Chapter 9
Teachers' Feedback to Pupils: "Like So Many Bottles Thrown Out to Sea"?

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9.1 Introduction

> . . . part of the feedback given to pupils in class is like so many bottles thrown out to sea. No one can be sure that the message they contain will 1 day find a receiver. . . (Perrenoud, 1998, p. 86)

Philip Perrenoud's words in the quotation above raise the issue of when teacher feedback really does help pupils in their learning. Perrenoud goes on to remind us that ". . . some of the messages which the teacher conceives as feedback do not in fact play this role for the pupil". Within the discourse of Assessment for Learning (AfL), classroom feedback is assumed to have a beneficial influence on pupils' knowledge construction, but the chain of events leading from feedback to successful learning is complex and has not yet been adequately described despite substantial research (Kluger & DeNisi, 1996; Mason & Bruning, 2001; Mory, 2004; Narciss & Huth, 2004; Hattie & Timperley, 2007; Shute, 2008). Most teachers are familiar with the frustration of spending many hours writing feedback comments on pupils' work, only to discover that pupils have no better understanding the next time, and seem to have taken little notice of meticulously crafted feedback comments. In his seminal and much quoted article of 1989, Sadler similarly describes the

> common but puzzling observation that even when teachers provide students with valid and reliable judgements about the quality of their work, improvement does not necessarily follow. Students often show little or no growth or development despite regular, accurate feedback (p. 119).

Many previously reported research studies of feedback have been conducted in experimental conditions, rather than natural settings such as classrooms, and several major studies have related to computer-generated feedback (e.g. Azevedo & Bernard, 1995; Narciss & Huth, 2004) or non-educational settings (e.g. Kluger & DeNisi, 1996), many of which take insufficient account of social, personal or

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classroom dimensions in understanding feedback. Pollard (1990, p. 242) suggests, "... the lack of an integrated analysis, comparable to the integrated nature of experience, denies the validity and thus the credibility of the academic account". This chapter therefore aims to draw not only on existing research, but also on teachers' perceptions of feedback, in order to throw further light on the role feedback plays in supporting learning within the setting of classroom realities. The question it explores is: What can teachers and researchers tell us about important factors affecting feedback's role in promoting individuals' knowledge construction?

9.2 Research Design

This chapter draws on a recently conducted survey of 88 teachers as to how feedback becomes effective. The majority of respondents were teachers in the UK. There were also English speaking participants from Chile, Greece and USA among others, all of whom were studying education at the Institute of Education, in London, UK. Data were collected between November 2007 and November 2008. The 88 teachers were invited, without conferring with others, to complete the sentence, "Feedback becomes effective when. . . ." They submitted their responses anonymously.

In order to supplement and illustrate some of the teachers' written comments, seven primary pupils aged 9–10 years, were interviewed for at least 45 min each, about feedback they receive from their teachers (four pupils from a London school and three from a Surrey school, in the south-east of the UK). These supplementary interviews were carried out during January and February 2008.

Using my own previous experience of the range of perceptions about feedback that teachers might hold, I then grouped together perceptions that seemed to have a common emphasis. The groups of perceptions also reflected various emphases I had noticed in different types of academic literature about feedback. The teachers' responses provide a basis for the discussion presented in this paper, with a scattering of pupil examples intended to provide additional insights. Verbatim comments written by the teachers in the sample are listed and indented. Pupil comments are given, mainly within the text, but italicized.

9.3 Teacher Perceptions of Effective Feedback

9.3.1 Social and Personal Factors Affecting Feedback

The 88 teachers in this sample indicated an acute awareness of how social and personal factors affected the usefulness of feedback in learning. Their comments did not just focus on the form, or even the content of the feedback but to a great extent on the interactions between pupil and teacher, the learning environment, the values of the pupils and the readiness of pupils to respond to feedback.

One group of the teachers described the feedback process as necessarily involving interaction between pupil and teacher. For example, they believed that feedback became effective:

- When you [the teacher] include yourself in the discussion and discuss as "we" with an open attitude.
- On the spot in the classroom in a two-way thought developing process. Less beneficial is the notes on the students' work as it is not a two way process.
- When the pupil and teacher work together building motivation and the feeling that anything is achievable by the child.

