Developing sustainable feedback practices

David Carless, Diane Salter, Min Yang and Joy Lam

University of Hong Kong, Hong Kong

Email: dcarless@hku.hk

Feedback is central to the development of student learning, but within the constraints of modularized learning in higher education increasingly difficult to handle effectively. This article makes a case for sustainable feedback as a contribution to the re-conceptualization of feedback processes. The data derive from the Student Assessment and Feedback Enhancement (SAFE) project, involving in-depth semi-structured interviews with a purposive sample of award-winning teachers. The findings focus on those reported practices consistent with a framework for sustainable feedback and particularly highlight the importance of student self-regulation. We conclude by setting out some possibilities and challenges for staff and student uptake of sustainable feedback.

Introduction

Feedback is central to the development of student learning (Hattie & Timperley, 2007; Hounsell, 2003), yet, there is an increasing body of evidence that current feedback practices are not fit for purpose. National student surveys in both the UK and Australia (e.g. HEFCE, 2008; Krause, et al., 2005) have pinpointed feedback as one of the most problematic aspects of the student experience. A study across universities in Hong Kong also showed pointedly that staff believed their feedback to be much more useful than students did (Carless, 2006). Whilst it is possible that

student evaluations of feedback reflect wider concerns about staff-student relationships or the nature of learning in mass higher education, feedback is clearly an issue in need of further analysis.

The challenges for providing effective feedback have been well-rehearsed in a number of recent articles (e.g. Gibbs, 2006; Hounsell et al., 2008). Students often view comments by tutors on their work as: difficult to understand (e.g. Weaver, 2006); lacking specific advice on how to improve (e.g. Higgins, Hartley & Skelton, 2001); or difficult to act upon (e.g. Gibbs, 2006; Poulos & Mahony, 2008). Many of these problems are accentuated by the terseness and finality of one-way written comments. The student role in the feedback process also needs enhancement. Students have seldom been trained or supported in how to use feedback (Weaver, 2006), and often rely on relatively unsophisticated strategies for using feedback (Burke, 2009). Finally, the expansion of higher education and the crowding of assignments towards the end of modularized courses create scenarios where students may be more in need of supportive feedback, but there are typically insufficient resources to provide this support (Hounsell et al., 2008).

The limitations in feedback practice sketched above stimulate momentum for further attention to feedback processes. The Student Assessment and Feedback Enhancement (SAFE) project, carried out in the University of Hong Kong, had the broad intentions of identifying staff and student perceptions of key issues related to feedback; developing enhanced understandings of how feedback is handled at the undergraduate level; and contributing to improvements in the practice of giving and receiving feedback. This article uses data from semi-structured interviews with award-winning

staff, a central focus of stage 1 of the project. Other phases of the project are not discussed here for reasons of space and will be reported elsewhere; they involved focus group interviews with students and developmental work with a small group of staff interested in trying to improve their feedback practices.

For the purposes of the current discussion, we take a broad definition of feedback as "all dialogue to support learning in both formal and informal situations" (Askew & Lodge, 2000, p.1). The focus on dialogue is central to our thinking because of the limitations of one-way written comments illustrated above. We view feedback as being part of pedagogy in that all good teaching is interactive and dialogic; and also part of assessment in that much student learning is driven by the assessment tasks they undertake. Guidance or dialogues related to these tasks form an important part of the instructional process.

Underpinning our position is the conviction that tinkering with feedback elements, such as timing and detail is likely to be insufficient. What is required is a more fundamental re-conceptualization of the feedback process. We chart some ways forward by building on recent work in the field (e.g. Hounsell, 2007; Nicol & Macfarlane Dick, 2006) and placing the development of student self-regulation at the core of feedback processes. Self-regulation is defined as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition" (Pintrich & Zusho, 2002, p. 250).

This article seeks to contribute to this re-conceptualization of feedback by putting forward a rationale for 'sustainable feedback' and providing examples of related

practices. Our orientation towards sustainable feedback emerged during the process of the study as a result of a constellation of factors, including: early interviews with informants; engagement with the relevant literature and other scholars in the field; and debates within our own team.

