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Moving feedback forward: theory to practice

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There is substantial research interest in tutor feedback and students' perception and use of such feedback. This paper considers some of the major issues raised in relation to tutor feedback and student learning. We explore some of the current feedback drivers, most notably the need for feedback to move away from simply a monologue from a tutor to a student to a valuable tutor–student dialogue. In relation to moving feedback forward the notions of self regulation, dialogue and social learning are explored and then considered in relation to how such theory can translate into practice. The paper proposes a framework (GOALS) as a tool through which tutors can move theory into practice with the aim of improving student learning from feedback.

Keywords: feedback; dialogue; practice; self regulation; learning

Introduction

Rationale

Research shows that assessment and feedback are important drivers of what, when and how students learn (Brown, Rust, and Gibbs 1994; Biggs 1999). 'Good' feedback helps students understand their subject area and gives them clear guidance on how to improve their learning. Indeed, Bellon, Bellon and Blank (1991) state 'academic feedback is more strongly and consistently related to achievement than any other teaching behaviour ... this relationship is consistent regardless of grade, socioeconomic status, race, or school setting'.

Despite the recognised importance of feedback, tutors' and students' perceptions and actions related to feedback have historically received less attention than say assessment. However, this situation is changing and within the last 10 years a substantial amount of research into the pedagogy of feedback has been undertaken. Poulos and Mahony (2008) demonstrated that students were able to *perceive* tutor feedback as meaningful in terms of their own learning and development, but did not hold homogeneous views and differed in three dimensions: firstly in their perceptions of feedback, secondly in their understanding of the impact feedback has on their learning and lastly in what credibility to place on feedback. In relation to

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the latter, Orsmond, Merry and Reiling (2005) showed that student responses to feedback credibility were strongly influenced by their perception of the tutor giving the feedback. That is, if tutors were teaching outside their specific subject areas, students were less willing to act on the tutor's feedback. Carless (2006), in considering differing perceptions between students and tutors of feedback, established that tutors: (1) believe that they are providing more detailed feedback than students believe they receive and (2) perceive their feedback to be more useful than students consider it to be.

From the student perspective, feedback may be provided in a manner which is deemed to be too late to be useful, too vague, unclear and inconsistent (Glover and Brown 2006; Weaver 2006). This has been highlighted by the National Student Survey data (NSS 2009) which have shown that the overall area of 'assessment and feedback' in higher education has been consistently rated the lowest in terms of student satisfaction since the survey started in 2005 (SurrIDGE 2008; HEFCE 2010a). Despite a gradual improvement in some areas the 2010 survey (HEFCE 2010b) showed this area was still a problem for students; in particular the issues of receiving prompt feedback and receiving feedback that helped clarify points they did not understand.

In addition to student perceptions, Duncan (2007) indicates that there is also tutor frustration in relation to feedback as many students fail to collect marked work and to respond to tutor comments. Thus, there are continuing challenges surrounding the delivery of effective feedback in higher education. This paper addresses these challenges. A brief review of recent research into tutor and student feedback practices in higher education is provided, with an emphasis on the practical application of the research undertaken and, on the basis of that review, we present a framework (GOALS) for bridging the gap between theory and practice.

Moving feedback forward

Students have a number of difficulties learning from feedback. Chanock (2000) and Weaver (2006) considered that tutor comments needed careful explanation and that students needed advice on understanding and using tutor feedback. Orsmond and Merry (2011) showed that there is a lack of alignment between tutor and student practice, that is, tutors' intentions regarding feedback were not always understood by the student receiving the feedback. A consequence of this is that students may pay selective attention to parts of the tutor feedback that they consider, often erroneously, most relevant. Orsmond (2011) reported that students could find tutors' comments ambiguous or cryptic, often needing explanation that is provided in an unfamiliar discourse; and often providing little forward direction (feed-forward) to help students hone their self-assessment/regulation skills.

The third point is particularly important as the literature (e.g. Hattie and Timperley 2007) shows that self regulation is key to effective learning, i.e. in relation to feedback the ability and motivation of the individual to utilise the feedback to recognise the strengths and weaknesses of their own work and thus to identify areas for further development/learning.

