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Assessment and Learning within the Framework of Self-Regulation

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Abstract

My empirical qualitative research was conducted in an English independent school where I examined assessments practices in place. In this paper, I focus mainly on theoretical framework and attempt to define assessment, which is seen as an integral part of learning. As different forms of assessment are explored, the importance of effective feedback is emphasized and, in particular, its impact on future learning. The concept of self-regulation is highlighted because this concept is considered an important aspect of achieving learning independence. I use the theoretical framework of 'self-regulation' to support the effectiveness of formative assessment practices in improving progress. I conclude that a failure to provide pupils with opportunities to become independent learners can be disadvantaging some pupils' educational achievement and can lead to pupils' reliance on external forms of regulation, which could be counterproductive to motivation and learning sustainability.

Key words: formative assessment, feedback, self-regulation, motivation, learning autonomy

1. Introduction and Research Context

In this chapter, I introduce my paper by describing briefly my research setting, to put my research into context, and I explore different forms of assessment. However, as I consider that the critical function of assessment is supporting learning, my particular focus is on assessment for learning, where I consider the quality of feedback and pupils' engagement as crucial to learning and progress.

My research was conducted in England in an independent school for about 450 boys aged 2 ½ to 13, where I examined assessment practices over a period of about six years. In my qualitative study as part of my research methodology, I employed triangulation, methodological triangulation and respondent triangulation, to establish data validity. This multi-method approach was applied to my data sources' analyses, which included semi-structured, face-to face, taped or non-taped interviews, documents (pupils' marked work/exercise books; teachers' reports; marked assessments or mock examinations; notes from staff meetings; extracts from inspection reports), notes from lesson observations and a teacher questionnaire containing closed and open-ended questions.

Following my data analyses, my study highlighted some interesting tensions between what kind of feedback teachers felt was most useful to pupils' learning and what pupils articulated as the most helpful feedback to their future learning. However, in this paper I focus on the notion of self-regulation because I regard it as an essential constituent of formative assessment.

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2. Educational assessment: forms and purposes

I begin by posing the fundamental question of: why do we assess at all? According to Broadfoot (1996): Assessment is a central feature of social life. Passing judgements on people, on things, on ideas, on values is part of the process of making sense of reality and where we stand in any given situation (p.3).

Assessment can also be seen in broad social terms, where one can refer to the evaluation process taking place in any social situation, any industry or place of work. Indeed, Stobart acknowledges the power of assessment in everyday life asserting that, "Assessment in the broad sense of gathering evidence in order to make a judgement, is part of the fabric of life" (Stobart, 2008, p.5). Hence the application of assessment and its outcomes have a very wide social and industry implications.   However, as Broadfoot (1996) writes, "one of the most highly evaluative settings is that of education" (p.4) where the deliberate gathering of evidence takes place in order to make judgements about individuals (ibid. 2008), thus my particular interest in assessment within an educational setting and especially assessment which is used formatively for the improvement of outcomes as asserted by Tymms (2000): "Assessments are intended to improve things, or at a minimum simply to help study things not make them worse in the process" (p.20).

Since assessment is such an integral part of any educational process (Gipps and Murphy, 1994; Cottrell, 2003; Earl, 2003) and since it has greatly increased in English schools over the last two decades, it is likely to have an enormous impact on the way teachers see their teaching and the way pupils are educated (Tymms, 2000; Khattri, N. et al. 1998; Gibbs, 2002), and so it is necessary to establish what is understood by assessment and what the purposes of assessments are.

a. Defining assessment

It is asserted that the term 'assessment' suggests an objective process of measurement (Drummond, 1994; Linn and Gronlund, 2000) and of obtaining information (Desforges, 1989; Rowntree, 1987). This gathering of information often rests on assumptions that testing reveals objective truths but Hanson (1994) disputes this: "These assumptions are mistaken. Because of their representational quality, tests measure truth as culturally constructed rather that as independently existing. (…) By their very existence, tests modify or even create that which they purpose to measure" (p.47).

Therefore assessment is complex, because it can stand for different approaches to the gathering of evidence and is so ingrained in the whole educational process, it would be too simplistic to refer to it just as a measuring device without considering it as part of the learning process. Effective assessment could be more precisely viewed as a process of asking questions about learning and educational outcomes; a process in which understanding of children's learning can be used to evaluate and enrich the curriculum on offer (Drummond, 1994; Weeden et al.2002).

