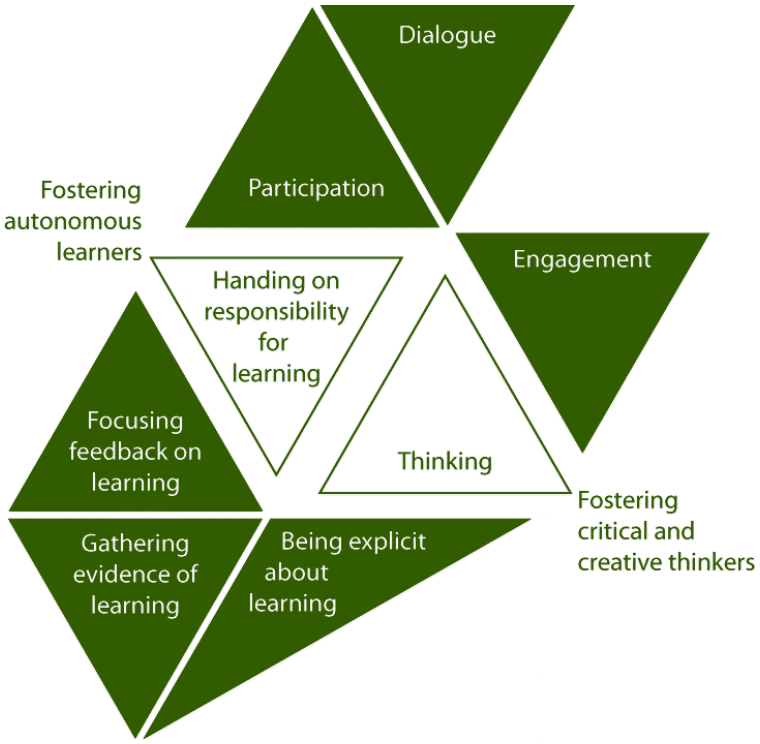
Becoming Successful, Confident, Responsible and Effective:
a principles-based rationale for embedding Curriculum for Excellence in the classroom



Using the Highland model to support the planning and delivery of outcomes based learning experiences.

Unit C3
The Highland Council CPD Reflection Framework

www.hvlc.org.uk/ace/aifl

Becoming Successful, Confident, Responsible and Effective:
a principles-based rationale for embedding Curriculum for Excellence in the classroom

Using the Highland model to support the planning and delivery of outcomes based learning experiences.

Unit C3
The Highland Council CPD Reflection Framework

by
Eric Young

Contents

Becoming successful, confident, responsible and effective: a principles based rationale for embedding Curriculum for Excellence in the classroom

1
Introduction

The idea that learning requires the active engagement of the learner is now widely accepted. Teachers understand that they cannot 'do' the learning for their students. They must learn for themselves and, as a result, we are coming to recognise that effective teaching is at best a means to an end. A lesson cannot be excellent in isolation from the extent to which it has involved all those present on the next step of their learning journeys.

This is at the heart of the Highland Council pedagogical model developed over the last few years as teachers have worked to embed and extend the use of formative assessment in everyday classroom practice. From the outset, it was understood that improvements occur when students themselves learn how to take responsibility by thinking about their learning in creative and critical ways and by becoming engaged in the principles and practice of formative assessment.

Such a broad statement is sustained by the evidence gathered though empirical studies carried out in different parts of the world. The model adopted by The Highland Council has attempted to bring together a set of general principles that can shape the quality of interaction between and among teachers and their students through coherent and consistent practice of formative assessment in the classroom.

The four principles involved are participation, dialogue, engagement and thinking. Together, they characterise the kind of interaction between and among teachers and their students most likely to stimulate and sustain those capacities that students need in order to take responsibility for their learning. A starting point in embodying these principles in everyday practice lies in the answers we can give to the following questions:

- To what extent are learning experiences planned to ensure that students are actively involved in their learning? (Participation)
- To what extent do classroom interactions provide opportunities for students and teachers to talk with one another? (Dialogue)
- To what extent do classroom activities help young people, especially reluctant learners, to engage with their learning? (Engagement)
- To what extent are students able to meet their learning objectives through creative and critical thinking? (Thinking)

Taken together, these questions invite a careful re-evaluation of how we work with young people and what we want to achieve as a result. They call for reflection on the role of planning in ensuring that coherent and progressive learning objectives are identified, understood and shared, the importance of providing students with the scaffolding to support them in their learning, the significance of the context in which students set about the tasks they undertake and the mental and emotional outlook they bring to their studies.

Crucially, such an evaluation also allows us to embark on an extended examination of whether and how we, through the ways in which we work with young people, promote in them the attitudes, habits and dispositions by which they can become successful in shaping their own learning, confident in their capacity to meet life's challenges, responsible in the social role they adopt and effective in working with others.

These purposes of Curriculum for Excellence are unlikely to reveal themselves except if young people themselves arrive at a mature understanding of how they can control the world

around them by their own actions and behaviours. And, since our ambition in this respect is for *all* young people, we need to remove the distraction that can come from an undue emphasis on ability as a condition that determines whether people can be successful, confident, responsible and effective in the lives they lead.

The Highland Council CPD Reflection Framework was always intended to provide a bridge between the theory and practice of assessment as encouraged through the Assessment is for Learning programme and the wider curricular developments envisaged by Curriculum for Excellence.

At a time when attention is focusing on the nature of the learning outcomes that we can expect students to achieve as a result of these developments, we are also beginning to grapple with the approaches to assessment most likely to foster the achievements intended. So we are coming to a stage when we need to think about how we can best provide and assess the activities and experiences most likely to lead all of our students to enjoy success in their learning and become confident, responsible and effective in how they interact with one another and in society generally.

This short booklet has been devised to provide an opportunity for some close practical discussion of what might be involved in giving expression to the principles of participation, dialogue, engagement and thinking in order to achieve these purposes.

Section 2 sets the context for continuing reflection and engagement with CfE experiences and outcomes in The Highland Council pedagogical model.

