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## **Where is the Theory in Assessment for Learning?**

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### **Abstract**

The term “Assessment for Learning” seems to signal its affiliation to both assessment and learning. This could be one reason why it has captured the imagination and following of educationalists worldwide. Despite the volume of literature, it is still difficult to understand where it is situated theoretically.

This paper examines the discourses which situate it in the domain of learning and subsequently, that of assessment and shows that its principal supporters and developers have failed to use either to positive effect. It also suggests that an artificial rift between learning and assessing has proved destructive and that processes and theories of learning and assessing are complementary and mutually supporting. Aligning these is an efficient means of providing “Assessment for Learning” with the theory it needs.

**Keywords:** Theory, ‘Assessment for Learning’, Learning, Assessment

### **Introduction**

“Assessment for Learning” (AfL) and various permutations of this can be found in use in educational institutions across the world. It began in the UK based on principles to support learners through efficient use of assessment. Despite this, even its most ardent supporters acknowledge that although driven by academics, it has surprisingly few theoretical underpinnings and is increasingly being seen as a series of practical, classroom tips (Stobart, 2008 p149). It is difficult to conceive of any major educational practices which have inspired academics and teachers world-wide not being firmly grounded in theory: but this is the reality of AfL.

This paper examines the arguments which have contributed to the current situation and why and how theory has been lacking in these discourses.

### **Terminologies**

Since this paper focuses on different understandings and definitions of assessment terms, it is perhaps necessary to explain certain terminologies. In common usage as a shorthand, ‘evaluation’ refers to judgements regarding courses, course delivery and the processes of making these judgements, whereas assessment refers to judgements of students’ work and performance.

Although in education circles these two terms are normally kept separate, this is a false dichotomy as conceptually there is no distinction between the two. Assessment is assessment is assessment: whatever the focus or context and whatever term or name we attribute to it, the process remains the same (Scriven 1967).

One product of assessment is feedback and this may be used for learning. Learning is associated with the concept of change which transcends superficial facts and engages with understanding and new conceptualisations. Feedback is a catalyst which links assessment and learning. Current beliefs about feedback no longer understand it as a one-way system of information-giving, but a dialogic, interactive process which requires the full participation of the person receiving the feedback. The Osney Grange Group in the “Agenda for Change” has concluded that feedback is a “relational process that takes place over time” and is integrated into learning and teaching.

If the above seems obvious, it nonetheless serves as a basis for discussing more contentious and polemic issues.

### **Formative Assessment as a Learning Process**

“Teachers/lecturers cannot carry out formative assessment of student work”. That is the conclusion that Taras (2007b) draws from Scriven (1967) and Sadler (1989). The argument is that when Scriven first made the distinction between summative and formative assessment, he was focusing on evaluation of curriculum, although what he said he made clear was relevant to the assessment of everything:

“Evaluation is itself a methodological activity which is essentially similar whether we are trying to evaluate coffee machines or teaching machines, plans for a house or plans for a curriculum. The activity consists simply in the gathering and combining of performance data with a weighted set of goal scales to yield either comparative or numerical ratings, and in the justification of (a) the data-gathering instruments, (b) the weightings, and (c) the selection of goals.” (Scriven 1967 p40)

Scriven was thus looking at processes (methodological activity) and principles which are generalisable. He clearly separated these assessment processes from functions or roles which are a secondary decision of what to do with the assessment.

“Failure to make this rather obvious distinction between the roles and goals of evaluation, not necessarily in this terminology, is one of the factors that has led to the dilution of the process of evaluation, to the point where it can no longer serve as a basis for answering the questions which are its goal. This dilution sacrificed goals to roles” (Scriven 1967 p41)

Therefore, understanding why we are assessing (used as a generic, all-encompassing term in this paper), that is the goals, and carrying out the process which provides us with the results and data of assessment (feedback) is a separate issue from the functions or the decision(s) of what to do with the information.

The data or feedback from an assessment (which is a summation of the judgement at that particular time) (Scriven 1967, Taras 2005) can be left as information which is not used (which Sadler 1989 calls Knowledge of Results – KR), or it can be used to improve the work. This use by learners of information provided is Ramaprasad’s (1983) definition of feedback and also the definition which Sadler adopts in the 1989 paper. However, more generally, this use of feedback is termed ‘formative assessment’.

The added implication of this is that formative assessment requires student self-assessment to take place (Sadler 1989, Taras 2005) and that therefore, teachers/lecturers cannot carry out formative assessment of student work as only learners can do this. Therefore, formative assessment could be considered as a necessary part of explicit, institutional learning, making the distinction between assessment and learning difficult to treat as separate entities. Why then is there still a problem with finding theory to support AfL after 30 years?