Self-regulation in feedback practices

Hattie and Timperley (2007) commented that feedback on tasks was only effective if combined with information either related to improving student strategies for processing learning tasks or with raising awareness of self-regulation in learning, something which Glover and Brown (2006) indicate often fails to occur. Self-regulation requires students having skills to use a 'variety of learning functions and adapting this usage to the task demands at hand' (Vermunt and Verloop 1999). When reflecting on how well students achieve learning as a result of tutor feedback, the ability to self-regulate with regard to feedback usage has been highlighted by several authors. Nicol and Macfarlane-Dick (2006) present a model of active student engagement with feedback, where self-regulated learning underpins seven feedback principles. Pryor and Crossouard (2008) consider the role of feedback within a formative assessment model that allows student learning to be seen in the context of a wider process of self-awareness. Orsmond and Merry (2009) showed a difference between high and non-high achieving students related to their ability to self-assess or regulate is vital in relation to how effectively students use feedback in their learning.

The notion of effective learning from feedback to inform future assignments encapsulates the notion of 'feed-forward', whereby tutor feedback on a completed piece of work, can be utilised by the student to inform their efforts in future assessments. Clearly if students are not engaging with the feedback provided then it is less likely that improvements can be made in future. Rust, Price, and O'Donovan (2003) note, in relation to assessment criteria, that socialisation processes are necessary to help develop a shared understanding between students and staff, although they note that traditional methods of achieving this are 'resource heavy'.

Similarly, Baxter Magolda (2004) considered the role of a learning partnership model, which portrays learning as a 'complex process in which the learners bring their own perspective on what they believe and simultaneously share responsibility with others to construct knowledge'. This quote highlights two aspects of learning that relate to feedback. The first is that learning in relation to feedback does not occur in a void and students need to develop their own perspectives. The second aspect is that these perceptions on their feedback need to be shared with others such as peers and tutors, in order for new learning to be developed. This re-enforces the need for feedback to be part of a dialogic process.

Encouraging dialogue in feedback practices

Feedback in terms of a dialogue is discussed extensively by Nicol (2010). Crisp (2007) also highlights the importance of dialogue and argues that providing feedback alone is unlikely to lead to higher standards and suggests that 'unilateral pronouncements by assessors rather than dialogue with students' was a possible cause for students failing to respond to feedback (578). In essence, feedback dialogue can take the form of either discussions/communication between tutor(s) and either an individual or a group of students or peer discussions/communication between students. These forms of dialogue are important in allowing students to make sense of new knowledge they encounter and to help them develop new conceptual understandings. For instance, social learning processes, involving peer feedback may be seen as one means for students to enrich their self-regulation processes.

However, enabling increased dialogue between tutor and student presents serious challenges in the current climate of increased class sizes and resource constraint. Tutors are under increased pressure to deliver on a number of fronts. Against this backdrop a range of emerging technologies and e-learning platforms are becoming available within universities, and our students are familiar with them.

Audio feedback aids the gaining and sharing of knowledge and can facilitate discussions between students and tutors. For example, Northcliffe and Middleton (2008) stress active engagement with students in order to develop a conversation with the tutor about a piece of assessed work. 'Walkthrough feedback' is a process by which tutor and student are able to discuss a piece of either formative or summative coursework. The discussion between tutor and student is recorded as they 'walkthrough' a piece of coursework, so that at a later date, when the memory of the original conversation may be fading the student can listen again to the recording and be transported back into the context of the original discussions. In doing this walkthrough feedback, students may develop a number of key skills, for example, reflective skills, and may hear, as if for the first time, things originally missed in the face to face discussions.

Merry and Orsmond (2008) showed that audio feedback was successful with students, and explored some of the underlying reasons for this. Tutors were able to convey more complex ideas in audio feedback compared to written feedback. Furthermore, they were able to illustrate their meaning with more detailed examples which enriched the feedback with variation. Variation, and associated student awareness of what was important in the feedback, was also demonstrated through tone and intonation of the tutor's speech.