Although there are many forms of assessments used for different purposes, and the processes are not mutually exclusive, two main categories can be identified: summative assessment – assessment summarizing pupils' achievement at the end of the course and used for reporting to third parties (Stobart and Gipps, 1997; Harlen, 2005;) and formative assessment – aimed at supporting the learning processes through dialogic interaction and guidance for improvement, leading to improved learning outcomes evident in higher attainment (Freeman and Lewis, 1998; Gipps and Murphy, 1994; Gardner, 2006; Maxwell, 2004; Black and Wiliam, 2009). As responsibility for learning is shared between the teacher and the learner, the process is based on joint interactions. Black and Wiliam (2009) assert that "the quality of interactive feedback is a critical feature of learning activity".

Despite this 'neat' documented division, practical evidence suggests that a particular test could be both summative and formative in its nature, as what is crucial is how the information provided by a particular test is used (Desforges, 1989; Harlen and James, 1997; Black et.al., 2003) and what teacher feedback is given. Feedback, a key element of any assessment process, can take many different forms, but is crucial to moving learning forward and is an essential part of formative assessment (Stobart, 2008; Clarke, 1998, Weeden et al. 2002). Feedback, in one form or another, occurs during everyday classroom interaction and can be given orally or in a written form in response to pupils' tasks. Since teachers mark pupils' work in different ways, Gipps distinguishes two main categories of feedback: evaluative feedback, which is concerned with giving rewards and punishments and/or expressing approval and disapproval, and descriptive feedback, which is aimed at telling children that they are right or wrong, describing why an answer is correct, telling children what they have achieved and have not achieved, specifying or implying a better way of doing something or getting children to suggest ways they can improve (Tunstall and Gipps, 1996b).

2.2 Assessment for learning

When teachers' judgements about pupils' performance are used to feed back into teaching and learning processes and involve pupils in their own learning, they take the form of assessment for learning (Stoll et al. 2003; Stobart and Gipps, 1997), irrespective of the form and purpose of the initial assessment and the division between these two categories of assessments can be blurred. In improving learning through assessment, Black and Wiliam (1998) suggest the following factors: a) effective feedback to pupils; b) active involvement of pupils in their own learning; c) adjusting teaching to take account of assessment results; d) recognition of influence of assessment on pupil motivation and self-esteem; e) self-monitoring and correction by pupils.

Although the relationship between formative assessment, resulting in modifying teaching and learning, and summative, aimed at monitoring progress, is not clear-cut (Stobart, 2008; Harlen and James, 1997), there has been some criticism of the recent preoccupation with assessment for learning rather than with providing measurement, which prompted Broadfoot (1996) to pose a question, "To measure or to learn: that is the question" (p.46). But since education is primarily concerned with learning, no opportunities should be missed in improving pupils' progress and understanding. As James (1998) says rather vividly, one "cannot fatten a pig by simply weighing it" (p.171), the real value in assessments is to give guidance for the advancement of learning and education, and there seems little value in the measurements for its own sake as measuring does not contribute to improvement.

2.3 The use of assessments in schools

There are different forms of assessments used in schools, and in broad terms, assessments can be formal or informal and subjective or objective (McAlpine, 2002; Zigmond and Silverman, 1984). Informal assessments occur as part of teacher day-to-day practice (Atkin et al. 2001; Yorke, 2003; Sota, 2003; Marsh, 2004), for example questioning during lessons; while formal assessments are more deliberate forms of testing (Firestone et al. 2004; Shepard, 2001; Marsh, 2004), for example, the English National Curriculum tests with levels. Both formal or informal assessments could be either subjective, where a teacher makes professional judgements about a particular performance, or objective, where this judgement occurs on the basis of some predetermined criteria, for example attaining a National Curriculum level or a pass at Common Entrance. Another distinction would be between norm-referenced assessments (Tymms, 2000; Hamilton et al. 2002)), those which deal with comparisons with others, and criterion-referenced (Tymms, 2000; Linn and Hambleton, 1991), which comply with a pre-set standard, as for example Key Stage tests. However, here again the distinction can be quite cloudy because they often overlap when Key Stage tests results are compared with national standards at given levels or when marks have to be related to levels before they are set (Tymms, 2000; Shayer, 1991). This is another example that the 'purity' of distinction rarely exists between different forms of assessments, as it was already discussed with reference to formative and summative assessments, hence it would be probably more appropriate to regard assessments in terms of providing information, which can have various uses.

