Rethinking Formative Assessment in HE:

i.e. how their performance compares to the standard – but this feedback often falls short of what is actually necessary to help students close the gap. For example, such information might be difficult to understand (e.g. a comment such as 'this essay is not sufficiently analytical') and especially if the learning goal (a) has not been fully assimilated in the first place. Black and Wiliam (1998) further elaborate on this communication issue when they discuss the links between the way a feedback message is received and what students do with that message.

comparison of current progress against internal goals or standards—gaps are identified (between progress and goals) and further actions are taken to close these gaps (Sadler, 1989). This self-generated feedback information might lead to a reinterpretation of the task or to the adjustment of internal goals or of tactics and strategies. Students might even revise their domain knowledge or beliefs which, in turn, would influence subsequent processes of self-regulation. If *external feedback* is provided, this additional information might augment, concur or conflict with the student's interpretation of the task and the path of learning (Butler and Winne, 1995).

In the model, external feedback to the student might be provided by teachers, peers or others (e.g. placement supervisor). However, students are always actively engaged in feedback processes. First, they generate aspects of their own feedback as they monitor performance and identify and make sense of gaps while carrying out tasks. Second, they interpret and filter feedback information from external sources. The teacher's feedback response (based on their monitoring and assessment of student performance) must be interpreted and internalised by the student before it can influence subsequent action (Ivanic, Clark & Rimmershaw, 2000). This has important implications for feedback processes in HE. If students are always involved in monitoring and assessing their own work, then rather than just thinking of ways of enhancing the teacher's ability to deliver high quality feedback we should be devising ways of building upon this capacity for self-regulation (Yorke, 2003).

### 7 Principles of Good Feedback Practice

From the conceptual model and the research literature on formative assessment it is possible to identify some broad principles of good feedback practice. A provisional list might include the following seven.

### Good feedback practice:

- 1. Facilitates the development of self-assessment (reflection) in learning.
- 2. Encourages teacher and peer dialogue around learning.
- 3. Helps clarify what good performance is (goals, criteria, expected standards).
- 4. Provides opportunities to close the gap between current and desired performance.
- 5. Delivers high quality information to students about their learning.
- Encourages positive motivational beliefs and self-esteem .
- 7. Provides information to teachers that can be used to help shape the teaching.

The following sections provide the rationale for each principle in terms of the conceptual model and the

associated research literature. Brief examples of how these principles might be applied are also suggested.

## 1. Facilitates the development of self-assessment in learning

Over the last decade there has been an increasing interest in strategies that encourage students to take a more active role in the management of their own learning (see, Nicol, 1997). Black and Wiliam (1998) make the argument that 'a student who automatically follows the diagnostic prescription of a teacher without understanding of its purpose will not learn' (p54) while Sadler (1989) argues that the purpose of formative assessment should be to equip students gradually with the evaluative skills that their teachers' possess. These writers are concerned that an over-emphasis on teacher assessment might increase students' dependency on others rather than develop their ability to self-assess and self-correct.

In the conceptual model, the student or learner is always engaged in *monitoring gaps* between internally *set task and personal goals* and the *outcomes* that are being progressively produced. This monitoring is a by-product of purposeful engagement in a task. However, in order to build on this process, and the student's capacity for self-regulation, teachers should create more formal and structured opportunities for self-monitoring and the judging of progression to goals. Self-assessment tasks are a good way of doing this, as are activities that encourage reflection on both the processes and the products of learning.

Research shows that direct involvement by students in assessing their own work and frequent opportunities to reflect on goals, strategies and outcomes are highly effective in enhancing learning and achievement (McDonald and Boud, 2003). Moreover, if the skills of self-assessment are developed progressively over the course of an undergraduate degree this would support a model of higher education where students are prepared for lifelong learning (Boud, 2000).

An important aspect of self-assessment involves helping students both to identify standards/criteria that apply to their work and to make judgements about how their work relates to these standards (Boud, 1986).