The use of video in delivering feedback is a more recent phenomenon. Video, which offers a powerful visual way to communicate, and has a high acceptability among learners (Cann 2007) has been used in teaching and learning for a number of years (Bracher et al. 2005). Crook (2011) experimented with the use of short video clips to provide generic feed-forward and feedback to students. Their research suggests that tutors can rapidly feedback to large classes in a timely and succinct manner and in a medium which appears to encourage students to engage with, and use that feedback for future assignments. The platform they piloted provided opportunities for students to 'rate' videos and to leave verbal comments, thus ensuring the possibility of dialogue with staff, although this function requires further exploration. Tutors felt that the video media allowed them to more effectively emphasise key points and believed their feedback interaction with students had improved as students were actually watching the videos (engagement), using the comments to for future work (feed-forward) and in some cases watching videos in pairs or groups thus facilitating peer dialogue.

Chi, Roy, and Hausmann (2008) reported on the use of video for peer feedback. They showed that collaborative observation of a pre-recorded videotape of a single student in a tutorial discussion with an experienced physics tutor led to peer dialogue between the observers, which subsequently led to the observing students solving complex physics problems as effectively as the student engaged in one-to-one dialogue with the tutor.

This use of videos brings into focus the value of peer discussions between students and the social element of learning, the importance of which is well-supported by the literature. Liu and Carless (2006) termed dialogue via peer feedback as the 'learning element' of peer assessment and they argue it is important to take learning

out of the private domain and to encourage a more social learning domain. A more social learning format for peer feedback has been seen to effect higher standards in comparison to current practices of tutors telling students about the quality of their work (Sadler 2010). When talking to tutors or peers in a feedback dialogue students undertake appropriation of ideas, language and activities and, since this is a multidirectional process, the term ‘mutual appropriation’ is used (Brown et al. 1993). This form of collaborative learning illustrates well the notion of social learning.

Overall, current research into feedback and learning has expanded in recent years to consider not only methods by which tutors may enhance their feedback practices, but has also began to consider students perceptions of feedback and their use of feedback. There has also been an increased recognition of the social element of learning and the value of peer–peer interactions. A key finding from the range of research reviewed is the importance of feedback as dialogic process and the ‘need’ for students to become effective assessors/regulators of their own learning.

A practical framework for moving from theory to practice

We have summarised key outputs from the recent literature relating to feedback and have highlighted the importance of both students’ dialogue and the social element to learning, as well as the need for students to take ‘ownership’ of their own learning. Table 1 illustrates the ways in which these concepts can be used to inform a new way of thinking about feedback delivery and how these methods differ from more standard, feedback practices.

In the section below we have interpreted the new way of thinking about feedback into a practical framework to assist tutors in enhancing student learning from feedback. A key area of research into tutor feedback has been the development of feedback models. Nicol and Macfarlane-Dick (2006) proposed a model of seven principles for tutor feedback delivery. In this model tutors are encouraged to, for example, clarify what a good performance is in terms of goals, criteria and expected standards and facilitate the development of self-assessment in learning. Carless et al. (2011) suggest that a sustainable feedback model necessitates, dialogue, goal-setting and self-evaluation. There is also a suggested need that assessment tasks ought to be designed to provide engagement over time in which feedback from various sources can be generated and processed. It is possible that tutors, in terms of feedback models, may believe that all they need to do in terms of their feedback is ‘do what the models asks’. Of course, this is not the case. If students are not familiar with self-assessment practices then asking them to implement self-assessment as

Table 1. New modes of feedback delivery in comparison with standard methods.

New feedback delivery	Standard feedback delivery
Encourages dialogue between giver and receiver of feedback	Monologue often tutor directed one way feedback
Involves peers	Does not involve peers
Explicitly encourages self-assessment/regulation	Does not explicitly encourage self-assessment/regulation
Feedback on assignment process	Feedback on assignment product
Students encouraged to be <i>proactive</i> in working with feedback	Students encouraged to be <i>reactive</i> in working with feedback

part of their feedback is going to be difficult. Therefore, it is important that tutors design within their curriculum opportunities to allow students to develop the skills necessary to implement feedback. The 'GOALS' framework provides guidance to tutors to assist in the delivery of feedback. It provides tutors with an approach that allows students to develop an understanding of what they may be asked to do in making sense of their feedback. The value of the GOALS framework lies in its flexibility for implementing the principles of a variety of models (e.g. Nicol's and Macfarlane-Dick's seven principles (2006), Hounsell et al.'s feedback loop (2008)). The GOALS framework allows for students to engage in self- and peer-assessment activities which are important in developing students' ability to use feedback. With its emphasis on peer-discussion, evaluation, self-regulation and the use of exemplars the GOALS framework is a tool to help tutors consider the fundamentals of feedback in a variety of settings and thus aims to facilitate the development of all students into effective, independent learners. It also allows tutors to consider feedback more holistically and in a socially embedded way, a need which has been suggested elsewhere (Price, Handley, and Millar 2011).