The remainder of the article is organized in the following way. First we present a framework for sustainable feedback; then the research method is described; findings are focused on an analysis of sustainable feedback practices reported by staff interviewees; implications summarize characteristics of sustainable feedback and outline some possibilities and challenges for its wider scale development.

Feedback and the path towards sustainability

If we adopt a rather one-way transmissive view of feedback, with tutors simply making comments on completed student assignments, then many of the limitations sketched above are likely to persist. Whilst feedback is generally considered to be most helpful if it is timely and can be acted upon by students (Gibbs, 2006), the crux of the matter is how students interpret and use feedback. Possible ways of enhancing feedback processes involve viewing feedback more as dialogue than information transmission (Nicol & Milligan, 2006) and the development of iterative dialogic feedback cycles (Beaumont, O'Doherty & Shannon, 2008). Dialogic feedback suggests an interactive exchange in which interpretations are shared, meanings negotiated and expectations clarified. Dialogic approaches to assessment can guide students on what is good performance by facilitating discussions of quality in relation to specific assignment tasks and also support them in developing enhanced ownership of assessment processes.

Underpinning student involvement in assessment is Boud's (2000) notion of sustainable assessment: practices which meet immediate assessment needs whilst not compromising the knowledge, skills and dispositions required to support lifelong learning activities. Building on this, Hounsell (2007) introduces the notion of sustainable feedback and addresses three strands: a focus on the provision of 'high-value' feedback carrying impact beyond the task to which it relates; enhancing the student role to generate, interpret and engage with feedback; and developing congruence between guidance and feedback by orchestrating teaching and learning environments in which productive dialogue arises from core module learning activities. In his exemplary treatment of the topic, Hounsell does not explicitly define sustainable feedback and so we propose our own definition:

- Dialogic processes and activities which can support and inform the student on the current task, whilst also developing the ability to self-regulate performance on future tasks.

Of key relevance to sustainable feedback is an influential model (Nicol & Macfarlane-Dick, 2006) which posits seven principles of good feedback practice. The two most relevant to our current purposes are: facilitates the development of self-assessment and reflection in learning; and encourages teacher and peer dialogue about learning. An important starting assumption is that students are already engaged in self-regulation but some students are more effective at self-regulating than others (Nicol, 2007). Such notions also resonate with the seminal work of Sadler who puts it crisply, "The possession of evaluative expertise is a necessary (but not sufficient) condition for improvement" (Sadler, 1989 p. 138). He also elaborates on the use of student

exemplars to develop an improved personal knowledge of the nature of quality work (Sadler, 2002).

For the purposes of our analysis, we interpret feedback practices as being represented by a continuum ranging from conventional to sustainable feedback practices. The former refer to strategies which involve tutors commenting on aspects of student work through various means, such as: written feedback on drafts or final versions of assignments; verbal comments in individual or small group tutorials; e-mail correspondence for suggestions or comments; and collective in-class guidance or feedback. These, or similar, tried and tested practices are part and parcel of many tutors' repertoires. Developing these practices in a more 'sustainable' direction principally involves variations which enhance the student role, so that the main onus is not on the tutor to deliver the feedback, but the student to self-regulate their work.

The kinds of practice congruent with a framework for sustainable feedback have not been widely reported in the literature, but neither are they unfamiliar. In addition, to those sources cited above, a well-known example is the justly celebrated work at Alverno College. Key aspects relevant to the current discussion are outlined in Riordan and Loacker (2009):

> The most effective teaching eventually makes the teacher unnecessary … students will succeed to the extent that they become independent lifelong learners who have learned from us but no longer depend on us to learn … a key element in helping students develop as independent learners is to actively engage them in self-assessment throughout their studies (p. 181).

Having made the case that student self-regulation is a central aspect of sustainable feedback, what kinds of assessment tasks might facilitate (or hinder) such practices? How an assessment task is designed and arranged, has a profound influence on how students organize their study habits (Gibbs, 2006). One-off end of module assignments or examinations are in themselves unlikely to encourage dialogic feedback cycles. A more promising assessment design strategy involves two-stage (or multi-stage) assignments in which two (or more) related tasks form the assessment for a course. Two-stage assignments can involve feedback on the first stage, intended to enable the student to improve the quality of work for a second stage submission (Gibbs & Simpson, 2004). Portfolios, projects and other integrated tasks also share characteristics with two-stage assignments. Such assignments facilitate sustainable feedback when required standards are becoming increasingly transparent and dialogic feedback processes support students in self-monitoring their work while it is being developed. Multi-stage tasks are also congruent with the important principle that assessment should stimulate even distribution of study time over the period of a module, rather than being concentrated at its end (Gibbs, 2006).

