

Policy and New Products

Research Report 13



**Just making them think:
A tension between teaching and
assessment in the high stakes
stages**

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Background and context

This study was written by Louise Hayward, Brian Boyd, Ernie Spencer and George McBride from the Universities of Glasgow and Strathclyde, it was commissioned by the Scottish Qualifications Authority (SQA) in 2008. It explores how a group of teachers under one education authority, Highland Council, were attempting to reconcile the perceived tensions between learning/teaching and assessment in high-stakes contexts.

The study sought to understand what kinds of assessment for learning the teachers were using to prepare students for high-stakes examinations, and why. It would also record any differences teachers discerned in teaching and learning as a result.

The policy and research context

The study took place during an interesting period for Scottish education. Questions are being asked of both the nature of curriculum in Scotland, and of the kinds of learning, teaching and assessment that might improve the life chances for young people in the 21st century.

Since 2001, the Scottish Government-funded Assessment is for Learning (AifL) programme has encouraged the development of a coherent assessment system across Scotland. It has sought to change assessment practices in classrooms, in schools, in local authorities, and in national bodies and organisations, to focus on assessment as a means of enhancing learning.

The AifL programme has attempted to develop a coherent assessment system, described as an inter-relationship of Assessment *for* Learning, Assessment *as* Learning, and Assessment *of* Learning.

Whilst significant progress has been made, developing assessment for learning and assessment as learning in some areas of school work seems more difficult. Though teachers report real differences in learning activities in the 3–15 age range, there has been a reluctance to use AifL practices when the stakes are high and young people are taking national examinations. Ironically, although teachers do report improvements in children's attitudes and performance, they speak of the 'risk' of these approaches. The pressure of the examination syllabus is offered as a reason why many teachers are reluctant to move away from the traditional patterns of summative assessment and examination rehearsal that have dominated the upper stages of secondary schools in Scotland for many years.

This is a deeply contentious area. In upper secondary school, assessment for accountability has a significance that headteachers and teachers recognise acutely. The results of these high-stakes examinations are a significant part of the evidence used to judge the quality of teaching and learning by education authorities and Her Majesty's Inspectorate of Education (HMIE). The results are also available to local and national newspapers, and may be used to create 'league tables'.

In her Reith Lecture (2002), Onora O'Neill argued that this system of accountability is damaging education. She suggests that the pressures lead teachers to develop a teach-to-the-test attitude, which in turn encourages an unacceptable wastage of potential among learners — young people are being disadvantaged for the sake of assessment.

Cowie et al (2007) argue that there are 'multiple accountabilities' in education, and ask 'To whom are schools accountable, for what, and for what reasons?' (p30). They review literature that suggests alternative models of accountability, even within education systems, and note that the complexity and contentiousness of the concept is often related to the values which underpin its various manifestations (p30).

They quote from O'Neill's Reith Lecture, which brought 'intelligent accountability' into the education domain. They also quote the Headteachers' Association (2003), which singled out performance indicators, externally-imposed targets, high-stakes testing, and a centrally-imposed curriculum, as being among the barriers to intelligent accountability.

They go on to examine (p35) the layers of educational accountability in Scottish local authorities. They note the significance of the Quality Initiative in Scottish Schools (HMIE, 1997); the Standards in Scotland's Schools Act (2000) and the obligations it places on schools; the role of education authority Quality Improvement Officers (QIOs); and finally the role of HMIE, suggesting that its emphasis on examination results as a key measure of attainment is fundamentally flawed. They cite 'pushing youngsters' (from Standard Grade 4 to Standard Grade 3) to illustrate the 'perverse incentives' of this kind of accountability.

They also point out the vagueness of the definition of 'improvement' used by the (then) Scottish Executive Education Department (SEED), and present information on education authority quality assurance processes. All the Education Authorities they worked with have an annual formal meeting with headteachers to look at the Standard Tables of data on each school's examination results. All were in the process of formalising this process and giving more QIO time to it.

This critique of accountability in the Scottish educational system may be open to debate. HMIE, for instance, would argue that examination data, amongst other aspects of the life and work of a school, provide useful evidence. However, it is clear that the significance given to accountability by the bodies that influence headteachers' and teachers' thinking and behaviour is likely to encourage them to give prominence to good examination results.

The current tensions are undeniable, but identifying the problem is easier than finding a solution that allows for accountability without the negative impacts. The focus of this study is the attempt to open up some of these very difficult issues, as part of the 'Highland Journey', by teachers who had agreed to explore the potential of AifL approaches in their Higher classes. SQA took a particular interest in this initiative precisely because it addresses the tensions between learning, teaching and assessment — in particular in the context of the preparation of young people to sit the examinations for which SQA is responsible.

Developments at Highland Council

The work that this study describes is embedded in a complex of developments in Highland Council in recent years.

Highland Council has been actively involved in the Assessment is for Learning Programme since its inception in 2001.

In 2004, through initiatives led by its Development Officer, Kevin Logan, the Council created a learning and teaching CPD Framework and the Highland Journey, *Embedding Curriculum for Excellence (CfE) in the Classroom (2004)*. These were the principal means by which council staff would be helped to implement real change in the nature of learning activities in their classrooms, and to ensure pedagogy that would effectively develop the four Curriculum for Excellence ‘capacities’ — successful learning, individual confidence, responsible citizenship and effective contributions.

The four main aims of the Highland Journey were to:

- ◆ develop a coherent conception of formative assessment
- ◆ explore links between formative assessment and approaches to making thinking explicit as a powerful way of fostering the CfE capacities
- ◆ encourage learning communities among teachers which foster reflective professionals through a variety of approaches to CPD
- ◆ raise achievement, motivation and confidence

The council secured Future Learning and Teaching (FLaT) funding for the project from the Scottish Government in 2006.

The CPD Framework and the Highland Journey were underpinned by research on effective learning and the role of assessment within it, and the circumstances in which significant educational change can occur (Hayward et al, 2006; Black and Wiliam, 1998).

Both developments played an important part in facilitating the progress that has been made, often called ‘the Highland Journey’. A more detailed description of the key elements in the CPD Framework and the Highland Journey is given in Appendix A, along with some detail about the research background.

An important feature of the council's strategy to take forward the FLaT project was setting up subject-based Associated Schools Groups (ASGs) in English, Mathematics, Modern Languages and Social Sciences — a Science ASG already existed. They were a crucial means of ensuring supportive contexts in which teachers could work together with subject colleagues in local groups and across the Highlands.

The council also took advantage of additional funding offered by the AifL programme to investigate a new area of assessment for learning. It focused on

self- and peer-assessment in classes preparing for National Qualifications (NQs), to investigate possible ways of easing or removing the perceived tension between formative and summative assessment. As a result of this additional funding, over two years, a group of 36 teachers used the Highland Journey to foster CfE capacities and raise attainment, with a particular focus on formative assessment in 'certificate' classes.

The 10 teachers who took part in the research, of which this is the report, are a subset of those 36. They represented the five ASG subject groups (English, Mathematics, Science, Social Subjects and Modern Languages); one teacher of each of these subjects, in one school was involved, linking with subject partners in other schools. Six schools participated in the research, one involving five teachers and five involving one teacher each.

FLaT evaluation and SQA report on the Highland Council developments

Evaluation is a key element in all FLaT projects. Accordingly, Highland Council has commissioned a professional study of the whole of its FLaT development programme (Hayward and Boyd, 2008 (forthcoming)). This evaluation identifies the action taken and its impact on classroom practice, including, for example, the establishment of school-based and cluster-based communities of teacher-learners; primary-secondary coherence and progression; and the effectiveness of the Highland Journey in enabling teachers to link assessment for learning and Curriculum for Excellence in ways that promote pupils' thinking and deep learning.

This report, funded by SQA, explores that part of the Highland Council's FLaT work that involved teachers who were already committed to AifL, and already engaged in cluster groups developing other aspects of the Council's FLaT programme, in building effective assessment for learning into pupils' preparation for National Qualifications (in particular, but not exclusively, at Higher level). This report is complementary to the broader Highland Council FLaT evaluation, focusing on the formative/summative tension, an issue of very real interest to the SQA.

Aims, scope and methodology

Aims

The project sought to understand:

- ◆ What teachers who were trying to reconcile the tensions between assessment for learning and assessment of learning in NQ classes were doing in their classrooms
- ◆ Why they were adopting such approaches
- ◆ What differences, if any, they discerned in teaching and learning

These broad aims entailed finding answers to the following questions:

- ◆ Could the Highland Journey work with classes preparing for NQs?
- ◆ Would teachers, amid the perceived welter of summative assessment demands, find time and space for pupils to engage in assessment for formative purposes?
- ◆ Would attainment be affected, positively or negatively?
- ◆ Could assessment for learning be developed equally successfully in NQ classes in all five of the subjects reported on, or would there be significant differences across subjects?
- ◆ If successful, what had contributed to this success?
- ◆ If less successful, what had prevented successful use of assessment for formative purposes in NQ classes?

Scope

The study was qualitative and small-scale. It was carried out between June and September, 2008. Ten teachers who were preparing pupils for NQ examinations (mostly, but not exclusively, Highers) in five subjects (English, Mathematics, Science, Modern Languages and Social Subjects) participated. These teachers had taken part in CfE/AifL developments in Highland Council in recent years. They worked in six schools: in one school all five curricular areas were represented; in each of the other five, just one curricular area featured in the project.

In June 2008, each teacher was interviewed in depth, and a group of S6 pupils were interviewed in the school where five of the teachers worked. In early September 2008, the teachers came together as a group with one of the principal investigators to discuss the attainment of the young people in the NQ examinations and the teachers' reflections.

The study received ethical approval from the University of Glasgow, and operated within the guidelines established by the British Educational Research Association.

Methodology

This qualitative study sought to employ ideas of authentic conversation (Holstein and Gubrium, 2004). As the purpose of the research was to understand what teachers really thought, it was important to employ an approach that encouraged openness and honesty. The interview schedules were designed in collaboration with both the funder and the local authority. The original questions were adapted following the initial interviews to cluster ideas and allow a greater focus within the time constraints. The interview schedules are in Appendix B.

