PROMOTING ASSESSMENT AS LEARNING

Improving the learning process

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Chapter 6

Building a framework for self-assessment

Introduction

Having briefly outlined some origins for pupil self-assessment and examined one primary school's attempt to develop a self-assessment initiative, this chapter builds on Chapter 5, aiming to focus more specifically on a framework for self-assessment as well as offering practical considerations for its future development. Of particular concern is the relationship and balance between assessment, which seeks to establish and measure pupil performance in relation to objective criteria, and assessment which directly seeks to influence and develop a pupil's sense of personal identity which includes his/her understanding of self as life-long learner and achiever.

In exploring the possible learning foundations for National Curriculum related assessments (Chapter 2) it seemed that the pupils' role in the assessment process was active in terms of their capacity as test takers or curriculum participants, but passive in the sense of their being directly influenced by the processes or outcomes of assessment. Increasingly, evidence suggests that pupils are far more greatly influenced by their experiences of assessment than is specifically recognised (Pollard *et al* 2000). Even when the focus is on formative assessment, teachers tend to regard any impact on pupils mainly in terms of intervention and mediation. Torrance and Pryor (1998) offer a different view. They suggest that pupils need to make sense of assessment in order for their learning to advance. Pupils need to understand something of the gap between where they are in their learning and where they might be. Although the next step of learning may be teacher constructed or nationally prescribed, if it is not grasped by the pupil, as an aspiration, next step, target or goal, then it is unlikely to be realised. The advocation of teacher/pupil

collaboration, to reflect Vygotsky's practice of constructing a zone of proximal development, offers a strategy for learning development within a constructivist framework (Chapter 2). However, if learning is viewed in this framework, the way in which assessment relates to this understanding needs more careful consideration. Torrance and Pryor (1998:16) suggest that, to date, there is insufficient literature to indicate how teaching, learning and assessment interrelate within constructivism. With the emphasis on the individual pupil in an active role interpreting and constructing learning, there seems to be a need to appreciate that this active participation should also be recognised within assessment. This, of course, assumes that assessment is regarded in a formative sense, which will contribute to the development of learning.

Of further significance are the ways pupils perceive their academic abilities. These may partly be gained from their understanding of assessments made on them by teachers and others who contribute a view to their learning. Additionally, they will also be influenced through a variety of interactions and experiences. Nicholls (1984) clearly indicates that children's perceptions of their academic ability changes during their time at school. At entry to primary school pupils have a positive view of their own competence, sometimes with grandiose evaluations of their abilities (Benenson and Dweck 1986). By the time they leave the primary phase their self-perceptions of their competence is much lower. Paris and Byrnes (1989) consider possible reasons for this, one of which is that young children (up to ages 8–9) do not differentiate between academic and social academic abilities. There was little notion of academic achievement as separate from personal preferences and effort. Furthermore, children gained different insights into the criteria for assessment shifting from the belief that social praise and effort denoted achievement to a view that social comparisons and external evaluations were the key indicators of achievement. Accompanying this shift in understanding, some children became more negative about their achievements since they viewed the level of effort given to their work as no longer having the impact on achievement that they had previously believed. It certainly seems to be the case that as children pass through primary school their assessments are increasingly legitimated by external factors. Pupil experiences and perceptions may well reflect the views of Nicholls, and Benenson and Dweck (op. cit.), yet the process of self-assessment may offer a context and process for helping to shape and influence pupils' understanding of their developing achievement

in a complementary way which can be initiated, developed and sustained throughout the process of life-long learning.

Establishing a purpose and need for pupil self-assessment, in an ideological sense, has important but only limited relevance. Translating the view that self-assessment is important, into practical possibilities is a more complex but crucial task. This chapter outlines and explores a number of processes, requiring development and understanding, before considering the details of how self-assessment might be utilised in classroom contexts. Of particular concern is the notion of self-regulation, which includes self-efficacy, motivation, metacognition, and feedback.

Self-regulated learning

If self-assessment is to be advanced, there is an implicit assumption that pupils are encouraged to participate in a process which will give them a greater stake in understanding and developing their learning. More than this, however, it can be seen as a process which relates to a broader view of pupils' learning development. In addition to the theories of Piaget and Vygotsky which contribute to a constructivist perspective, pupil understanding and interpretation of their learning is crucial rather than optional (Chapter 2), the notion of self-regulated learning requires some explanation.

The idea of self-regulation has its roots in the sphere of biology. Organisms respond to the environment through processes of biological feedback and adaptation. Its provenance in education is clear in Piaget's work, and since then has been applied to learning and development theories from varying perspectives. Fundamentally, self-regulation is 'an organising concept, self regulated learning describes how learners cognitively, motivationally and behaviourally promote their own academic achievement' (Zimmerman and Schunk 1989: ix). Pintrich (2000:452–3) highlights the following four assumptions underlying models of self-regulation in a learning context:

1 The active, constructive assumption—implying that learners are viewed as active constructors in the learning process.
2 The potential for control assumption—that all learners can potentially control, monitor and regulate aspects of their own cognition, motivation and behaviour as well as some aspects of their environment.

3 Goal, criterion or standard assumption—to which comparisons can be made or decisions as to whether the process should continue or be changed can be made.
4 Mediation between personal and contextual characteristics and actual achievement or performance feature in most models of self-regulated learning. Thus, outcomes in learning will, to some degree be influenced by self-regulatory processes.

The capacity of learners to demonstrate and utilise these aspects of self-regulation, and the sophistication they bring to these skills will relate partly to their developmental growth. There may, as Zimmerman (1989) suggests, be limitations in the ways in which very young children are able to be self-regulating in their learning. Thus, their capacity to self-regulate needs to be considered less formally at this primary age. The reasons for pupils' more limited capacities vary according to cognitive and social perspectives. Piagetians would assume that the egocentric nature of young children would limit their capacity to self-regulate, whilst Vygotskians would emphasise young children's restrictive capacity to use language covertly to guide self-regulation. An additional perspective may highlight the limited development of the higher order thinking skill of metacognition in young children which needs to feature within self-regulation. However, even with limited yet developing capacities, it is suggested that pupils can still have a participative role in the process.

When pupils' cognitive skills are considered to be sufficiently developed, their use of self-regulation in learning might operate in the following ways (from Zimmerman 1989:4):

- Personally improving their ability to learn through selective use of metacognitive and motivational strategies.
- Proactively selecting, structuring and even creating advantageous learning environments.
- Choosing the form and amount of instruction that they need.

