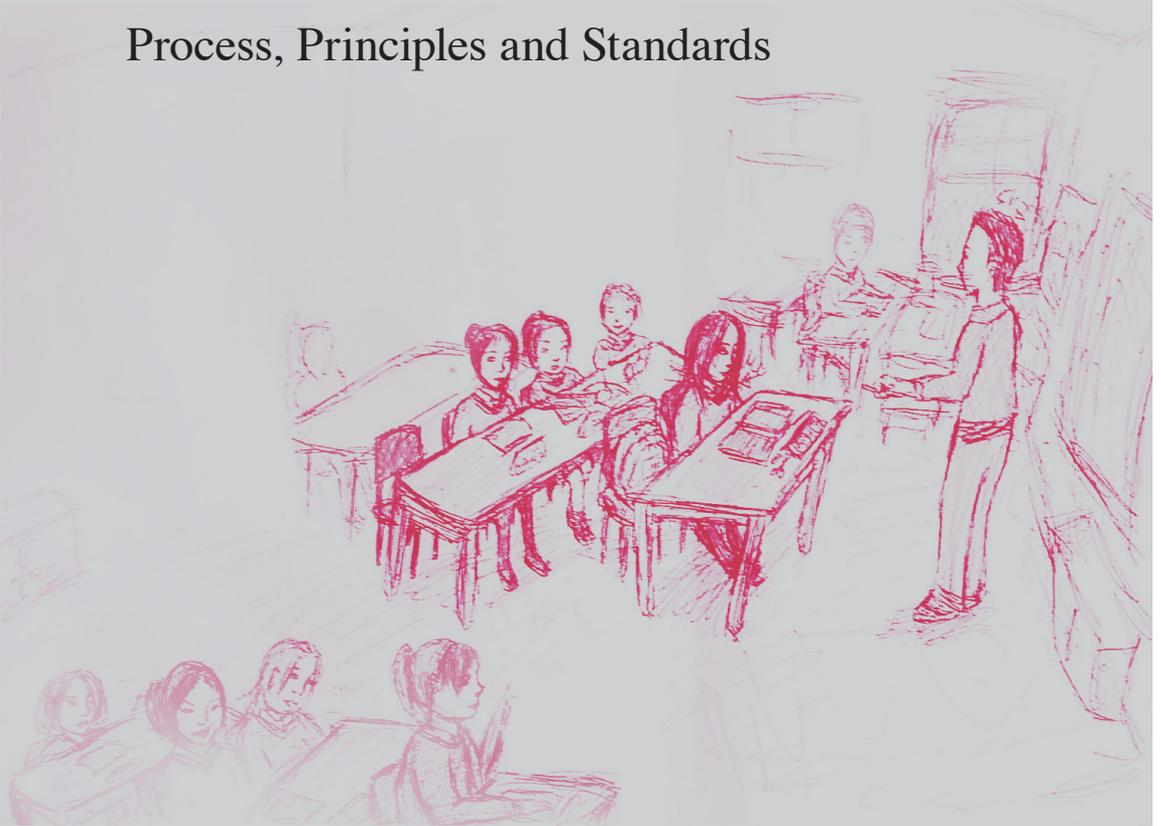# Changing Assessment Practice

Process, Principles and Standards

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(Assessment Reform Group, 2008)

Changing Assessment Practice

Process, Principles and Standards

This is a brief account of what has been learned during the Analysis and Review of Innovations in Assessment (ARIA) project about how changes in assessment practice may be brought about most effectively. The changes in question focus on the role of teachers in formative and summative assessment in schools. The approach has been to review recent initiatives and developments in assessment that shared this purpose in all four countries of the UK: England, Wales, Scotland and Northern Ireland (see Appendix 2 for a list of projects included).

It is not the intention of this summary pamphlet to review and report on each of the projects. Rather the intention is to present a synthesis of lessons learnt that has emerged from our studies of the projects, combined with the insights of key experts who took part in a series of project seminars and interviews throughout the UK. This synthesis unfolds along two main axes: an exploration of the key processes involved in moving from an innovative idea to its embedding and sustainable development in the classroom; and a framework of principles and standards for effective assessment practices, which are set out in Appendix 1.

Acknowledgements

Cover: Gabrielle Wellard (aged 13, 2006)

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[*]   AAIA=Assoc. for Achievement and Improvement through Assessment; GTCE=General Teaching Council for England

Changing Assessment Practice

Process, Principles and Standards

Introduction

In the eyes of many educational professionals, an extraordinary variety of classroom-targeted initiatives has been unleashed on schools over the past decade and more, all with the same general aim: the improvement of pupil[†] learning. Assessment by teachers, whether formative or summative, is one of these developments that is considered to offer significant potential for improving pupils' learning (Black and Wiliam, 1998; Harlen, 2007). Teachers who integrate assessment into their teaching do so in order to identify where their pupils are in their learning and the steps they need to take for improvement and progress.