The interviews were recorded, with the permission of participants. The recordings were transcribed and the transcriptions were analysed to identify recurring themes — these are presented in the following section of this report. Each theme is supported by illustrative evidence from the teacher interviews. Teachers are anonymous in the text, but are identified by number, eg Teacher 1, to allow patterns of response to be identified by readers. One teacher declined to be recorded and so there are no directly attributed comments, although issues identified have been incorporated into the text.

Analysis

The data consisted of the teachers' accounts of their views and practices. Comments on aspects of the themes were highlighted, and teachers' views were grouped under each of the themes. A decision was taken to present substantial verbatim comments from the teachers to provide authenticity and to allow their voices to be heard. Given the diversity of the teachers, the researchers felt that their views should be presented in a way that did not suggest a degree of unanimity of view or approach where this did not exist.

The researchers have presented the teachers' views as faithfully as possible. In addition, they have provided a commentary in the form of Discussion sections at the end of each theme. These form the basis of the Discussion and Recommendations section, as requested by SQA.

The themes were:

- ◆ Changes in Pedagogy
- ◆ Motivation for change
- ◆ Demands of summative assessment
- ◆ The summative/formative tension
- ◆ Changes in pupils' learning
- ◆ Impact on pupils' performance

The writers of this report took the view that with the exception of the final SQA examinations, no assessment was inherently either formative or summative. The key issue was purpose. Was information from assessment used to provide feedback to inform learning, to track progress or for wider purposes of accountability?

Teacher interviews: key themes

1 Changes in pedagogy

A key motivation for teachers was a strong desire to ‘give people as much responsibility for their own learning (as possible)’ and an intention ‘to get them to use more critical thinking’. The need for this manifested itself in English in the Intermediate 1 course taught by **Teacher 1**. In their previous Standard Grade Course, pupils could receive a lot of teacher support for essay writing, whereas in Intermediate 1, essays had to be done under timed conditions. So, the teacher reasoned that the pupils had to take responsibility for their own planning. Pupils therefore needed to develop ‘critical skills’ to enable them to organise their thoughts under exam conditions.

‘Basically, an example would be they had to plan topic sentences, obviously, which they do, but also I gave them loads of statements they could use for their essays; some of them being trap statements, which were not relevant. They had to discuss as a group where to place these statements and how they worked, etc. So the responsibility is with them. They have to make a choice and, at the end of the day, it could be a bad choice.

‘...the discussion was very valuable... — “Oh no, we’ll not put it here — Well I think you should put it here because —” Basically I’d never heard them argue a point so much before that activity.’

The teacher reported that they ‘got very involved and they produced the best essays so far’.

This same teacher tried some other approaches to develop pupils’ responsibility:

‘One I’ve used is to get them to become the teacher, so it’s what Robert Fisher calls ‘wearing the mantle of the expert’. An example in Standard Grade would be what I call cross-reading markets. Each group is in charge of one or a couple of questions, and they have a marking key, and they have different pieces of information they can use to understand how that question should be tackled. Then they have to produce a teaching aid to help people understand how to tackle that particular question and get to a good answer.

‘And then the second part of the activity is to keep one person at the table, and it’s basically the person working at the market, and send all the other ones in the group working as envoys, and they go shopping around the classroom to find out how to tackle this question and this question from a different group. The third part is to get them back together and just mark their paper. So I just had to sit back and see what happened. My role in that activity was more that of a guide rather than a teacher, and they were teaching each other. I think that’s really good, because it’s part of peer- and self-assessment, and it gives them a good idea of what the criteria are about.

‘... One person remains at the table, the market stand in a way, to explain it to somebody else. To whoever wanted to know. It’s a bit like a fair I suppose,

isn't it, rather than a market. The others, the envoys, would go and were in charge of finding out about a particular question, so they would go to this particular stand and find out.'

This same teacher, while enthusiastic about the impact on pupils' learning, was nevertheless aware of the tensions involved when trying similar approaches with Higher classes:

'I wonder why I didn't try it with the Higher class. Well, with the Higher class we use peer and self-assessment maybe in a more formal way, but I think I should delegate it a little bit more.'

The challenge was, primarily, perceived to be one of time:

'It takes more time, I think, for good dialogue to take place. It has to take more time in the lesson.'

Nevertheless, this teacher did employ innovative methods with the Higher class, but, perhaps, with more of a concern about the time implications.

In another subject, **Teacher 2** employed an approach which, at first, disconcerted the pupils as she prepared them for a NAB (National Assessment Bank item):

'A method I used — kids in my fifth year found this very strange at first — was to sit them down towards the end of the Course and they were looking through past paper examples, and the only rule was that they were not allowed to write any Mathematics. No numbers, nothing — they had to write down their method. I would do this, then I would do that, then I would do this ... and at first they were just like, "Oh, this is really strange, is this Mathematics? I like to do my numbers." And some of them would insist upon trying to actually just do the Mathematics, they couldn't see it. And I said, "No, you're not allowed to, you've to just write your method". I did that in preparation for NABs, and then in preparation for the exam. This obviously came at the end of a topic, when they had the information and they were tackling the questions. I found that very beneficial ... the biggest problem seems to be time constraints as we go along: feeling 'Have you got time for these things?' But the benefit of it was great.'

The issue of time, raised here again, became a common theme throughout the study. However, this teacher was prepared to persevere:

'... when they have done summative assessments within the classroom, what I do with a lot of my classes now is, instead of me taking a marking scheme and marking them, they get together in groups with their scripts, which I haven't seen as they've just done their test, and as a group they're to come up with their individual group marking schemes for each question. They have no idea whether their answers on their paper are right or wrong — they have to decide on it as a group. They come up with a group marking scheme over a period of a few days, and then as a class we get together. Different groups come up and put their answers and marking scheme for a particular question on the board.'

We amend it as a class, and then we come to an agreement of a complete class marking scheme, and they mark each others' scripts using this ... So, in effect, I see the blank pieces of paper I put out for a test, and the next time I handle those papers is when they come back to me marked and graded by the pupils. That works well. Time consuming, again, but it works well.'

In addition, the teacher used a form of 'traffic lights' adapted from Assessment is for Learning, to allow the pupils to indicate whether tests were easy, medium or hard. This was a form of self-assessment but with an additional element: the teacher realised that when she thought a test was likely to be easy, medium or hard for pupils, they did not always agree.

A key feature of this teacher's approach was 'challenge' and making pupils think. For her dialogue was important:

'When they do the marking scheme, it's all dialogue between the pupils, they work as groups...I think dialogue between themselves is hugely important.'

The pupils talked in groups and the teacher moved around the class 'speaking to each group, individually'. The lesson concluded with a whole-class discussion.

In trying to 'encourage pupils to become more responsible for their own learning', **Teacher 3** 'used some existing homework exercises'. This was an attempt to 'model what they should do'. She 'cross-referenced the homework exercises with the learning outcomes ... for a section'. Her main goal was to 'make them feel more confident':

'I gave them a random set of past paper questions. Some were just questions from an exercise that we'd used in the past, but I made them all different topics. They had to sort them out into topics and Units and make a mind-map and say, "I know that question comes from that Unit", and trying to get them to realise "Well, if I can identify which part of the Course it comes from, that's much easier for me to revise."'

This teacher was conscious that the Higher pupils needed to take the learning outcomes and 'make them into something that makes sense to them':

'I built up a set of exercises where they had specific things I asked them to do with the learning outcomes. I might ask them to find a calculation that was an example of that and write it in under the learning outcome, or copy a diagram from such-and-such page of notes and put that in, just to try and help them make links with what we'd done in class and the learning outcome.'

*'Then the next set in the series — maybe three weeks or a month or so afterwards — I gave slightly less instruction, and then by the third one it was literally just the learning outcome with space for them to take notes underneath. I was trying to get them to distinguish between learning outcomes that are maybe a **calculate** or an **explain** or a **describe** or **state**, just to try and get them to really pull apart what the learning outcome was asking.'*

For **Teacher 3**, self-assessment was at the heart of what she was trying to engage the pupils in. Peer-assessment was used with the Standard Grade class after a test. The teacher marked the pupils' work, collated the most common mistakes and incorporated them into some sample answers. The pupils first had to find the mistakes in small groups, and then check if their fellow pupils had made any of them. Marking one another's work using the actual marking instructions from the SQA website was another form of peer-assessment used in this classroom.

Teacher 4 spoke of the support she derived from meeting other teachers, from different subjects, in trying to 'bring AifL into our senior classes.' As with other teachers, SQA's 'success criteria' were used as the basis for self-assessment:

'I've done it with the Higher to teach essay-writing skills. We would look at, brainstorm if you like, in a class or as groups, what makes a good essay, and we'd feed back to the rest of the class. There's a lot of discussion involved. Although it's led by me, it's really over to them a lot of the time. Once we've brainstormed it, got ideas about what makes a good essay, we then compared their criteria of good essays with SQA's success criteria. Then we've looked at actual past examples, pupils have been given the marking scheme in pairs to mark the essay. Once they've got the skills to mark the essays as a pair, got confidence there, then they should (in theory) be able to transfer that to marking their own... which has seemed to be successful.'

Jigsawing, another strategy from AifL, was adapted for the Higher class:

'I trialled jigsawing, where they were split into groups. Topics were identified, their weak topics. They'd work together with people who had similar weaknesses, then they'd go and investigate particular areas of a topic and report back to the rest of the class on it. Then, after they'd done that, they would know the topic in a lot more depth. So we've done that as well, but that's just what I've tried. Other people have tried different things.'

This teacher, like many others, was keen not to claim any special expertise. She preferred to use the verb 'trailing' and claimed to be trialling 'lots of different small things'. Her aim was to 'embed it more consistently'.

Sharing the criteria from the SQA website was the starting point for **Teacher 5**. The pupils discussed the criteria in groups and then as a whole class:

'Then we'll work on the speaking assessments and we'll record some speaking assessments, then I get the pupils to mark each others' work using the criteria that we have discussed and that they've put into their own words. They've come up with their own kind of marking sheets, if you like.'