These processes clearly outline the potential for pupils' self-regulated learning. However, personal, cultural, social and institutional factors present constant restraints. The extent to which pupils display and develop self-regulating functions within their learning, in a proactive sense, is partly based on their willingness to use such strategies. Constructivists would tend to claim that motivation for learning is

intrinsic and that a distinction between motivation and learning is not helpful. Nevertheless, as the goals of learning become more explicit, formalised and part of national expectations, pupils seem likely to make more conscious judgements about their participation in this prescribed form of 'school' learning. Pupils will need to make a judgement about the extent to which they can operationalise self-regulatory processes in learning. Obviously this is unlikely to be in a calculated informed way, but as part of the process of understanding the assumptions and dynamics of teacher/pupil interactions in the classroom.

Self-efficacy and motivation

The way in which a pupil enters into a teaching, learning and assessment interaction that serves to promote development will, to some extent, depend on each pupil's self-efficacy. That is, their personal belief 'about having the means to learn or perform effectively' (Zimmerman 2000:17). Zimmerman also indicates that self-efficacy beliefs can causally influence a pupil's use of self-regulation in academic time management, academic learning strategies, resisting adverse peer pressure, self-monitoring, self-evaluation and goal setting. He illustrates with the example of goal setting. The more capable pupils believe themselves to be, the higher the goals they set for themselves. If pupils fall short of their goals, those who are self-efficacious will try to increase the efforts they make, whereas those who are not will tend to withdraw. A pupil's belief in his/her own potential achievement seems to have an impact on the way s/he seeks to bring this into effect.

Within a school learning context, however, teachers (rather than pupils) tend to structure and present learning goals. The expectation is that pupils are motivated and able to fulfil these goals. If they are not achieved, the evaluative and monitoring process in our current educational system is highly likely to point to poor teaching quality as the cause of poor pupil performance. Boekaerts and Niemivirta (2000:418) present a more complex picture. They promote the notion of a 'learning episode' in which a person is

> invited, coached, or coaxed to display context specific, goal directed learning behaviour. If the learner accepts this invitation, his or her learning behaviour unfolds over time until one of the following conditions is met: (1) the learning goal that organised

> the learning episode is attained, (2) the learning goal is attained only partially, but this state of affairs is accepted by the learner, (3) the learning goal is reappraised as unattainable, unattractive or irrelevant, or (4) another goal takes precedence.

The 'success' of the school-based, teacher-led learning episode is dependent on the way in which a pupil engages with the goals and purposes presented. Boekaerts and Niemivirta (2000) question the extent to which pupils create an experience of 'felt necessity' in the focus teacher-led learning. However, they suggest that children often construct highly sophisticated and progressive learning episodes in natural contexts where opportunity and 'felt necessity' coincide. They call for a recognition of pupils' own personal goals as significant influences in the learning process.

In addition to pupils' beliefs in self-efficacy is their motivation to be active in their learning. For pupils' learning to progress, there must be some self-motivation in order to take advantage of the learning environment of which they are a part. Obviously, pupils' beliefs that they can achieve will form part of their motivation. Other factors which may impact here are worth some consideration. The motivation to learn may be considered as an inherent part of development. Piaget, for example offers little suggestion that children may not be motivated to learn. Rather, the processes which drive the development of cognition are considered to be embedded in an individual's biology and his/her interaction with the environment. Such an explanation does not provide an adequate account of the realities of classroom learning in which some pupils are clearly not motivated to learn to the same extent as others. Rheinberg *et al.* (2000) suggest that motivation within learning relates to individual characteristics such as motives, interests, goals, beliefs as well as to situation related factors such as the nature of the task, potential gains or losses, characteristics of the environment. Children will make judgements about the extent to which they wish to engage with learning. These, Rheinberg (1989) (in Rheinberg *et al.* 2000:511) suggests focus around the following four questions:

1 Does the outcome seem to be determined by the situation? If the answer is perceived to be 'yes' then the pupil is unlikely to be motivated; if it is 'no', then together with perceptions of other key issues a pupil may be motivated to learn.
2 Can my actions have sufficient impact on the outcome?

3 Are the potential consequences important enough to me?
4 Do the desired consequences follow from the outcome?

For questions 2, 3 and 4, if the answer is 'no' it is unlikely that there will be pupil action. Whereas, if the answer is 'yes' pupils are more likely to be motivated to endeavour to achieve. For those children who are not propelled to action based on factors of motivation, there may be issues of volition which need to be considered. Some individuals will exercise volitional control processes that enable them to overcome the adverse conditions which they identify. So, for example, pupils may try to control their attention, their emotions, the environment or their cognitive processes in ways which help them proceed with learning—as an act of will. Such acts of volition are not easy and are difficult to sustain.

Pupils' skills in self-regulated learning may be accomplished more fully in adolescence rather than in their primary years. Yet, the argument presented here calls for some sensitivity and recognition of aspects of development throughout formal schooling. Dewey (1963:48–9) in discussing the purpose of education states that

> the most important attitude that can be formed is that of desire to go on learning… What avail is it to win prescribed amounts of information about geography and history, to win ability to read and write, if in the process the individual loses his own soul: loses his appreciation of things worthwhile, of the values to which these things are relative; if he loses desire to apply what is learnt and, above all, loses the ability to extract meaning from his future experiences as they occur?

The enthusiasm for learning which is so often present when a child begins primary school needs to be harnessed and utilised. All too often, as Covington (1998:5) suggests, 'their enthusiasm, like that of previous generations, will also dwindle and soon evaporate'. Attempts to encourage and motivate pupils to learn and to have the belief in self-efficacy certainly should not be postponed to secondary education, where it may be too late. Developing strategies which are consciously designed to promote pupils' beliefs in their own potential to learn should be specifically embedded in the primary curriculum.

Bandura (1997) identifies four possible ways in which self-efficacy is learned and how this learning may be influenced and supported:

(a) performance accomplishments; (b) vicarious learning; (c) verbal persuasion; (d) physical/affective status.