This is a persuasive rationale for change but the fact remains that changes in assessment practice have been notoriously difficult to sustain. In an effort to address this issue and develop an understanding of how change in assessment practice in UK schools may be both generated and sustained, a selection of major projects involving innovative assessment practice has been studied (see Appendix 2). In addition, a series of expert seminars and interviews contributed authoritative insights from practitioners, academics, professionals and policymakers. The main conclusions are two-fold.

Changing Assessment Practice

The first conclusion points to the stark reality that initiatives in assessment do not always take full account of all of the key dimensions of the change process or the needs of all of the key communities involved. In this sense they can often be described as being under-designed. This not necessarily a fault of any particular initiative; indeed all of the projects studied fulfilled their objectives exceptionally well. The research-oriented projects helped us to understand the processes of change and why such change may not translate easily to schools outside a project. The national development projects had comprehensive remits and helped us to understand just how complex it is to introduce change in large-scale contexts. Just as small-scale

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[†]   Both terms 'pupil' and 'student' are used in this document.

initiatives cannot be expected to address large-scale needs, local initiatives must be allowed to proceed without any deliberate intention of having national impact. However, it is clear that education systems, whether local or national, must fully commit to all of the necessary ingredients for sustainable development if their objective is to promote and embed changes in assessment practice.

In order to create sustained changes in assessment practice, a number of key processes therefore need to be addressed (see Figure 1). These must be planned and designed from the beginning otherwise the process of effecting change may stumble and ultimately fail.
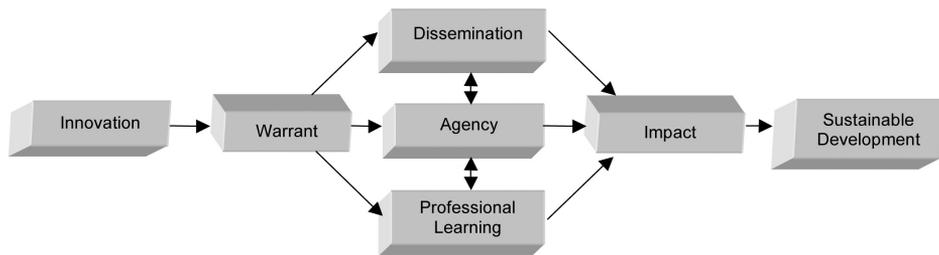
Figure 1: Key Processes in Changing Assessment Practice[‡]

Assessment Principles and Standards

The second conclusion is equally important. A set of principles and standards is needed to guide the development of effective assessment practice. These should be designed to enable any stakeholder group to assess the extent to which they are effectively promoting and sustaining desirable changes in assessment and its use. As with the model of key processes

[‡]   The linearity of this model should not be taken to mean that the process from innovation to sustained new practice is simple and direct. Far from it. The concepts are highly interrelated and the processes are complex. Nevertheless, in the beginning there must be an innovation on which to base any change process. Ultimately, too, the focus of the change process is usually intended to be sustained.

above, the principles and standards put forward here have also emerged from the studies of recent projects and from the series of expert seminars. They extend the development of principles relating to classroom assessment practice to other important stakeholder groups.

The Process of Changing Assessment Practice

The overarching concept in Figure 1 is 'change' and we recognize that change in assessment practice, as in many contexts of education, has to confront three fundamental obstacles before a sustained future is assured. The first two of these are long-standing:

- the extent to which the education community reflects collectively and individually on its practices;

- a resistance to change even when the evidence and experience warrants it;

- the under-designing of educational change, specifically in planning for sustainable development but also in making best use of the complex weave of warrant, dissemination, professional learning, agency and impact.

There are many reasons for the first two observations above, too many and complex to rehearse here, but readers will recognize their validity. The next section explores the third obstacle and considers in more detail the processes set out in Figure 1.

Innovation

Change in assessment must begin with some form of innovation, which might be quite different from existing practices in any particular situation. But what do we understand innovation in assessment to be? In education the newness identified in innovative contexts is more likely to be 'situated' or context dependent. The assessment process may not be new in itself but may be new to the teachers and schools concerned. Indeed, in this 'situated' context, the innovative assessment

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being promoted may be no more than a reincarnation of practices that have waned over time, or a new way of carrying out established activities.

The much quoted 'new learning' heralded by 21st century technology presents significant assessment challenges, the resolution of which may well constitute innovation. For example, QCA (2007) have launched their framework for learning and thinking skills, covering various types of learning such as team working, independent enquiry, self-management, reflective learning, effective participation and creative thinking.

Innovation may fail in the face of workload issues or in simply not being a convincing enough change for teachers to adopt.

If such developments do represent varieties of new learning then it is a short step to arguing they need innovative practices to assess them. There is the real possibility that both the 'new learning' and its innovative assessment will be seen as fads. Many innovative assessment techniques, from 'authentic' tasks to portfolios to project work, have often struggled to maintain momentum. Teachers may ultimately not accept their worth and may reject them as top-down directives designed unilaterally to promote change in classroom practice. Innovation in such circumstances may fail in the face of workload issues or in simply not being a convincing enough change for teachers to adopt.