She tried to 'include self and peer-assessment at every step':

'What I actually do is — I have a blog — so I upload all their speaking assessments to the blog, and they can listen to their own work and also their peers. I find that works really well because it's about them and a computer, it's not in front of the whole class, and it's much more private than showing the

video to the whole class and everybody seeing it. A lot of the pupils tend to get quite embarrassed, and I've found that that works particularly well.'

Marking each other's work, either using checklists which they have compiled from using the criteria, linking it in with 'next steps for learning' were some of the approaches used in this classroom. The teacher's direction was important as overall guidance for the pupils' peer and self-assessment:

'So they marked each others' work, and then what I did was I created a tally sheet for them. As a class, we talked a lot about reading and why we make mistakes when we read, what we do wrong. So, we don't put enough information in, or we misuse the dictionary, or we don't read the question properly. The class again came up, through discussion with their peers, with a class list of mistakes we normally make. They then had this tally sheet, and they had the list saying the types of mistakes. They then had to go through (they did it with their partner's work) the reading paper. Every question that was wrong, they had to try to understand why it was wrong. They had to put a tick on the tally sheet next to the type of mistake it was ... for their partner. The reason I did it with their partner was because I thought that it would be easier for them to spot mistakes and be more objective in relation to something else, rather than their own work. What that then gave them at the end of the paper was a tally sheet where they could see what type of mistake was repeated.

'I found generally that pupils tended to make the same mistake over and over again. There were also two mistakes that were made more than any other type of mistake, which was not giving enough information and the English not reading correctly. So the pupils were then able to say to their partner, "You made this type of mistake the most". Then they talked with their partner about what they could do to stop making that mistake. So, my evidence would show me, for instance, that you had made the mistake of not reading the question properly because your answer never tallied with your question, and then ... some peer feedback had to come up with ways that you could tackle that. The pupils discussed that together, and they filled in a target-setting sheet, like a next steps sheet — what my mistake is, what am I going to do to stop this next time.'

Summing up, the teacher felt that 'there's both self- and peer-assessment going on in ... speaking, listening and reading'.

Comment-only marking was the starting point for **Teacher 6** with her Higher class '... and that has worked incredibly well'. Introducing mind-maps, group mind-maps, at the beginning of a topic before they write an essay ... getting them to make up their own questions ...' are some of the new strategies that have been introduced. Colour-coding is an interesting variation introduced in this classroom.

*'Colour coding ... there's certain criteria they have to have in a particular kind of answer. It doesn't matter if it's a **how useful** question, or a **compare sources** question or an **essay** question and we've actually colour coded the criteria and then showed them the model answer ... and we colour code that and we give them a model answer to start with and show how we've done this*

and then we leave them to do a different question, get them to swap over and they colour code with highlighters.'

Taking a group approach to the planning and writing of an essay was the starting point for **Teacher 7**:

'One of the ways that's been particularly successful this year with the group of six I had, (mixed boys and girls, all seventeen going on eighteen, most of them going on to university and a lot of them to carry on with French), was that, independently, they had to plan their discursive essay, gather together all the different types of vocabulary they wanted to use with it, and come along to the class with a pack. When they had that pack put together, they then found somebody that they could work with. They looked at both packs of material and decided what was useful, what they both had in common, and what could be discarded. Having that, they then had the skeleton of a piece of writing for a discursive essay.'

'So that then meant that I had three or four groups arriving at a table with a bank of material that could be used, and a plan. Then as a group of six or seven, they decided how the plan should actually look. So they all had their own separate ideas. They then needed one group idea of how the essay should be planned and structured from beginning to end. So that took a bit of time for them to decide what should go in paragraph one, what should go in paragraph two, what the relevant benefits of doing the positives rather than negatives were, first or second, and also looking at the conclusion, so that the conclusion wasn't the same as the introduction. So they all had to work on that; that was all worked on in English for quite a period of time.'

'They then had a plan, and they had a bank of vocabulary — that was the material. And from that, they had to — together, as a group of six or seven — write an essay. They used the digital projector for this, so somebody was in charge of the typing up.'

'So they worked on that, and they worked on it for two hours, probably, together. It takes a lot of time for them to agree on different aspects, different language. Alongside their material and their plan, they also had to have a checklist of what the summative assessment examiner was looking for. So they had to know what we are looking for in any piece of work — for example, that verbs are secure, that there's a variety of tenses, that there's Advanced Higher vocabulary and not S1 vocabulary. So they had a checklist of those, helped along by me. That all went to plan, they wrote their essay together, and then we discussed it — myself and them.'

The teacher explained that when the pupils applied Grade Related Criteria to the writing and she marked them independently, 'nine times out of ten we arrived at the same grade'. Then the pupils had to write an essay on their own under test conditions to 'see if they could come up with the same kind of work'. Again, nine times out of ten, 'it was good'.

Confidence-building was at the heart of these approaches:

‘So, sharing their own thoughts with others shows that they can be on the right track, that the person they perceive to be the best in the class isn’t necessarily, and that they themselves have skills to be valued. It worked very well — their confidence really improved.’

A revealing comment from this teacher illustrates an interesting shift in pedagogy — ‘I’ve kept quiet for more of the time than I normally would have.’

For **Teacher 8**, peer and self-assessment, sharing the standard, trying to make criteria clearer, and giving pupils ownership of the criteria, all added up to a convincing case for using the pedagogy of AifL. ‘An awful lot more working in pairs and groups’ was one notable feature of her classroom, and jigsawing was one strategy she used:

‘So far more sharing of work, working together for example, turning over the novel study to them, pretty much, and asking them to do it in jigsaw groups. They were working in groups of three. There was a structure to it. They were looking at symbolism, characterisation and themes and development, taking a section at a time.

‘They would do the reading — three chapters — and then they would work away. Really, they did that themselves in groups. There was some very powerful dialogue between the groups there, where it was less ‘this is what the novel’s about and here’s what I know’. I want them to understand about it so that they can write a critical essay about it. It was more ‘what is the novel about? What do you think it’s about?’ Having an opportunity to discuss that. And some really very purposeful work going on.

‘Interestingly enough, there were only two or three who were less keen on it, and they were really ones who were very much focused on, ‘Well, this is my achievement, this is my work, and I just want it to be my work’, whereas those who were much more willing to say, ‘We can help each other out here, we can discuss this. I can clarify my own thinking, I can get feedback on how I’ve explained something. Somebody else might be able to answer something for me that I’m not sure about myself’. Those who were able to be more co-operative like that generally did better at it.

‘But it was a bit of a shift sometimes for some pupils to feel, ‘Well hang on, I’m going to do the exam on my own, why do I need to do all this?’ Well you don’t need to, but if we work this way it might help you when you get to the exam. But I have to say they were in the minority. Most pupils were delighted to be working with others and ... they become more and more used to this. We are saying to them this is a good way to learn, and a good way to develop skills. They are appreciating that for themselves as they’re doing it, and they realise and they talk about it. ‘Oh, well I understood it much better when my friend was able to explain it to me’; and it seems nonsensical to get to the fifth year and say well this is too important, you can’t do all these good ways of learning

now because you've got an exam! Surely all the good ways of learning should be even more important.'

Using ICT, when available, to support peer- and self-assessment was another aspect of this teacher's pedagogy. Pupils worked in threes, making notes on chapters they had read, covering things like character, themes and symbolism. They made notes for revision ('they were really very, very good notes') and the notes were available electronically to the whole class.

Teacher 9 used 'a lot of group discussion'. Pupils would assess each other's work using the SQA's 'Understanding Standards' website. They would look at worked examples, explore common misconceptions, etc, using co-operative learning approaches. This teacher highlighted dialogue as the key:

'It's the 'Understanding Standards' website set up by SQA. The Highland Region were given a password, a login ... At the time there were Higher and Intermediate 2 resources there, where they would have a selection of maybe around about a dozen exam questions from Higher level. There would be two or three examples of actual pupil responses from previous exams. You'd be given the question... as a teacher, you were to log on, choose a question to look at ... you'd be given the question and the marking scheme and a couple of pupil responses. So you were to look at it, mark it, and you put a mark onto the website. Once you put a mark on the website, submitted it, you would then get feedback, it would show you what the actual marker awarded for that question.'

Learning Logs were another feature of his approach. This was intended to give pupils greater responsibility, asking them to reflect more deeply on their work: 'How did I get on? What bits do I feel comfortable with, and what bits do I still not really understand? Just write a wee sentence reflecting on their progress.'

As with many of his colleagues, this teacher had trialled some of these approaches with junior classes because 'we'd a bit more time, you're on less pressure for delivering the course'. So 'traffic lights', now in use with certificate classes, was trialled with junior classes.

Discussion

The teachers were all employing formative assessment approaches, derived in the main from Assessment is for Learning, in the context of syllabuses leading to summative assessment. They were using SQA materials — success criteria, conditions and arrangements literature, the website, etc — in assessment for formative purposes.

Some strategies were in common use, notably peer- and self-assessment, enhanced dialogue and, as means of achieving this, jigsawing, traffic lights and mind-mapping. The stated aim of all this innovative endeavour was to give pupils more responsibility for their learning, to promote deeper understanding, to enable pupils to apply principles to new situations; in fact, to empower them as learners.

However, at no point was the shorter-term, instrumental goal of success in the national examinations compromised. There were, throughout the teachers' responses, concerns expressed about time; dialogue, and pair and small-group work were perceived to take longer than teacher-led, didactic teaching. The teachers knew this, but they were convinced that the gains would not only make the young people better learners but would also improve their exam performance.

There was a sense in which the domination of the exam syllabus, the day-to-day reference to the success criteria of the examination, and the constant use of what were described as summative assessment formats, had not been challenged. Indeed, in a pragmatic way, it had been exploited by the teachers as the context for providing formative feedback to learners. With one or two exceptions, the formative/summative assessment tension had been resolved, at least in terms of pedagogy, by using assessment elements that had traditionally been regarded as summative to help the pupils to think about their learning priorities, priorities that would enable them to improve their examination performance.