G = Grasping the objectives or purpose for learning

Before starting a learning task, such as an assessed essay or poster assignment, it is important that students should have grasped the objective or purpose of the assignment. That is, students should be encouraged to go beyond the belief that they are simply undertaking essays or posters to pass a module or course, but they should be encouraged to realise that there are certain learning outcomes or criteria that need to be met, or standards that have to be achieved and that the essay or poster is just the vehicle by which outcomes, criteria or standards are demonstrated. This can be interpreted as a key step by the student in relation to their own learning sphere, starting to see the 'bigger picture' and to take ownership of their learning experience – in essence the start of self-regulation. Orsmond, Merry, and Sheffield (2006) make the distinction between the 'form', i.e. the vehicle and 'function', i.e. the achievement of outcomes, criteria and standards of assignments. It is axiomatic therefore, that tutors relate their feedback to the purpose or objectives of learning, to the function of the assignment. Tutors are also encouraged to consider their feedback practice to enhance transparency of criteria in written feedback (Carless 2006; Poulos and Mahony 2008) and in audio feedback (Lunt and Curran 2010) or to make standards explicit (Young 2000).

How tutors guide students in grasping the objectives or purpose of learning from particular tasks is well discussed in the literature. Exemplars (e.g. previous cohorts' work), are useful in developing understanding of assessment criteria and tutor's requirements (Orsmond, Merry, and Reiling 2002), and can be used to discuss feedback and its meaning. Hendry, Bromberger, and Armstrong (2011) illustrate ways that exemplars can be used to act as constructive guidance on using different types of feedback and Handley and Williams (2011) discuss exemplars in terms of developing dialogue between tutors and students. Sambell and Montgomery (2009) showed how working with exemplars and asking students to engage in peer feedback was a more beneficial form of feedback in terms of increased learning when compared to tutors writing formative feedback on draft coursework. The use of exemplars is an effective way to illustrate to students how final products or performance demonstrate learning outcomes, criteria or standards. Essentially, such

discussions prior to, or around the setting of assignments are directly related to the concept of providing feed-forward, encouraging and guiding students in relation to the assignment to be completed, which for many students may raise confidence levels and perhaps encourage the student to plan more clearly how they intend to tackle an assignment. Exemplars have been used extensively as a way to guide students in the use of criteria and the understanding of standards, two aspects which many consider as being vital if students are to be able to comprehend the objective of assessed assignments (Orsmond, Merry, and Reiling 2002; Rust, Price, and O'Donovan 2003). Exemplars may also be a way of focusing on the notion of standards and away from criteria as encouraged by Sadler (2005). Exemplars encourage peer-assessment, even if direct marking is not involved (Orsmond 2011). Cartney (2010) discussed how peer-assessment helps students become more familiar with assessment standards. Interestingly, marking sheets helped but some students found the language the tutors used in designing marking sheets difficult it was in 'tutor speak', which may indicate the notion of separate tutor and student communities of practice as discussed in Orsmond, Merry, and Callaghan (2011).

With respect to the curricula itself, it may be beneficial for tutors to make more explicit the link between assessments and learning objectives and hence improve the understanding of the value of tutor feedback (Combs et al. 2008) and how it can enhance the learning process. For instance, this could simply take the form of a short period of group work discussing how a particular assignment links to learning objectives and how individuals within the group will tackle each of the criteria, thus providing feed-forward on the assignment.

Similarly, the use of peer discussion can be beneficial for delivering feedback as it allows feedback between peers on learning outcomes (Van den Berg, Admiraal, and Pilot 2006) and marking criteria (Liu and Carless 2006). Peer discussion is important in feedback delivery as students do not hold homogenous views as to what effective feedback is and how it can be used. Therefore, the variation inherent in peer feedback may be beneficial. At a practical level this could simply involve groups of students discussing anonymised written feedback on an assignment, identifying key learning points from text before presenting and discussing their ideas with the wider class.