(a) Performance accomplishments refer to the way a pupil's performance is received influencing self-efficacy expectations and actions. So, for example, poor grades and negative feedback have the potential to lower self-efficacy beliefs.
(b) Vicarious learning is undertaken by observing or interpreting the way other pupils behave and the work that they do. Pupils who make judgements on others and see their own progress and learning as limited in some way as part of this comparison are likely to have lower self-efficacy beliefs.
(c) Verbal persuasion—the messages that are conveyed to an individual from others will all contribute to the way an individual constructs his/her self-efficacy beliefs. Messages may be overt or covert, intentional or unintentional—it is the way that they are interpreted which will impact on self-efficacy beliefs.
(d) Physical/affective status—Environments in which there is conflict, tension, anxiety or uncertainty are unlikely to offer contexts that promote positive self-efficacy beliefs. Classroom pressures, resulting in pupil anxieties, may have a significant effect on developing pupil outcomes and beliefs.

Various strategies may be employed within the classroom to promote pupils' positive beliefs about learning. The potential role which self-assessment may have for helping pupils to consider their work honestly and positively, to express their own views about their learning, to engage in the process of celebrating achievement and to establish future priorities, seems to offer the potential to influence the process of self-efficacy as part of the process of self-regulation. Even if pupils have more negative views of their learning, self-assessment can be specifically focused so that positive aspects can be framed and crystallised. As in the example with Jason in the case study, this approach improved his view of what he could do.

Metacognition

Put simply, metacognition is thinking about thinking. Within self-regulation theory it is an essential component that enhances the mechanism through which feedback is acted upon and judgements are made. Similarly, the process of self-assessment demands that

judgements are made by the pupil about his/her achievements. It requires thinking about learning. In terms of cognitive processes, metacognition is a higher order skill which develops throughout primary education. Beyond a basic and rather simplistic definition is twenty-five years of research, which has tried to offer more precise definitions. Hacker (1998:11) seeks to draw together some consensus.

> A definition of metacognition should include at least these notions: knowledge of one's knowledge, processes and cognitive and affective states; and the ability to consciously and deliberately monitor and regulate one's knowledge, processes, and cognitive and affective states.

Two strands are implicit here: understanding knowledge; and recognising one's own role in monitoring and regulating it (an aspect of self-regulation). Both strands are required, for simply possessing knowledge about one's cognitive strengths or weaknesses alone does not indicate metacognition. It is the way that this knowledge is utilised in assessing the realisation of learning goals and targets which must be evident. There is a core assumption that some form of self-monitoring or assessment is required. Hacker (1998:13) states that

> the key to effective self-regulation is accurate self-assessment of what is known or not known. Only when students know the state of their own knowledge can they effectively self-direct learning to the unknown.

With reference to cognitive monitoring, research has shown that even young primary aged pupils can accurately monitor their knowledge. With progressing age this capacity increased along with accuracy. For example, a study by Flavell *et al.* (1970) focused on children aged from 5 to 9 (in Hacker 1998). They were shown successively longer sequences of pictures of familiar objects. The children were than asked to predict whether they would be able to recall the pictures in the correct order. The children's predictions were compared with their actual recalls. The youngest children tended to overestimate their recall ability whereas the older children were able to recall more pictures and were more accurate with their predictions.

Studies which have sought to explore cognitive regulation have shown that 'young children can be trained to monitor their strategic

behaviour and performance, and that this training can enhance their regulation of efficient strategies' (Hacker 1998:17). Thus, children at a young age can make judgements about ways of working, and make appropriate decisions about relevant strategies. At the primary school age limited experience restricts the choices available. Nevertheless, the processes for cognitive regulation are evident and could be further enhanced by specific training and awareness.

Feedback

Within the context of self-regulation feedback is identified as a controlling factor (Carver and Scheier 2000). From a behavioural perspective, they highlighted four key elements which form a feedback loop: an input function; a reference value; a comparator and an output function. Black and Wiliam (1998:48) highlighted elements of feedback drawn from the behavioural sciences which focus more specifically on possible elements of feedback. These include:

> data on the actual level of some measurable attribute;
>
> data on the reference level of that attribute;
>
> a mechanism for comparing the two levels, and generating information about the gap between the two levels;
>
> a mechanism by which the information can be used to alter the gap

For a feedback loop to be completed there needs to be some altering of the gap between performance and the goal/standard or reference level. Without this, feedback has not taken place. Kluger and DeNisi (1996) identified different responses which may be selected in response to the gap identified as part of feedback:

- to attempt to close the gap and reach the standard;
- to abandon the standard completely thus eliminating the gap;
- to alter the standard so that the gap is not so great;
- to deny that a standard exists, which effectively removes the need for feedback.

In recognising that feedback responses vary considerably some attempt has been made in recent research to offer explanations for

this. Black and Wiliam (1998) summarise some of this research. Attention is drawn to the evidence which suggests that individuals should be directed towards tasks rather than self for better performance. Feedback such as praise tends to emphasise self rather than task, and Black and Wiliam suggest that this has little impact on performance, although it can increase interest and attitude. An additional finding indicated that feedback on learning processes seems more effective than feedback on absolute levels of performance. Black and Wiliam (1998:53) offer a definition which uses feedback in its restrictive sense as

> any information that is provided to the performer of any action about that performance. This need not necessarily be from an external source, nor need there necessarily be some reference standard against which the performance is measured, let alone some method of comparing the two.

However, in accord with Sadler (1989), for assessment to be formative, feedback is essential. Without it information is simply recorded and not acted upon—the control loop cannot be closed.

Torrance and Pryor (1998) suggest that feedback forms an essential function of formative assessment. Although it is clearly identified as the part of assessment which allows the judgements made to contribute towards future learning, it is problematic. Details of the interactive process of feedback are scarce in research literature. Furthermore, drawing from Sadler (1989) they reveal:

> 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…development despite regular, accurate feedback.
>
> (Torrance and Pryor 1998:13)

Hattie and Jaeger (1998) extend the notion of feedback more specifically to processes of learning. They move away from the more behaviourist assumptions underlying much of feedback analysis which emphasises input and output factors, including Black and Wiliam's similar emphasis on the provision of information, to the importance of pupils' *understanding* of information and learning. Their model is based on 'the tight interplay between assessment,

learning and feedback' (p. 111). Their view of learning recognises that in order to assess learning and to improve it there needs to be an understanding of the 'constructions that students have made from the learned/taught information' (p. 113). As suggested in the discussion of constructivism earlier in this book, students will make sense of the information they are taught in different ways. In order for learning to advance, both the teacher and pupil must consider the process of learning as well as the outcomes. Feedback must be related to understanding and not merely to partial evidence which may measure only an element of learning. This type of feedback is focused on individual pupils, and requires the teacher to spend time with each pupil. Whether this is practical in a large class of over 30 must be ascertained. It certainly needs to be located within a carefully planned programme which allows for individual pupil/teacher interaction regularly. In extending Black and Wiliam's (1998) and Kluger and DeNisis' (1996) recognition that students are likely to use feedback in different ways, Hattie and Jaeger (1998:117) emphasise that students will often bias feedback in order to support their own beliefs. But more importantly they highlight the importance of teachers trying to establish how individuals have interpreted feedback. They state 'excellent teaching involves being aware of individual students' dispositions to receiving feedback information'.