Warrant

As a new focus for learning, any approach to assessing skills such as 'reflective learning' might have a legitimate claim to being innovative. However, improving pupils' learning through teachers' effective use of formative and summative assessment is rooted in longer established intentions and practices. In addition to such foundations, however, there is the need to have evidence of effectiveness - that is, the warrant.

Take for example formative assessment; assessment that is designed to support learning. The importance of using assessment in this way has come to the fore in recent years largely because of Black and Wiliam's (1998) widely-cited review

of the research evidence. This evidence convincingly supported the effectiveness of formative assessment in promoting learning. Over a relatively short space of time this warrant was recognized by a variety of educationalists and not least by teachers themselves. This bottom-up growth in practitioner adoption was then bolstered by research-based principles designed to provide a rationale for classroom practice (ARG, 2002; Gardner, 2006).

Assessment for Learning (AfL) has become a force for change in classroom practice in national assessment systems in all four nations of the UK and beyond. It illustrates the importance for any innovation in assessment to have solid research evidence that it works before its roll-out can be justified. A problem that frequently occurs, however, is that the 'warranted' roll-out subsequently falls foul of inadequate planning and design for professional learning and dissemination. Recent initiatives in Wales show how these deficits may be mitigated by supporting teachers directly with materials, conferences, visits of advisers and distance support using e-mail and the web.

Any innovation in assessment requires solid research evidence that it works before its roll-out can be justified.

Dissemination

Developing the practice of large numbers of teachers involves a complex interaction of people, ideas and systems. For example, effective and desirable change, as endorsed through pilot projects, may need policy changes in order to prompt wider dissemination. Policy change is inevitably a top-down process but the same top-down approach may not serve so well in relation to rolling out change in classroom practice. Such approaches to dissemination, which involve telling teachers about an initiative through policy documents or professional development resources, can suffer from considerable drawbacks. For example, they may ignore the importance of the often enthusiastic engagement of teachers in making the initial, pilot development successful. Teachers 'being told' about such an initiative, without experiencing the participation that was a feature of the pilot, are not likely to adopt the changes with the same commitment. In such circumstances a signal failure to

recognize that the learning process has to be the same for the first person as the last has meant that many attempts to scale up or roll out innovations in assessment have had only limited success.

Sophisticated models of this 'telling teachers' or transmission approach arguably can achieve success if they engage the teachers in the assessment practices as soon as possible, encouraging them to create and tell their own stories of practice. Such a model has the advantage of peer-to-peer dialogue, widely considered to be one of the most effective vehicles of dissemination. In this manner, the top-down dimensions are downplayed as the process of change is collaboratively made explicit. The problems encountered and the solutions to them are shared, leading to more secure adoption than the direct transmission model may achieve.

In all four countries of the UK, the cascade model of dissemination has also been widely used. For example, in England the cascade model was the central approach taken to the dissemination of innovative practices at Key Stage 3 (Stobart and Stoll, 2005). At its simplest this model involves key individuals – perhaps a small number of advisory staff in a local authority - being 'trained' in the matters to be disseminated. Those trained then train others in a metaphor that sees good practice cascading down from the top of an innovation fountain. As the word spreads, the practice is adopted by each level in the cascade until it ripples across the final level, the whole community of teachers.

Good in theory, the fact is that cascade approaches often suffer from problems associated with the contrasting 'pilot and roll-out' processes mentioned above. Pilot phases that provide the warrant for wider dissemination can often be highly successful in involving teachers in developing new assessment practices. However, such success may falter in the large-scale roll-out phase as engagement of teachers switches to telling teachers.

While dissemination as transmission has had limited success, recent thinking has evolved to promote ideas of transformation rather than transmission. What this involves is the engagement of teachers in the process of transforming their assessment practices, often through action research. It emphasizes that for real change, as with all learning, the individuals involved need to take more control of what they are being asked to do. They need to make sense of it through reflection and sharing it with others until new ideas and processes become internalized. Ideas of engagement, of purposes, of collaboration, of manageability and of contextualization are seen as central in order to avoid the adoption of actions and procedures that are separated from the ideas and purposes behind them. Implementation of this approach was central to the Assessment is for Learning (AiFL) programme in Scotland.

For real change, as with all learning, the individuals involved need to take more control of what they are being asked to do. They need to make sense of it through reflection and sharing it with others until new ideas and processes become internalized.

Successful dissemination cannot rely on any single strategy, however, and assumptions cannot be made that what works in one culture will work in another, where culture may be defined as narrowly as a school, local authority or as widely as a national system. In planning the scaling up of innovations in assessment practice, the context, the nature of the innovation and its impact in relation to (or competition with) other initiatives are important considerations. But just as important are the considerations of how best to engage teachers, who are potentially the most important agents of change, through their own reflective practice and professional learning. In many projects this has been successfully achieved through supporting teachers in researching their own classroom practice.