The above examples deal with the use of criteria and standard, however, as Hughes (2011) outlines in her critique of current feedback practice these are not without their problems (for example, even when explicitly stated criteria are still open to interpretation and so subjective, external criteria might be beyond a student's reach and being clearer about the meaning does not necessarily help attainment). As allowing students to decide their own learning goals fits within the GOALS framework of grasping the purpose of learning, the framework can be used for less common practices such as ipsative feedback.

O = Orientate the student to 'self'

As noted in the literature, self regulation is a key to effective learning. In their conceptual model of how self-assessment and internal feedback can be developed Nicol and Macfarlane-Dick (2006) propose the delivery of seven feedback principles which allow input from peer dialogue, self-assessment and the clarification of what a good performance is. A close link between self-assessment and feedback can be made. Hattie and Timperley (2007), in their proposed model for feedback identify three major feedback questions that students need to ask in relation to learning from

feedback ‘How am I doing?’, ‘Where am I going?’ and ‘What to next?’ These questions closely reflect the definition of self-assessment provided by Boud (1995) ‘Whenever we learn we question ourselves. How am I doing? Is this enough? Is this right? How can I tell? Should I go further? In the act of questioning is the act of judging ourselves and making decisions about the next step’. In their model Hattie and Timperley (2007) argue that feedback to the student, such as ‘great work’ or other praise to students is unlikely to be effective as it can distract from the most useful feedback directed towards the student in terms of regulation on the processing of the task. This feedback relates to how well students monitor the processing of the task, for example in error detection which is poorly undertaken by university students (Butler and Winne 1995). There are a number of ways that such error detection can be encouraged, for example students can be asked to consider 150 words of tutor-constructed text on blood pressure, which has certain errors. The students are then asked to identify the errors and provide an explanation. The students are then provided with a tutor-constructed correct text and are asked to compare their responses with the tutor’s. In this way students begin to develop self- and peer-assessment abilities (Orsmond 2011).

Orientating students to ‘self’ can also assist students in grasping the purpose of learning. For instance, Gomez and Osborne (2007) provide a practical mechanism for developing self-regulation through reflective writing. They ask third year biology students to undertake a reflective summative assessment using reflection on the feedback provided on an earlier formative assignment relating to an aspect of neurobiology.

Exemplars also have a role to play and are not only useful in providing reference points for directing students but they also allow students to be aware of their own progress in learning, and hence are able to monitor their own learning more effectively (Earl and Katz 2008).

A = Actions required to provide dialogue opportunities and enhance self-regulation

We have explored the importance of dialogue in relation to learning although acknowledge that providing the time for effective dialogue between the tutor and individual students can be challenging. However, encouraging dialogue in feedback is recognised as a need by both tutor and student as without dialogue feedback can become frustrating and disengaging for all. Tutors may offer the opportunity outside of the class to talk, but not all students take up this offer (Price et al. 2010). Sometimes, the actions that tutors need to take to generate dialogue can involve changing the feedback format. Lunt and Curran (2010) observed that students who received audio feedback comments that disappointed them asked to meet tutors to discuss the audio comments, something which happened rarely with written feedback. Bloxham and Campbell (2010) developed interactive feedback cover sheets which required students to comment on what they wanted from feedback. This approach not only enhanced dialogue, but developed self-regulation.

Technology can help: of all the technologies the personal response system or ‘clickers’ is the most well established (for a useful bibliography see Bruff 2011) and can help maintain student interest, enable (anonymous) group participation (Rhem 2009) and provide immediate feedback (Beatty 2004). Virtual learning environments (VLEs) and other web-based platforms provide for tutor–student and student–student dialogue. For instance Ertmer et al. (2007) reported on a study that

investigated student on line peer discussions and found that students not only recognised that giving peer feedback reinforced their learning but enabled them to achieve higher understanding.

Orsmond, Merry, and Callaghan (2011) show that students as part of their community of practice engage in patterns of participation and specific discussions with peers. This forms part of the learning in the overt curriculum, and part of the tutor's role is to try and develop or enrich this discussion. By utilising the GOALS process tutors are able to focus on ways of encouraging further actions that enrich student dialogue with their peers. In terms of communities of practice Price et al. (2011) indicate that students recognise the need for dialogue in order to fully work with their feedback.