Perrenoud (1998:87) also contends that the effectiveness of feedback lies ultimately with the pupil.

> Thus we must concede that some of the messages which the teacher conceives as feedback do not in fact play this role for the pupil, because their form, their tone, their content (verbal or non-verbal), the moment chosen, the point reached in the work and the interactive situation in which they occur do not allow the pupils to understand them or 'do something with them'.

Perrenoud draws together the notion that feedback is part of self-regulation with its role in advancing learning. He considers the relationship between self-regulation (specifically feedback) and learning and suggests that processes of self-regulation do not necessarily have learning process as their objective. However, regulation can affect learning. The way in which this may occur is not easy to ascertain.

> It is difficult to ascertain at which point in time and under what conditions the regulation of the activity induces effects in the learning process. In between what the pupil does and what passes through his or her mind, the mediations are complex. And what happens in the mind does not necessarily affect learning.
>
> (Perrenoud 1998:88–9)

Seeking to establish a connection between self-regulation and learning development is part of the argument so far developed in this chapter. However, beyond this is the view that understanding learning, through processes which can form part of assessment, can have an impact on learning.

The elements of self-regulation which have been discussed—self-efficacy, motivation, metacognition and feedback—can all be aspects of learning, whether for self-regulation or not. They can form part of the ways in which pupils influence and exercise control of their learning, and how they make sense of their experiences and build upon them. Furthermore, they can be used in the way they understand their learning, make judgements about it and decide the way forward. At this level, assessment and learning become part of the same process. They are interlocked in the development process. If this is the case, the notion that assessment should be a component of learning rather than merely a measure of it, needs to be further developed. Processes which may influence teaching are therefore likely to influence assessment and vice versa. Strategies which may encourage children to consider their learning more carefully and help them close the gap in their learning or to bridge the gap (Vygotsky) need to be considered from the perspectives of both teaching and learning. Constructivist theory highlights the importance of the pupils' role in making sense of learning. Implicitly from this perspective is the view that pupils must also be able to make judgements about their learning through assessment—self-assessment. The processes which would be necessary for this to occur are also important for the development of learning. Pupils' role in self-assessment can thus be seen as a form of learning. This readily permits the view that assessment can be regarded *as* learning. This is a particular form of assessment, located in a formative framework and not necessarily related to agreed standards.

The remainder of this chapter will try to set out key aspects for consideration when developing self-assessment. It draws from the

case study in the previous chapter and from the aspects of self-regulation already outlined in this chapter.

Developing self-assessment

Assumptions

For pupils to be encouraged to engage in the process of self-assessment within the primary classroom there are a number of assumptions which need to be made explicit before more practical ideas and possible principles for development are outlined. They are drawn from the case study analysis and theoretical considerations presented so far.

1 Pupils must be seen as active learners who are active in the process of interpreting and constructing their learning.
2 Pupils know that their views of their own work as well as their judgements and comments are welcomed by the teacher.
3 Pupils must have some developing awareness that they have a role in shaping and changing their own learning.
4 Pupils must have some notion that their learning is part of a process of development which has defined steps which the teacher will outline.
5 Pupils' learning is situated within a particular context which must be accounted for in the self-assessment process.
6 Factors related to pupil self-efficacy and motivation will impact on the way a pupil engages with the self-assessment process.
7 Self-assessment involves the use of skills which pupils at the primary school age are still developing, such as metacognition.
8 Pupil involvement in self-assessment in the primary age phase is part of the process of developing skills not just a limited application of already learnt skills.
9 The outcomes of self-assessment of pupils at the primary age phases will have limited relevance or validity in contexts beyond the classroom.
10 The process of self-assessment may have benefits to pupils beyond the assessment process, if regarded as a form of learning as well as a form of assessment.

The purpose(s) of self-assessment

The possible purposes outlined here which may propel the use of self-assessment are not given with any indication of priority. Indeed the purposes cited for developing and using self-assessment are likely to combine a number of issues. Their emphases are likely to relate to whether reference is being made to a specific self-assessment occasion or to the principal of self-assessment as part of general priority and policy. Purposes of self-assessment, within the constructions which are being developed here, include the following:

1 As a tool for formative assessment.
2 As a tool for summative assessment (the focus of self-assessment for summative purposes in the primary age phase is likely to be mainly within a defined context (the classroom) rather than for more general accountability purposes and put alongside other forms of evidence which it may help to qualify).
3 As an aspect of learning development providing information about the gap between what has been learnt and what needs to be learnt.
4 To enable targets to be set, linked to current achievements.
5 To enable pupils to think about their own learning, thus encouraging the development of metacognition.
6 To provide a forum for pupils and teachers to talk about their work.
7 For pupils to be able to be actively involved in curriculum and assessment practices (i.e. their learning).
8 To form part of the developing process of self-regulation which continues throughout lifelong learning.

From these purposes it is clear that the relationships between learning and assessment are tightly interconnected.

The practices of pupil self-assessment

Having clarified assumptions and purposes for pupil self-assessment some strategies for implementation are offered. The suggestions made are offered in general terms so that they can be applied to a variety of contexts. Elements for consideration are drawn from the experiences outlined in the previous chapter. These looked at a case study in which self-assessment was developed, as well as from the

theoretical considerations already outlined in terms of learning theories. Points for consideration in the practice of self-assessment in the primary classroom are offered under the following six themes:

1 creating the classroom context;
2 understanding learning;
3 making judgements;
4 recognising differences;
5 closing the gap;
6 moving on.