Having briefly established some distinctions between different forms of assessments, one becomes aware of their characteristics when examining different types of tests conducted in schools for different purposes: formative, diagnostic, summative and evaluative (Hargreaves, 2005). Although some would argue that it is impossible to design an assessment that would serve all four purposes (Drummond, 1994) as outlined by the Task Group on Assessment and Testing (1988), it could be asserted that since the distinctions between different forms of tests are not absolutely clear, an assessment can serve different purposes (Brown, 2004; Webb, 1992; Gipps and Stobart, 1993; Harlen and James, 1997). Therefore it is not necessarily the design of the assessment that is paramount, but what the assessor does with the outcome of the test (Tunstall and Gipps, 1996a; Brown, 2004; Torrance and Pryor, 1998). When the outcome is used in ways of supporting a child by showing him how to improve and what is needed for a higher attainment, then a formative judgement is being made (Butler and Winne, 1995; Black et al. 2003; Black and Wiliam, 1998b). This judgement is usually open to any teacher.

As assessments contribute to education in many ways and at many levels, different types of tests have an important role to play in any child's education. Such formal assessments as baseline testing, although not directly formative in their purpose, provide very valuable information about pupils and their academic potential which, when used sensitively by teachers, can be used as a springboard in their approach to individual students, to ensure that each one fulfils his potential (Clarke, 1998). Diagnostic assessments, for example, used by special needs teachers, provide information which can be used for formative purposes with the aim of improving learning and academic achievement by focusing on areas of weakness (Tomlinson and McTighe, 2006; McAndrews, 2008; Carter et al. 1991). So in this sense, a diagnostic assessment could be regarded as a specific form of formative assessment, as asserted by, for example, Gipps and Murphy (1994) and Marsh (2004).

It could be alleged that, primarily, educational assessment should be used for professional rather than managerial purposes, a view shared by Gipps and Murphy (1994) and Stoll et al. (2003) who acknowledge that during the last 10 years or so there have been emphases on the managerial role of school assessment, especially for accountability purposes. This has been the by-product of the National Curriculum tests and the publishing of league tables, but since maximizing learning opportunities and raising achievement are important, Desforges asserts that, "…rather than looking at one school in comparison with another, the key question to ask is whether the school is making the most of the pupils it gets" (Desforges, 1989, p.120). Furthermore, there is a strong body of opinion (Sadler, 1989; Stobart and Gipps, 1997; McDonald and Boud, 2003) that standards can be raised through the use of formative assessment and significant gains can be achieved (Black, 2005; James, 1998).

2.4 Afl2 and the use of assessment in business and sports coaching

Considering relationships between teaching, learning and assessment, there is a body of evidence suggesting that what is termed as 'formative assessment' – assessment which focuses on feeding forward each individual learner – is a good method of not only monitoring each pupil's learning but also of involving each pupil in his learning with the aim of guiding each pupil through the next stage on the way to achieving independence in learning (Stobart and Gipps, 1997; Tunstall and Gipps, 1996a). This method is successfully used in business and sports coaching, where an individual would be told where they were performing unsuccessfully and what they needed to do to improve performance just as in the spirit of AfL, a pupil would be given specific guidance for improvement. In this sense coaching would be seen as a learning aid – equipping pupils with specific information about their learning, rather than giving them direct instructions in the way Whitmore (2002) defined it: "Coaching is unlocking a person's potential to maximize their own performance. It is helping them to learn rather than teaching them" (p.8).

In principle, there are similarities between sports and business coaching for improved performance and assessment for learning because the processes rely on the active telling. This is not a novel approach to teaching and learning and its roots can be traced to ancient times. In some ways, this resonates with Socrates who voiced the same ideas some 2000 years earlier when, in his teaching, he used questions and sequences of questions, 'Socratic questioning' (Magee, 2000, p.16) to make people review their thinking and arrive at different conclusions. This type of dialogic interaction (Alexander, 2006; Freeman and Lewis, 1998)) is at the heart of AfL. Feuerstein's (Feuerstein and Randy,1974) approach to teaching, based on the assumption that effective learning is synonymous with active learning (Sharron and Coulter, 1996), of which key elements are self-awareness and setting one's own targets, fully involves learners through questioning referred to as the 'mediated learning experience' (ibid.).