Where feedback was seen as such an interactive process, teachers in the sample perceived that the teacher, as feedback giver, would be a learner too. Askew and Lodge (2001) describe how two-way feedback can simply be a "ping pong" of discrete ideas between teacher and learner; but more richly it can be a set of "interactive loops" in which increasingly complex knowledge is constructed collaboratively by teacher and learner:

- The result becomes useful to both the teacher and the learner in the teaching-learning process.
- It helps the person who gave the feedback to take something out of the experience.

A few teachers in the sample went further to suggest that feedback not only came through interaction between pupil and teacher, but also from "all members of the learner's inner circle". This resonates with Allal and Mottier Lopez's (2005) conception of formative assessment as interactive regulation "based on the interactions of the student with. . . the teacher, with other students and/or with material allowing self-regulated learning" (p. 245). These views feed into the further discussion about feedback from a range of agents, but this is the subject for another paper.

Teachers in the sample perceived that feedback would only be fruitful when the learning environment was comfortable for pupils, where:

- The child is confident and happy to continue learning.
- When the child is in a play-like situation. If feedback were given using children's creative minds, their lingo, their level of understanding of things, or whatever interested them like computers or lego, then that feedback would stick and take effect irrespective of the particular learning intention.

The most important factor facilitating a supportive learning environment for feedback was pupils' trust in the giver of feedback. Feedback is only effective when:

- The feedbacker's opinion is respected/valued.
- Pupils trust what has been said to them and know it is in their interests to act.
- It comes from people who really care about you.
- It is honest – not false.

This point was illustrated in interview with a primary pupil about her teacher's feedback. Pupil Lucy described receiving insincere feedback on her mathematics work. Her teacher had said, "I know you're very good at maths, so you've got to try harder!" and "You're a very bright little girl!" Lucy told us she was not sure if they were true as she did not think of herself like that. "I'm more of a sporty, artistic little girl", she said, "and I prefer other lessons than maths". She thought the teacher "might say it just to make me feel better if I was finding it really tough". In other words, the praise made her feel better in the moment, but also confused her because she could tell that it did not make sense.

These views emphasize the futility of focusing purely on the feedback message without paying heed to the relationship within which it is given. They also expose the sensitivity of the feedback receiver. Kluger and DeNisi (1996) confirm that computer-generated feedback can be more effective than teacher feedback; and one analysis of this could be that the computer is perceived to be neutral, and this makes its feedback more palatable than feedback given by a teacher who is feared or not respected by pupils. Although practice in classrooms may not always reflect the belief, teachers in the sample suggested that, because of the vulnerability of pupils, feedback should avoid being personal and should certainly never be unfair or humiliating. Feedback becomes effective when:

- It doesn't affect the learner's feelings.
- It is not critical of one's character.
- It is just, so the student will accept it and take it in.
- The children realize it is given to help them, and does not humiliate them or degrade them.

Hattie and Timperley (2007) and Kluger and DeNisi's extensive reviews (1996) stress the dangers of using feedback focused on "self", which, they suggest, may distract attention away from learning and onto the ego. An illustration of the complex emotional factors involved in responding to negative feedback, was given during an interview with a primary pupil called Len. It showed how aroused emotions could become barriers to further learning for some pupils. He told us that:

> Different pupils respond differently to [negative] feedback because children have different minds and are brought up differently. If they have "soft" parents, then they might be "soft" themselves, but if someone's father is "tattoo man" then they would not care much. So some people might completely ignore negative feedback; someone else might be quiet for the rest of the day; some people might be annoyed; and others might take it out on their mum at home.

A perception was evident among our teachers that even if the learning environment was conducive to learning, and pupils trusted the feedback provider, if they did not value the actual feedback, then it would not be effective. As Ryan and Deci (2000) suggest, for pupils to be most highly motivated to act, they need to have integrated and internalized for themselves, teachers' external directives. Teachers suggested that pupils need to recognize that feedback is there to help, not criticize, them, and it needs to be in keeping with their own goals rather than in conflict with them or

alien to them (Butler & Winne, 1995). Teachers in this sample said that feedback would be most effective when:

- You agree with the feedback (danger of shrugging it off if you don't agree).
- It is sought (even sub-consciously) by the learner.
- It is about something one wishes to be fed back on.