Creating the classroom context

Developing self-assessment strategies in the classroom cannot be seen in isolation from other classroom activities and practices. The active role which pupils need to assume during self-assessment should also be evident in other aspects of classroom experience. The skills required to be effective in self-assessment need to be supported and developed throughout the curriculum. Vygotsky claims that the basis of language and thought starts with the social.

> Every function in the child's cultural development appears twice: first on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher psychological functions originate as actual relations between human individuals.
>
> (Vygotsky 1978:57)

Following Vygotsky's contention, the levels of higher order thinking required in self-assessment need to be developed as social practices before they can be internalised by a pupil. Thus, there seems to be a strong case for trying to ensure that higher order thinking skills feature as part of classroom interactions. Lipman (1991) advocates that the classroom should be a community of inquiry. In such an environment classroom discussion in which pupils ask each other questions, offer reasons, listen and respond to each other's points of view and seek to identify each other's assumptions, are all important aspects of cooperative activity. The teacher's role in facilitating and guiding such inquiry is not one of dominance but

of discerned nurturing, encouraging pupils to interact and engage with ideas and concepts in ways which will foster thought and reflection. If pupils are not encouraged to participate within their learning environment, in interactions with one another and with the teacher, in ways which promote higher order thinking skills, then their involvement in self-assessment is unlikely to be of value. Features which might characterise a community of inquiry, whether as part of specific curriculum subjects or as discrete learning opportunities, include:

- seeking and explaining logical relationships between items of knowledge;
- asking appropriate questions;
- highlighting possible assumptions for different perspectives;
- exploring a variety of possibilities;
- explaining the limits of a concept or idea;
- identifying or discovering criteria;
- seeking alternative views and solutions;
- asking for and developing reasons;
- making considered judgements;
- drawing relevant distinctions and inferences from information;
- trying to anticipate possible consequences of particular scenarios.

All the skills here are ones which can be developed throughout schooling. Within the primary classroom, encouragement of their development will be only the start of the process. More consolidated and extended development can be enhanced as pupils' cognitive competencies increase.

The process of involving pupils actively in thinking about their learning and discussing concepts should also foster a sense of valuing pupils' ideas. This is a fundamental requirement within pupil self-assessment. The whole process of self-assessment needs to be founded upon a sense of trust. Pupils must feel that the judgements they make and ideas that they share will be used positively by teachers. The consequences of their being honest and open about the way they have worked, as well as the product of their efforts, must be seen to be fair. If pupils perceive that any comments they make about their work relating to weaknesses or aspects for improvement have negative consequences (such as redoing work, extending the work, completing as homework) they are unlikely to be forth-coming with such comments. It is therefore important for pupils to understand the

possible impact and status of what they are invited to engage. Furthermore, if the judgements which pupils make are merely overruled by a teacher's judgements then they will consider little point in offering their opinion. Trying to balance pupils' views of their learning with the teacher's more directive agenda and informed perspective requires careful consideration. (This is developed more specifically in pp. 135–8, in the section headed 'Recognising and acknowledging differences'.)

Understanding learning

The case study outlined in the previous chapter illustrated the use of self-assessment initiatives with Years 5 and 6 pupils. Both formative and summative approaches were used. The attempt to involve pupils in summative self-assessment of research skills and attitudes at the end of a topic was highlighted as being rather a bolt-on process. What was not clear from the pupils' responses was the extent to which they had drawn on the full range of experiences or whether their results were based on a memorable selection of their work which may or may not represent what had been undertaken. The pupils' judgements do, however, reflect their overall judgement of their skills and attitudes which extracts what is salient for them. In order to help pupils consider the breadth of their learning experiences throughout a topic, more regular opportunities to consider their work and involvement may assist in offering further steps which can be built up and synthesised for a final summative self-assessment.

The main focus of the pupil self-assessment in the case study cited was on formative assessment which was linked to individual lessons. Part of the rationale for the practices developed was built on the basis that the learning criteria for each lesson should be made clear to the pupils as part of the teaching element of the lesson. Criteria for each lesson were made explicit and attempts made to illustrate how such criteria could be translated into the work requested for the lesson. The lessons, thus, had clearly defined objectives which were translated into criteria that were the subject of discussion and understanding in the early part of each lesson. The intention was to develop a shared understanding of learning aims between the pupil and the teacher. Furthermore, the criteria were designed to form the focus for the self-assessment so that judgements and comparisons could be made between teacher and pupil. As indicated in the previous chapter, there were limitations with this aspect of the development

of the initiative. It was clear that the criteria were not always fully considered by the pupils when undertaking or assessing their work. Furthermore, pupils also included personal factors which were not related to the criteria such as effort, the standard of their previous work as well as how they compared their work with that of other pupils in their self-assessments.

The case study showed that the use of criteria had been of importance to some of the children. The example of Jason showed that the focus on specific criteria in each lesson had enabled him to recognise his developing skills which had previously been overshadowed by specific language difficulties. Having specific criteria permitted him to push his other difficulties to one side and to see beyond them. Other children in the case study had indicated in the pupil interviews that the criteria had helped them to understand what was important in a task. This had been identified as helpful by the pupils. It seems to support the view already expressed in the research (e.g. Black and Wiliam op. cit.) that supporting pupils through task-related issues is more effective than supporting them in more general positive ways.

In recognising this point, it was also clear from the case study data that many of the children had attempted to use the criteria alongside their own agendas for work and success. They were trying to make sense of their new learning in their own way. From the learning theories already outlined throughout this book, the importance of recognising that pupils' learning is embedded in a context which includes the social, and is related to previous learning, should not be overlooked. If pupils are to be encouraged to articulate something of their learning through self-assessment, trying to force sole reference to objective criteria may not be desirable or helpful.

The use of criteria in the process of self-assessment is none the less considered to be of value. They will certainly need to feature in the teacher's agenda for teaching and learning. In order to satisfy both school-based and national accountability demands clear criteria must be articulated as part of the comprehensive plan of curriculum coverage. The assumption that a particular form of effective teaching will result in pupils fulfilling these criteria, which can then be easily assessed, promotes a distorted and grossly naive picture of the complexities of the teaching and learning process. It is within such a framework that any developments in self-assessment are located and developed. However, any intention that self-assessment should contribute to a similar purpose of accountability will falsely reduce its practice to a level of objectivity which is neither feasible nor

desirable and which fails to account for both the ways in which pupils learn and how they understand their learning.