Examples of structured reflection and/or self-assessment are varied and might include students: (1) requesting the kinds of feedback they would like when they hand in work; (2) identifying the strengths and weaknesses in their own work in relation to criteria or standards before handing it in for teacher feedback; (3) reflecting on their achievements and selecting work in order to compile a portfolio; (4) setting achievement milestones for a task and reflecting back on progress and forward to

According to Yorke (2003) two questions might be

courses in history and psychology and that poor essay performance is correlated with the degree of mismatch. In a similar vein, Norton (1990) has shown that when students were asked to rank specific assessment criteria for an essay task they produced quite different rankings from those of their teachers. Weak and incorrect conceptions of goals not only influence what students do but also the value of feedback information. If students do not share (at least in part) their tutor's conceptions of assessment goals (criteria/standards) then the feedback information they receive is unlikely to 'connect' (Hounsell, 1997). In this case, it will be difficult for students to evaluate gaps between required and actual performance.

One way of clarifying task requirements (goals/criteria/standards) is to provide students with written documents embodying descriptive statements that externalise assessment goals and the standards that define different levels of achievement. However, many studies have shown that it is difficult to make explicit assessment criteria and standards through written documentation or through verbal descriptions in class (Rust, Price & O'Donovan, 2003). Most criteria for complex tasks are difficult to articulate; they are often 'tacit' and unarticulated in the mind of the teacher. As York (2003) notes:

Statements of expected standards, curriculum objectives or learning outcomes are generally insufficient to convey the richness of meaning that is wrapped up in them (York, 2003, p480)

Hence there is a need for strategies that complement written materials and simple verbal explanations. An approach that has proved particularly powerful in clarifying goals and standards has been to provide students with 'exemplars' of performance (Orsmond, Merry and Reiling, 2002) alongside other resources. Exemplars are effective because they define an objective and valid standard against which students can compare their work.

Strategies that have proved effective in clarifying criteria, standards and goals therefore include: (1) providing better definitions of requirements using carefully constructed criteria sheets and performance level definitions; (2) providing students with exemplar assignments with attached feedback; (3) increasing discussion and reflection about criteria and standards in class; (4) involving students in assessment exercises where they mark or comment on other students' work in relation to defined criteria and standards; (5) workshops where students in collaboration with teacher devise their own assessment criteria for a piece of work. (6) Combinations of the above five have proved particularly effective.

4. Provides opportunities to close the gap

guidance about how to improve is given students often do not fully understand it or know how to turn it into action.

Specific strategies to help students use external feedback to close the gap are: (1) to increase the number of opportunities for re-submission; (2) for teachers to model the strategies that might be used to close a performance gap in class (e.g. model how to structure an essay when given a new question); (3) teachers might also write down some 'action points' alongside the normal feedback they provide. This would identify for students what they should do next time to improve their performance; (4) a more effective strategy might be to involve students in identifying their own action points in class based on the feedback they have just received. This would integrate the process into the teaching and learning situation and involve the students more actively in the generation and planned use of feedback.

# 5. Delivers high quality information to students about their learning.

Another finding from the research is that a great deal of external feedback given to students is not of good quality: it may be delayed, not relevant or informative or over-whelming in quantity etc. Good quality external feedback is defined as information that helps students trouble-shoot their own performance and take action to close the gap between intent and effect. In the model (figure 1) processes internal to the student (shown by the dotted line) are strongly influenced by contextual factors in the environment over which the teacher has considerable control. The teacher sets the task, assesses performance and provides feedback. Research shows that in each of these areas there is considerable scope for improvement.

Feedback needs to be relevant t5(a)5(Tf0 Tc 0 Tw 10.02 0 0 10201.14144 Td[of44 Td 0 0 10Td 0 0r5Tw 1fo-0.00. tha)-l0 1)-5 g-5

about themselves which, in turn, affects what and how they learn.