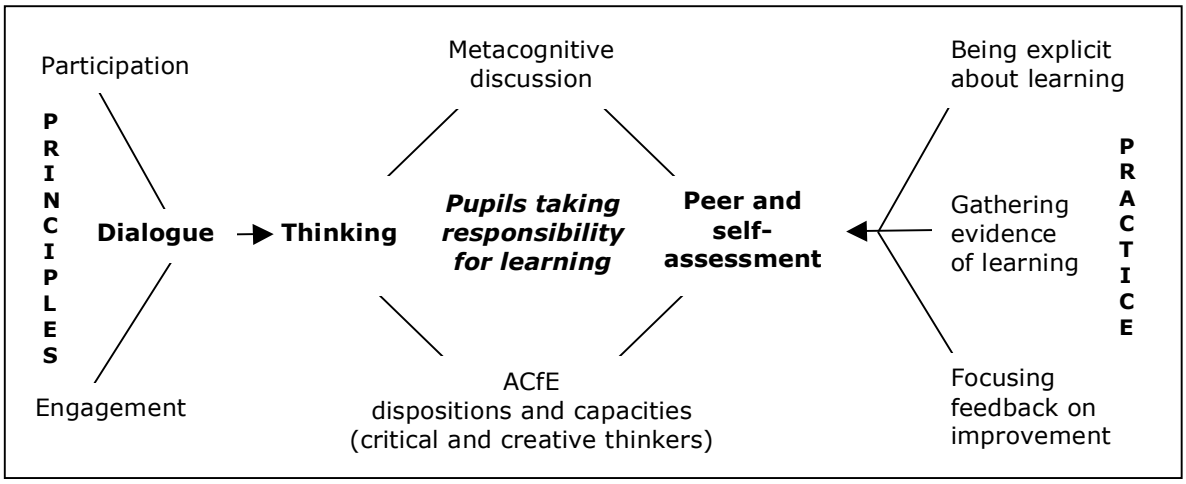
Section 3 explores how the principles might be used in practical classroom settings in order to address the particular issues involved in planning and providing varied learning experiences that are capable of articulating with the specific learning outcomes identified in Curriculum for Excellence. As a result, the planned experiences should address the broad values, purposes and principles of the curriculum through which teachers and schools can help young people shape a better future for themselves.

Each part of section 3 is constructed around a brief discussion of some of the issues involved in embedding the principles of formative assessment in the classroom followed by a number of practical approaches that might help to achieve this. These are not exhaustive; however they are illustrative of what assessment might look like in a classroom where active learning is encouraged.

Section 4 looks at a framework within which the process of engaging with CfE experiences and outcomes might be conducted.

2
Embedding Curriculum for Excellence in the classroom

The principles and practice of formative assessment



The Highland Council pedagogical model was designed to show that the principles and practice of formative assessment can offer a rigorous way to meet the needs of a Curriculum for Excellence. From the start, its focus was on the role teachers could play in helping students to take greater responsibility for their own learning. Work over the last year or two has begun to explore in more detail the essential elements of this role. The aim of this was to develop a meaningful way of engaging with both the values, purposes and principles of a Curriculum for Excellence and the new self-evaluation framework of How Good is our School: the journey to excellence.

The diagram above shows how the principles and practice of formative assessment come together to support students in taking greater responsibility for their learning. The 'route to engagement' produced in 2007 was designed to guide teachers through additional support materials that had been prepared to support continuing work on The Highland Council CPD Reflection Framework. Paul Black's paper, 'Full Marks for Feedback', for example, suggests a number of ways in which ***dialogue*** and ***self-assessment*** by students can be carried forward and helps to confirm the validity of the Highland approach.

Creating autonomous learners

The Highland Council Reflection Framework was always about using the principles and practice of formative assessment as a framework within which the purposes of Curriculum for Excellence could be achieved. If children and young people learn how to become more involved in their own learning and so take greater personal responsibility for it, then they will be displaying the capacities of successful learners, confident individuals, responsible citizens and effective contributors. Recent CPD work introduced a closer focus on the affective and cognitive aspects of the dispositions children and young people need to bring to their learning. This allowed an emphasis on the practical aspects of introducing students to manageable ways of evaluating and planning their learning.

Exploring the principles of formative assessment

In exploring the four principles underpinning formative assessment - participation, dialogue, engagement and thinking -, we have concentrated on the practical implications of developing thinking through effective dialogue in the classroom. In focusing on this, we began to identify what might be involved in improving students' capacity for learning and the role of dialogue and self-assessment in better understanding and using formative assessment.

Developing formative assessment practices

Because the capacities of Curriculum for Excellence depend on students' ability to take greater responsibility for their learning, peer and self-assessment has become an important part of the development work undertaken by teachers in Highland schools during 2007. The case studies describing the experiences of teachers and students at all stages suggest that peer and self-assessment offers significant opportunities for real improvement even in upper secondary where formative assessment is often regarded with some caution.

This booklet is intended to support further development in these areas. What follows in section 3 can be read as guidance on how the principles of formative assessment can be applied in the classroom to improve the quality of the interaction between and among teachers and students.

It is also intended to provide teachers with a context in which they themselves might begin to engage with CfE experiences and outcomes. In the spirit of the Assessment is for Learning programme, section 3 can be read by teachers beginning to engage with CfE experiences and outcomes as learners who want to do more than simply map 5-14 targets onto the new outcomes.

In this respect, the booklet should help reflective professionals to identify and clarify the classroom activities and experiences most likely to achieve the outcomes set by guiding their efforts to encourage active learning among their students through *participation* and meaningful *dialogue*, with the aim of stimulating and sustaining their students' *engagement* in their learning by seeking to ensure that each one of them is capable of purposeful *thinking*. It should also begin to show the contribution assessment should make in ensuring that objectives set for individual tasks and broad outcomes articulate with one another.

3
Principles into practice

a
Participation: encouraging active learning

To what extent are learning opportunities planned to ensure that students are actively involved in their learning?

> For formative assessment to be productive, pupils should be trained in self-assessment so that they can understand the main purposes of their learning and thereby grasp what they need to do to achieve.
>
> *Inside the Black Box, 1998*

The capacity for self-assessment is an important feature of successful learning. Yet the habits on which it depends are seldom purposefully encouraged in students by their teachers. So the point that students need to be trained in self-assessment is well made. It is reinforced by D Royce Sadler (1989) who noted that, before they can take action to improve their learning, students must be aware of their *desired goal*, show evidence of their *present position*, and have some understanding of a *way to close the gap* between the two.