The extent to which pupils can make sense of criteria which form the basis of teaching and the focus for learning will be partly related to the level of their cognitive development. The extent to which pupils in the primary age phase can use criteria objectively increases in the junior phases of schooling (over 7 years old, according to Piaget's model). The complexity of the criteria as well as the way in which they relate to and build upon existing knowledge and experiences are also significant factors. Pupils' use of criteria within the curriculum may be varied. For example within maths or science their use may be related to classification and setting—to help children see relationships and recognise inclusiveness. This is likely to be related to known factors which have been part of knowledge development and require application, consolidation and manipulation. Pupils' use of criteria in terms of framing a task and assessing it requires similar skills but is likely to be related to knowledge, skills and understanding which is new and developing. The focus of the criteria, however, are likely to be in what Vygotsky terms the ZPD (see Chapter 2). Thus, the way that pupils may be able to consider them and relate them to their own thinking and performance is likely to be more problematic. As pupils continue through the primary years the challenge of using task criteria in the context of self-assessment seems to be as relevant to the substance of curriculum experience as it is to the understanding of their learning through assessment. Thus, the curriculum challenge which self-assessment may provide should not be overlooked. Appropriate teacher guidance and support, however, is crucial.

Recognising the role of task criteria as part of the basis for self-assessment involves acknowledging that any such criteria will be embedded in the context of learning and individual interpretations of that learning. The way that criteria are shared with pupils must try to encourage them to make connections between what pupils already know and what is being asked of them. The criteria must therefore be shared in a way which allows application and interpretation rather than in a closed form which assumes universal interpretation. Following this, teachers need to try to find out how pupils have understood what the task requires. Trying to establish this information is an important part of formative assessment for the teacher. Without an attempt to understand how pupils perceive the curriculum, and what sense they make of it, there will be little

hope of gaining relevant insights into the process of learning or gaining any information which might contribute to its further enhancement. The process of pupil self-assessment should be an enabling process which supports pupils in articulating their priorities and their views of the tasks that they have undertaken. From this basis pupils can consider the work they have done and try to formulate a judgement about what has been achieved.

Making judgements

The case study cited in the previous chapter illustrated how pupils were required to use an A to E grading system as part of their self-assessment. This was popular with the pupils since they seemed to think that grades offered status. The pupils' perceptions here are obviously linked to the way in which they have understood other assessment systems, and the status which they appear to have been given. In the case study school illustrated, grades were frequently used by the teachers which may have promoted the eagerness of pupils to use them. Their currency was evidently high. Within the national educational arena the use of levels for the attainment targets offers a similar type of assessment score output. Although the levels are based on criteria which are consolidated in level descriptions, the overall assessment result is simply conveyed in a single number. Critical for consideration in deciding how best to summarise and communicate assessments are the purposes to which they are to be used. In the national assessment system, since its development, the emphasis has been increasingly on providing summative assessment information for national accountability. Having assessment results which are simple is important if large amounts of data are to be collated and compared. In the case study, there was a clear dilemma about the purposes of the self-assessment. There was a sense in which national trends in assessment should be followed, but with an added voice—that of the pupil. Thus, the decision to use grades in the self-assessment process was designed to make the self-assessment results suitable for inclusion as part of school accountability as well as for formative class-based assessments. It seems (as with national assessment developments which sought to serve both formative and summative assessments) that the irreconcilable cannot be reconciled (drawing on Nutall's statement that the National Curriculum claimed to reconcile the irreconcilable). It was clear that the pupils were drawing on a variety of sources of evidence and interpreting the

grades in their own ways. Trying to claim that the self-assessment grades offered reliable evidence for summative assessment would have little foundation. Pupils admitted in their interviews that the basis for their grades was not always related to the criteria. Furthermore, for pupils who did indicate that they tried to use the criteria, the use of the grades tended to focus on selected criteria and not represent the full picture. It seemed that the use of grades offered little to the self-assessment system, except for the status which pupils associated with them.

Pupils were encouraged to consider the criteria which had been outlined for the task and then to link these criteria with the grade range given to them. This structure offered pupils an additional level of abstraction in dealing with the assessment. It seemed to further remove the pupils from the heart of what they were assessing. The grades, which were recorded, were thus supposed to represent the judgement made of the criteria. However, the grades gave no information about the specific criteria for the task. Thus, in terms of providing information for further improvements and development, there was very little useful information recorded. This does not mean, however, that the pupils and the teacher did not benefit from the process of discussing and considering the work assessed: the process carried out during the process of self-assessment provides more meaningful information which can be sustained and utilised despite the more limited records.

The process of self-assessment is based on pupils making at least one judgement on their work. The capacity which pupils have to control the factors that influence their judgements will vary according to their age and experience. As pupils move through the primary age phase their ability to deal with more complex issues as well as more abstract ones increases (e.g. Hacker 1998 op. cit.). Pupils' skills in self-assessment during the primary phase must, therefore, be seen as developmental. In seeking to involve pupils in the process of making judgements about their work some consideration must be given to ways of guiding them in this process so that their skills can be extended and enhanced. The potential for self-assessment to contribute to the curriculum rather than just respond to it should not be overlooked.

Looking more closely on the possible pathway of skills which pupils may use for self-assessment offers some insight into the level in which self-assessment may both draw upon and develop pupils' thinking and reasoning skills. Figure 6.1 offers some possible