Although the idea of 'coaching' usually refers to sports and business coaching, the word 'coaching' in education can be used to indicate intensive preparation for an examination and is more reminiscent of "micro-teaching" (Stobart, 2009, CIEA lecture) and "cramming for exams" (Stobart, 2008, p.26) and would be associated with 'the letter' rather than 'the spirit' of assessment as it would be focused on the right answers rather than on principled understanding.

Testing, however, can encourage effective and sustainable learning in an environment in which pupils are fully involved in their learning and the focus is on matching teaching aims to assessment objectives (Gardner, 2006). Therefore if the right balance is achieved between the demands of summative assessments and achieving pupil learning autonomy, with results being used for formative purposes (Black et al. 2003), pupil performance should be able to improve.   Acknowledging that learning is for life, not earning a living or passing a particular test, effective learning requires full learner involvement at every step of the process and Stobart (2008) claims that:

Sustainable assessment makes it imperative for the learner to be actively involved in both the learning intentions and in grasping what success in meeting them might look like. It is not enough just to be aware of these – learners have to develop strategies for self-monitoring their own progress towards these goals (p.184).

These techniques are being successfully applied in sports and business coaching for improved performance (Gallwey, 1974; Hardy, 2006; Neighbour, 2007, Whitmore, 2002).

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[2] Assessment for learning

3.   Self-regulation

3.1 Motivation and learning

In order to have a better understanding of principles which encourage children to learn and why some children are more successful than others, extensive studies into the psychology of learning focused on motivation and, in particular, on the association between motivation and learning outcomes have come to the fore (Boekaerts, 2002; Dweck, 1986; Stipek, 1988; Pintrich 2000), and it is relevant to my research to explore some theoretical aspects of learning which scaffold classroom interaction. Learning is one of those terms about which many assumptions are made, but around which there is a silence in terms of assertions because it is complex and specific to different learners, and no single strategy works for all (Schunk et al. 1998). According to Hirst and Peters (1989), "Educating people is not done by instant fiat. It takes time, and a variety of different processes of learning and teaching are involved it" (p.14). Drawing on a range of European studies, including her own research in Holland over the last twenty years, Boekaerts (1995) concluded that motivation, an essential element of successful learning, conceptualized in her research as specific self-regulatory skill, was necessary for learners to experience success in educational outcomes.

3.2 Self-regulation and motivation

Research (Boekaerts, 2002; Schunk, 1991) indicates that motivational beliefs, which act as a frame of reference for pupils' feelings and actions in a given subject or task, result from learning experiences and act as favourable contexts for learning, where students are not motivated to learn in the face of failure but students who have positive beliefs about their capacity to learn have higher achievements (Boekaerts, 1995; Pintrich, 2000; Stipek, 1988). It was observed that children who were well motivated to learn were also capable of using their self-regulatory skills effectively for higher achievement, whereas children who were not skilled or nor inclined to use their self-regulatory skills, were poorly motivated and over-reliant on teachers, which had a negative effect on their progress. What is understood here by the term 'self-regulatory skills' is the learners' capacity to control and manage their own learning. Boekaerts (1995), who distinguishes between meta-cognitive skills (learning goals oriented which refer to the learners' capacity to generate cognitive strategies in a context-specific way), meta-motivational and self-management skills (not necessarily learning goal restricted), uses this term to explain the types of self-regulatory skills which are "concerned with the control of behaviour in general, including motivation control, action control, emotion and social control" (p.10).

Drawing on Boekaerts's findings, it could be argued that what makes pupils independent in their learning is the effective use and proficiency of self-regulatory skills, which would mean that if teachers were to plan activities that would encourage independent thinking and decision making, and used their knowledge about their pupils' motivational beliefs to plan these learning activities, then their pupils might become more independent and self-reliant – qualities which are essential for good progress and educational achievement (Perrenoud, 1998). Since there seems to be a direct link between motivation to learn and proficiency in self-regulatory skills, pupils who have been encouraged by their teachers through questioning, feedback, well planned learning activities involving peer-work and assessment, self-assessment and other activities conducive to developing self-reliance, become independent and well-motivated learners capable of high achievement and results. Broadfoot (1996) considers that the social changes, and especially the needs of the 'information society', require different emphasis on learning and assessment, including self-regulatory skills:

In place of the emphasis on knowledge acquisition and the associated emphasis on didactic teaching approaches, the beginnings of a quite different emphasis on education as the facilitation of skill acquisition is already apparent. The emerging psycho-pedagogic assessment culture, with its emphasis on equipping even smallest children with the skills and attitudes to be self-regulating, independent learners pursuing their own educational targets, is arguably a reflection of these fundamental changes (p.62).