Stobart (2008) has described the lengths to which children will go in order to gain self-feedback about a skill they value such as skateboarding. His point is that feedback is sought and acted on with speed and enthusiasm when the learner sees feedback as the route to achieving a much valued goal, in contrast to an externally imposed one. In similar vein, one teacher drew from the sports world when he described feedback as "the breakfast of champions", meaning that champions become champions by being constantly open to feedback. Phillipe Perrenoud (1998, p. 86) reminded us that 'the intention [of feedback] can only be effective if a window is found into the cognition system of the learner. There is no point in sending him or her messages if they are treated as noise or redundancy'. . .

In addition to (a) the right interaction between pupil and teacher, (b) the right learning environment and (c) recognition of the pupils' values, teachers suggested that feedback would only be effective if they timed it right. Readiness for feedback was a theme teachers in the sample found important. Feedback would be effective if:

- It is at a time when it can be contemplated and explored.
- You find (create) the moment when you can exchange ideas with students, so you can reinforce what is being taught.
- It is given during the activity or task so that the child can use the feedback while it is still fresh in their mind. This way it can become embedded in the child's understanding.
- It is little and often.
- There is an appropriate balance between immediate or delayed, written or oral responses that suits the purpose of the feedback.

Teachers are here acknowledging the need for sensitivity as to the most appropriate time for feeding back. The international research on the timing of feedback is inconclusive (Shute, 2008), although there are some indications there that immediate feedback is most effective for "difficult" tasks and for the retention of procedural or conceptual knowledge, and delayed feedback for "relatively simple" tasks and to promote transfer of learning (p. 32). In the pupil interviews whose aim was to illuminate our understanding of these issues, pupil Lucy described wanting assistance in the moment of learning. She needed "someone right by my side, telling me what I've done wrong and helping me". However, another pupil, Len, found it useful to revisit work the day after he had done it, in time dedicated for pupils to read feedback comments. He said, "I like little comments. It gives me something to do!" However, Len

also told us that the most effective feedback was comments his teacher might make casually in the playground, such as, "You need to improve on this" or occasionally, "You're very good at that".

9.3.2 The Focus of Effective Feedback

Once the crucial effects of social and personal factors have been acknowledged, the actual focus of the feedback message needs to be examined. The 88 teachers in this sample described the following five focuses for feedback as most effective: Learning objectives and assessment criteria, Motivating learning and reinforcing positive achievements, Deepened understanding, Action and improvements, and Reflection and learning processes.

Tunstall and Gipps (1996a, 1996b) proposed that feedback could be categorized as either evaluative or descriptive. Evaluative feedback refers to self and includes value judgments, while descriptive feedback relates directly to learning objectives and assessment criteria. While this distinction does not cover a full range of possible purposes for feedback (the purpose of provoking thought, for example), it is useful in its emphasis on feedback that provides information to the learner about what made learning good, not just whether it was good. Tunstall and Gipps suggest that while evaluative feedback can be helpful in changing behaviour, descriptive feedback is more effective for learning (see also Hargreaves, McCallum, & Gipps, 2000). This suggestion was affirmed by teachers in the sample. They perceived that feedback was most effective when:

- The person receiving it is told why [work/learning] was good or bad.
- It is directly related to the learning objective. If [pupils] don't know about the goal, they don't know how to interpret the feedback.
- There is recognition of criteria met.

However, given the discussion above of social and personal factors affecting feedback, in particular the need for pupils to value the feedback given and play an active role in constructing it, reference to learning objectives and assessment criteria within feedback needs to be further analysed. As Tunstall and Gipps (1996b) stress, objectives and criteria can be "givens" or can be negotiated. Torrance (2007) has drawn attention in the post-16 sector to how the use of objectives and criteria can actually take over from learning rather than encourage it, where feedback is very directive in relation to "criteria compliance". Torrance's research found that teaching could become reduced to getting students to meet criteria, rather than helping students learn. Pryor and Crossouard (2008) suggest that the negotiation of objectives and criteria is perhaps the fertile ground for learning rather than pupils' compliance to them. Therefore, the process of using and of deciding on valued objectives and criteria, must be considered before their benefit as effective feedback can be assured. This may be a challenge for teachers in an educational climate where externally

imposed "objectives" are championed. However, some teachers clearly find ways of negotiating valuable criteria whilst still "covering" required curricula.