Successful dissemination cannot rely on any single strategy and assumptions cannot be made that what works in one culture will work in another. In planning the scaling up of innovations in assessment practice, the context, the nature of the innovation and its impact in relation to (or competition with) other initiatives are important considerations.

Agency

Agency, in the sense of 'agent of change', is a key concept and process that needs to be thoroughly understood if effective and sustained change in assessment practice is to be established. There are two common understandings of the term 'agent': an advocate who promotes the interests of another person or organization, or someone who undertakes actions on behalf of another person or organization.

These two senses of an agent of change can be broadened in education to include agents that are not people: for instance, peer pressure, public opinion, government policy, research findings and professional learning. What is common to any form of agent is the role that it plays as an intermediary between the status quo and a proposed new approach. Teachers and school leaders are therefore generally considered to be pivotal change agents while government policy is the most significant in the category of external intervention.

Self-agency is a powerful device in fostering change because it draws on self-motivation. Unless teachers are committed through self-agency to changing their assessment practice, the prospects for successful dissemination and professional learning, leading to its embedding and sustainable development, are likely to be slim.

In a bottom-up mode, teachers may pick up the initial ideas, for example about AfL, from professional dialogue or from the professional and academic literature. If their interest is captured they then either seek support or have a go themselves. This self-agency is a powerful device in fostering change because it draws on self-motivation. Unless teachers are committed through self-agency to changing their assessment practice, the prospects for successful dissemination and professional learning, leading to its embedding and sustainable development, are likely to be slim.

However, whether it is self-agency or agency mediated in other ways, it requires external support. Such support conventionally ranges from awareness raising (e.g. information and advice) to direct interventions such as professional development events. These events must also be supported by appropriate resources and funding for such important dimensions as time out of school. The varieties of in-house support also include school-based staff development, peer support and whole school development planning processes.

In the Black and Wiliam review, credible and accessible research findings provided teachers with the motivation to become agents in changing their own practice through trying out new (to them) approaches to assessment. In the case of summative assessment, teachers' own experience of the negative impacts of excessive testing has been a strong motivation to improve assessment through using their own moderated judgments.

When strong self-agency is absent, it is clear that several types of counter-agency may prevail. The requirement for compliance with a top-down policy, for example, may lead teachers to down-grade the value of the proposed changes in practice. For example, a senior management team might require every teacher to begin lessons with a WALT statement (… *we are learning to* …). The intention would be to promote the sharing of learning objectives between teacher and class. However, the practice may quickly become a must-do that is merely presented to the class as a fait accompli with the minimum of discourse. Even worse, it may simply tick a box when a member of the senior management team monitors its usage. When the compliance monitoring fades, this minimal engagement may become erratic until it too fades away completely.

One means of countering this is to encourage reflection about assessment practices. The change process will then be more effective since the agency for the change will lie more with the individuals concerned.

Professional Learning

Accounts of attempts to bring about change in education invariably emphasise the role of professional development for teachers. Our use of the term 'professional learning' recognizes that attempts to change practice in education must aim for a change in understanding rather than merely a superficial change in teaching techniques. Attempts to produce 'teacher-proof materials', which by-pass the teacher's engagement, have long been abandoned. Much professional learning can take place through informal peer-to-peer discussions among teachers. However, more formal professional development support is likely to be required when considerable changes to traditional teaching and assessment are required.

Using the term professional learning recognizes that attempts to change practice in education must aim for a change in understanding rather than merely a superficial change in teaching techniques.

There are many different forms that professional development can take depending on decisions about several important factors. These include the balance between top-down and bottom-up approaches, the tension between theory-based

and technique-based models and the consistency between the underlying view of learning and the messages intended to be communicated.

Bottom-up models reflect the view that participation in developing new procedures or materials is a most effective way of encouraging teachers' commitment to change. Groups of teachers, working together with local authority support personnel or researchers, can tackle new ideas creatively in a conducive and experimental environment. They can learn from each other, combine their ideas and achieve ownership of the emerging practices. With opportunities to reflect and develop understanding of the principles underlying desirable changes, this type of experience can be a most effective approach to promoting professional learning. But it is also very demanding of resources, particularly time, and in contexts of limited resources for professional development, it cannot be extended to many teachers.

When decisions need to be made about when and how assessment techniques can be used, the lack of a fundamental understanding of the purposes may lead to confusion and ultimately to rejection of the techniques.

A less open-ended approach is one in which teachers are not expected to develop new techniques themselves. Instead they are encouraged to try out ready-made approaches. Such professional learning is characterized by providing opportunities to adapt as well as to adopt. However, unless understanding of the rationale for the techniques is established there is a risk of the teachers using them somewhat mechanically. When decisions need to be made about when and how the techniques can be used, the lack of a fundamental understanding of the purposes may lead to confusion and ultimately to rejection of the techniques.