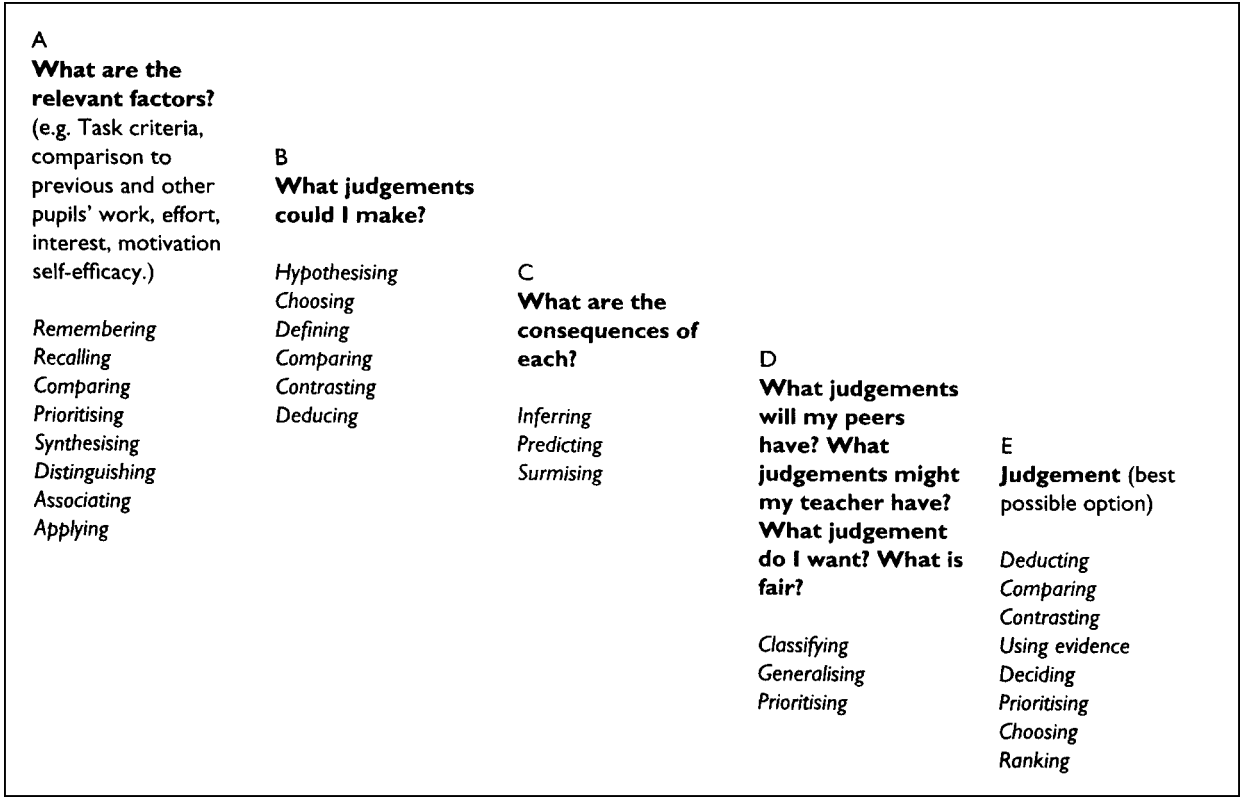

Figure 6.1 Judgement and skill in pupil self-assessment.

components of the process of making an assessment judgement as part of pupil self-assessment and suggests possible skills (given in italics) which may be used at each stage.

The stages A to E identified in this module are not intended to promote a neat sequential and linear process for self-assessment. Consideration of the five stages included may partly be simultaneous; their combination and priority may differ for different pupils on different assessment occasions. Furthermore, the skills used at each stage will differ. The reasons for the difference in the use of skills will vary and might include the following:

- Cognitive ability of the pupil limits the extent to which cognitive and metacognitive skills can be utilised.
- Cognitive ability may influence the extent to which pupils can consider and work with multiple variants at any one time, thus affecting the range of skills which might be utilised in the self-assessment processes.
- Issues related to motivation and/or self-efficacy may influence the way in which skills are used.
- Favoured priorities, personal preferences and the values and assumptions held are all likely to influence the way in which a pupil interprets each stage.

Thus the pathway a pupil may take in the process of making self-assessment judgements may be extremely simple (conceptually), based on loosely substantiated choices informed mainly by personal preferences. On the other hand, the process may use a range of metacognitive processes which are clearly defined and rationally utilised. These two scenarios are not offered as a continuum, even though the pupils are likely to function in the process of self-assessment somewhere between them. Although the emphasis which is developed in this chapter stresses the need for participation in self-assessment to be developmental, as cognitive skills are enhanced through a range of learning activities, there is also recognition that sharpened cognitive skills will not result in a uniform process of self-assessment. Any self-assessment initiative which assumes uniformity of practice may mislead, particularly if there is an assumption that pupils can be steered to think in particular ways about their work.

If we are to accept that pupils will draw on a variety of sources of evidence and make decisions which are informed from several perspectives, then a key part of self-assessment must be in examining

the processes used as well as the outcomes presented. In terms of gaining and making sense of a self-assessment judgement, it must be acknowledged that this judgement will be based on a number of decisions, each of which may have drawn on different evidence and involved different skills. Trying to ensure that pupils are encouraged to articulate the basis for their judgements should feature as part of the self-assessment processes. Thus, in addition to the ever increasing number of self-assessment sheets which encourage pupils to offer their judgements on aspects of their work, some consideration of how these judgements have been made will be of use. Such encouragement would enhance the way in which the self-assessments information could be understood and subsequently used. Figure 6.2 is offered as an example. It is presented in a way which illustrates principles for development rather than a sheet which will serve any particular pupil group.

For pupils to work with such questions assumes that they are already familiar with being engaged in tasks which require them to think and to reflect. The questions posed in this example may be the focus of a discussion session rather than presented in written form. The aim is to try to elicit the reasons behind the judgements pupils make so that perceptions and thinking about learning are understood alongside the pupils' work. This should enhance the ways in which both pupil and teacher make sense of and subsequently build upon existing learning.

Recognising and acknowledging differences

The self-assessment process outlined here seeks to stimulate thinking about learning which is not designed to reduce assessment to simple objective measures. In seeking to enable pupils to present a range of factors which they consider have influenced their work, teachers, potentially, may have a complex task of helping pupils and themselves to meaningfully combine and interpret the information. There is no assumption that assessment information will be transparent and easy to produce or to use by either pupil or teacher. It may well be that the judgements which teachers make about a pupil's achievements during a lesson may not fully concur with those made by the pupil. If teaching and learning are to successfully interrelate there must be some attempt to recognise, understand and work with differences. The following headings (after Figure 6.2) offer a framework, which may help in this task.

Thinking about my work?

What is important to me in this activity?

	Very important	Important	Slightly important	Not important
The criteria for the lesson				
Whether I have finished the task				
How much effort I put into it				
How my work looks compared to somebody else's				
Whether I enjoyed doing it				
Whether it is a good piece of work for me				
Whether it is not a good piece of work for me.				

What two judgements could you make about your work in this lesson? What do you think the consequences will be of making either?