L = Learning evaluation opportunities

Opportunities for students to receive feedback on how much they have learnt are a vital part of the learning journey. It is particularly helpful if such learning evaluations are carried out by the students themselves as this encourages self-regulation. Students need to be aware that all learning involves shifting from a point of being assisted learners to one in which they become unassisted, and then perhaps as part of developing task complexity, they become assisted learners again (Tharp and Gallimore 1991). Therefore, part of the feedback dialogue needs to indicate that when assistance is being given that the student incorporates that into their thinking and understanding of the subject being studied. In this way, feedback can guide students into reconstructing a conceptual understanding of the subject. Elbow and Sorcinelli (2006) take the perspective of the reader when returning feedback to the 'writer'. They suggest discussing the content in terms of 'I don't see it the way you do. In my view ...'. Here the student has to make the evaluation themselves. Activities involving peer-discussions and assessment are highly beneficial in developing learning evaluation opportunities. Cartney (2010) reported on a peer-assessment model where students saw benefit in not just giving feedback, but also in questioning their own work as a process of developing feedback for others. Hughes (1995) outlines his work on peer evaluation of laboratory reports and the range of case studies in Orsmond (2004) such as Rushton's (2004) 'league fixture approach' to peer-assessment of scientific poster provide examples of how practitioners have incorporated peer evaluation into everyday practice.

S = Strategies for moving on

Having focused students on the objectives of learning, orientated them towards self, developed a feedback practice to encourage self regulation and dialogue and enhanced students' ability to evaluate their learning it is important to assist students in developing strategies to allow learning to move forward.

Thus, in responding to feedback, students need to be active and engaged and to consider the feedback they receive in terms of their own learning. Cartney (2010) showed that, as a result of peer-assessment, which feeds self-assessment, students have a desire to take meaningful experience forward, to change practice and to develop networks between students and recognise the worth in others and to evaluate the learning ability in others. Orsmond, Merry, and Sheffield (2006) showed that when undertaking a certain task some students develop frameworks to structure their information. In reading students work it can be unclear why certain

information has been used or how sense has been made of a particular concept. In giving feedback, a dialogue can be created by asking students about what led them to make a specific decision. This is something that can effectively be done through audio feedback which allows complex ideas to be conveyed more effectively compared to written feedback (Merry and Orsmond 2008). Boud's definition of self-assessment considers learning in the present and future, and therefore can link learning evaluation with developing learning strategies. Feedback, therefore, should encourage students to think about future learning approaches and development. Students for example, could be asked as part of assignment to say what advice, with justification, they would give someone else attempting this assignment in future. This could take the form of a short audio or video clip.

Discussion

In this article we have provided evidence from the literature that suggests there are distinct advantages which accrue from a more interactive, dialogic feedback process involving tutor, student and indeed other students. Feedback as a two way process provides the opportunity for tutors to enhance a number of key learning approaches within their students, most notably in allowing students to develop self-assessment/regulatory abilities – an element key to future success.

As a result of consistently low assessment/feedback scores within the NSS it is likely that staff are more aware than ever that there needs to be a substantial shift towards enhancing feedback practices. However, there remain substantial barriers, not least time pressures and a widespread, persistent belief, despite evidence to the contrary (Higgins, Hartley, and Skelton 2002; Orsmond, Merry, and Reiling 2005; Carless 2006), that students are only interested in their grades. Equally in a digital age there needs to be a recognition that universities are no longer the gatekeepers of knowledge; we need to move the ethos from one in which feedback is seen as a peripheral activity to the main delivery of content, to one in which we recognise feedback is essential in the development of independent learners who understand the hierarchy and geography of where information resides. In this context we present the GOALS framework as a tool to help practitioners implement effective feedback within real-world constraints. GOALS is not dependent on a particular form of feedback, and as such can be delivered in multiple formats, e.g. written, audio or video. With its emphasis on peer-discussion, evaluation, self-regulation and the use of exemplars it is possible to address some of the feedback concerns discussed earlier in this paper. Within the UK such an approach may be particularly timely given the current higher education 'climate'.

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