When aiming to reach large numbers of teachers, for example to make changes nationally rather than locally, approaches to promoting professional learning tend towards those used for dissemination. The cascade model is often used with the same message being spread through various providers supported by universal training materials and pre-determined procedures. Clearly such approaches to professional learning offer little opportunity to tailor experiences to individual needs and may,

at worst, follow a simple top-down transmission model.

These negative effects may be ameliorated by ensuring there are opportunities for peer-to-peer discussion and reflection.

Regardless of the mode of the professional development on offer, the experience across recent projects indicates that several key elements are required to facilitate effective professional learning.

Teachers, for example, must have the time to reflect and to adjust their teaching to take on new practices. Professional development activities are therefore best spread over time with opportunities for trying out new assessment ideas between sessions. Reflecting on and sharing their experiences with others are important elements in promoting effective professional learning, and the ownership and understanding needed for successful implementation of new assessment procedures.

Teachers need to be clear about the direction in which they should be trying to move their assessment practice and to have some feedback about their progress. Professional learning can only start from teachers' initial understandings, just as in the case of pupils' learning.

Some teachers may prefer to start by adopting techniques for change rather than understanding the reasons for change. However, the review of the projects showed that unless they eventually reach this understanding, the new techniques are likely to be followed mechanically. They will not be adapted to particular circumstances and may be easily abandoned.

Impact

Clearly any innovation seeks to make a difference, so something should change. The justification for an assessment initiative may be related to a specific aspect such as improving the consistency of teachers' marking in English. More often the

Teachers need:

- *time to reflect and to adjust their teaching to take on new practices;*

- *professional development activities which are best spread over time with opportunities for trying out new assessment ideas between sessions;*

- *to reflect on and share their experiences with others in order to promote effective professional learning and the ownership and understanding needed for successful implementation of new assessment procedures.*

purpose is presented in terms of broader aspirations, for example to improve classroom learning. The broader the scope of the innovation, the more difficult it may be to establish what its impact has been. This is even more complex if the innovation proposed is just one of several initiatives in which a school is involved.

The aspiration behind changes in assessment practice is improved pupil learning. This improvement is often expressed in broad terms and can mean many things: better conceptual understanding, more applicable skills, higher-order thinking, changed attitudes, more learner autonomy etc. These processes are difficult to measure. Even when they can be measured, the question remains as to whether any change is due directly to the change in assessment practice. This is not to suggest that we should avoid evaluating impact in terms of outcomes but it does emphasise the need for caution in interpreting results.

One of the most common reasons for 'no-difference' or even negative findings for the impact of innovation in education is that the intended changes are not properly in place. A key reason for proposing principles and standards in this pamphlet, therefore, is to offer a framework to assist key stakeholders in ensuring that quality assessment practices are in place.

One of the most common reasons for 'no-difference' or even negative findings for the impact of innovation in education is that the intended changes are not properly in place. For example, half-hearted implementation of 'no marks or grades' on pupils' work is pointless unless the pupils are given feedback in terms of comments that point to the next steps for them to take. A key reason for proposing principles and standards in this pamphlet, therefore, is to offer a framework to assist key stakeholders in ensuring that quality assessment practices are in place, or to point out aspects which need attention.

The use of teacher perceptions has been the dominant form of evidence of impact in the projects studied. What emerges is a strong sense of belief that initiatives in the formative use of assessment benefit both teaching and learning. There is no reason to suppose that this reliance on teachers' personal observations is misplaced, but there are clear indicators of the kinds of supporting evidence that are needed to assure a systematic approach to impact evaluation. Some of these indicators are:

- base-line information about conditions and practices before the introduction of changes;

- a statement of intended outcomes that can be assessed, not just broad intentions;

- evidence related to the intended outcomes;

- evidence of unintended consequences;

- consideration of alternative interpretations.

The last of these is particularly important since there may be a range of explanations as to why any change has had an impact. For instance, it may be due to the teachers being more enthusiastic, as a result of receiving special attention and resources rather than the merits of the new procedures. Moreover, a change in assessment can have repercussions in loosening or tightening constraints on the curriculum and teaching methods, which themselves may have a considerable impact on teaching and learning.

Sustainable Development

In education, and specifically in the context of assessment, the notion of sustaining new practices as fixed and unchanging is inappropriate. Sustaining new practices in assessment has to be a dynamic process. Such classroom activities as the AfL traffic lights, wait time and no marks, which were at one time new to many teachers, can quickly become drab routine if they do not develop in tandem with the ever-changing needs of teachers and pupils. The link between ideas and practice is central but often appears difficult to sustain as the reasons for using them become lost.