Serious attempts were being made to make the preparations for the final exam a more formative experience. All the teachers were very clear that they had to work within the 'conditions and arrangements' of the national examination structure. They were, in the main, using the demands of the external, high-stakes examinations as a vehicle to give pupils responsibility for their own learning and making the process explicit. These teachers' goal was to shift the balance towards greater levels of 'deep' rather than 'surface' learning, and to develop elements of strategic learning that are often crucial to success in high-stakes examinations (Entwistle, 1998).

2 Motivation for change

The motivation for changes in pedagogy varied, as might be expected. The general context was that these teachers had all been involved, to varying degrees in the networks made possible by the Highland Council FLaT project funded by the Scottish Government. They were appreciative of the support provided by the networks set up within the FLaT project, and the way in which contact with other teachers helped them to become more reflective about their own practice and, as a consequence, helped them to enable the pupils to become reflective too. For most of the teachers, there was also a pressing motivation from a desire for the pupils to be successful beyond the immediate goal of the examination. **Teacher 1:**

'... I want these pupils to be successful, because they deserve to be successful and therefore it's my duty to make sure that I can do everything possible to do that. Also to make sure that, once they've left the academic world, they have something that will stay with them forever, this ability to question and to reflect upon things.'

'The authority gave me access to research that maybe is more difficult to access without that kind of initiative. So I'd say it's providing a framework for reflection and development that is, I think, essential. So I think that, yes, it's very useful in that way.'

Talking to other teachers was a key element of the change process, whether the teachers were from other schools (eg the ASG) who taught the same subject or colleagues from other departments in the same school: 'I think dialogue between teachers is very valuable' (**Teacher 1**).

Some of the younger teachers in the project, like **Teacher 2**, did not find these new approaches to be much different from what they had always done since leaving Initial Teacher Education (ITE): 'I've been teaching for three years, and I've done it very much from the start of my teaching, so there wasn't a major change in how I've done it.'

Indeed, in this teacher's case, the process began during student placement with the class teacher acting as a 'supportive colleague':

'I was here as a student, and I got a lot of ideas from her, and other things just seem a good idea to do, and I try them. Some work, some don't. The majority seem to work — not all the time, every time, you've got to balance. So there's been no major change in me doing this.'

For **Teacher 3**, it was quite specifically the Highland Council initiative that was the stimulus. The existence of a school learning and teaching group clearly helped to complement the ASG subject grouping:

'The impetus really came initially from the Highland Council and Services on formative assessment, and then other things that we'd done in the school as a group. We had a school learning and teaching group, we all individually did a small project. I was really interested in sharing criteria as well, and that's

where the use of learning outcomes came from. Also, more peer-assessment, for them to take more responsibility.'

These groups helped provide a focus — 'Last year we focused on peer and self-assessment specifically' — and allowed teachers to share insights on their classroom practice.

In addition to the various levels of support provided by Highland Council, **Teacher 4** cited attendance at a national, HMIE-led good practice seminar as a stimulus for change:

'I think just hearing about what other people are doing, the whole national move towards assessments for learning, CfE. The thing that really made me think was a couple of years ago going to an HMIE good practice in social subjects day ... it was a kind of workshop run by practitioners who'd been identified as having good practice in the classrooms, and it really made me question what I was doing. So I think that was the turning point for me ... it's just been a kind of regional drive to change practice.'

'So, in this single case-study of pedagogical change in the later stages of secondary schooling, there was an indication that change was a multi-faceted process, with impetus and on-going support from classroom to national level all playing their part. Both subject-based groupings and inter-disciplinary networks had a role to play.'

'I would say most of it has been through hearing other people, what they're doing, and how successful it was being in their classrooms. For example, if a colleague says, 'I did this today and it actually worked really well, it was a very good way of teaching that particular topic.'

One challenge for the teachers involved was the pressure of time. Some, like **Teacher 6**, felt it necessary to trial new approaches with junior classes, but were aware of the implications:

'First of all it was the initiative in the school itself and getting involved, doing a bit of background reading ... I started using these strategies further down the school. Not that I mean it doesn't matter but I felt it was safer to use them in junior classes first and then build up my confidence ... I feel that by the time I was doing it in Higher I was quite confident — I'd tried it out in a second year class and a third year class.'

'I had to prove it to myself because as I said I will not compromise in quality, so proving it to myself, doing a bit of reading and speaking to colleagues who were involved and I thought yeah it's worth a go, let's go for it. And then after each thing, asking the pupils what they thought, this is the way I used to do it, this is the new way, what do you think? And I'd cherry pick the ideas that work well.'

Clearly, there was an awareness that work done with junior classes was important in its own right and should not be seen as a testing ground for senior school. There

was no compromise in quality with any of the classes; it was simply that junior classes had fewer pressures from external exams.

One challenging insight was provided by **Teacher 7**, who found the Advanced Higher Course in her subject ‘very, very boring’ and found the application of formative assessment strategies one way of enlivening the course:

‘I’ve been doing a lot of AifL. I love methodology, I like looking at how to teach, and how children learn, particularly interested in that, so I thoroughly enjoyed AifL over the years that we’ve been doing it. I love the buzz that goes with it. The seniors come in — an Advanced Higher for them is a very serious type of Course, they think. Also by the nature, by the level that we’re at, it’s a very, very boring course (I hope SQA aren’t listening to this!).’

‘There’s no great fun in it, there’s no element of anything exciting. It’s dry, it really is quite shocking. So you have to put a lot of yourself into it, a lot of your own personality. That can work, but I wanted the pupils to put a lot more into it themselves. I decided that I could teach well, I could give them the materials, but they themselves could just take it on and do with it what they wanted ... To actually work out what the answers might be, or to have an analytical approach to a particular answer, it’s far more beneficial for them, than for me to sit with a marking scheme and quietly mark, and for them to sit in silence.’

For this teacher, AifL had enabled her to become more reflective about her practice. The shift had been radical, accelerated by current developments:

‘Watching how they learn, watching how they respond to different activities over the years, has meant that I’ve altered a lot of the way I approach teaching. From standing at the front during class lessons working in silence, to involvement of the kids, thinking about what they’re doing, helping each other, supporting each other and just building confidence, I suppose self/peer-assessment has come into it long before AifL/CfE came in.’

The teachers were very aware of the danger that AifL could become little more than a series of strategies, ‘tips-for-teachers’. Interestingly, **Teacher 8**, while expressing this view, offered an important insight into how using strategies might lead to engagement with the underlying principles:

‘I think one of the problems with the initial focus was that it became a sort of, try out some strategies, see if that works, see if this works, which I think was actually an important stage, because it was through that that people then started to engage with the underlying principles of why you were doing it that way.’

This was an important issue in the context of the Highland Council Journey where engagement with the principles was perceived to be fundamental to the innovation as a sustainable development.

This project deliberately targeted teaching in the upper school as being traditionally the least fertile soil for pedagogical change. The relentless pressure

of exam preparation has often proved to be a barrier to new approaches. It is significant, therefore, that these teachers, like **Teacher 8**, saw their engagement with AifL as not only improving their students' learning but also as enhancing their own professionalism:

'So, since I went into teaching that's been something I've tried to do — not to say that the exams are an irrelevance, but I've tried to value the learning rather than always pointing ahead to whether there's going to be an assessment. It's trying to enthuse pupils about learning, which is obviously something that all teachers do. But the point about this initiative was that it gave more of a structure to that, and it's given more of a forum for teachers to meet and talk about it, and for teachers to share their reflections about what's happening. I think it's increased professionalism, from that point of view.'

There were indications that, for some teachers, including **Teacher 8**, the ways of supporting learning had become so embedded in practice that there was no longer a need for ideas to be labelled:

'I don't tend to use the phrase 'AifL' very much anymore. I use more formative assessment, because it has been absolutely embedded in what we've been doing in the last year or so.'

A factor that may be important is the role of senior management. **Teacher 9** was unequivocal:

'We've got a very forward-thinking Head. He's always pushing the school and departments to keep moving forward, looking for improvement in learning and teaching and in results, and I think — through my own experience as a Principal Teacher (PT) — AifL really became far more prominent about the same time I was running up to being PT because of the regional, national initiatives. It all just seemed to happen.'

This same teacher, interestingly, saw the benefit of new qualified teachers:

'The probationers were coming in, and they were coming in with loads of ideas.'

Discussion

A key motivation for the teachers' pedagogical change was that they believed that change was necessary. Also crucial was the Highland Council initiative funded through the FLAT project. This enabled networks to be established, mainly of subject specialists. Time to talk, support for trying new approaches, and a forum for discussion and reflection were major benefits. The ASG groupings were not resource-intensive, but they were hugely influential. The meetings took place after school and occasionally during the school day, and almost every teacher cited them as important factors in the change process.

Other elements identified as important included a supportive climate within the individual schools, which allowed cross-curricular groupings to be formed.

Reading, research and teacher-teacher dialogue were important, as was the opportunity to try things out with junior classes. Some of the teachers suggested that AifL did not signal a huge shift in their practice, either because they had recently joined the profession from Initial Teacher Education or because they had always been inclined to this type of teaching. Some, however, admitted that their pedagogy had undergone a radical change. Overall, the change had been significant in most cases and being part of a structured project was seen to be helpful.

3 Demands of summative assessment

The context for this study was the sense that teachers have — whether it is justified or not by what is really expected — that SQA or their school or department imposes summative assessment demands on their work. What was clear from the project data was that the demands of summative assessment were significant in all schools and increasing in some. One aspect of the study was to try to determine what demands the teachers believed were made of them, and to clarify whether these were indeed SQA requirements.

All the schools had prelim examinations; some had two in S5. There were NABs (National Assessment Bank items) and there were ‘timed pieces’. Past papers were used, and there were homework assignments reflecting examination tasks. But the picture was not consistent across schools. Individual teachers were not always aware which demands were departmental, and which whole-school, authority-wide or national.