### **Assessment for Learning: theory, practice and empirical research**

Educational developments, whether theoretical, practical or empirical, are required to be grounded in the literature which will support and sustain them. To promote AfL, Black and Wiliam took examples of empirical research which had demonstrated ways of supporting student learning through assessment practices and adapted processes of good practice for the classroom. Therefore, although it had begun within an empirical research framework, it was reproached for not embedding this good practice within classroom pedagogies (Black & Wiliam 2006; Perrenoud 1998) or within theories of assessment (Stobart 2008), although it did refer to both within its literature.

Because much of the earlier work of members of the Assessment Reform Group was based on formative assessment (which is both an assessment and a learning theory) and its development, it was a natural step for AfL to be closely allied to it. For example, early work by Black and Wiliam had focused on theoretical issues related to summative and formative assessment and the relationship between them (Black & Wiliam 1998b; Wiliam & Black 1996; Wiliam 2000). When they produced their seminal review paper (Black & Wiliam, 1998a), they held the position that summative and formative assessments were defined by their functions and that because these were often incompatible it was better to separate the two.

The links between AfL and formative assessment were so close that the former did not just align itself with the latter, but it has often been considered interchangeable and synonymous with it (Broadfoot 2008 p216; Gardner 2006 p197; Harlen 2006 p103; James 2006 p49; Stobart 2008 p16; Wiliam, 2007 p1054; Wiliam 2009 p6, 7). The AfL discourse seemed to use the literature and the evidence from formative assessment (Sadler 1989; Black & Wiliam 1998) in its early stages of development, and an important aspect was that, along with formative assessment, AfL was opposed to summative assessment because it focused on providing support of learning rather than final assignments for accreditation (Black, Harrison, Lee, Marshall, & Wiliam 2003; Wiliam, Lee, Harrison, & Black 2004). Therefore, although AfL became synonymous with formative assessment, it has situated itself within classroom practices and principles of learning and teaching processes, as supporters have been at pains to repeat (Black et al. 2003 p2; Black & Wiliam 2009 p6; Stobart 2008 p145; Wiliam 2007 p1054).

### **Assessment for Learning and formative assessment as “assessment”**

Earlier work by Black and Wiliam (Black et al. 2003; Wiliam & Black 1996; Wiliam 2000) clearly shows formative assessment as “assessment”. For both summative and formative assessments links between learning and assessment are made explicit:

“...summative assessment tests ‘are designed to judge the extent of students’ learning of the material ... for the purpose of grading, certification etc.’ and formative assessment is ‘so useful in helping them improve what they wish to do’” (Wiliam 2000 p18).

This would seem to be providing a description of the processes of the assessments as well as the design, but further clarification would seem to distance their association of the terms summative and formative with processes of assessment and limit it solely to the “purposes” of assessment where the timing of the assessment is all important.

‘However, if assessments were designed only for summative purposes, then formative information could not be obtained, since the summative assessments occur at the end of a phase of learning and make no attempt at throwing light on the educational history of the pupil’” (Wiliam & Black 1996 p544)

This discussion, although accepting that summative and formative are actually “assessments” creates a new dilemma of whether they are processes or functions of assessment. Since these definitions separate summative and formative assessment from the process of assessment, it may explain why Sadler and the theory of formative assessment are not used as a basis for understanding classroom processes:

“...there is no comprehensive theory that could form a basis for action” (Black et al. 2003 p15)

Taras (2007b) provides a detailed discussion of the issues of processes and functions of assessment, and here we signal that this distinction may also have as a consequence the rejection of Sadler's theory of formative assessment to inform processes within the classroom which interlink learning and assessing. Taras (2007b p365) also notes that one major problem with AfL theory is that there are different conflicting definitions of formative assessment. The definitions of formative assessment fall into two categories: one is based on Sadler's theory of formative assessment (1989) and focuses on product assessment (Black 2003c p2; Black et al., 2003 p15, p121; Wiliam 2000 p15). The other is based on the understanding of formative assessment as a classroom learning and teaching pedagogy process (Black 2003a, b, c; Black et al. 2003 p2; Wiliam 1994, 2000a, b, 2000; Wiliam & Black, 1998 p8). This observation also supports the claim made in this paper that there appears to be ambiguity as to whether AfL is learning or assessing.

The following example shows formative assessment is about learning and teaching:

“Such assessment becomes formative assessment when the evidence is used to adapt the teaching work to meet learning needs.” (Black et al. 2003 p2)

But although being used to meet learning needs, it is more specifically under the control of the teacher and primarily his or her responsibility:

“It has to be within the control of the individual teacher and, for this reason, change in formative assessment practice is an integral and intimate part of a teacher's daily work.” (ibid p2)

The same book (ibid, p13-15) also presents a second meaning of formative assessment as an assessment which uses feedback to improve learning as described by Sadler 1989.