In sum, the framework underpinning this article is based on the assumption that students are only in a position to benefit fully from feedback processes when they are self-monitoring their own work at increasingly higher levels. This development of self-regulative capacities is the essence of sustainable feedback. Appropriate assessment task design represents a means by which sustainable feedback can be facilitated.

Research method

This article seeks to address the following research question: what practices, relevant to a framework for sustainable feedback, were reported by a sample of award-winning teachers in the University of Hong Kong? The data come from the first stage of the SAFE project, involving ten interviews with award-winners from each of the ten Faculties of the university: five of these teachers had won university-level awards, three had been decorated at the Faculty level and two had won both university and Faculty awards. Interviews are a particularly useful research strategy when one wants to understand what teachers are doing and why, and probe responses in an interactive manner. Furthermore, we believed that award-winning teachers were likely to have the enthusiasm and expertise to engage in insightful discussions of their teaching and feedback practices. We use these interviews, not of course to claim that they are a representative sample of views in the university, but in order to generate a range of practices for analysis. A limitation of an interview study is that it only represents what is reported and this may not reflect entirely what actually takes place; it also lacks triangulation with other measures.

The main purpose of the interviews (conducted by the first two authors) was to permit participants to describe and discuss their feedback practices. An interview protocol was developed, piloted with an experienced colleague and then refined. Semi-structured interviews for the study lasted around one and a half hours and took the form of interactive conversations in which participants described and reflected on their feedback practices, and responded to various probes. The main foci included: discussion of feedback practices in relation to specific courses; how informants defined and interpreted the notion of feedback; discussion of different modes of feedback and their respective pros or cons; perceptions of what constitutes effective

feedback; and how students were perceived to respond to feedback. Interviews were recorded and transcribed verbatim.

There was no a priori position taken before data collection. The framework of sustainable feedback used to interpret the data evolved as interviewing proceeded, provisional data analysis unfolded and relevant literature was further scrutinized. In some of the early interviews, informants reported mainly conventional feedback practices which seemed somewhat labour-intensive and unlikely to contribute to a generalizable way forward. As interviewing continued a more diversified set of practices were reported by informants. As a consequence of this, interviewing became progressively more focused on sustainable feedback elements during later interviews.

Data analysis procedures were as follows. A preliminary content analysis identified two main strands of feedback strategy: the first encompassed conventional feedback methods, the second involved practices which are congruent with our framework of sustainable feedback. The practices were coded and categorized first by the fourth author, verified or amended by the first author and then further debated within our team. When clarification was necessary, the research team went back to informants to check details and the trustworthiness of interpretations. Those practices which resonated with our evolving framework for sustainable feedback formed the raw data drawn on in this article. We use these reported practices to theorize and to draw out principles for the development of effective feedback.

Findings

The findings are essentially a description and analysis of reported practices carrying implications for our framework for sustainable feedback. They are divided into four sub-sections for convenience of exposition. The themes addressed are: two-stage assignments and their role in facilitating feedback; dialogic feedback through oral presentation tasks; the use of technology to facilitate feedback; and the overarching notion of student self-evaluation, a theme underpinning all the reported practices.

Two-stage assignments

A number of informants mentioned that two-stage assignments could facilitate feedback processes. Peer review or peer feedback processes were reported as part of such assignments. The informant from the Faculty of Engineering described a group project which comprised successively a single page statement of intention, a short oral presentation and a final report. In this 'spaghetti bridge' task, students have to design and construct a bridging model by using spaghetti to support a certain weight. He outlined students' roles during the oral presentation part:

> When students are doing the presentation, I encourage them and make it a requirement to ask questions or make suggestions to the presenter group … At first they felt I force them to do that and later on they seem to enjoy it … The comments from the students are reflective and helpful for learning because they are facing the same design problems in spaghetti bridge so can learn from each other.