Many teachers are enthusiastic about the response of their pupils to using assessment to support their learning. They are considered to be more confident, persevering and aware of what they have to do. A degree of enthusiasm also extends to the effect on teaching, which is considered to be more focused

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on pupils' needs. The challenge is to ensure that setting up the conditions needed for sustaining change is a feature of planning right through to national policy level, as witnessed in large measure in developments in both Scotland and Northern Ireland.

Change in assessment practice can be both an individual and a collective process but changing the assessment practices of individual teachers or in schools is not enough to maintain change in a whole system. The notion of sustainability commonly implies:

- change beyond the individual into the wider system itself;

- commitment for system-wide change and support;

- changed practice as a feature of teacher education and of government and local policies.

Criteria used by schools and inspectors in school evaluation must therefore endorse and reflect the importance of the changes being pursued. Where policy arrangements and official endorsement are not consistent with the demands on schools, the potential for innovation to be sustained is compromised.

Successful innovation in assessment involves sustaining a dynamic culture of readiness to change and a commitment to reflection at all levels. Teachers, policy makers, other educational professionals and researchers must seek collectively to improve learning.

Sustainable development is the necessary condition and the desired endgame of any assessment innovation of value. But it must not be viewed simply as a question of resources such as time, support and materials. These will be required but an essential ingredient will be the readiness of teachers to scan the horizon continuously for ways to improve their assessment practices. The profession must continuously reflect on whether any innovations are warranted (e.g. appropriate, useful and effective in the classroom) and must be ready to adopt them when they are.

Principles and Standards for Effective Assessment Practice by Teachers

Assessment innovations in the education systems of the UK have had a relatively chequered history. While individual projects provide examples of considerable commitment and excellence, the national systems can be more patchy in attending to the key processes (Figure 1). They may excel in some processes but for a variety of reasons, including resources, they may not always be able to address all of them sufficiently to guarantee that desirable practices are supported and sustained.

However, another phenomenon is acting across the scene. This might be summarized as many voices seemingly talking about the same issue (improvement in assessment practice) while using almost as many definitions of that issue as there are voices. Ultimately such a situation dissolves into a melee of jargon used to describe different types of assessment, different uses of assessment and different perceptions of what is considered to be acceptable quality in assessment practice. Not having an explicit view of what is 'good' assessment for any particular purpose, has the knock-on effect of making it difficult to decide what an improvement is or indeed what effective dissemination or professional development for good assessment practice might look like.

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Principles of Assessment Practice

Our contention is that a major first step in establishing a common language to use in the context of assessment by teachers is the identification of principles that are widely held. We have derived such a set from the study of assessment reform projects, informed by the insights of the wide variety of experts engaged in the study. However, we acknowledge that, like sustainable development itself, the principles (and the standards presented in Appendix 1) should be considered to be dynamic and amenable to change. Generally speaking they are expressed in broad terms that can apply to national

policy as much as to classroom practice and to various uses of assessment. They are:

1. Assessment of any kind should ultimately improve learning.

2. Assessment methods should enable progress in all important learning goals to be facilitated and reported.

3. Assessment procedures should include explicit processes to ensure that information is valid and is as reliable as necessary for its purpose.

4. Assessment should promote public understanding of learning goals relevant to students' current and future lives.

5. Assessment of learning outcomes should be treated as approximations, subject to unavoidable errors.

6. Assessment should be part of a process of teaching that enables students to understand the aims of their learning and how the quality of their achievement will be judged.

7. Assessment methods should promote the active engagement of students in their learning and its assessment.

8. Assessment should enable and motivate students to show what they can do.

9. Assessment should combine information of different kinds, including students' self-assessments, to inform decisions about students' learning and achievements.

10. Assessment methods should meet standards that reflect a broad consensus on quality at all levels from classroom practice to national policy.

A major first step in establishing a common language to use in the context of assessment by teachers is the identification of principles that are widely held.

Whilst it is possible to use these principles as evaluation criteria, it is more helpful to be specific as to how they apply at different levels in the educational system and for the formative and summative uses of assessment. By doing this we arrive at standards expressed as a quality of practice to which those working in four key communities - classroom, school, local authority and national policy – should aspire.

In some quarters, an obvious measure of improvement arising from changing assessment practice would be an increase in pupils' achievement. This is the avowed aim of reforms in education of almost any kind. However, it is largely the case that current and recent initiatives in assessment have not provided significant data on the effects of the changes on pupils' achievements. This is not surprising since it is only in the long term that changes in assessment practice can be expected to have an effect on student outcomes. But improvement can be identified other than by measurement of outcomes alone.

Improvement in student learning can be identified other than by measurement alone.

Standards of Assessment Practice

Arising from the inputs from key experts and from the analysis of various initiatives, we contend that there are standards by which assessment by teachers can be judged. These are no less achievable than are standards of practice in other areas of professional working.