This leads directly to the value of sharing learning objectives and criteria for success with students and there are many ways in which student can become more involved in their learning through understanding more clearly not only the tasks they will undertake but also what they can expect to learn as a result and how to gather the evidence of their success in doing so. A number of practical classroom approaches can help in this.

Encouraging student participation

(The approaches to formative assessment described here are not exhaustive; however they are illustrative of what a classroom where active learning is encouraged might look like.)

Sharing learning objectives from the outset

The learning objectives of a lesson need to be introduced early. But, by themselves, they may not encourage active participation in the task. Interest is more likely to be aroused by offering the chance to write a ghost story than by suggesting some work on paragraphing.

To be explicit about the learning while still capturing interest, a lesson could be introduced as follows:

1. Describe the topic: “Today’s topic is all about…”
2. Illustrate it with some interesting input/visuals/props etc
3. Introduce the learning objective: “In working on this, we will learn to…”
4. Introduce the activity: “What we will be doing today is…”
5. Have a practice run, then return to the learning objective and stress it very explicitly: “By doing this, you will learn how to…”
6. Explore the success criteria: “How will you know that you have learned this? What would a good … look like?”

Involving students in identifying success criteria

Involving students in identifying the criteria for success helps them to engage with their own learning. This need only be a one-minute brainstorm: “How will we know if we have achieved this?” For many lessons, it will be simple and straightforward. But, where appropriate, it may be worth negotiating suitable success criteria by guiding students through the processes involved in identifying the standard they should be working towards. By having a shared understanding of the quality they are pursuing, students can then confidently embark on the next stage of their learning.

Helping students understand and interact with what they are learning

WALT and WILF are two acronyms used by teachers to focus students' attention on what they will learn and how they will recognise when they are making progress. WALT stands for "We are learning to…", WILF for "What I'm looking for…" Another acronym, OLI stands for "Our learning intention…" and it is used in conjunction with TIB, "This is because…".

The terminology used is less important than the fact that teacher and students use a shared language to describe what is to be learned (the learning objective) and how progress can be recognised (the criteria for success).

Focusing on the skills involved

Sometimes, teachers find it difficult to distinguish learning objectives and success criteria from the tasks and activities they have always asked children to do. One distinction worth making is that of the purpose of the activity. Learning objectives and criteria for success are designed to communicate not simply what your students are going to do but what they will learn by doing it and how they will recognise success in carrying it out.

Another distinction is that between setting an activity and thinking about the skills or understandings needed to carry it out. This may be particularly useful when considering the learning outcomes described in Curriculum for Excellence. In planning effective learning experiences, teachers may need to reflect on the skills and understanding students will require before specifying the activities they should be undertaking. This can make it easier to devise learning objectives and criteria for success that will help students to focus on what they will learn through these activities.

With time and practice, learning objectives become easier to frame if the skills or understandings to be fostered are established before the activity or lesson itself is constructed. As well as beginning to offer a framework for engaging with Curriculum for Excellence outcomes, an approach like this allows teachers t to explore how the activities they have devised might be assessed.

Checking on progress

Checking on progress can be very demanding if students are not themselves involved in the process.

A paper-based approach can be time-consuming. If time is invested at the outset, face to face exchanges using some form of codification can be more efficient. For example, after discussing what it means to have achieved a particular objective, a code (e.g. 'OA' or 'OM') written at the bottom of a piece of work can show it has been met.

This process can then be developed until it is almost self-sustaining. As students get used to it, they can take responsibility for their own work or for their partner's. As it is bedding in, students still need to know that their work will be checked. The symbol can be modified by the teacher (e.g. circled) to show that it has been. To be manageable, meetings with students to check progress need to be short and focused.

Helping students use objectives effectively

Don't expect students to know immediately how to use learning objectives, whether short or longer term. Once an objective has been set, students need help in working with it.

An objective looks forward to an outcome of some kind. It need not include directions on how it can be fulfilled or how to close the gap between where a student is now and the final outcome. In many classrooms, when an objective is set, students have no idea of how to achieve it. As well as an objective, students need to understand the criteria and standards

required to achieve a successful outcome as well as the strategies that will help them get there.

Sharing the big picture with students

Students often become more involved in their learning when they recognize its relevance to their life more generally. This can be presented as what Shirley Clarke calls an 'aside', a remark offered at an early stage in sharing the learning objective that is designed to show how the student can benefit from this piece of learning. It needn't be written down and it shouldn't be overplayed. These 'asides' or big picture goals might describe how the specific learning objective will contribute to future class work: "This will help us with our reading and writing" or "with our project for this term." They can also be about life skills: "This will help us to make decisions", "to work with different kinds of people", "to look after ourselves." In the context of Curriculum for Excellence, big picture goals may well look forward to the capacity a task might foster. Big picture goals can also be explored simply by asking students to identify why they think they are learning something.

Set bigger learning goals in a meaningful context

While there is enough evidence to suggest that having big picture goals can exert a significant influence on how successful people achieve their ambitions, it is sometimes difficult to see how such goals can be related to daily classroom activity. A maths department in a secondary school offers one example of how this might be achieved.

The teachers of four first year maths classes encouraged their students to think about their classroom activities as helping them to "become a mathematician". Being a mathematician comprised the sum of four pursuits: asking questions, trying things out, looking for connections and asking why.

This gave students a structure to use in understanding what maths is all about and moderated its image as a subject with a lot of rules to learn. When asked what they had learned, students used these features of becoming a mathematician and commented on the specific content they were working on. As a result, they were able to show an understanding of wider goals and aims and became forward looking in their own learning.

Similar approaches can be devised for other curriculum areas.

b

Dialogue: talking together

To what extent do classroom interactions provide opportunities for students and teachers to talk with one another?

Inside the Black Box: the evolution of effective teaching

Discussions, in which pupils are led to talk about their understanding in their own ways, are important aids to improved knowledge and understanding. Dialogue with the teacher provides the opportunity for the teacher to respond to and re-orient the pupil's thinking. However, there are clearly-recorded examples of such discussions where teachers have, quite unconsciously, responded in ways that would inhibit the future learning of a pupil. What the examples have in common is that the teacher is looking for a particular response and lacks the flexibility or the confidence to deal with the unexpected. So the teacher tries to direct the pupil towards giving the expected answer. In manoeuvering the conversation in this way, the teacher seals off any unusual, often thoughtful but unorthodox, attempts by the pupils to work out their own answers. Over time the pupils get the message-they are not required to think out their own answers. The object of the exercise is to work out, or guess, what answer the teacher expects to see or hear, and then express it so that the teaching can proceed.