The informant noted that it was often difficult to motivate students to engage in peer feedback or comments on classmates' presentations (although he acknowledged that he could not state how much of this activity was going on outside class). He also reported how feedback processes from the statement of intention and oral presentation

were designed to improve performance in the final report. He described how he would allocate time in class for his feedback and guidance, and provided some further written comments to aid the preparation of the final report. He also reported other feedback strategies involving tutorials and examination preparation advice. Taking the entire interview into account, we inferred that his feedback practices were mainly conventional with some elements carrying potential for sustainability, namely peer review and peer feedback.

The informant from the Department of Nursing reported on a portfolio assessment as an example of a multi-stage assignment. In this case, she asked students to hand in the portfolio twice to reduce the pressure of an 'all or nothing' submission at the end of the course. She reported how she would handle the first submission:

> I would report [to students] that you have achieved these objectives and outline the positive things where I think they have done well. But because it is the first portfolio, I want them to improve on that in the second one, so I would say these are some of the areas you can pay attention to.

Grades would be awarded for both submissions of the portfolios with the general orientation being to average the two grades, but with the possibility that a significant improvement in the second portfolio could be rewarded appropriately. The informant acknowledged the heavy marking workload generated by the two submissions of the portfolio but outlined some positive outcomes:

> You are getting students a lot more interested in what they are doing … When I am marking their portfolios it's like reading somebody's inner world. They're telling you what they have learned, the joy, the worry and the aspirations. I think it's great when you read something like that… What they like about the portfolio

assessment is that they know how well or badly they have done and are able to make it better. They have learnt not just how to write this assignment but also how to look for information, knowing how to use it and applying it.

We inferred from the interview that her enthusiasm for the portfolio assessment provided the motivation to invest the time and effort in engaging with her students' portfolios. We noted both elements of conventional feedback practices (timely feedback on the first portfolio to inform the second one), and sustainable feedback (student responsibility in locating and using information for the portfolio).

An informant in the Department of Geography, Faculty of Social Sciences talked about her experiences with two-stage assignments. She used an image to articulate her perspective on feedback:

If you don't know what students are doing with the feedback, it risks being like throwing a stone into the sea … when I shout out I want something to come back, so the aim is echo, a student response … Feedback is something that can help students act in the future, so that they can improve. They may not immediately improve based on the feedback, but it should give them a direction. From their own effort in setting goals for ongoing learning, they could improve in terms of knowledge, thinking or some other areas.

Our interpretation is that 'throwing a stone into the sea' represents those one-way transmissive feedback practices that the literature has tended to identify as largely ineffective, whilst her notion of 'echo' is that it involves some kind of response from the students. She reported that two-stage assignments create more potential for this student response: "you feel more willing to give them comments because you are

more confident that your feedback would be acted on. I feel that there would be an echo at the end". She said she was confident in giving feedback on students' initial report (i.e. the first stage) of this course because she would know whether the students had incorporated her feedback in their final product or not. The 'echo' represents a student response to the feedback.

In this sub-section, we have suggested that multi-stage assignments are a potentially useful means of developing productive feedback strategies. The reported strategies share some elements of conventional feedback practices (e.g. written feedback on first stage assignments so as to inform second stage assignments), as well as features congruent with sustainable feedback (e.g. peer review in engineering or locating and using information independently in Nursing).

Dialogic feedback in oral presentations

Oral presentations were frequently reported as an assignment task. In the discipline of Business, oral presentation skills are highly valued and the relevant informant indicated he would facilitate the feedback process by recording student presentations:

> I video-tape each student for five minutes … We show the video right after the presentation … Usually I get them to reflect first, "How do you think you did?" And then we give them feedback. I think they find it phenomenally useful because hardly anybody does this … They are able to give insightful analysis on their own performance because pictures don't lie ... At first, they get a bit embarrassed but I find they are objective. That's why I think it's very effective, because they see the truth.