It is important to note, however, that we use the term standards in a broader sense than is normally the case in education. Standards are often taken to mean levels of achievement as measured by test scores or examination grades. Here we are using standards in relation to assessment in a more general sense. Such standards reflect expectations about, for example, the range of learning outcomes included in assessment. They also cover the impact of the assessment process on pupils, teachers and the curriculum. Ultimately they guide how assessment policy should be formulated.

Standards of quality practice in assessment by teachers can be used to identify good practice where it exists or what needs to be changed where it does not.

These standards of quality practice are eminently attainable but their primary intention is to express a direction rather than a goal. The standards can therefore be used to help various groups to identify good practice where it already exists. They can support critical review and discourse on the nature of effective assessment in different communities of users. Conversely, they can show what needs to be changed where good practice does not exist. And they can help those who are attempting to change assessment practice to ensure that

all of the key aspects are in place. The standards, which are set out in the tables of Appendix 1, offer frameworks for reflection on the quality of assessment practice for four significant groups: teachers, school managers, inspection and advisory professionals, and policymakers.

Concluding Remarks

The challenge of changing assessment practice in schools is not to be taken lightly. Whether it is to serve the internal needs of teachers, pupils, parents or the school, or the external needs of employers, tertiary education or government, it has to be planned and implemented thoroughly. Its achievement can be successfully accomplished through purposeful collaboration, engagement and commitment of all the key players including teachers, school managers, researchers, teacher educators, local authority personnel and policymakers. Pupils have a major role to play too and the process of changing classroom assessment practice will benefit significantly from seeking and integrating their views.

Whether it is to serve the internal needs of teachers, pupils, parents or the school, or the external needs of employers, tertiary education or government, changing assessment practice in schools has to be planned and implemented thoroughly.

The ultimate goal – improved learning through effective assessment practices – stands a much greater chance of successful achievement if, as we propose here, the change process is designed comprehensively from the initial innovation through to a state of dynamic sustainable development. Put simply, no planning for change in assessment practice can ultimately be complete until the objective of sustainable development is designed into it. To assist in this process of change, we offer principles and standards (Appendix 1) to describe widely held conceptions of good practice in assessment - from classroom to policy formulation.

In the spirit of the pamphlet overall, we therefore offer these principles and standards, and the call for holistic design, to promote wider discussion and reflection on the complex and dynamic process of changing assessment practice.

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Appendix 1

Standards for Classroom Assessment Practice

Assessment Generally

1. The assessment uses a range of methods that enable the various goals of learning and progression towards them to be addressed.

2. The methods used address the skills, knowledge or understanding being assessed without restricting the breadth of the curriculum.

3. Teaching provides students with opportunities to show what they can do through tasks that address the full range of goals of learning.

4. Teachers use evidence from their on-going assessment to:

- help students' learning;

- summarise learning in terms of reporting criteria;

- reflect upon and improve their teaching.

5. Teachers develop their assessment practice through a variety of professional learning activities including reflecting upon and sharing experiences with colleagues.

Formative Use of Assessment

1. Teachers gather evidence of their students' learning through questioning, observation, discussion and study of products relevant to the learning goals.

2. Teachers involve students in discussing learning goals and the standards to be expected in their work.

3. Teachers use assessment to advance students' learning by:

- adapting the pace, challenge and content of activities;

- giving feedback to students about how to improve;

- providing time for students to reflect on and assess their own work.

4. Students use assessment to advance their learning by:

- knowing and using the criteria for the standards of work they should be aiming for;

- giving and receiving comments from their peers on the quality of their work and how to improve it;

- reflecting on how to improve their work and taking responsibility for it.

Summative Use of Assessment

1. Teachers base their judgments of students' learning outcomes on a range of types of activity suited to the subject matter and age of students, which might include tests or specific assessment tasks.

2. Assessment of learning outcomes is based on a rich variety of tasks that enables students to show what it means to be 'good' at particular work.

3. Teachers take part in discussion with each other of students' work in order to align judgments of levels or grades when these are required.

4. Students are aware of the criteria by which their work over a period of time is judged.

5. Students are aware of the evidence used and how judgments of their learning outcomes are made.

6. Students are helped to use the results of assessment to improve their learning.

Standards for Use by School Management Teams

Assessment Generally	Formative Use of Assessment	Summative Use of Assessment
1. There is a school policy for assessment that reflects the standards above for classroom practice.	Teachers collaborate in developing their practice in:	1. Teachers are able to use a variety of assessment methods free from the pressure of high stakes use of the results.
2. The policy is regularly discussed and reviewed to reflect developing practice.	• communicating goals and quality criteria to students;	2. Teachers take part in developing quality assurance procedures to maximize consistency in their judgments.
3. Teachers have opportunities to improve their assessment practice through professional learning and collaboration.	• helping students to take part in self- and peer-assessment;	3. Students' achievements are discussed in terms of what they can do and not only in terms of levels or grades.
4. Time is made available for teachers to discuss, reflect upon and on occasion to observe each others' assessment practice.	• providing feedback to help learning;	4. A manageable system for record-keeping is in operation to track and report on students' learning.
5. The school's policy and practice in assessment are communicated to parents and carers.	• enabling students to take responsibility for their work.	5. Parents and carers receive written and oral reports that identify the next steps for their children and provide information about assessment processes to ensure confidence in teachers' assessment.
		6. Summative judgments are required only when necessary to check and report progress.