A particular feature of the talk between teacher and pupils is the asking of questions by the teacher. This natural and direct way of checking on learning is often un-productive. One common problem is that teachers do not allow enough quiet time so that pupils can think out and offer an answer. Where, as often happens, a teacher answers her or his own question after only two or three seconds, and where a minute (say) of silent thought is not tolerable, there is no possibility that a pupil can think out what to say. There are then two consequences. One is that, because the only questions that can produce answers in such a short time are questions of fact, these predominate. The other is that pupils don't even try to think out a response-if you know that the answer, or another question, will come along in a few seconds, there is no point in trying. It is also common that only a few pupils in a class answer teachers' questions. The rest then leave it to these few, knowing that they cannot respond as quickly and being unwilling to risk making mistakes in public. So the teacher, by lowering the level of questions and by accepting answers from a few, can keep the lesson going but is actually out of touch with the understanding of most of the class-the question-answer dialogue becomes a ritual, one in which all connive and thoughtful involvement suffers.

There are several ways to break this particular cycle. They involve giving pupils time to respond, asking them to discuss their thinking in pairs or in small groups so that a respondent is speaking on behalf of others, giving pupils a choice between different possible answers and asking them to vote on the options, asking all to write down an answer and then reading out a selected few, and so on. What is essential is that any dialogue should evoke thoughtful reflection in which all pupils can be encouraged to take part, for only then can the formative process start to work.

The dialogue between pupils and a teacher should be thoughtful, reflective, focused to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and to express their ideas.

Paul Black and Dylan Wiliam (1998)

This extract describes the quality of dialogue Black and Wiliam found in their review of formative assessment. After setting out the current position, they go on to offer suggestions on what needs to be done. Since we know that feedback leads to improvement only when it is

used, the challenge only begins when we try to improve the quality of interaction between and among teachers and students in the classroom and beyond.

From the outset, The Highland Council included dialogue in its pedagogical model. In doing so, it sought to ensure that we would look beyond a narrow focus on the classroom questions we might use towards a wider examination of how questioning and dialogue may be practised to encourage students to participate more fully in their own learning.

This has practical implications for the nature of the questions we ask, for how we use questioning to stimulate and sustain thinking and for the ways in which we use dialogue to ensure that students are actively engaged in their learning. In seeking improvements in the ways in which dialogue is used in the classroom, we can begin to identify and pursue practical ways in which many of the principles of curriculum design such as set out in Curriculum for Excellence can be achieved.

Encouraging purposeful dialogue

(The approaches to formative assessment described here are not exhaustive; however they are illustrative of what a classroom where active learning is encouraged might look like.)

Leaving time for thinking

Research suggests that teachers typically leave less than a second after asking a question before accepting an answer or trying to move on. Yet, a considered response cannot be offered without more thinking time.

An interval of at least three seconds acknowledges that thinking takes time and that students should have more of it. It also implies that the student, not the teacher, should be thinking. Other advantages are:

- it discourages ill-considered answers while encouraging thoughtful ones
- more students are likely to be able to offer an answer
- creative responses are more likely
- students of all abilities are involved in answering

Also, leaving some time between a student's answer and a reply (think time 2) produces longer answers and lets students correct their own mistakes.

Increasing wait time is not easy. Slowing the pace of classroom discussion is hard if there is pressure to cover content or students are not used to long silences. Changes in classroom practice need to be explained.

Leaving more wait time or think time is often linked to another simple but useful technique, No Hands Up, so called because the teacher tells students to keep their hands down and s/he will pick students to answer. This helps to bring in students other than those who usually answer.

Asking students not to compete when answering

The no hands rule can completely change the dynamic in the classroom by ensuring that students will not be expected to offer an answer until they are asked. As a result, everyone understands that they are expected to be able to answer at any time, even if it's only to say, 'I don't know'.

No hands up can work well when used with more think time. If students know that answers won't be called for until a few seconds have been spent thinking but that anyone can then be asked to say what they think, then the motivation to participate increases significantly for all, especially those who prefer to leave it to others.

Thinking, pairing, sharing

Think, pair, share encourages classroom participation and interaction. Its particular value lies in the way it allows involvement to grow gradually through individual reflection shaped and developed by accommodating other views and ideas. Because of this, it provides an easily managed but structured approach to classroom discussion.

First of all, students write down as many answers, ideas or suggestions as they can think of on their own (think). Then they pool their ideas with a partner (pair) and finally the teacher opens the discussion up for contributions from the class as a whole (share).

This simple strategy helps all students to learn by encouraging a sustained interaction between thinking and talking, both individually and in groups.

Using clever questions

Many questions used by teachers tend to be either closed (they have one right answer) or lower order (they look for simple recall and not much else). On the other hand, open (inviting different possible answers) and higher order (looking for analysis, synthesis, evaluation etc) questions can be much more useful in exploring students' mis/understandings and therefore revealing valuable information about their learning. Primary teachers often talk about thin and fat questions to help students distinguish between different kinds of questions. Bloom's Taxonomy and some derivatives offers a more sophisticated exploration of different question types, comprising, in order:

- *Knowledge* questions recalling facts, terms, basic concepts and answers (What is...?)
- *Comprehension* questions demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas (How would you compare and contrast...?)
- *Application* questions using new knowledge, solving problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. (Can you organize _____ to show...?)
- *Analysis* questions examining and breaking information into parts by identifying motives or causes; making inferences and find evidence to support generalizations. (How would you classify...?)
- *Synthesis* questions compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions. (Can you predict an outcome?)
- *Evaluations* presenting and defending opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria.

Bloom's Taxonomy also provides a context in which the progressive nature of some Curriculum for Excellence outcomes can be explored.

Using a question to explore understanding

Teachers can be tempted to go from questioning to evaluation before the discussion has had full impact on students' learning. Often this rush to closure comes from a desire to move on and cover more ground. However, there is a lot of evidence to suggest that children and young people learn best through opportunities to explore questions in greater depth. By slowing things down, questions can encourage thinking, and provide opportunities to monitor learning as it is happening.