“With small changes of terminology, the above four steps could be a description of formative assessment.” (ibid p15)

These steps essentially require comparing data of the actual level with that of the desired level in order to identify and then bridge the gap. The four steps are Sadler's definition of formative assessment which is product assessment of learners' work, and also describes the process which the assessor follows.

If formative assessment is linked to learning (as opposed to teaching), then we would expect it to be linked into how the assessment is used to support learners, which is linked to Perrenoud's (1998) reproach that Black and Wiliam do not address learning theories (Black & Wiliam, 2006). Teaching and learning cannot be linked in a linear and direct fashion unless the belief is that there is a causal relation.

The issue is not that either or indeed both of these definitions of formative assessment are presented, but the fact that firstly, this link is not acknowledged either implicitly or explicitly, and secondly that the differences are not reconciled, discussed and coordinated to a coherent representation within theory and practice.

In addition, they seem to change the definition of formative assessment by equating it to and confusing it with feedback (Black et al. 2003 p14-15). As signalled previously, Sadler notes that formative feedback is a central aspect of formative assessment but by no means all of it. Equally important is how the feedback was obtained (through understanding of criteria, standards and processes which permit comparisons of the actual level with the desired level), how feedback will be used and understood, and the learners' integration of this into their work, which is seen as beyond the teachers' control.

In a book which presents both a theoretical and practical framework of formative assessment, the confusion of different definitions and processes is never reconciled

and neither is whether assessment for learning is about learning (through teaching), or about assessment supporting learning which it is often believed to be.

### **Claims or not for theory in Assessment for Learning**

Academics are expected to have a sound understanding of theory in their field, but it is not evident that being an academic warrants the claim to be made to expertise in theory:

“The authors of this book worked in a university and can lay claim to expertise in the areas of evidence and theory” (Black et al. 2003 p1)

The subtitle of this book is ‘Putting it into practice’ and therefore a focus on practice is to be expected. This does not exclude the requirement to justify the rationale for the practice by placing into a theoretical frame especially when teachers themselves had wanted updating on theory (Black et al. 2003 p23).

After 30 years of AfL, and despite world-wide research on classroom practice it seems surprising that Stobart believes that “...our understandings are still at an early stage” (Stobart, 2008 p145). Stobart recognises the problems inherent in this that this may result in AfL being seen as “a series of classroom ‘handy hints’, rather than a theory-driven approach to teaching and learning” (ibid p149). He further notes that

“This does not mean that there is no theoretical underpinnings; simply that it has not been organised, and may not need to be, into a stand-alone theory” (ibid p145)

The empirical research which has formed the basis for AfL was based on theory and therefore, in that sense, it has sound theoretical underpinnings. Even if there is no stand alone theory, this does not mean, as this paper will demonstrate, that an overarching theoretical framework is not required to explain and justify how the various elements of AfL and its interventions are interlinked and coalesce.

Where Black et al (2003) claim expertise in theory and evidence by virtue of working in a university, Black and Wiliam (2009), without denying their expertise, review their achievements to date and acknowledge that their contribution (or indeed engagement) in the realm of theory has been limited. Importantly, they clarify that, despite their 2003 claims, their earlier work had no sound or solid theoretical basis but instead based their review on research linked “to the notion” of formative assessment:

“(Black and Wiliam 1998a, b) did not start from any pre-defined theoretical base but instead drew together a wide range of research findings relevant to the notion of formative assessment.” (Black & Wiliam 2009 p5)

Again, whether theory is produced deductively or inductively is not in itself critical: the real issue is when this step of situating practice in theory is eliminated as seems to have been the case for AfL. Although now regarded as a seminal paper, Black and Wiliam 1998a, the criteria for selection of the research papers is not without controversy since one criterion was to separate formative and summative assessment research (Biggs 1998), particularly since adhering strictly to this criterion was not possible. Black and Wiliam’s decision is perhaps even more surprising when their points of focus for developing AfL interventions have a majority of summative assessment foci (see above).

One interesting and logical explanation as to why theory has such limited prominence in AfL research is provided by research from Tight (2004) who examined a spectrum of articles from different educational journals. He concludes that in the context of education departments and faculties, there is pressure to deliver on evidence-based practice to support the chalk-face of education, classrooms, which tends to result in little time or energy to focus on theory: “the demand for evidence-based practice gives relatively little priority to theory” (Tight 2004 p406). A similar sentiment and

conclusion is expressed by Broadfoot and Black (2004 p10) who examine work in the journal "Assessment in Education" over the past 10 years. This explains the AfL focus on practice and evidence supporting practice.