We infer here that this process is focused on promoting dialogue about effective presentations within a challenging task for students. He acknowledged the emotional side of this experience:

> The students sometimes feel awful during the presentation and video-taping. Sometimes they even cry but I think it's a part of the learning experience. Emotion is part of learning and they have to learn to deal with it. I am sorry that they sometimes feel bad but it is better that we discover their poor performance in class rather than in their working environment. Mostly I think they appreciate the feedback. The intimidation they go through is actually good for them. It makes them more competitive.

The informant's orientation towards teaching was further articulated in terms of organizing challenging interactive learning activities for students; declining to provide lecture notes and instead putting the onus on students to learn pro-actively. He commented as follows: "If anyone falls asleep in class, I embarrass them and then they don't do it again … I am known as a tough teacher but I don't know why because I award a lot of 'A' grades and find the students really motivated". He acknowledged that, "the way I do things is quite different from others and none of the other colleagues relates to what I do".

Oral presentations were also viewed as important by the informant from the Department of Real Estate and Construction, Faculty of Architecture. He believed that in his discipline there were no right or wrong answers but convincing clients was a particularly valued skill. He described how he had changed the frequency of

presentations from a one-off presentation ("where students learnt very little") to three short presentations (once every four weeks):

> Although the presentation duration was shorter, it didn't matter because their performance kept on improving. I think students treasure the presentations, because they can receive comments immediately which would benefit their final submission [of the written report]. I urge students to ask questions and give feedback, sometimes they do, but unfortunately students did so less this year. Most of the comments came from me; I asked questions like 'Why this choice?' 'What are the other alternatives?' Students would learn from the feedback and they would also learn from listening to other groups' presentations.

We see in this example a recurrence of earlier themes: an oral presentation followed by an associated written report; immediate feedback following a performance; and encouraging students to provide peer comments, but the difficulty of getting students to provide such input.

In this sub-section, we have discussed two examples of attempts to promote dialogic feedback within the oral presentation assignment genre. The example from Business involved a lecturer who challenged students intellectually and emotionally to develop their oral presentation skills. The example from Real Estate involved repeated presentations which facilitated improvement over time.

Technology-supported feedback

Several informants commented on the potential of technology to facilitate feedback processes. An award-winning teacher in the Faculty of Education saw online

dialogues as more effective than conventional verbal and written feedback. He outlined some advantages of online technology tools as follows:

By posting their drafts on the online platform, they get the chance to see other students' work, then they can give and receive feedback in an interactive manner … Teachers are providing an opportunity for students to learn from each other.

He further expressed the view that online tools can extend dialogues, can enable ideas to be revisited, and the online community can promote open sharing. He provided an example where his students had posted on a blog their own storyboard for him and other students to comment. He thought the dialogues on the blog promoted in this way formed a powerful feedback mechanism. He reported that he would identify the characteristic patterns in those 30 storyboards and create a summary which students could apply to their work.

His orientation towards feedback was as follows:

Feedback to me is not just the feedback you give to students in written form. Feedback is a kind of support which gives students a sense of scaffolding and will gradually get them to be more independent. I think feedback is a tool to get students involved in interactive learning, for example, through looking at other students' work.

He perceived that the most effective feedback revolves around the students' need, what he called "just in time feedback" so that students have the opportunity to use the feedback. He warned, however, of a negative effect of feedback if it becomes spoon-feeding, "so only give feedback when it is necessary, and otherwise use strategies for students to find out answers themselves". This point appears congruent with our framework for sustainable feedback.

A second example of technology-supported feedback concerned the use of blogs from the informant in the Faculty of Business. He reported posting articles on the blog:

> This is a good way to start discussion … They need to read the articles and write their comments. They build on each other's arguments. It makes them think and gives them a sense of sequence in that they can give instant feedback to each other … The feedback from the course blog is more horizontal rather than vertical because they will bring in all their ideas. It's very dynamic and a lot of discussion is generated.

The blog formed part of the course grade of 40% for "active class participation" which encouraged students to involve themselves in it.

In this sub-section, we have focused on the role of blogs as a strategy to engage students in dialogues around learning associated with assessed tasks. In the first case, students were encouraged to participate through its relevance to their assignment. In the second case, participation in the blog counted as part of the grade for the module.