Many studies have shown that, contrary to expectation, frequent high stakes assessment (where marks or grades are given) can lower the motivation to learn (Harlen & Crick, 2003). Such assessments encourage students to focus on performance goals (passing the test) rather than learning goals (Elliot and Dweck, 1988). In one study, Butler (1988) demonstrated that feedback comments alone improved students' subsequent interest in learning and performance when compared with controlled situations where marks alone or feedback and marks were given. Butler argued that students paid less attention to the comments when given marks and consequently did not try to use the comments to make improvements.

Butler (1987) has also argued that grading student performance has less effect than feedback comments because it leads students to compare themselves against others (ego-involvement) rather than to focus on the difficulties in the task and on making efforts to improve (task-involvement). Feedback given as grades has also been shown to have especially negative effects on the self-esteem of low ability students (Craven, et al, 1991).

Dweck (2000) has interpreted some of these findings in terms of a developmental model that differentiates students into those who believe that ability is fixed and that there is a limit to what they can achieve (the 'entity view') and those that believe that their ability is malleable and depends on the effort that is input into a task (the 'incremental view'). These views affect how students respond to learning difficulties. Those with an entity view (fixed) interpret failure as a reflection of their low ability and are likely to give up whereas those with an incremental view (malleable) interpret this as a challenge or an obstacle to be overcome.

These motivational beliefs, however, are not immutable. In part, they depend on how teachers provide feedback. Praising effort and strategic behaviours and focusing students on learning goals leads to higher achievement than praising ability or intelligence which can result in a learned-helplessness orientation. In summary, 'feedback which draws attention away from the task and towards self-esteem can have a negative effect on attitudes and performance' (Black & Wiliam, 1998, p23).

The implication of these studies for teaching practice is that motivation and self-esteem are more likely to be enhanced when a course has many low-stakes tasks with feedback geared to providing information student learning and help them decide how to use it. For example: (1) one-minute papers where students carry out a small assessment task and hand this in anonymously at the end of a class (e.g. what was the main point of this lecture?; what question remains outstanding for you at the end of this teaching session?'); (2) having students request the feedback they would like when they make an assignment submission; (3) having students identify where they are having difficulties when they hand in assessed work; (4) asking students in groups to identify 'a question worth asking', based on prior study, that they would like to explore for a short time at the beginning of the next tutorial; (5) quick evaluation strategies at key points in teaching.

#### References

Angelo, T. & Cross, P. (1990) Classroom

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Nicol, D.J. & Boyle, J.T. (2003). Peer Instruction versus Class-wide Discussion in large classes: a comparison of two interaction methods in the wired classroom. *Studies in Higher Education*. **28** (4), 457-473.

Norton, L. S. (1990). Essay writing: what really counts? *Higher Education*. **20** (4), 411-42.

Orsmond, P., Merry, S. & Reiling, K. (2002). The use of formative feedback when using student derived marking criteria in peer and self-assessment. *Assessment & Evaluation in Higher Education*. **27** (4), 309-323.

Rust, C., Price, M. and O'Donovan, B. (2003). Improving students' learning by developing their understanding of assessment criteria and processes. *Assessment and Evaluation in Higher Education*. **28** (2), 147-164.

Sadler, D. R. (1983). Evaluation and the improvement of academic learning. *Journal of Higher Education*. **54** (1), 60-79.

Sadler, D.R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*. **18**, 119-144.

Sadler, D.R. (1998). Formative assessment: revisiting the territory. *Assessment in Education*. **5** (1), 77-84.

Steadman, M. (1998). Using classroom assessment to change both learning and teaching. *New Directions for Teaching and Learning*. **75**, 23-35.

Stefani, L. & Nicol, D. (1997), From teacher to facilitator of collaborative enquiry. In S. Armstrong, G. Thompson and S. Brown (eds.), *Facing up to Radical Changes in Universities and Colleges*. London: Kogan Page.

Torrance, H. & Pryor, J. (1998) *Investigating* formative assessment: teaching, learning and assessment in the classroom. Philadelphia, PA: Open University Press.

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education*, **45** (4), 477-501.