Teacher 1 indicated that her school had NABs, regular timed pieces and a prelim, as well as past papers. Her feeling was that ‘they’re more to assess progress – it’s an assessment, not so much of a learning tool’. In S5 there were two prelims, one in January and one in March, but the teacher was unclear as to whether this was a school or departmental policy. The ‘de-brief’ from prelims was extensive, with a number of periods being given over to individual and whole-class feedback. The feeling was that these assessments were necessary to ‘provide evidence’ to parents concerned about progress, to school management monitoring attainment, and for SQA in case of an appeal. In some cases, NABs were not valued, because the teachers did not believe them to have high status (though this varied from subject to subject).

The extent of this pressure was made explicit by **Teacher 2**, who was also unsure whether the two prelims were authority or school policy:

‘In Intermediate 2 the summative assessment is NABs, three NABs throughout the course of the year; their mini-prelim at the end of their second NAB; their main prelim at the end of the second NAB; and another prelim — two prelims, three NABs for Intermediate. We don’t do block tests, Unit tests.’

The important issue here was the amount of time these forms of assessment took:

‘Each NAB will take about ... forty minutes, and some pupils will have three attempts at a NAB. So for certain pupils it takes longer than it would ... and we do cross-marking here, so it’s the time taken to mark. The prelims take about a single to a double period, and the time taken to mark those as well.’

Like many of the teachers in the study, **Teacher 2** was anxious to use the opportunity to engage the pupils actively in the feedback process. Commonly, however, more time was spent on completing assessment activities than learning from them:

'I would tend to give the pupils back their scripts to have a look at, get them to sit for a wee bit and talk between each other, give them maybe as a pair their own scripts ... to talk through where they went wrong or what they were happy with. I don't do all these all of the time, just a selection at different times.

'Things that get discussed: what's the hardest question, what's the easiest question, why was this harder. How they've used the marks — if you've got a four or five mark question, it's always a good guide. If there's five marks, where are those marks coming from ... rather than it just being seen as five marks. And then what I try and do is project the paper up on the board and get pupils to come up and show you what they've done. Maybe split it so you can get two or three different comparisons, and they can discuss, maybe get two people up who both had five marks for the five mark question but with different styles, or get somebody up with two or three marks and we can discuss where they would have got more or less.

'I try and give as good general feedback as I can to the whole class about how to do the paper, and then we always have time for pupils to come to us individually. Also for Maths we run a study club on a Monday lunchtime and a Thursday after school, which is very popular with the senior pupils. A lot of them utilise that time to come and speak to us individually.'

The pattern of what was described as summative assessment varied from Standard Grade through Intermediate to Higher. **Teacher 3:**

'For Standard Grade, their summative assessment ... we give them end-of-Unit tests, and there's seven of those across third and fourth year. Then they have a prelim, and then the final exam. They also have a practical element, which takes in these techniques which are short — five or ten minutes. They're experiments or techniques like measuring focal length, or measuring the speed of an object down a ramp. That counts for a fifth of the final overall mark. That element is actually assessed in class.

'They have to do a NAB for each Unit. We find that, because the NAB has a sort of ceiling, it doesn't test their problem-solving skills as much as the final exam does. We also give a class test as well at the end of each Unit that is at exam level, so that's a second summative assessment they do.'

Many of the teachers made use of the BBC and the SQA websites for revision; the latter providing 'marking instructions and arrangements documents' (**Teacher 3**). Often, the information gleaned from these forms of assessment was used for reporting to parents, for appeals, and as part of on-going monitoring. Most schools also offered out-of-hours classes as an extra layer of support for pupils.

In some of the departments in which these teachers worked there was some tension about the amount of assessment for summative purposes. **Teacher 4** talked of 'a bit of a split ... about whether third year exams are necessary'. Some of her colleagues argued that 'we need evidence for parents for reporting purposes, hard evidence of the stage your pupils are at'. Indeed, the issue of 'evidence' cropped up regularly. It seemed that some teachers were unaware of the

kind of evidence required by SQA. When one of the interviewers suggested to **Teacher 4** that evidence for appeals did not have to come from prelims, the response was one of surprise:

'I didn't know that. That's news to me. So we could, in effect, have a timed essay that we've done at some point?'

The issue of the NAB surfaced again with **Teacher 4**. The use of 'trial attempts in class' was mentioned, which, in the light of **Teacher 3's** description of the feedback sessions, begins to look like a mammoth amount of time simply around NABs, an element of the assessment process in which some teachers had very little confidence:

'Fifth year we've got, for Higher History certainly, three NABs they have to pass throughout the year, and then their final exam with extended essay thrown in there — that's thirty per cent of their final mark. They have probably two or three trial attempts in class, so it's pretty continuous.'

Teacher 5 described a range of tests used almost entirely for summative purposes and admitted that she hadn't looked at how some of them might be used formatively. However, she went on to describe aspects of her practice where, clearly, she did just that:

'At the end of S3 the pupils do an end-of-year exam, which tends to be an SQA past paper, so that's their first chance to see a real paper. We then look at that paper, look at the areas where the pupils didn't do so well, and we do target-setting based on that. The pupils mark each others' work or mark their own work and, again, look at the answer schemes. So I try to use that in a formative way.'

In the subject where NABs were seen to be useful, **Teacher 6** had tried to reduce the amount of time spent on assessment for purely summative purposes:

'We're in a fortunate position in one respect and our NABs have got headroom. So our NABs are at a very similar standard to Higher, so NABs are very acceptable for the prelim. So I actually incorporate NABs into the prelim, so it cuts a corner.'

It was clear that assessment for summative purposes continued to dominate. **Teacher 7** reports that 'there are exam practice activities going on all the time'. The same teacher felt that all this assessment was summative 'because everything they are doing has a goal'. And yet, she acknowledged that 'they're actually evaluating their own performance regularly without me having to do it for them.'

Teacher 8 was adamant that the demands of assessment for summative purposes would not dominate her classroom:

'I do know that in other subjects there are things like practice-NABs and pre-NABs, but I don't tend to do that, and I never did, really. I didn't see it as a productive thing to do.'

Discussion

There was strong evidence from these interviews of a significant amount of assessment for summative purposes throughout S5 and S6 — Unit tests, timed pieces, past papers, formal homework, NABs (with pre- and practice-versions), prelims (sometimes two per year) and a lot of time spent ‘going over’ the outcomes of these tests. While almost all of the teachers clearly tried to use the results of tests formatively, the volume of these kinds of activity led to little possibility for meaningful feedback. Only in one subject was it suggested that NABs were useful. It was not clear whether this referred to the items themselves or to the ways in which NABs were currently being used.

There is clearly a challenge for the current system of national assessment inherent in the views of these teachers. The teachers involved in this study were not rebels trying to attack the system; indeed, most of them saw their pupils’ success in exams as their prime motivator. Some were uneasy about the potential distortion of learning and teaching because of incessant testing. However, they all spent huge amounts of time, in and out of class, preparing their pupils for the exams. Had the burden simply become unbearable? If weekly tests, timed pieces, formal homework, NABs with their preparation and de-briefing, prelims (whether one or two), and the exams themselves were so ubiquitous, who was responsible? Was it SQA, school managers, Heads of Department, or teachers themselves? Did anyone really have an overview of the situation? Indeed was the advice given by SQA understood or necessarily even read? It was difficult to be clear and it is likely that the answers to these questions were related to particular context and to individual teachers within these contexts. There were, however, very clear confusions around ideas of the range of types of assessment and the purposes to which the evidence emerging from assessment might be put.

However, the current study suggests that, even amid this welter of assessment activity described as summative, assessment for formative purposes could flourish. The most productive approaches emerging in the teachers’ practices were:

- ◆ use of what had been traditionally regarded as summative assessment activities as opportunities for formative feedback
- ◆ use of peer- and self-assessment when looking at the outcome of tests and exams
- ◆ use of SQA and other websites to be clear about criteria

All the teachers interviewed had found ways of using a range of ways of collecting assessment evidence — eg through tests, NABS and timed pieces — to engage with pupils in ways that would help them to understand more deeply what was expected of them.

4 The summative/formative tension

All the teachers were trying to ‘use summative assessment, formatively’ (**Teacher 2**). In fact, the amount of time they spent on the formal aspects of assessment for summative purposes was considerable, but, as described in this section, they attempted to do so in ways which promoted pupil autonomy and pupil dialogue. However, a key question here was whether the fact that these teachers had all, in their own ways, found ways of reconciling assessment for summative and for formative purposes to some extent meant that the current summative assessment system did not need to change? Or would the innovative work being done by them benefit from changes to National Qualifications?

The pupils’ eventual performance in the high-stakes examinations dominated the thinking of almost all the teachers on a day-to-day basis, notwithstanding their broader aim of making them more independent and more successful learners. Indeed, **Teacher 1**, when asked if getting the pupils to be more responsible and do more of their own thinking was designed to have a beneficial impact on the summative assessment performance, replied, ‘...one hundred percent’. She saw their ‘increasing self-awareness as learners’ as helping towards greater ‘awareness of what the SQA are looking for’.

Teacher 2 was determined to use strategies such as peer- and self-assessment. For her, it was ‘instinctive’: that was how she saw teaching:

‘I use [summative assessment] for feedback, dialogue, for paired work once we’ve done it. Some ... maybe at the senior level when we’re talking prelims obviously, it has to be marked by a teacher. But for some of the class tests that we structure for fourth years, with clearance from the PT, I’ve done peer marking and making up the marking schemes for the summative tests.’

‘I try my best — it’s instinctive to me to take something summative and make it as formative as I can within the constraints that I’m given ... So not compromising the validity of anything that would be required. I’m uncomfortable to give a test and just give grades and let that be the end of it. I find that sometimes you have to, time-wise, but I think it’s important they get to discuss and look over and dissect what they’ve done.’

Teacher 3 focused her formative assessment strategies on ‘using learning outcomes, assessment techniques and looking at common mistakes’. For her it was clear that it was unlikely that ‘there’d be less summative assessment ... it’s about trying to help prepare for that.’ She felt that the main strength of using formative assessment strategies was it developed greater understanding, so that they could build on this when they later encountered more difficult work:

‘Because I know that pupils have these exams to get through, I can’t help but be very aware of that and know that I need to prepare the pupils for those exams. Therefore, what I do is use those exams and see how I can prepare them for it in, or using the techniques of, AifL. So for instance, the pupils at Higher, in their exams they write an essay. So during the year the pupils will

write essays, and during the year I will get them to assess their own work and assess their partner's work in relation to the criteria.

