peers can act as surrogate assessors for teachers.

Peer feedback need not involve students grading each other and to gain maximum learning benefit it is better not to use peers as surrogate markers. Some notional peer marking might accompany feedback reviews but it is better if these marks do not count in the final grading. Teachers might mark the peer comments provided by peers to encourage engagement but this also needs to be handled sensitively.

Conclusion

In conclusion, while there has been some interest in peer feedback in recent years this has been primarily focused on the students' ability to grade the work of others or on enhancing the feedback students receive from others. What has not been studied is the untapped potential of peer feedback as a process whereby students construct their understanding and develop critical judgment by reviewing and commenting on the work of others. This capability to construct feedback is a fundamental requirement in professional settings and for continuing learning beyond university. Also, critical thinking, making reasoned evaluations and developing self-reliance are core capacities inherent within the new Curriculum for Excellence being implemented in the school sector across Scotland (www.ltscotland.org.uk). It is therefore likely that students arriving in higher education in years to come will already have significant experience in self and peer review processes. This raises the question: how will assessment and feedback practices in higher education build on these developments?

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Resource
The PEER project has been funded by the Joint Information Systems Committee (JISC) and is developing a set of resources to support those wishing to implement student peer review. Website is at www.reap.ac.uk/peer.aspx