Taking a question round the class might involve asking one student a question and then asking another if the answer seems right. A third student might be asked for an explanation of why it seems so. Instead of responding with a question like "Are you sure?", the answer could be explored by saying "Could you say a bit more about that?" This is less threatening than the more inquisitive "What do you mean by that?"

This approach can be used for different reasons: to extend discussion, to address a misunderstanding, to explore the range of views or ideas in a group. Instead of what is sometimes called the 'ping pong' style of discussion, the teacher passes the answer to others in the group 'basketball' style and invites their comments. Finally, the teacher draws the discussion to a conclusion by taking the responses back to the original student or in some other appropriate way. Taking an answer round the class is most effective if used regularly as a way of encouraging a habit of shared reflection.

Using wrong answers to clarify misunderstanding

Incorrect answers are actually a valuable opportunity to check and develop a student's understanding. When presented with a wrong answer, there is no need to rush to a judgement or correction. Instead, a range of checking questions - Are you sure?, Can you say a little more about that?, Why do you think that?, Are you sure?, Who agrees with this answer?, Did anyone get a different answer?, What should the answer be, do you think? - can often elicit a better answer.

Weak or incomplete answers are also good starting points for effective classroom discussions. Instead of correcting an answer that needs improvement, the teacher could gather some answers from other students and offer them to the first student and ask: "Which of these answers helps you to improve yours?"

These approaches have several strengths. First of all, they avoid 'fixing' negatively on one student. Second, they involve the rest of the class while still keeping the first student listening and thinking.

Listening reflectively

A reflective listener restates the feeling and/or content of what a speaker has said in way that demonstrates understanding and acceptance. Reflective listening should be non-judgemental, accurate and concise. It involves paraphrasing the essence of what has been said and reflecting that back to the speaker.

Some examples of phrases that can be used are: "So you think that….", "You seem to be saying that….", "It seems to me that you feel…." In teaching, you can use paraphrasing to reflect children's emotions or understandings back to them. It is particularly good to use reflective listening before judging, arguing, criticising or trying to come up with a solution.

In encouraging effective dialogue, listening is just as important as having something to say. It allows teachers and other students to gather evidence of learning because it lets them tune into the thinking behind the words. There are different kinds of listening:

Search listening: looking for specific information in a student's answer
Survey listening: building a picture of a student's understanding
Skim listening: deciding the relevance of a response.

Listening to what students have to say is a very explicit way of showing them that their ideas are valued. This is an important influence on the quality of the student-teacher relationship. Students need to know that their teacher wants to hear what they have to say. Finally, it's worth remembering that the capacity to listen tends to diminish with anxiety so, to get the most out of listening, you need to be calm but alert.

Provoking responses when necessary

Well-constructed questions are an essential way of stimulating student-teacher and student-student interaction.

But sometimes getting an answer to a question can be difficult no matter how many prompts

and clues you give. A tactic worth trying in this situation is to offer the class two answers, ‘a’ and ‘b’. Students who prefer answer ‘a’ can put their thumbs up, those who prefer answer ‘b’ can put their thumbs down and the remainder can show no particular preference by keeping their thumbs hidden. An open follow-up question like “Why did you choose that/no answer” then has the potential to stimulate a more productive discussion.

Taking time out to check learning

To help students check on their own learning and iron out minor misunderstandings, call a two minute time-out during which students can talk to a partner and ask them any questions they want to about the lesson.

This makes use of research indicating that students will ask their peers questions that they would be embarrassed to ask the teacher. They will also benefit from hearing explanations in language they can understand, while students asked to give an explanation will benefit from having to organise their own thoughts in order to explain something to their partner.

c
Engagement: taking responsibility
To what extent do classroom activities help young people, especially reluctant learners, to engage with their learning?

> *Formative assessment and the design of instructional systems*
>
> The indispensable conditions for improvement are that the *student* comes to hold a concept of quality roughly similar to that held by the teacher, is able to monitor continuously the quality of what is being produced *during the act of production itself*, and has a repertoire of alternative moves or strategies from which to draw at any given point. In other words, students have to be able to judge the quality of what they are producing and be able to regulate what they are doing during the doing of it.
>
> *D Royce Sadler, 1989*

The process of engaging with one's own learning involves a complex interaction between what is provided, often by some knowledgeable other, as the stimulus for a piece of learning, what is done by the student in response to that stimulus, and the changes in understanding, attitude and/or behaviour that occur as a result.

As Royce Sadler acknowledges, the capacity for self-improvement is conditioned by the extent to which a student is able to:

1. identify what a successful outcome to a given task will look like, and
2. deploy the strategies and skills most likely to achieve that outcome

These two conditions could be called the interplay between engagement and thinking in effective learning. Engagement is stimulated by thinking; thinking sustains engagement. In the former, what matters is the extent to which the student understands the criteria under consideration and the standard set for a given outcome; a student can't be expected to engage with a piece of learning without reflecting on what a successful outcome will look like. In the latter, the student must be equipped with an appropriate repertoire of mental, emotional and physical skills and responses to pursue the task; a successful outcome cannot be achieved without them.

As principles underpinning effective learning, engagement and thinking complement one another. Together, they provide a context in which to develop the capacities for:

- critical thinking on which sound judgements depend, and
- creative thinking, which helps student to find the right tools to use with the task in hand.

It is worth noting that these are as relevant for a teacher engaging with CfE experiences and outcomes as they are for a student engaging with a new set of lessons or preparing for an external examination.

Each needs to reflect on the desired outcome as a standard to be achieved and use that standard to begin to either plan and construct (while engaging with CfE outcomes) or undertake (while engaging with learning) the activities and experiences most likely to meet the objective set by the outcome.

As a result of this approach, assessment will come to be used to inform the extent to which the pursuit of the objective actually achieves the desired outcome. In this way, assessment can both support learning as it occurs and provide an indication of its eventual success. Understanding the different uses to which assessment is put begins to release the perceived tensions between formative and summative assessment.

Encouraging engagement

(The approaches to formative assessment described here are not exhaustive; however they are illustrative of what a classroom where active learning is encouraged might look like.)