A much expressed view among the teachers in our sample was that feedback should be positive. It would be effective when:

- It acknowledges positive aspects/things that work.
- There is a clear understanding of what you have done well so that you can repeat the success again and again. If the feedback suggests failure it is important to understand what can be done to change quickly so that success follows the improvement or change.
- Praise is given for what was done but also giving it a way to move forward to make progress.

This view mirrors Kluger and DeNisi's (1996) finding that negative feedback does not improve achievement. However, a distinction needs to be made between feedback whose purpose is to motivate, and feedback whose purpose is to indicate successful learning, perhaps in relation to valued learning objectives or assessment criteria. The comments given above stress the latter purpose, in which the pupil's own achievements act as models for future successful learning.

Comments whose main purpose is to motivate (an "evaluative" purpose) come with more cautions. Teachers may assume praise to be crucial for raising the self-esteem of their pupils. However, Pryor and Torrance (1998) have painted a vivid picture of a teacher who wholeheartedly wanted to improve his pupils' self esteem, but his praise only exacerbated the pupil's belief that good learning was learning that others praised, without giving her any clues as to how she could choose to improve her own learning. Henderlong and Lepper's (2002) review of the benefits of praise is inconclusive, suggesting that praise plays an ambivalent role in learning. However, the recognition that feedback should be encouraging rather than discouraging is important within the AfL framework and the teachers in the sample suggested how praise might encourage future learning, when:

- We give them [pupils] support, tools, knowledge and strategies to feel more self confident.
- The learner is motivated to complete a task in achieving his or her goals.
- It gives the learner confidence to repeat the activity and try to improve their own capabilities.
- [Feedback] praised risk-taking and praised children for saying when they did not understand.

Pryor and Torrance (1998) have identified a spectrum of assessment approaches from "convergent assessment" at one end to "divergent assessment" at the other end, where convergent assessment demands correct answers from pupils and divergent assessment explores what pupils can and cannot do and how they make connections between ideas. Feedback within a convergent framework focuses on the elicitation of correct answers and identifies errors in a pupil's performance (see also, Black and

Wiliam's "directive" feedback, 1998) while within a divergent framework, feedback is "exploratory, provisional or provocative" (Pryor & Crossouard, 2008, p. 4), often encouraging pupils to reconstruct their thinking about the subject domain or learning process (see also, Black and Wiliam's "facilitative" feedback, 1998). There were teachers among the 88 in the sample who believed that for feedback to be effective, it needed to operate divergently, leading to deeper and more sophisticated thinking which was sustained over time. These teachers had sustained such a belief despite current pressure in schools to produce quick, measurable results. For these teachers, feedback became effective when:

- It assists students with the immediate task at hand but also promotes life-long learning (future application of feedback).
- It changes/reinforces/stimulates the learner for the future.
- The recipient uses it to alter their learning in a positive way.
- It was provocative in helping students to think more critically.

The unifying idea underlying AfL is that formative assessments lead to learning action rather than being an end in themselves (Black & Wiliam, 2006). Many of the 88 teachers in this sample stressed the importance of teacher feedback promoting future action in pupils. This action might be particular behaviour that the teacher hopes will aid pupil learning, or it might be improving on weaknesses pointed out by teacher feedback. Feedback promoting action or improvement might also be criteria related, positive and motivating and should support extended understanding:

- It provokes a reaction.
- It empowers.
- It asks for evidence that the person given the feedback has made changes/improvement.
- The teacher has successfully been able to communicate to the pupil, and the pupil has successfully understood and is able to implement the advice that was given.

Teachers described effective feedback particularly as promoting improvement in pupils' learning, sometimes by pointing out their weaknesses using critical, but constructive, feedback:

- It is delivered in a positive way with suggestions for improvement.
- It encourages students to try again using the correct method.
- It highlights the areas of development the learner should take and how they should go about it.
- It is specific about how to improve.