'That's not just about preparing them for the exam. By showing them the criteria, it enables them to think about what they're writing and to maybe change the way they go about writing something. So for instance, a lot of the times the criteria for language say use a variety of grammar, or use a variety of structures, show the ability to use tenses. Although those are really boring criteria, and you have to do them, it's like a tick box exercise: you have to do them to do well in the exams; it also makes your writing much more interesting. Instead of saying, 'Today I do this, etc' and talking about just today, if you include what you did last weekend and what you're going to do next weekend, it makes your writing much more interesting. So I try not to look at it in terms of a negative — the students have to do this for the exam and therefore I've got to tick the boxes. I try to turn it around and think about how I can use it to improve the pupils' learning and make them more responsible for their work, more independent, and get them to think about their work. As a result of that, they're doing better in the exams.'

Other teachers, eg **Teacher 4**, were less sanguine about the likelihood of being able to reconcile the demands of summative and formative assessment:

'I don't think the two can fit together. Again, others may disagree. I think that the constraints of the exam and of NABs and whatnot mean that we're teaching constantly to the exam, and there's just not the opportunity in a lot of cases. If we're talking about the capacities of a Curriculum for Excellence, when are we supposed to do them when we're trying to rush our way through the Course? So I don't think that the two types of assessment actually match up, I think a lot of people would agree. I don't know what the answer is, but certainly the pupils enjoy far more the chance to work together, to discuss, to work co-operatively. There's a really good buzz in the classroom, rather than me just standing up and telling them what they need to know for the exam. Which is successful, you know, it's still going to get them their exam pass at the end of the day. But I don't think there's that kind of depth of knowledge for them, or enjoyment. It's certainly not making them responsible, because they're just being told what to learn.

'I think even if we just had the summative exam at the very end, which I think we used to have a long time ago, it would take away some of the time constraints, and the need to get through this NAB, and then this one ... essays to practice ... and it's just continuous. And although you can still do your formative assessment and teach in an interactive way, I do think you're constrained with time.'

Teacher 6 was prepared to live with a reduction in the amount of summative assessment done with her class. She was confident that her pupils' results in summative tests were improving. This was her third year of trying such approaches with her Higher classes, and she was more confident:

‘Overall, I probably do slightly less [summative assessment] because I’ll spend more time, practising [in a] group, preparing for summative, whereas in the past I would have actually given them a practice under test conditions. I’m not doing that anymore. It’s much more open.

‘In the past, I would have given them a class test and a practice exam whereas now yes, they do still get an occasional practice, but it’s not in the same sort of volume as before.’

So, there were challenges implicit in the practice of these teachers. Should the onus be on the teachers to reconcile competing priorities? Should the teachers, like **Teacher 6**, simply find their own ways of reducing the burden of summative assessment? Or, should National Qualifications adapt to the changing demands of A Curriculum for Excellence and to the pedagogical changes taking place as result of the Assessment is for Learning development?

Some of the teachers, like **Teacher 7**, had quite radical views, about such questions; others were more pragmatic. NABs were particularly unpopular (except in one subject where they were thought to be useful). The central issue was whether what were perceived to be summative assessment demands were, at times or in general, an ‘interference’ in learning and teaching:

‘I’m never happy with summative assessment. I would like to see NABs removed — totally and utterly not necessary. If we have in-school assessments that can show the children where they are, we don’t actually need the NABs. I think anybody who’s teaching Higher and Advanced Higher is working very well with pupils, and the NABs are an interference in what could be a smooth-running term.

‘They get very upset about NABs; they get worried about NABs, because they’re told if they fail the NAB, then they might not be able to sit the final exam. How discouraging is that for a child that you’ve worked with for three months, who comes in and says, “I think I’ve got my translation going really well these days” ... who say, “I’ve taken three topics, and I’ve done a plan, would these ideas be good?” These are children who, five years ago, would put their head down and just say, “What are we doing today?” They have a whole different approach to it, and the NABs just interfere with it.’

The tension between formative and summative assessment was reflected in teachers’ concern for their pupils. Different teachers had found different ways of presenting the tension to pupils. Some highlighted the importance of using summative assessment tasks for formative purposes. Others set up a ‘them-and-us’ scenario where the SQA was the enemy that must be defeated. Others tried to inculcate skills and dispositions in the pupils and convince them that they could take the SQA exams in their stride. **Teacher 8** focused on what she believed mattered:

‘As I was doing the bare minimum anyway, it was difficult to do less summative assessment, so I suppose maybe that’s the answer to that. Although I’m saying I don’t generally use their actual summative assessments in a formative way,

the actual piece, it also isn't divorced entirely from what they're doing because I'm explaining to them as we're working on things like analysis and approaches to questions, that the summative assessment and the exam itself is designed to allow them to show their skills in these areas.

'We do a lot of work on question analysis and identifying key words, and being able to use those to unlock what you need to do. The presentation I put on it is that you can do all of these things, you can do this analysis, you have a good understanding of things, and really all the examiner is asking is that you articulate that in your answers. That's what the summative assessments require of you. So it's not that they're separate and divorced and that I do them because we have to do it. It grows out of what we're doing. The skills we're developing should be being accessed in these pieces. I do have a colleague who says she presents it like it's 'them and us' — this is the test, and the answer is you've got to beat them. So she encourages this kind of combative mentality, which she says is quite effective. But I don't, I say summative assessments are there to help you show your skills, that's what they're there for, so we work towards doing that.'

There was a pragmatic streak in the teachers. The exams are there and the pupils had to be prepared for them. There were real concerns amongst teachers that shifting the balance towards formative assessment would increase pressures of time. There were perceptions of very real curricular pressures leading to a focus on getting through the curriculum. Results were important for pupils, for teachers and for schools. Teachers were clear on the importance of examination results for school performance data. So, knowing that results were good gave some external legitimacy to existing approaches, even though teachers had concerns about their impact on effective learning. **Teacher 9:**

'For those certificate classes, I didn't actually envisage an awful lot less summative assessment at all, because, ultimately, they still need to sit an external exam. We still need to provide evidence for any loss in performance or absence, so we still need to do at least a prelim. Because of how much evidence is required to cover the course, we've found that we're — it's a school policy — we're locked into the prelim that's at a two thirds stage. So we need a further prelim. At the moment we can't get away from that. I've not particularly felt we've over-assessed in Maths, but I think looking at the bigger picture, looking across the school, we perhaps do set an awful lot of tests.

'But the biggest thing I found with all the techniques we've talked about first is the time. They do take an awful lot of time. That's why I said earlier we experimented with the junior classes, because we had a bit more flexibility with the time there. We have much more pressure at Higher. To play around with things, it's quite hard to begin with, because you could get over a whole lesson on an activity — a formative or learning activity — that you could just teach in ten minutes, say. So stuff does take longer. But really the biggest motivation is understanding, so you have to stand back from that. There's a bit of a feel there you're losing time, but if you stand back and let it happen, eventually you actually regain that time later on because the understanding's improved.

'Then you would just need to do wee re-visits every now and again, or just use little starter activities. So at the beginning there's a lot of time taken up just in an experimentation sort of phase, where the kids get used to the new techniques or activities, but it is gained later — as proven by my current, new fifth year class. They were this class I talked about in third year. Personally, I started off trying lots of things with them in third year, so we actually finished our credit course by December of fourth year. That was with losing a lot of time ... taking a lot of time in the early stages to do all these kind of things. But then, the payback was later, a year or so later. The results went through the roof.'

Discussion

The time spent on summative assessment and on preparation for the final exam seemed disproportionate in most schools, yet neither policy makers nor practitioners argued openly for such dominance. It appeared that a combination of pressures from culture (this is the way we have always done things and it has worked for our pupils in the past) and context (high-stakes for pupils combined with high levels of public accountability) has led to assessment practices in schools that dominate rather than support learning and teaching.

Few of the teachers in this study were iconoclasts. They accepted the importance of exams in the main, and they used the exam 'rules' — eg how to answer examination questions, how to use criteria to develop a piece of work — as the context for formative assessment. The final exam was still the target, the *raison d'être* of their day-to-day work. They complained remarkably little; they simply got on with the job, making the most they could of the opportunities to improve learning through formative assessment or to use summative assessment tasks formatively.

These were teachers who had done a great deal of thinking about learning. For example, there was clear evidence from the interview data that they understood the Highland Journey of effective learning; the importance of engaging pupils, encouraging participation, promoting dialogue and centrally providing and supporting opportunities for pupils to think. They were committed to the importance of learner autonomy and to the role of self- and peer-assessment in that process. Yet they described these in ways that suggested they had to be protected from a system that focused on getting through curriculum content, on rehearsing for high-stakes assessment. The current examination system appeared to focus on a narrower range of skills and approaches than the teachers in this project believed to be associated with what mattered in learning. This was true across all subject areas. This debate was often contextualised in ideas of time.

The tension between formative and summative assessment was very real. The fact that these teachers had found ingenious ways of resolving it did not diminish the reality. While most of the teachers were pragmatic about the examinations, they saw the need for change. In the context of AifL and A Curriculum for Excellence, it would seem certain that the exam system needs to change to reflect the proposed changes in the curriculum and in pedagogy.

5 Changes in pupils' learning

'Impact' has become, in recent years, a key word in educational discourse. Particularly common in discussions around Quality Assurance processes, it is often seen as a touchstone. It is important to be able to demonstrate the impact of change on pupils' learning and or attainment/achievement if policy communities, in particular, are to be persuaded of the efficacy of any proposed action. All the teachers were confident that their pupils' learning had improved as a consequence of the new teaching approaches that were characterised by collaboration and dialogue.