Developing a nose for quality (modelling standards)

Developing a nose for quality, or a sense of what a good piece of work looks like is essential if students are to make informed judgements about how well their own or their partner's work matches up to the standard set.

It takes time for this to develop and one good way of encouraging it is to discuss with students' examples of others' work. Early examples should emphasise the qualities that distinguish a piece as good. These can be followed by others demonstrating areas that could be improved in some way.

Teachers can also use a piece of work to help a class or group to see more clearly the ways in which specific learning intentions and success criteria can be used to assess a piece of work. Whole class marking using an OHP or photocopies of a piece of work can help students understand the basis of marking. It can also help them to think about how they would set about using feedback to improve their work and to develop their own self-assessment skills.

Modelling work in this way provides concrete examples that students can refer to when working by themselves or in assessing work by someone else through peer assessment exercises.

Using comment only marking

Many teachers accept that giving a mark in itself does not help anyone learn so they spend a great deal of time supplementing their marks with comments to point out what can be improved and how.

However, a large body of research tells us that comment only marking encourages greater improvement than either grade only or grade and comment marking. The reason seems to be that when marks are included in some way, students don't look any further. With a good mark, they think they don't need to try harder while a poor mark discourages them from greater effort. No mark focuses attention on comments which, if well constructed, can point the way forward.

The best strategy is to give marks as seldom as possible while children are learning and use only comments to help direct their future efforts.

Giving just enough feedback to close the gap

Feedback to support learning is about helping students to close the gap between where they are now and where they want to get to in terms of a particular learning objective.

Success in closing this gap is obviously related to the kind of comment or prompt given. Research suggests that the best kind of comment is one that gives just enough help to point learners in the right direction. Too little help won't achieve this and can have a negative effect on student motivation. Too much help can mean the objective is reached with no real effort.

When deciding how much help to give, teachers need to take account of the needs of the student in question. Some may need a fair bit of help; with others, a nudge may be all that they need.

Focusing on the positive while looking for improvement

Learning is most likely when students are engaged and motivated. For this reason, it's usually important to emphasise the positive when assessing a student's work. This is just as important

when students are assessing themselves. There are a number of ways of trying to ensure that students pay due attention to this when they are assessing their own or one another's work.

Two Stars and a Wish is a very effective way of accentuating the positive. Students are asked to make sure that they make two favourable comments (two stars) about the work they're assessing and then identify the most important thing they think could be improved (a wish). Easily remembered, the jingle emphasises what is good about a piece of work while also asking students to think about ways to make what they have done even better. For maximum impact, the stars and wishes should relate to the original learning intention and success criteria and be written in language the student can understand.

Making sure students follow up on feedback

Current thinking about assessment believes that it only becomes formative if it is actually used to guide future learning activities. So you need to have ways of making sure that students use your feedback to improve their work.

Ask students to number all the pages in their jotters. Have them construct two columns on the inside cover, one for you and one for them. Once you have marked a piece of work, note down the page numbers and the date in your column and sign it. Students should do the same in the opposite column once they have done the follow-up work required. You should not mark the next piece of work until they have. If parents complain, you can explain why and have the evidence to support your position.

Making able students acknowledge effort

Research tells us that grade only marking appeals to the ego while comment only marking makes learners think about the task they've been working on. As a result, there is a risk that always getting good grades can make able students complacent. So, instead of giving your most able children a grade for a piece of work, give them a plus, minus or equals depending on how it compares with the last piece of work they did.

This can work for all students but bright ones who want to cruise hate it! Part of the reason for this is that to make sense of feedback, they have to engage in some critical reflection on the strengths and weaknesses of both the current piece of work and their past efforts. In doing this, they will learn a lot more about their own learning.

Involving students in marking

Students can mark their own work and that of others against clear criteria and learning intentions. The criteria can be developed as a class activity; this clarifies the teacher's expectations and involves the students in reflecting on how far their work fulfils these expectations. The aim of the activity should be to identify ways that the student whose work is being marked can move forward.

Developing peer and group marking

Peer marking allows students to assess how well a partner's piece of work meets the success criteria and what can be improved. In paired marking, students need to understand both their marking role and the learning intentions and success criteria they're working with.

The partner's role might be displayed in the classroom to remind everyone of what's involved, eg, "A response partner is someone who tells me the truth about my work and helps me make it better".

Peer marking should encourage dialogue rather than encouraging each student to take turns at being teacher. Ground rules about listening, interruptions and confidentiality etc should be decided and displayed prominently.

Partners should point out first what they like and then suggest an improvement based on the learning intention. To keep positive, partners should identify more strengths than improvement points.

Work done at home can provide ideal material for assessment by other students. This often helps both the author of the homework and the student assessing it. It can involve anything from correcting a set of short answers (with or without a checklist) to more complex assessment procedures.

Paired marking can work at all stages. In early years, pairs can meet on their own magic spot on the carpet to talk about their work. Children can be trained in their roles through modelling with the whole class, watching paired marking in action and other routines.

An alternative to marking individually or in pairs is for students to do this as a group. The focus should be on a recently completed piece of work and the group can help each other to assess the work against agreed criteria and suggest ways in which the work could be improved.

Marking against annotated examples

A useful marking strategy is for peers or groups to work together to see how closely their work measures up against an 'ideal solution'. Whilst it will be important to emphasise that there could be many 'ideal solutions', group discussion should aim to help each student understand the extent to which their response achieves the criteria and what they can do to improve.

Getting students to self-correct

Students can often get a lot out of guided self-correction. Checking for obvious errors is a useful exercise for both students and teachers. At the very least, it will help to define what 'obvious' means to different people and that could influence future plans for learning.

Self-correcting provides opportunities in some subject to practise alternative routines to confirm answers. For example, in mathematics, a calculation could be checked by using:

- inverse calculations
- equivalent calculations
- knowledge of odd and even

Some people are afraid that self-correction can encourage students to be more generous to themselves than their work merits. Quite apart from the fact that research doesn't confirm this fear, it needn't be a problem if it happens within a classroom culture that values the task, not the ego performing it. Getting students to self-correct actually encourages personal responsibility for work done.