The specificity of the "advice" given requires further thought. Some teachers mentioned the importance of feedback advice being realistic and achievable. However, if the aim of feedback is extended, even life-long understanding by a learner who is the owner of her/his own learning, then provocative rather than prescriptive comments

may promote a more meaningful response in pupils. For example, rather than telling the pupil what s/he should do to improve a piece of work, the teacher might invite the child to make her/his own suggestions. In similar spirit, she might ask her/him to write down what s/he thought her own general target was for improvement in a given subject.

A sense of ownership of learning, which stems from the pupil's power to direct her/his own learning, is the ultimate aim for feedback within the discourse of AfL, and is more widely considered to be central to successful learning and its sustainability (Dennison & Kirk, 1990; Murnane & Levy, 1996). Successful learning therefore comprises the development of subject domain knowledge and metacognitive knowledge about the learning processes, the latter helping the learner to construct the former (cf. Biggs & Moore, 1993; Butler & Winne, 1995; Watkins, 2003).

Self-assessment is therefore not an added luxury but a fundamental tenet of AfL, and a constituent element of learning from constructivist perspectives (Dann, 2002, calls it "assessment as learning"). However, "self-monitoring" (Sadler, 1989) does not happen automatically, but has to be learned by pupils and supported by teachers' feedback. This view was reflected in teachers' emphasis in this sample, on the need for feedback to support pupils' reflection on their own learning. This reflection was on (a) what a pupil was learning and (b) the effectiveness of their own learning processes. For feedback to be effective, they believed firstly with reference to reflection on domain content:

- It allows the learner to reflect on their work.
- It helps you to reflect on and develop your understanding.
- It makes the learner aware of what s/he is learning.

Secondly, teachers recognized that powerful feedback was feedback that assisted pupils in giving themselves feedback, or self-monitoring. For example,

- The individual learns to self check their work and provide internal feedback.
- It makes students think about the way something was done and how they could improve.
- [It] encourages [pupils] to find out what worked for them and share good strategies with peers by demonstrating them in class.
- It develops self-regulation.

Hattie and Timperley's (2007) extensive review of feedback concluded that when teachers' feedback focused on how pupils went about processing tasks and on how they managed or regulated their processes, this was most effective for transferring skills to future tasks and for deeper and more sophisticated thinking which is sustained over time. That focus contrasted with feedback about the self as a person, or feedback to pupils on how to complete a one-off task: neither of these, they claimed, had sustained effects. This perspective implies that when feedback suggests actions and improvements, these need to be related to pupils monitoring their

learning processes as well as to immediate subject domain criteria. An example of such feedback, described during interviews with pupils, was of pupil Len's teacher who fed back to the children in the form of a plenary using process questions such as: "What did you find easy today?" and "Did anyone find anything difficult? How did you overcome the difficulty?" He allowed children to talk in pairs and took individual answers from children. Finally he asked, "Who or what helped you?" and "What strategies did you use today?" and "If you were to learn this again, what would you do differently?"

9.3.3 The Message Form, for Effective Feedback

Teachers in our sample recognized that the right context for feedback and the appropriate focus were not enough to guarantee its positive effect. The form of the feedback message was also important 'to mediate understanding… to enable the student to appreciate and effectively access the communication and feedback.'

Although prescriptive advice may not help the learner develop ownership of learning, clarity and consistency in the feedback message were seen as fundamental requirements by teachers and in the research literature (Hattie & Timperley, 2007). Even when the message is clear, other factors may intervene, but the feedback receiver cannot possibly act appropriately on a message whose actual content is not accessible. Clarity of purpose is important as well as clarity of meaning. Feedback can only be effective when:

- The learner can crack the message's code.
- The receiver understands what they have been told and understands ways to implement methods to achieve their next step.
- The learner understands the purpose of the feedback and how to apply it to himself/herself in order to benefit from it.

9.4 Summary and Concluding Comments

Perceptions of effective feedback taken from across the 88 teacher respondents in this research project, can be summarized as follows.

1. Feedback becomes effective when social and personal factors are supportive to learning, especially when there are trusting relationships between feedback giver and feedback receiver; in fact, this notion of giver and receiver is less useful than one of negotiation and co-construction between teacher and learner. Feedback becomes effective when pupils feel comfortable in their learning environment, where feedback does not distract them into thinking about their own self-worth but rather focuses on learning itself. Feedback becomes effective when pupils want to receive it because it accords with their own values and goals; and when pupils are ready to take it on board.