Collaborative working was an aspect of pupil learning common to most classrooms. In some cases, this would arise out of what would, in the past, have been fairly dry returning of test scripts and going over the marking. **Teacher 1:**

'I think they do work together. I've used the pure assessment, for instance, to reflect on what makes a successful critical essay.'

'There's a link, because I think that it's probably more valuable than me marking it and giving them feedback. If they have to assess something and then give feedback to somebody else, and again it's the quality of dialogue, the depth of dialogue.'

A key concept that emerged from the teachers' descriptions of the changes which took place in the pupils' learning was dialogue. **Teacher 2** talked of 'feedback, dialogue ...paired work', and **Teacher 4** was also enthusiastic:

'There was no opportunity for them to work together at all. I would say now it's completely changed. It's still teacher-led, it's still very structured, but opportunities are built in, I would say, to just about every lesson for every year group, where they are given the chance to discuss something, to work with their partner, to share ideas with the rest of the class. It's getting them thinking more, it's getting them speaking more, and taking a bit more responsibility, rather than me just telling them. So it's keeping them on their toes, and not letting them sit back, basically.'

Teacher 7 cited the quality of the dialogue, time on-task and focus as indicators of the improvement in pupils' work in groups:

'Apart from working better as a group, what I have noticed is five years ago, if you'd asked them to do things in small groups or pairs, sometimes the work would degenerate into general chit-chat about the weekend. When you're 17–18, that's what can happen. [Now] they had their general chit-chat, but then when it came to do the task either in pairs or in groups, they did the task, and it didn't actually deteriorate into anything else. So more focus, definitely more focus, I noticed that. I'd never have commented on that to them, because I think they have to learn how to manage time as well, and if they're not doing the task in the 30 minutes allocated, they've to find the time somewhere else. That's going to be the way life is at university, or in their working life as well. But I have noticed that they were more focused on what they were doing because each one was relying on the other to contribute.'

Dialogue, responsibility for learning and reflection were, overall, the key aspects of change in pupils' learning. Pupils were more confident, they contributed effectively in small groups and they took ownership of their learning, as **Teacher 8** noticed:

'I think they are more reflective about their work. They have more confidence that they can look at their work and be critical about it, critical in a constructive sense. They feel more able to do that, I think, because of the way we've been working. In a sense, they have more ownership of it; they've more responsibility for it.'

'So I suppose that they feel more able to assess their own work, to really say. They've also, several times, suggested that we do something that we weren't planning to do in a group way. They'll ask to do it that way. 'We did that this way, and that was really good — can we do that for this as well?'

These changes had taken place in the context where the examination was still the goal. Many of the pupils' new approaches to learning had a clear summative focus. **Teacher 3:**

'I think one of the main differences is using their learning outcomes much more, referring to them and helping plan their revision. I think it's sort of more of an awareness of what's expected, and also I'm seeing that they are taking more responsibility, and they're not just... say, for example, if I give back a summative assessment, an end of Unit test or whatever, they're not just saying, "Oh, that's my mark" and putting it to one side. I think I've built in a structure where they are analysing what they've done in more detail than they used to.'

Teacher 2 explained that dialogue among pupils could lead to better thinking in the exam situation because it made them focus on method:

'Once they sit down to do a summative test at their exam, their brains are, slightly, functioning in a different way by pushing the 'think about the method, think about the method.'

The changes in pedagogy varied slightly from teacher to teacher, but tended to be in a similar direction — towards more group work, pupil-pupil dialogue, peer -and self-evaluation and creative thinking. These were, of course, key elements in the Highland CPD Journey that was the context of their changes. For some teachers, the journey towards this type of pedagogy was longer than for others. Some, recently out of ITE, had been working like this from the beginning; others had made radical changes to their pedagogy. All of them, though, used summative assessment for formative purposes, some more explicitly than others.

Discussion

Teachers cited reflection, peer- and self-assessment, pupil autonomy, and understanding as the main changes in pupils' learning. The key word was dialogue: pupil-pupil, pupil-teacher and teacher-teacher. The teachers were most animated when they spoke about this aspect of their pedagogy. Indeed, they seemed to value this more than examination success, although they never deviated from their duty to get their pupils through the exam successfully.

Spaces that offered opportunities to discuss learning and to build understanding through reflection and in discussion with others were seen as crucial in deepening and focusing learning. All teachers had found ways of doing this in high-stakes assessment classes (S4–6) in different areas of the curriculum. They seemed to have squared the most difficult circle of all: exam preparation had been put to a formative use in ways which could not have been anticipated. The examination curriculum still set the parameters for learning, and there were perceptions that the current curriculums did not always offer opportunities to assess all that was important in learning. These will be important issues to consider in reflecting how the future examination system might support the aspirations of the pedagogy and the four capacities of A Curriculum for Excellence.

6 Impact on pupils' performance

The teachers were reluctant to make any extravagant claims about the likely performance of their pupils in the upcoming exams. Although, as evidenced in the previous sections of this report, they were all confident that their pupils' learning was more effective, deeper, more reflective, they were not sure that this would lead to better results in their exams. **Teacher 1:**

'If they understand better I assume that the grades, at the end of the day, would be better.'

This raises a very interesting issue. Is it certain that, as exams are currently constituted, understanding does lead to better grades?

Teacher 2 was confident that her pupils' engagement with formative assessment had impacted on their internal results:

'They've gone into the exam more comfortable, the prelim grades are higher, their NAB grades are higher. They're a strong group.'

But she was not willing to predict how the pupils would fare in the final exam:

'I think I'd find it hard to say exactly, have paper proof that this has made a difference. It's only just in pupil feedback verbally to me, and in my own professional judgement I can see the difference.'

Teacher 4 suggested tentatively:

'And their exam results, I'm not sure if they would improve, but I know that they wouldn't actually suffer. So that's enough for me!'

Teacher 6 said:

'The exam results have not gone backwards, there's no question about that. We've maintained a very high standard.'

Even where there was some evidence, teachers, including **Teacher 5**, would still qualify their judgement:

'My exam results have improved over the last few years ... but more than the results, it's just being in the classroom and seeing the engagement of the pupils.'

The strong tendency was for the teachers to focus on learning. **Teacher 8:**

'So I would say that's the key; the engagement with both pupils and colleagues.'

Discussion

It seemed rather odd that teachers who were so committed and professional were so unsure of the examinations that they were reluctant to predict how well their pupils would do after changes in their pedagogy, which they were convinced produced better learning. The researchers had a sense that, privately, the teachers all believed that the young people would do better. It may be that the nature of the present examination system, or the ways in which the current examination system is being realised in practice, made them unsure that the deep learning and reflection which was at the heart of their classroom practice was really assessed in the final examination — even though this appeared to be consistent with current research evidence on what matters in effective learning, teaching and assessment (ARG (2002, 2006); Black et al, (2003), Gardner (2006); Harlen (2007); James et al,(2007) & Stobart (2008).

7 Postscript

A meeting took place on 4 September 2008 with as many of the teachers as could be present. The object was to allow them to discuss how their pupils had fared in the national examinations during the summer and to reflect on their interviews, which had taken place in June 2008.

The final question to them all in the June interview invited them to speculate on how their pupils might perform in their exams. They had all been reticent and unwilling to be over-optimistic. The first question in the September interview was, 'How did the pupils do?' The response was almost unanimous — the results had been excellent.

However, what was also important were the comments from those teachers who said that the results had been more or less as expected. They felt that the pupils had been more self-aware and had come after the exam to discuss the paper and talk about how they went about their answers, when, in the past, they would have gone straight home. Others had come to see the teacher at the beginning of this current year, as they began S6, talking about the strategies they would have to work on to do better next time.

What different teachers meant by excellent results varied a little in pattern of grades. For some, it was defined by an increased number of pupils achieving Grade A, Band 1. For others, it was the pupils achieving Grade 3 at Standard Grade, rather than Grade 4. For one teacher it was the fall in the drop-out rate over the year at Higher. Only one pupil had dropped out, and even he had stayed in the class to work on the subject, but had decided not to take the exam. Overall, there was a feeling that pupils were more at ease going into their exams.

Issues

The teachers then re-visited some of the points explored in their original interviews. They identified a number of key issues.

Time

Time was a critical factor. All the teachers had felt under pressure as a consequence of their decision to spend time on formative assessment strategies. Most of them focused on the most challenging parts of the Course and took the view that the transfer of skills would more than compensate for any less time spent on other elements.

The problem was undoubtedly at its most acute in Higher Courses. All teachers felt they had plenty of time in Standard Grade (and suggested that this might be part of the problem). They had all tried to base their practice on the four capacities of Curriculum for Excellence, and acknowledged there were advantages in this approach, notwithstanding that the whole thing seemed to involve a 'leap of faith' at the outset. The advantages included: an improved relationship with the pupils; better ethos; shared sense of purpose; greater enjoyment; improved motivation;

and, of course, better results. The downside was that they did give more homework, but the pupils even seemed to enjoy that!

ASG support

The ASG was an important support structure and a useful network. Teachers could share ideas and have their views challenged or reinforced. School ethos was crucial, especially for the five teachers from the same school. Pedagogy was their focus and the discussions across subjects about it were very fruitful.

Amount and type of summative assessment

The impression from the June interviews of the very large amount of summative assessment faced by these teachers and their pupils was reinforced. Teachers were under the impression that SQA demanded evidence from prelims and NABs, but it was difficult to establish what had convinced them of this. SQA is clear that it makes no such specific demands on schools — requiring results NABS, estimated grades and evidence only, to support appeals. Some communication problems need to be addressed.

NABs were almost universally felt to be a waste of time and effort, partly because, with the exception of History, they were not sufficiently challenging to be a reliable guide to future performance in the exam. The teachers' negative attitude to this form of summative assessment in the system raises questions about its appropriateness in a future revised National Qualifications system.

All the teachers felt that the exam system needed to change to reflect the four Curriculum for Excellence capacities. Part of this change would be for the method of examination to reflect the pedagogy: as well as individual, written examinations there could be group presentations, internal assessment, team tasks, etc. This would require some external moderation, and the teachers all argued that, while this might be expensive, it would give more validity to their pedagogy as well as assessing Core Skills. Self-evaluation, critical and creative thinking, and reflection were not perceived to be an essential part of what the current Scottish exam system rewards, and it was argued that they should be.