Standards for Use in National and Local Inspection and Advice Arrangements

Assessment Generally	Formative Use of Assessment	Summative Use of Assessment
1. Schools' policies and practices in assessment are reviewed in relation to the standards above.	1. The use of assessment to support learning is included as a key factor in evaluating the effectiveness of schools.	1. Schools are helped to develop action plans based on self-evaluation across a range of indicators beyond students' levels of achievement.
2. Inspection procedures ensure that schools evaluate their assessment practices and develop action plans for improvement.	2. Help is available for schools to ensure that all areas of achievement benefit from the formative use of assessment.	2. Advice on school assessment policies and practices takes account of what is known about the reliability and validity of different assessment methods.
3. There are opportunities for schools to share and develop assessment practices.	3. Schools are encouraged to develop their formative use of assessment.	3. Schools are helped to use assessment results to identify areas for improvement of learning opportunities.
4. Professional development is available to develop policies and improve assessment practice.		
5. Resources are available to enable schools to take steps to improve assessment practice.		

Standards for Use in National Policy Formulation

Assessment Generally	Formative Use of Assessment	Summative Use of Assessment
1. Policies require schools and local advisers to show how all assessment is being used to help students' learning.	1. Assessment to support learning is at the heart of government programmes for raising standards of achievement.	1. Moderated assessment by teachers is used to report students' performance throughout the compulsory years of school.
2. Introduction of new practices in assessment is accompanied by changes in teacher education and evaluation criteria necessary for their sustainability.	2. Initial teacher education and professional development courses ensure that teachers have the skills to use assessment to support learning.	2. Moderation of teachers' judgments is required to ensure common interpretation of criteria within and across schools.
3. Schools are accountable for using formative and summative assessment to maximize the achievement of goals.	3. School inspection frameworks give prominence to the use of assessment to support learning.	3. Regulations ensure that arrangements for the summative use of assessment are compatible with the practice of using assessment to help learning.
4. National standards of students' achievement are reported as a range of qualitative and quantitative data from surveys of representative samples.	4. Schools are encouraged to evaluate and develop their formative use of assessment.	4. Targets for school improvement are based on a range of indicators and are agreed through a process combining external evaluation and internal self-evaluation.

A List of the Main Projects Reviewed Under the Auspices of ARIA

- Assessment is for Learning (Learning and Teaching Scotland and the Scottish Government)

- Assessing Pupils' Progress (Key Stage 3) and Monitoring Children's Progress (Key Stage 2) (Qualifications and Curriculum Authority with the Primary and Secondary National Strategies)

- Assessment for Learning in the Northern Ireland Revised Curriculum (Council for Curriculum, Examinations and Assessment (CCEA), Northern Ireland)

- Consulting Pupils on the Assessment of their Learning (Queen's University, Belfast)

- Programme for Developing Thinking and Assessment for Learning (Department for Children, Education, Lifelong Learning and Skills, Welsh Assembly Government)

  Assessment Programme for Wales: Securing Key Stage 2 and Key Stage 3 Teacher Assessment (Department for Children, Education, Lifelong Learning and Skills, Welsh Assembly Government)

- Project e-scape. Goldsmiths, University of London

- Jersey Actioning Formative Assessment (JAFA) (King's College London and the Education Department of Jersey)

- King's Oxfordshire Medway Formative Assessment Project (KMOFAP) (King's College, London, Oxfordshire LA and Medway LA)

- King's Oxfordshire Summative Assessment Project (KOSAP) (King's College, London and Oxfordshire LA)

- Learning How to Learn (University of Cambridge)

- Portsmouth Learning Community Assessment for Learning Strand (Portsmouth LA)

- Summative Teacher Assessments at the End of Key Stage 2 (Birmingham LA and Oxfordshire LA)

NB. This list does not include details of the many important local initiatives that participated in ARIA events e.g. Gateshead LA, Belfast ELB and the Highland Council.

Project Core Group and Advisory Committee

Core Group

Professor John Gardner	Queen's University and ARG
Professor Wynne Harlen	University of Bristol and ARG
Louise Hayward	University of Glasgow and ARG
Professor Gordon Stobart	Institute of Education, London and ARG

Advisory Committee

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Professor Richard Daugherty	Cardiff University and ARG
Professor Kathryn Ecclestone	Oxford Brookes University and ARG
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Dr Mike Walker	King Edward VI Grammar School, Chelmsford
Anne Whipp	Welsh Assembly Government

Project Research Support

Dr Debie Galanouli	Queen's University (January 2007 – February 2008)
Jo Wilson	Queen's University (September- December 2006)