Promoting student self-evaluation

A number of informants reported strategies related to the promotion of student self-evaluation. The informant from the Department of Real Estate and Construction articulated an orientation to teaching based on "reducing the amount of guidance provided by the teacher and pushing students to find answers themselves". He mentioned giving students some open-ended guiding questions for reflection at the

beginning of a course (what he called 'pre-workshop assessment') and the same questions at the end ('post-workshop assessment'). He outlined his view as follows:

I think the pre-workshop assessment is a very important component because without it, students very often cannot realize what they have learnt. It is a self-evaluation, so that students would realize whether they have already mastered the knowledge or not.

He said that in this way students could self-evaluate what they have learnt, how they improved, and what were the learning experiences that supported the improvements.

Turning to his views on effective feedback, he expressed it as follows:

Effective feedback must be in the interests of students rather than teachers. I think the most important characteristic is to let students know how to find out what they want, rather than providing the answer directly. But it's easier said than done.

The final sentence of this quotation is illustrative of the challenges inherent in developing practices which put the onus on students to learn autonomously. He elaborated as follows:

I've tried to explain to students my approach. Some of the students accepted it and some of them didn't. They think getting a high mark is the main priority … Many of my students would complain that I pose too many questions without giving them answers. But my strategy is that the same question has to be asked twice, so students can realize what they have learnt.

We interpret these comments as illustrative of tensions in attempting to develop student self-regulation and sustainable feedback. The informant acknowledged that he sometimes compromised between promoting student autonomy in the way he believed, and catering for student requests for more direct teaching and support.

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The informant from the Faculty of Medicine described how he promoted self-directed learning using problem-based learning (PBL) with a group of twelve students. He described his orientation as follows:

> I think PBL is the most exciting model for giving feedback. It is exploratory rather than directive feedback … To promote self-directed learning I would not make a judgement. I would just ask the class questions like, 'What do you think of that?' 'Has he missed something?' 'Do you think the points are clear?' They are all learning and it's what I call feedback in real time.

He also referred to "provocative feedback" in order to "open up new things for them and encourage them to think a bit wider and deeper, for example, through questioning". Tensions were also mentioned, "Initially, I would think that they are probably a bit disappointed because they expect the teacher to teach them. In the end, they value the fact that you respect what they brought to the class".

We infer a number of points from his comments. His notion of exploratory rather than directive feedback appears consistent with our framework of sustainable feedback in that it places the onus on students to interpret and use feedback. 'Feedback in real time' resonates with the notion of timeliness and immediacy of feedback (cf. Gibbs and Simpson 2004) and could relate to either conventional or sustainable feedback. 'Provocative feedback' hints at a dialogic approach to pedagogy, in this case facilitated by the small class size.

In this sub-section, we have discussed two examples of how staff tried to involve students in activities promoting self-evaluation. Other informants also provided examples, whilst some seemed to view student self-evaluation as something that was a desirable goal, yet difficult to achieve in practice. This tension between what staff thought was educationally desirable and what was realistic with and acceptable to students was evidenced in several of the interviews.

Discussion

This article has reiterated the importance of student self-regulation in feedback processes, enriched the notion of sustainable feedback and provided reports of related practice from award-winning teachers. We have not sought to report a representative selection of practices reported by our informants, but have instead focused on strategies that carry implications for our framework for sustainable feedback. The rationale for this approach is our belief that for feedback to be effective, it needs to place less emphasis on conventional feedback practices and develop further those in which student autonomy and self-monitoring capacities become paramount. Following from this, sustainability lies in the ability of students to improve the quality of their work independently of the tutor. To rephrase Riordan and Loacker cited earlier, the most effective feedback eventually makes the feedback provider unnecessary.

In summary, we infer from the findings the following principles of effective feedback practice:

- the enhancement of student self-evaluative abilities through activities such as question-raising and the promotion of self-directed learning;

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- dialogic interaction usually incorporating both peer and lecturer critique;

- technology-assisted dialogue with the aim of promoting student autonomy and reflective interaction.

The kinds of assessment tasks most supportive of these principles were usually embedded within two-stage assignments. These typically took the form of oral presentations, including an interactive peer critique framework. Oral presentations were frequently followed up by group projects and/or an ensuing written report. These two-stage assignments seem to carry particular potential for supporting sustainable feedback practices when they facilitate iterative development of self-regulation skills over an extended period of time.