This is reflected in Black and Wiliam 2009 who summarise their past work and note their achievements and also signal deficits in theory. They conclude that Black et al. 2002, 2003 proffer practical advice and practices and "presented on a pragmatic basis, with a nascent but only vaguely outlined underlying unity" (Black & Wiliam 2009 p5): this work had drawn on Black and Wiliam 1998a, b which "did not start from any pre-defined theoretical base but instead drew together a wide range of research findings relevant to the notion of formative assessment" (Black & Wiliam 2009 p5). This confirms Tight's and Broadfoot and Black's conclusions on research within education departments, which is, that evidence-based work has down-graded and often excluded theory.

More recent work in Black and Wiliam (2006) which is entitled "Developing a Theory of Formative Assessment" would seem to specify a focus which is specifically on theory does not in fact discuss theories of assessment which supports AfL (Taras 2007b). Black and Wiliam situate their practice within frameworks of 'pedagogy' as recommended by Perrenoud (1998), but they do not develop the theory of AfL per se. What they do is look at which learning theories can be of support for AfL. This demonstrates that despite the term "Assessment for Learning", and the use of Sadler's work which represents a coherent theory of formative assessment, it becomes more evident on closer scrutiny, particularly of Black and Wiliam 2009, that AfL is seen as a tool of four interventions for teachers to coordinate and orchestrate classroom learning.

This idea is confirmed and made explicit in the following quote:

"Subsequently, (Black and Wiliam 2006) we explored the changes that occurred in the classrooms of teachers developing formative assessment, and proposed a theoretical frame for the study of such classrooms. However, this theoretical frame was grounded in the data collected from classroom observations and interviews with teachers, and no systematic attempt was made to connect these data to work on such topics as classroom practice, or the regulation of learning." (Black & Wiliam 2009 p6)

Again, this further confirms Tight's and Broadfoot and Black's conclusions on research within education departments which prioritises classroom practice as opposed to pure theory or pedagogic principles. Black and Wiliam reiterate the same ideas about subsequent work which is described in their summary:

"Other recent work has focused on aspects of implementation, notably on effecting change with communities of teachers (Wiliam 2007a) and on problems of superficial adoption (Black 2007), whilst both the book by Black et al. (2003) and the studies of the project on "Learning how to learn" (James et al. 2007) have discussed the learning principles underlying formative practices. In the conclusion of our 2006 article, we raised the wider issue of the role of formative assessment:" (Black & Wiliam 2009 p6)

Ironically, it appears as if they are examining most aspects of AfL and formative assessment except for theory. This aim does not seem to have altered in the paper they are writing and which again has the misleading title of "Developing **the** theory of formative assessment". Their aim is to focus on "diverse practices", therefore why does their paper have this misleading title?

"So our first aim in this paper is to provide a unifying basis for the diverse practices which are said to be formative." (Black & Wiliam 2009 p5)

If their intention is stated clearly early in the paper, and if their past record of engaging with theory is so problematic, why would they, for a second time, choose a title that seems to highlight their own confessed weakness and caveat? Whether it is “a theory of formative assessment”, or “the theory of formative assessment”, when they explicitly state to have no intention of actually engaging with formative assessment theory, it would seem a strange thing to do. It could plausibly be due to an idiosyncratic implicit understanding of the term “formative assessment”. If this were interpreted differently to that of, for example, Sadler 1989 it could go some way towards explaining what appears as strange behaviour. Against this possibility is a close scrutiny of Black 2001 who seems to interpret formative assessment the same as Sadler which would argue against this.

### **Assessment for Learning: is it Assessing or Learning?**

The title of this paper asks if AfL is represented as assessing or learning. One answer dominating much of current thinking is in the work of Black and Wiliam: it is neither simple nor straightforward and also full of contradictions. First of all, they see AfL as an integral part of classroom interaction and teachers’ responsibility: this is consistently seen in the literature (Black et al. 2003; Black & Wiliam 2009; Wiliam 2007). This is made more explicit and repeated in the most recent works as we have seen.

It is interesting that although learning and motivational theories are cited, that the use of Sadler does not situate AfL within a theory of (formative) assessment although it is used synonymously with it (see above). Although the aims for developing and using AfL seem relatively clear, that is, to develop interventions which will support improvements within the classroom, and although the pertinent theories are evoked, there seems to be “a missing link” which cannot coordinate these.