Stobart (2008), furthermore, affirms that "learning is an essentially social activity" (p.79) as it is based on interactions with others and the learning resources. Since learning is not just limited to knowledge acquisition, for effective learning to occur, learners need to be equipped with self-regulated learning skills, Stobart continues, which means they need to know how to learn in order to be fully successful. These skills are developed through interactions and classroom dialogue, he asserts, and are central to AfL. Therefore the use of peer-assessment can be a powerful step in developing self-assessment (Blatchford et al. 2006; Mercer et al. 2004) and classroom interactions which are at the heart of AfL.

Schools, however, face the dilemma of operating within the climates of high stake summative assessments and formative assessment practice, which are difficult to reconcile at a practical level as Stobart claims: The image is still that formative assessment is a 'good thing', but, once preparation for examinations starts, we need to get on with the 'real thing'. This means frequent summative assessments and direct teaching-to-the-test, even though there is evidence that self-regulated learners will perform better (ibid. p.159).

3.3 Challenges for schools

Therefore in order to be well prepared for the demands of the modern era, schools have an important role to play in developing independent, self-regulating pupils ready for the challenges ahead in the 21st century. Within the globally integrated economy and the rapid development of technology, pupils will be required to develop the ability for making informed choices, for which they will need independence and self-regulatory skills. Weeden et al. (2002) argue that in order to make effective choices in the 21st century, pupils will need to be self-reliant: "…new opportunity requires each individual to develop the capacity to chart their own route, their own learning map, their own individual targets for learning" (p.9).

Schools thus face a crucial challenge of developing strategies of working successfully within the systems of high-stake tests, for certification and accountability purposes, and developing self-regulated learners through formative practices. Hence the purposes, for which assessment outcomes are used, are key to developing a system focused on learning advancement and on developing sustainable learners. Independent schools, which are free in their curriculum choices, should therefore be best placed to develop their assessment systems relevant to the learners of the 21st century. Boud (2000) refers to this idea of schools working within the constraints of summative and formative assessment frameworks as 'double duty'. Within these constraints, Stobart (2008) emphasizes the importance of assessment aims: "It is what is done with this information [assessment outcomes] which will determine whether it becomes formative – does it lead to further learning? So the difference is about purpose rather than timing" (p.159).

3.4 Engagement of students in their learning

Sadler (1989) also recognizes the value of self-monitoring as an essential skill for improvement, "… for students to be able to improve, they must develop the capacity to monitor the quality of their own work during production" (p.119), which means that students need to be taught how to self-evaluate their work for successful progress. Sadler discredits the behaviourist model of learning based on Bloom's hierarchy of learning, where pupils move from acquiring simple tasks to learning more complex ideas, (Bloom et al. 1956) in favour of cognitive psychology theories grounded in social constructivist perspective, which see learning as a collaborative process between a teacher and a pupil (Torrance and Pryor, 2002). It can be asserted that since cognitive scientists see learning as "… a more interactive process; pupils do not simply encounter and learn material, moving from the simple to the complex, they actively engage with (…) what they encounter" (ibid. 1998, p.15), the model of formative assessments must have developed from cognitive psychology theories of learning which put teacher-pupil interaction at the heart of the process. Since pupils need to be actively engaged in their learning processes, rather than be passive receivers of information, to be effective learners in the 21st century, it would seem almost certainly that pupils should be equipped with self-regulatory skills for making sense of and managing their own learning.

Educational theorists agree that learners who are able to self-regulate their learning use these skills to affect positively their learning and motivation (Boekaerts and Corno, 2005) and are efficient at managing their own learning (Boekaerts et al. 2000; Butler and Winne, 1995; Hadwin, 1990; Winne and Perry, 2000; Green and Azevedo 2007; Stobart, 2008).

While Perrenoud (1998) affirms that well-regulated classroom environments with focus on the learning outcomes before any learning occurs and adjusting teaching to pupils' responses, assist with the regulation of learning. Importantly, Boekaerts and Corno (2005) assert that "all theorists assume that there are no direct linkages between achievement and personal or contextual characteristics; achievement effects are mediated by self-regulatory activities that students engage to reach learning and performance goals" (p.201). Therefore appropriate teacher intervention is crucial to train students to regulate their own behaviour so students develop their self-regulatory and motivational skills allowing them to be less teacher-dependent. As research suggest that learners who use these meta-cognitive skills (thinking about learning) obtain better grades (Boekaerts, 1995), Boekaerts concludes that "all learners should be equipped with multiple forms of self-regulatory skills" (p.17) and that "teachers should make these self-regulatory skills explicit educational targets" (ibid.) in order to make pupils effective independent learners capable of regulating their own behaviour and learning.