Encouraging self-assessment

Traffic lighting is a simple but very powerful device for finding out what students think about the present state of their understanding or learning. Marking something green means that they have fully grasped what's involved; amber means they are not yet fully confident; red indicates that they are struggling. After making their judgement, students can then think about what they need to do to move from red/amber to green. Teachers working with students at all stages have found many different ways of using traffic lighting and its near neighbour, Thumbs.

Traffic lighting is most effective when used in a climate of trust where students know it's OK to say they aren't clear about something. They should also be confident that, if they use red,

they'll get help. Also, greens can help ambers and reds to a clearer understanding because the opportunity to use their knowledge/skill to help someone else both consolidates it for them and allows the teacher to check that it really is secure. Thumbs is a variation on the traffic lighting theme. It requires no resources and can be used in any context. Thumbs up means I'm happy with this, thumbs across I'm getting there, thumbs down I'm lost.

d
Thinking: working productively
To what extent are students able to meet their learning objectives through creative and critical thinking?

In the previous section, engagement and thinking were presented as complementing one another to enable effective learning. In developing critical and creative thinking, students are engaging with their learning by coming to a better understanding of the standard they are aiming for and building a repertoire of actions, strategies and moves to help them achieve their objectives.

Curriculum for Excellence accepts that critical and creative thinking are essential capacities in all of the four capacities, eg:

successful learners are able to
- think creatively and independently
- make reasoned evaluations
- link and apply different kinds of learning in new situations

confident individuals are able to
- be self aware
- assess risk and take informed decisions

responsible citizens are able to
- make informed choices and decisions
- evaluate environmental, scientific and technological issues
- develop informed, ethical views of complex issues

effective contributors are able to
- apply critical thinking in new contexts
- create and develop
- solve problems

This is not an exhaustive account of every connection that can be made between critical and creative thinking and the purposes of the curriculum, yet it is surely enough to confirm that engagement with Curriculum for Excellence for teachers and young people alike must involve developing the dispositions, habits and approaches of critical and creative thinkers.

There is not enough space in this short booklet for close discussion of how this might be achieved. Other parts of The Highland Council CPD Reflection Framework and subsequent work with Robert Fisher explore the issues in greater detail. However, there are some practical aspects of formative assessment that are worth considering here.

Thinking purposefully

(The approaches to formative assessment described here are not exhaustive; however they are illustrative of what a classroom where active learning is encouraged might look like.)

Encouraging a positive approach to mistakes

An important element of developing the skills of self-evaluation is how the teacher deals with situations where students find their work difficult. The language that teachers use is influential in building an acceptance that it is OK to find things difficult and that recognising this is an important aspect of learning. Consider ways in which you can get that message over to students. To supplement this teachers have found that introducing a framework for reflecting on learning can help develop confidence in pointing out areas which need support as well as those that have proved successful.

For example, the following list of questions (perhaps using one or two at a time) can be used to start the process. It is usually best to relate these to the specific learning intentions of the lesson.

- Have you learned anything new?
- What were you most pleased with?
- What did you find easy?
- What did you find more difficult?
- What helped you to solve your difficulty?
- What can you do now that you couldn't do before?
- What do you need more help with?
- How would you change this activity for another group?
- Do you have any questions?

Using thinking partners

Thinking partners can provide an effective way of giving every student the opportunity and responsibility to tackle a thought provoking question. Thinking partners get together whenever the teacher wants students to discuss what they think about a specific question. It is an approach that works particularly well with the Think, Pair, Share described elsewhere. It's probably a good idea to change pairings around fairly frequently. This can help to avoid staleness or mischief and encourage the development of students' interpersonal skills.

Talking more about thinking

Formative assessment is about identifying and sorting out the things that go wrong in learning so being stuck is actually a good thing, an opportunity to learn something new and find out what works for individual learners.

Encouraging students to talk honestly and confidently about their learning, even when unsuccessful, is critically important in effective formative assessment. Practice and habit can help make such candid discussion feel normal, natural and non-threatening. Peer-partners can help students to be open about their thoughts and feelings.

Talking about the strategies they use when they don't know the meaning of a word or can't do a sum helps students to become more conscious of the strategies that work for them and encourages them to look for new strategies to solve new problems.

New strategies that students come up with can be posted on a classroom notice-board as a constantly changing record of what the class thinks about its learning.

Debriefing regularly

Students benefit from regularly discussing their successes and difficulties. Talking will give them insights into what helps them to learn. Discovering that learning is difficult for everyone at times will also reassure them and build self-esteem.

Written self-evaluation can limit thinking to what children can write. So it may be better to finish early and hold a short discussion based on a few questions:
What really made you think?
What did you find difficult when you were learning…?
What helped you - friend? teacher? book? thinking? - when something got tricky about…?
What do you need more help with about learning to…?
What are you most pleased with about learning to…?
What have you learned that is new about…?
How would you change this activity for another class who were learning to…?

Start the debrief by asking about the learning intention and success criteria. Keep pulling discussion back to these as a frame for students' responses and to let you exclude irrelevant comments. Remember, though, learning is messy and children may well have learned unintended things. Acknowledge this and celebrate it if possible.

Introducing learning logs or journals

Learning logs or journals let students keep notes of their thoughts and feelings about their work. A log need be no more than a jotter or a ring binder and sheets of paper.

Students should have time in class to complete it. This will help them use it conscientiously. The teacher should be able to gather information for progress reports, etc.

A typical log might ask students to complete at least three sentences from a list of statements like:

- The most important thing I learned this week was…
- What I found most interesting today was…
- What surprised me most was…
- What I enjoyed most about today was…
- One thing that still puzzles me is…
- What I need help with is…
- What pleased me most was…
- Right now I feel…
- Today might have been more helpful for me if…

Some of these can be displayed on the classroom wall.

Having two-thirds of the way through topic tests

End of topic tests come too late for students to do anything to correct misunderstandings. Learning needs can be identified while there is still time to do something about it by setting a two thirds of the way through topic test.

The task can be combined this with traffic lighting. Students can review their test results and think about where and why they made mistakes. Traffic lighting allows them to record their understanding of aspects of the topic. If they have done well in part of the test and feel confident about it, they can mark that part green. A less confident response might be marked amber. Poor answers would be marked red.

Once collated, the results can be used to identify what needs to be revised in some way, either with the whole class or in smaller groups working on clearing up a shared misunderstanding.