My judgement about my work today	Consequences of making this judgement
1	
2	

What are the reasons for each of these judgements? Try to think of two reasons for each judgement

	Reason 1	Reason 2
Judgement 1		
Judgement 2		

What are the pros and cons of making each judgement?

	Pros	Cons
1st possible judgement		
2nd possible judgement		

How fair are your judgements?

1

2

What judgements do you think your teacher will make of this activity?

Your decision

Weigh up all the factors

What did you do best in this activity?

What things are you not so happy with?

Have you any ideas of what you need to do next to improve?

Figure 6.2 Promoting pupil thinking in assessment and learning.

- **Articulating**—A conscious effort needs to be paid to ensuring that pupils have appropriate opportunities to express the factors which have influenced their work. A pupil's self-assessment may be in written or spoken form, working individually, with a partner or in a group. Consideration should be given to the skills and abilities a pupil has to express his/her thinking. Thus, as with most aspects of the curriculum, facilitating pupils to participate in self-assessment will require differentiated tasks based on teacher knowledge of pupils' developing skills, capacities and attitudes.
- **Acknowledging**—Even if a pupil's view of his/her work is at odds with the teacher's impression it is important that the pupil's assessment is valued. The pupil's own view of progress and achievement will be the starting point for his or her future learning. Seeking to overrule or dismiss this view is unlikely to be conducive to future learning.
- **Agreeing**—In the case study presented in the previous chapter there was an attempt to formulate an agreed grade, supposedly drawing from both the teacher's and pupil's initial judgements. In reality, it tended to be the teacher offering a decisive judgement without an exchange of reasons or clear deliberation. The value of such an 'agreed grade' was thus in question. Furthermore, the focus on a grade as the focal point of the agreement seemed unhelpful. An essential part of 'agreeing' is accepting each other's viewpoint as potentially useful for moving on.

Closing the gap

If pupils have offered judgements about their work, these provide a useful starting point for discussion and for helping the child to begin to progress. If the process of self-assessment deliberately seeks to ensure that different perspectives of achievement are sought, it potentially, on the surface, makes the task of synthesising information, so that future steps can be taken, seem more difficult. Such difficulty is identified only in comparison to systems which seek to oversimplify assessment and learning processes.

Pupil learning, ultimately, falls with the child. If a child is unwilling, or is not able to connect with the ideas and tasks presented then little or no learning will take place. The judgements which may be made within a self-assessment experience may or may not (in the teacher's eyes) be the most appropriate to serve the further development of

learning considered appropriate. The teacher's power and responsibility for controlling, and being accountable for, the curriculum and the quality of teaching (measured in our current system by pupil achievement) may not always sit easily alongside pupils' priorities and perceptions. By giving pupils a voice through pupil self-assessment there needs to be a carefully considered approach to trying to integrate perspectives. Even though curriculum criteria may well have been identified during both teaching and assessment processes, as already indicated, many primary pupils are highly likely to have prioritised additional considerations. A strategy for trying to combine these views may be to ensure that the final agreement covers both curriculum achievements in their broadest sense (i.e. including personal and social factors)

It will be desirable for teachers to use pupil's judgements as a starting point and to incorporate other judgements as appropriate. Thus, part of the teacher's role should be to affirm some/all of the judgements already made as well as to augment or add to them. This will help the pupils to reconsider and expand their reflections about their learning. With the help of discussion with the teacher, pupils may be able to gain new insights into the ways that they have carried out their work and how they need to further develop it. Drawing once again from Vygotsky's work, the role of another who is more knowledgeable seems just as appropriate in the assessment process as in the process of learning. Thus, to leave self-assessment as a confined activity for each individual is limiting. Its potential lies as part of the wider processes of assessment which attempts to connect teaching and learning for both the teacher and the pupil.

The discussion which follows self-assessment has the scope to value pupil perspectives, to augment them, and to offer feedback which has a known starting point. From such discussions the pupil can try to discern whether there are some points which can be highlighted as targets for the future.

Moving on

Moving on from one assessment experience to another should not be a large leap but part of a continuum. Although the nature of the curriculum content may sometimes appear to have few connections, as topics change and new themes are pursued, the way in which pupils make sense of their progress will impact on subsequent learning experiences. In the case study offered in the previous chapter, pupils

were asked, in negotiation with the teacher, to construct mini-targets. The intention here was to highlight specific targets, which the children could understand and act upon in their subsequent learning. Part of the problem identified with this aspect of the case study was the way in which the mini-targets tended to be identified by the teacher. Some of the children had found it difficult to recall their targets and had evidently prioritised their own issues for development. A further consideration related to the focus of the targets. If they are specifically linked to tasks then their relevance to subsequent learning may be marginal. Trying to make targets more general so that they can form the focus for the future is more difficult—particularly if the pupils are to help formulate them. Nevertheless, if self-assessment is to contribute to formative assessment both pupils and teachers need to be able to link the assessments to future learning. For children to be able to move on in their areas of weakness or to consolidate aspects of uncertainty they must be able to begin to make connections between where they are and where they intend to be. Trying to crystallise this step is as important for the pupils in making the step of learning as it is for the teacher who seeks to plan the curriculum appropriately. From Kluger and DeNisi's (1996) research, mentioned earlier, pupils will decide the extent to which they respond to feedback and the targets related to them. Additionally, as Hattie and Jaeger (1998) emphasise, they will bias the feedback to support their own beliefs. Thus, the understanding which pupils have of what they should aim for next is likely to be the key factor in the way in which they learn. Pupils' willingness to seek out new directions in their learning, to be motivated to achieve new things and to work at skills which are hitherto not fully understood, will depend on the way in which they perceive their capacity to succeed. As previously mentioned, motivation and self-efficacy are important aspects of self-regulated processes of which learning is a part. Targets, constructed in a supportive context stressing pupil approval, participation and understanding, may well be instrumental—even pivotal—in facilitating the learning process.

Conclusion

This chapter has argued for greater involvement of pupils in the assessment processes which should be seen as an integral part of their learning. The involvement of primary pupils in the self-assessment process is highlighted as complex, involving a variety of

skills, which are both developed and utilised in the processes. Rationalised from a theoretical position and supported from insights gleaned from school-based initiatives this chapter has presented a case for the further development of pupil assessment in a way which reinterprets assessment—as learning.