“The principles to do with teacher change, student change, student change and feedback would clearly have to be borne in mind in any innovative development. While these pointed to several theoretical ideas that would be relevant, notably those concerned with theories of learning, theories of motivation and Sadler’s analysis of the role of feedback, there is no comprehensive theory that could form a basis **for action**” (Black et al. 2003 p15)

The role of feedback in this citation links it with learning and motivation theories while separating it implicitly from assessment. This is all the more surprising when examining past publications of the authors who have built up a specialism and focus on assessment. Also, it is not clear exactly what this change is except that it is “informal” and “individual”. This would seem to point to idiosyncratic practices which cannot be said to be part of a coherent theoretical framework or indeed cogent practice to spearhead classroom change:

“... (AfL) is usually informal, embedded in all aspects of teaching and learning, and conducted by different teachers as part of their own diverse and individual teaching styles” (Black et al. 2003 p2)

With AfL, Black and Wiliam seem to have a choice of beginning with learning theories or assessment theories and perhaps using the others to support their processes of classroom action. By claiming that there is “no comprehensive theory”, they do themselves a disservice by ending in a wasteland between the two. In fact, both assessment and learning theories can and should be used to support AfL.

However, in a book which promotes AfL as “formative assessment” and by academics who claim expertise in areas of evidence and theory, there is very little discussion of theories of learning or assessing. It signals that teachers involved in the

AfL projects wanted discussion about theory (Black et al., 2003 p23), but no indication as to what they may have been told. To add to their claim at the beginning of the book that they are academics and thus understand theory and evidence, towards the end of the book they claim that their work has clarified the concept of formative assessment (ibid p122).

Sadler (1989) provides an often cited theory of formative assessment which links assessment and learning, and of which feedback is only one element within this. Surprisingly, in Black et al. 2003, it is only the aspect of feedback which is highlighted. An obvious question which arises is why has Sadler's theory of formative assessment not been used to link learning and assessing since both can valuably support each other? One answer which seems to be confirmed by more recent work (Black & Wiliam 2009; Wiliam 2007, 2009) is that AfL or formative assessment is seen as classroom learning as we shall see in more detail and that earlier views of formative assessment as "assessment" have been rejected. Another may be that summative and formative assessments in the AfL literature have been represented as describing the "functions" of assessment (see all the papers in Gardner, 2006). This would exclude the "function" that is formative assessment from being used as "a basis for action" as described above despite the fact that Sadler (1989) describes a formative assessment process in his theory.

Then perhaps the question which should be asked is why assessment has been part of the discourse at all, and why has there been recourse to the assessment literature. The answer is simply that the four (or five in the latter) interventions which have been consistently used (Black et al., 2003; Black & Wiliam, 2009; Wiliam, 2007) are assessment processes. Basically, although AfL is considered a support for learning, the most basic support for learning and understanding which is required in all contexts is assessment.

To unravel the dilemmas which have dogged the literature on AfL, the discussions and questions need to turn to the relationships between assessing and learning. Feedback is central to promoting learning and this comes from assessment. Why the literature should separate the two is a mystery. Learning and teaching have been linked together like bread and butter and fish and chips, yet learning is in fact linked directly and indelibly to assessing. Why is assessment always the ubiquitous chapter which deals with issues of validity and reliability of assignment of large-scale accredited programmes and courses? Why is it regarded as an extraneous and marginal activity in the classroom, and hence the exclusion of "summative assessment" from AfL? Why is it the discourse of the "other", and the evil other at that (Taras 2007b)?

## **Conclusion**

AfL developed from the desire and perception that the focus should be on learning and not on assessing and that the latter should be at the service of the former. The contention and turmoil of political, social as well as educational battles reflected in assessment have made it an ambiguous tool of educational support. Therefore, it is perhaps not surprising that it has progressively been excluded from AfL. Despite the initial focus on the formative assessment literature to support AfL so that it became synonymous with it, there was still the desire and perception that the focus and support and therefore theory should come from the realm of learning. This is reflected in the discourse of the literature which situates it firmly within classroom interaction and not as part of assessment.

However, the practices which make up AfL are essentially assessment processes and as such do not make its dissociation from assessment either easy or logical. This paper has asked “Is AfL assessing or learning?” it is obvious that it believes that it is both and that the two aspects are essential and indissoluble from each other. It also believes that understanding the discourse of the AfL literature and where it has situated it in terms of affiliation is critical to both supporting it and also to developing theories which sustain it. The aims and ethos of AfL are valuable to the education community, and as such, it is deserving of robust theories to support it. These can be found both in assessment and learning theories: integrating these as opposed to separating them can be valuable support for classroom and assessment processes and will resolve and eliminate many of the contradictions which at present seem to plague AfL.

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