As one of the goals of any educational institution is to achieve the highest academic results possible for their students (fulfilment of students' potential), the importance of the research findings into the psychology of learning, and in particular into motivation (Schunk and Zimmerman, 1994; Dweck and Legett, 1988; Dweck and Elliot, 1983; Ames and Archer, 1988) – a crucial element of classroom success – are important considerations for teachers. Since the learners' autonomy, where pupils can take charge of their learning (Dornyei, 2001) can increase motivation and be beneficial to learning, assisting pupils in becoming independent learners could have positive effects on their motivation to learn. Rogers (1991) argues that: "The only kind of learning which significantly affects behaviour is self-discovered, self-appropriated learning" (p.276), which emphasizes the importance of one's involvement in one's own learning. Baumert's research (1993) highlighted that school processes seemed to play an important role in influencing self-regulation where learners assumed a sense of responsibility for learning. Gula-Kubiszewska (2007) linked self-regulatory learning to learning independence through active participation, rather than teacher-reliance for external control, which reinforces the need for teachers to involve actively pupils in their learning to enable them to become self-supporting learners.   Stobart (2008) also claims that it is the learner's responsibility to become independent and it is the teachers' task to use appropriate methodology to enable learners to become autonomous: "Part of being a self-regulated learner is to accept responsibility for learning, just as teachers must take responsibility for creating a context which helps learning" (p.179). This view stresses the value of the quality of interactions between teachers and learners and the importance for teachers to create purposeful learning environment where students can be effectively supported in developing their independent learning skills.

3.5 Self-regulated learning and the' spirit' of assessment

Paris and Wingrad also observe that the importance of understanding the essence of self-regulated learning (SLR) is not only crucial for students but also for teachers: "These features of independent learning need to be experienced, constructed and discussed among teachers so that they understand how to nurture the same development among students." (www.ciera.org/library/archive, 2001 - 2004). This view of 'making meaning' is in harmony with what I consider as the 'spirit' of assessment as it highlights the necessity for teachers to have the principled understanding (Marshall and Drummond, 2006) of all the assessment processes involved and what kind of impact do they have on learners.

In view of these research findings on self-regulation in the classroom, a failure to provide pupils with opportunities to become independent learners can be disadvantaging some pupils of not fulfilling their educational potential and is more likely to produce students who are in the habit of relying on external forms of regulation, which are counterproductive to motivation (Boekaerts, 1995).

Zimmerman (Schunk and Zimmerman, 1998) says that, "self-regulated learners (…) are distinguished by their view of academic learning as something they do for themselves rather than as something that is done to or for them" (p.1), which would indicate the necessity for the learners to be fully involved in every stage of their learning. Indeed, Zimmerman (ibid.) states that, "students cannot develop or display their self-regulatory skill in settings where they cannot exercise personal choice and control" (p.11). Therefore it would seem it is one of the teachers' responsibilities to create learning environments conducive to their pupils developing their self-regulatory skills so they could become effective learners capable of mastering their own learning for progress (Butler and Winne, 1995; Sadler, 1989).

4. Conclusion

I find that failure to provide pupils with opportunities to become independent learners can be disadvantaging some pupils' educational achievement and can lead to pupils' reliance on external forms of regulation, which could be counterproductive to motivation and learning sustainability.

In case of my research findings, since pupils were not accustomed to self-evaluation and to monitoring their own learning, and a number of interviewed teachers were confused about these processes and had little understanding of 'targets' for promoting learning, this influenced pupils' attitudes to the value of self-assessment, which seemed to be underrated in relation to their views on the usefulness of comments on how to improve. As teachers tended to provide a great deal of support, pupils had limited opportunities for experimentation leading to developing learning independence and the necessary study skills (Zimmerman in Schunk et al. 1998; Boekaerts, 1995). Such practices encouraged teacher-dependency rather than self-regulation and learning autonomy. The data also show that teachers rarely made self-regulatory skills as educational targets, which are necessary for developing learning autonomy. The resulting practice somewhat limited the development of pupils' self-regulatory skills, as they were not always given sufficient control over their learning.

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