2. Feedback becomes effective when the focus of feedback is appropriate, for example: when valued learning objectives or assessment criteria are addressed or negotiated through it; when positive achievements, past and future, are stressed; when feedback aims to promote sustained changes in pupils' thinking, rather than "quick fixes" of immediate tasks; when it encourages pupils to take action to continue or improve current progress; and when it allows pupils to reflect on their own learning and so take control over it.
3. Feedback becomes effective when the form of its message makes it clearly accessible to the learner.

This chapter has illustrated how teachers' perceptions accord with or add to existing research about feedback. The special contribution of teachers' perceptions on feedback is their classroom base and, at the same time, their far-reaching scope: unlike some existing research, teachers draw heavily on day to day practicalities, and on experience of many curriculum subjects and many learners, often over many years. Research evidence, on the other hand, can offer teachers insights into their own feedback practice too, because it is drawn from large samples of learners surveyed systematically for their feedback responses. The outcomes of such research can sometimes challenge everyday assumptions. Children's perceptions also have a special, yet largely untapped, potential to give us insights into the processes of feedback. This is an important area for further research work not drawn on in this survey, but the few examples of children's words presented here do illuminate some feedback issues from the unique perspective of the feedback respondent.

The range of teachers' perceptions described in this research reflects the range of emphases portrayed in existing research reviews (see for example, Shute, 2008). Clearly, there are no "one-size-fits-all" prescriptions for effective feedback, but rather a combination of factors that teachers and pupils must bear in mind. However, teachers in this sample put particular emphasis on the social and personal aspects of feedback processes, while existing research into feedback has sometimes focused on the form and content of the feedback message. Teachers suggested that feedback messages thrown by teachers "out to sea" are more likely to find a receiver if the situation in which pupils come across them is supportive to learning, is a situation where relationships are trusting, where pupils feel comfortable and focused on learning, and where pupils' own values and goals drive the agenda. In other words, pupils are more likely to make constructive meaning out of feedback messages when teachers recognize the influence of social and personal factors as well as of the content and form of feedback.

Such a conclusion accords with Michelle Boekaerts' dual processing theory (1993), portrayed by Wiliam (2007). Wiliam describes how, in Boekaerts' model, it is assumed that students who are invited to participate in any learning activity use three sources of information to form a mental representation of the task-in-context and to appraise it:

(1) current perceptions of the task including the environmental, social, and learning context within which it is embedded;

(2) their existing knowledge and metacognitive strategies related to the task; and
(3) personal beliefs about motivation, including beliefs about their competence, interest and effort (Boekaerts, 2006).

Boekaerts suggests that, following this initial appraisal of the task, the student begins to act along one of two pathways. If the task appraisal is positive, the student begins activity along the "growth pathway" where the goal is to increase competence. If, on the other hand, the task appraisal is negative, attention shifts away from the learning task and towards the pathway of trying to maintain well-being. The student then becomes focused on self-appraisal rather than task appraisal, concentrating on preventing threat, harm or loss. This form of self-regulation is triggered by cues in the environment, rather than by learning goals. Boekaerts' theory therefore emphasizes the role that social and personal factors play in facilitating or hindering learners' engagement.

Sadler's "common but puzzling observation" about the ineffectual nature of teacher feedback becomes less puzzling when these social and personal factors which contribute to feedback's effectiveness are taken into account. As this chapter has indicated, teachers simply providing students with "valid and reliable judgements about the quality of their work" (in Sadler's words, 1989, p. 119), does not pay sufficient heed to the complexity of factors affecting feedback's role in learning, in particular to social and personal factors. If AfL is "a framework of social mediation that fosters the student's increasing capacity to carry out more autonomous self-assessment and self-regulated learning" (Allal & Mottier Lopez, 2005, p. 252), feedback is the key player in this social mediation. It is the essentially social and personal nature of this mediation, based on individuals' relationships, interactions, values, experiences and feelings, as well as academic knowledge, that may supply a missing piece to Sadler's puzzle.

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