Using traffic lighting to prepare for tests and exams

Traffic lighting is a remarkably simple but powerful way of signalling how children perceive their own learning that is used in many different ways. One specific application for traffic lights is in evaluating strengths and weaknesses to plan revision.

Students use traffic light to assess a list of key words or topics on which the test will be set. By doing this, they can identify the areas where they feel their learning is secure, which they mark in green, and where they need to concentrate their efforts, which they mark in amber or red.

These traffic lights then form the basis of a revision plan. Students can identify questions in past examination papers that test their red (and amber) areas and use personal and group revision time to help them cover the topics where they are weakest.

Getting students to prepare their own test questions

Research suggests that students who revise for tests by preparing and answering their own test questions, perform better in unseen tests than those who prepare in more conventional ways.

Why this should be so is not so difficult to understand. Preparing your own test questions calls for, and so develops, an overview of the topic. Students also have to think about what makes a good question and, in doing so, they need to have a clear understanding of the subject material.

One other whole class benefit is that the best questions can then be used for class revision or even a class test. In this way, students can see tangible evidence that their work has been valued.

Making an interactive jigsaw

Jigsawing is a structured way of giving everyone in a group the opportunity to develop a variety of skills to use when working with others. In particular, it gives everyone a chance to be both proactive and responsive.

The technique involves 'piecing together' a range of different inputs to a specific topic. For example, where a topic under study can be separated into four sub-topics, the class is first divided into groups of four students. Inside each group, students take responsibility for one of the four sub-topics, which they will teach to the others later on. The class then breaks into four new groups, each comprising the students that are responsible for one of the sub-topics. In these groups, students learn about their sub-topic from texts, the teacher and other sources. Students then return to their original group of four and, in turn, teach one another their sub-topic.

Riding the carousel

Carousel brainstorming gets everyone working together in small groups to quickly create lots of ideas. It is most effective when several ideas or kinds of ideas are being managed at once.

Students work at one table in small groups. Each group brainstorms a specific 'way' for three to five minutes. Then the groups move to the next table to add new ideas to those already devised by the last group. The carousel continues until every group has visited each table. Groups then return to their original table to review the list they find there.

Groups can simply reflect on the range of ideas generated or they can be asked to do something with them. As an adaptation to the process, each group can leave one person behind as it moves on to the next station to explain and clarify the group's ideas. A less energetic way of turning the carousel is to make the lists go round instead of the groups.

4
Planning outcomes based learning experiences

Engaging with CfE experiences and outcomes involves re-examining the opportunities for learning we currently provide in the light of changed and changing needs.

The overarching purpose of Curriculum for Excellence is to enable *all* young people to become successful, confident, responsible and effective. To achieve that, traditional approaches to planning and teaching will need to be reviewed and most likely refreshed. Planning learning to achieve this cannot be simply about *what* we think students should know or be able to do; it will be about clarifying *why* a task should be performed, identifying *what* it should achieve and thinking about *how* it might be carried out. As we plan for these whys, whats and hows, we will also want to think about how assessment can be used to make appropriate judgements about whether and how the experiences contributed to an individual's learning.

By concentrating on planning what to do without thinking too much about why it should be done or how, we run the risk of perpetuating habits that tend to see learning as the transfer of a body of knowledge and competence that may or may not include the capacity for autonomous, self-directed growth which underpins the purposes of Curriculum for Excellence.

In seeking to help children and young people become successful, confident, responsible and effective, we need to ensure that the experiences through which they will learn are capable of providing them with meaningful opportunities for emotional and intellectual development. For that reason, we need to think carefully about the nature of the teaching and learning processes that will take a planned task and turn it into a meaningful learning event. From the beginning, Curriculum for Excellence recognized that the purposes of the curriculum could only be achieved if we paid close attention to three areas:

- the environment for learning
- the choice of teaching and learning approaches
- the ways in which learning is organized.

So, in engaging with experiences and outcomes, we are primarily in the business of using what we already know about effective teaching and learning as a standard against which we can make judgements about current practice and seek improvement where we can.

A specific outcome provides a brief description of what is to be expected at a given level. It provides the standard we are aiming for. For pupils to reach that standard, they need opportunities to build knowledge, explore understanding, practice skills and develop maturity over an extended period of time. In devising a series of such opportunities which fully acknowledge the over-arching purposes of the curriculum, we need to keep in mind the criteria provided by Curriculum for Excellence and other appropriate sources.

For example, the principles of curriculum design should be near the front of our thoughts. Will the experiences we are planning provide *challenge and enjoyment*, *coherence* and *relevance*? Do they offer opportunities for *personalisation and choice*? Is there sufficient *breadth* across a range of experiences? Are they sequenced to ensure *progression*? Do they take learners to an appropriate *depth* for their current learning needs?

We should also be thinking about the places for learning to take place. Thus far, we probably see the classroom as the principal location. Curriculum for Excellence accepts that. But it also and argues a case for learning to occur in other circumstances which may well be more authentic for many students. In total, it suggests four different contexts for learning, each of which has a valuable role to play:

- Curriculum areas and subjects
- The ethos and life of the school as a community
- Interdisciplinary projects and studies
- Opportunities for wider achievement

The principles and practice of formative assessment as set out in the Highland model have their contribution to make, too. We can encourage pupil *participation* in their learning by making effective use of *dialogue* in different learning contexts. This should result in high levels of pupil *engagement* in the learning process because they are *thinking* about their learning in critical and creative.

In the classroom, we would expect to see interactions between and among teachers and students in which learning is made explicit, evidence of learning is continuously gathered and feedback is focused on improvement. Most importantly, it would be clear that students had assumed significant responsibility for their own learning. Peer and self-assessment would pervade every learning activity.

Engaging effectively with the outcomes of Curriculum for Excellence is a challenge that takes us somewhat beyond a simple translation exercise from the old curriculum onto the new. We cannot forget the question Curriculum for Excellence asks us to address: are we educating students for our past or for their future? The answer almost certainly lies in the quality and suitability of the learning experiences we are able to devise.

Harry Wong, the American educationist, wrote, “Some classrooms are unintentionally uninviting”. Evaluative planning and reflective practice in applying the principles discussed here would go a long way to creating inviting classrooms where learning is known by all as worth the effort it requires.

Eric Young
June 2008