Congruent with these principles of effective feedback, we suggest sustainable feedback encompasses the following three characteristics:

- Involving students in dialogues about learning which raise their awareness of quality performance;

- Facilitating feedback processes through which students are stimulated to develop capacities in monitoring and evaluating their own learning;

- Enhancing student capacities for ongoing lifelong learning by supporting student development of skills for goal-setting and planning their learning.

A fourth facilitating strand of sustainable feedback relates to the task design aspect and suggests a further key element:

- Assessment task design to encourage sustainable feedback needs to facilitate engagement over time in which feedback from varied sources is generated, processed and used to enhance performance on multiple stages of assignments.

The article has built on Hounsell's (2007) initial conceptualization of sustainable feedback. It claims to have enriched the concept in three ways: by suggesting a working definition of sustainable feedback; by providing reports of sustainable feedback practices from award-winning teachers; and suggesting the above four overarching characteristics of sustainable feedback.

Our position reinforces the need to re-focus feedback research and practice away from the notion of staff providing one-way feedback to students, in favour of dialogic exchanges in which staff and students are jointly involved in conversations about learning (cf. Beaumont et al., 2008). Unless students are developing capacities to self-regulate their own learning, their ability to make sense of and use any feedback we provide, is seriously constrained. The data have, however, also suggested some tensions between staff views of the desirability of stimulating students to develop critical thinking skills and self-evaluative capacities, and reports of student unwillingness or resistance. In this study, only the representative of the Faculty of Business seemed prepared to challenge the students fully, whilst other informants mainly adopted a more pragmatic compromise between what they thought was educationally desirable and what they perceived students could readily accept. Aspects of the data indicate that some students show reluctance to engage fully in self-evaluation activities, and others appear to have relatively under-developed abilities in this area. Our student interviews, which will be reported elsewhere, also showed only limited evidence of student involvement in self-regulative activities. Related to this, a key strategy to support increased uptake of feedback is the enhancement of student self-regulation (cf. Nicol, 2007). How students develop these

self-regulatory capacities is a crucial issue that our data do not permit us to engage with fully, although it is our belief that dialogic feedback cycles applied to exemplars of performance are a key strategy.

Conclusion: possible ways forward

This article has reported pockets of sustainable feedback practice amongst a small group of award-winning teachers. In essence, feedback is sustainable when it supports students in self-monitoring their own work independently of the tutor. We conclude by discussing strategies for the wider promotion of sustainable feedback amongst staff and students and the potential barriers. This forms part of an agenda for further research and development.

Whilst this article has mainly focused on feedback in the context of assessment, the development of student self-regulative capacities is an important element of good teaching. Within the multiple demands of academic life only a minority of lecturers are likely, however, to have the mindset, skills and motivation to prioritize the development of self-regulative activities congruent with sustainable feedback. One problem may be a lack of incentives to engage in such practices, particularly if there is a risk that asking challenging questions of students and pushing them in potentially uncomfortable directions might have negative impacts on student evaluations of teaching. Another obstacle is that such activities may be perceived as taking away time from the delivery of disciplinary content. These barriers need to be tackled or challenged, not least because self-regulative activities congruent with sustainable feedback are key aspects of the development of quality student learning. They might be promoted through various means: collaborative staff development activities

focused on stimulating changes in attitudes and behaviors; the sharing and reporting of concrete discipline-specific examples which reflect lived experiences; and probably most fundamentally, resourced commitments at institutional and department levels.

Students may need to be pushed to involve themselves in developing self-regulatory practices consistent with sustainable feedback. This reinforces the need for more to be done in terms of communicating with students the purposes of feedback and their central role in the process. It would be necessary to articulate consistently on a program-wide basis, the benefits for students of being able to self-regulate their own learning. Repeated involvement in practices, such as dialogic interaction, peer feedback and self-evaluation in relation to exemplars, performance assessments or work in progress would support this process. An important incentive for students is that developing enhanced self-regulative capacities is likely to lead to better quality learning and higher grades. If this message can be communicated effectively, increased engagement with relevant practices should follow.

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