Overall, there were surprisingly few differences across subjects. Issues identified were common to teachers from all areas of the curriculum in this study.

Pupil interviews

A discussion took place with a group of S6 pupils from the school in which five of the teachers worked. Among the group were pupils who had studied at least two of the subjects taught by these teachers. The purpose was to explore the extent to which the pupils were aware of the approaches being taken by the teachers, their views on the strategies and whether they felt that they had worked differently in different subjects.

The first issue to arise was that at least one pupil was unclear what 'peer-assessment' meant: *'I don't really understand what you mean by peer, what do you mean?'*

This perhaps raises an interesting question about whether teachers share the language of what they were doing with pupils. David Perkins (2003) argues that we should 'make thinking visible'; perhaps we should also make our language more explicit.

The same pupil, having had the word 'peer' explained, instantly remembered the approach:

'I think we did a lot more of that in fifth year than we did any time before. I can't really remember doing it in Standard Grade or any time before that.'

For this pupil, the main advantages were:

'Before, in Standard Grade, we used to just look at examples. You couldn't tell if it was done by a real pupil, whereas in peer-assessment we were looking at a pupil's work, someone that actually did it, not just something typed out, which I think was more effective that way. It seemed more real.'

Other pupils remembered peer-assessment being used in other subjects:

'We did it in Physics one time, where we got put into four different groups, and we each had to write a question by ourselves and swap them around and the groups would do the question and then put it to the next group, and then they would do it. So, you could kind of compare how you would do the question. There were four or five questions, and they were all on different parts of the Course, so you covered a wide area. If you were doing it from a book you would probably end up doing a lot of questions from the same section, but you gained more knowledge from a wider variety of questions. Then you could see what other people thought about how to do it, and then if you thought the same way or if you thought they were wrong, you could see, you could compare how you would have done it.'

For the pupils, the contrast seemed to be with a more teacher-led approach which:

'...involved a lot of listening to the teacher talk, and it's really easy to switch off, even in Higher. But when we did things like peer-assessment, you actually had to wake up and get involved.'

In another subject, the focus was on looking at common mistakes:

‘Well, we really just looked at quite a lot of topics that you do essays for, so we just really looked at other students’ essays and they pointed out the pitfalls, which I thought was really helpful because most pupils also did the mistakes that they were doing. So, by looking at ours, you can really notice how to avoid them in the future. Really that’s what helped.’

As might be expected, some teachers had their own, specific strategies for engaging pupils in dialogue. For one, it was mind-maps. One pupil who felt this was useful, was insightful enough to realise that this approach might not suit everyone:

‘It was worth doing because I like to do mind-maps, but that’s just me; it might not work for other people. I’m just the type of person that always does mind-maps for everything. Doing it in the group was easier because it’s not just your ideas you’re putting down, it’s everyone else’s, and if you hadn’t thought of something and someone else thinks of it, you’ve got another idea down on the paper.’

Presentation of work to fellow pupils was another strategy employed by some teachers to encourage pupil-pupil dialogue. In one case, ‘jigsawing’ was used:

‘We had to make a presentation in Physics, which we didn’t do in Science first and second year or Physics Standard Grade, where there were four groups of us and we each did a quarter of a topic, and then we showed the presentation. So it would be faster to learn the topic.’

The pupils had different takes on the advantages of such approaches:

‘I think working in a group you get to know it better than if you’re just working on your own. Because there’s people there that can help you with things they understand but that you might not, and it works vice-versa for you.’

On the other hand:

‘If you have the opportunity to teach someone else something that they don’t know, it’s more effective than learning it yourself. I think I heard that somewhere — you learn better when you’re teaching someone. So I think that helped as well.’

The issue of summative assessment was raised with the pupils and their comments tended to reinforce their teachers’ views:

‘We did practice NABs and practice prelims, and that sort of thing. They were just practice, they weren’t actually tests...then you’d go over how to answer each question.’

The pupils were a little uncertain about the issue of prelims too:

'Some classes, I think most of them, actually, do two prelims...like, they'll teach you the first two topics, and then you'll get to your prelim. Then when you've learned the third topic, they'll give you another one.'

For the pupils, exam practice seemed to be worthwhile:

'Well practising questions gives you an idea of how the questions will be worded, and what kind of questions would come up in the exams, so it does help, I think.'

Peer-assessment, too, could help in this regard:

'Having to mark other peoples' work, you know how markers are thinking, and you know exactly what you want when it comes to your turn.'

But one note of caution was sounded by the pupils on small-group discussion. The composition of the group and the nature of the task are critical components of effective pupil-pupil dialogue and co-operation:

'Sometimes I felt group discussions could be quite ineffective because, if you just got one person who's constantly talking and dominating it all, you don't really make an effort ... But then it can also be very effective, so it just depends on who you're working with at the time.'

Discussion

Pupils were aware that there were differences in the pedagogy of the classes in this project, although not always of the language that might be used in this report to describe their experiences. They spoke very positively about the importance of authenticity, the focus on real work from real pupils; the importance of dialogue and of thinking, having opportunities to reflect on what was being done with others and to identify what actions might next be taken.

Different pupils responded to different strategies, but there was common ground in pupils understanding the importance of their engagement and the differences that these ways of working made to their own levels of engagement.

Like their teachers, their focus was on the examinations, and there was a sense in many of the responses of an unquestioning attitude to many of the tasks that existed in schools — NABs, prelims were simply there and had to be done. There was more enthusiasm when pupils were talking about approaches to learning.

Again, there was little evidence of difference across subjects except in the mechanics of the process, eg phasing of prelims.

Conclusions and recommendations

This study found that all of the teachers had found ways to reconcile tensions in their use of assessment for formative and summative purposes within their high-stakes assessment classes.

The project sought to understand what teachers who were trying to reconcile the tensions between assessment for learning and assessment of learning in NQ classes (mostly Higher) were doing in their classrooms; why they were adopting such approaches; and what, if any, differences they discerned in teaching and learning. The evidence related to each of these issues is presented below followed by recommendations for future action.

Reasons for adopting more formative approaches

The teachers in this project believed that there was a need for change. They perceived that there was too great a focus on assessment for summative purposes. They wished to develop the empowered learning abilities associated with the peer- and self-assessment activities they introduced. They also welcomed the approach to the development adopted by the Council.

A significant amount of summative assessment took place throughout S4 to S6 — Unit tests, timed pieces, past papers, formal homework, NABs (with pre- and practice-versions), prelims (sometimes two per year) as well as time spent going over the outcomes of these tests. The burden seemed disproportionate, but it was difficult to be clear about how and why this position had developed in schools. No-one, either from practice or policy, argued that the current position was desirable.

The teachers' most commonly stated aim was to give pupils more responsibility for their learning, to promote deep understanding, to enable pupils to apply principles to new situations — in fact, to empower pupils as learners.

The evidence-based, participative approach adopted by the Council was crucial in promoting teachers' motivation to engage in the project.

Teachers perceived that there was support from the education system more generally. Support from the Council, led by the Development Officer, was crucial to the development of the teachers' practice. It enabled networks to be established, mainly of subject specialists. These ASG groupings were not resource-intensive, but they were hugely influential. The meetings took place after school, and occasionally during the school day, and were an important factor in the change process.

A supportive climate within one school allowed cross-curricular groupings to be formed. This led to reading, research, teacher-teacher dialogue and feeling part of a group of colleagues.

Teachers regarded the opportunity to reflect on ideas collaboratively as important.

Recommendations

Small-scale case studies should be initiated to explore alternative approaches to summative assessment that would meet both the requirements of SQA and the aspirations of CfE.

If practice and consistency in terms of learning and teaching are to be improved, then support structures and networks based around groups of schools — clusters, learning communities or ASGs — must be encouraged and sustained. This is a crucial part of the improvement process and should be funded as part of CPD.

Tensions between assessment for learning and assessment of learning

In this welter of assessment for summative purposes, assessment for formative purposes could flourish — the teachers had built opportunities for formative assessment in use of peer- and self-assessment when looking at the outcome of tests and exams; use of the SQA and other websites to clarify criteria; and use of assessment to enable pupils to reach an understanding of what was expected of them. There appeared to be potential for a shift in emphasis, so that the formative role of assessment could be enhanced and the frequency of assessment for summative purposes reduced.

The amount of time spent on assessment for summative purposes was disproportionate. Activities included past papers, NABs, prelims (two sets for Higher) and other related activities such as timed examination practice, homework exercises, etc. As currently used, NABs, except in one subject, were not perceived to be helpful. They were universally regarded as compulsory elements.

The teachers had no consistent or clear idea of why they had to undertake some of these activities, and whether the drivers were departmental, school or council policy. Nor were they aware of exactly what SQA's requirements were.

Time was an issue for all of the teachers. However, they were entirely committed to pedagogical practices that promoted dialogue, pair and small group collaborative tasks.

The tension was resolved, with one or two exceptions, by using tasks and associated materials originally designed for summative purposes in formative ways. Teachers were, in the main, using the demands of the external, high-stakes examinations as the means of promoting metacognition, giving pupils responsibility for their own learning and making the process explicit. Thus, preparation for final examinations became a more formative experience for pupils.

The teachers, in the main, accepted the importance of examinations, and they used the examination 'rules' as the context for their formative assessment strategies. The final examination was still the target, the *raison d'être* of their day-to-day work. They made the most they could of the opportunities to use assessment formatively in preparing pupils for it.

The tension in teachers' experience between assessment for formative and summative purposes was a real one. The fact that the teachers believed this project to be about finding ingenious ways of resolving it did not diminish their day-to-day reality of perceiving assessment for summative purposes as dominant. While the teachers were pragmatic about the examinations, most advocated change.

Recommendations

SQA and local authorities should seek to ensure that schools clearly understand the nature and extent of pupils' work to meet SQA's requirements for evidence to support estimated grades. Schools should be asked to reflect on the relationship between this guidance and their current practice and, as appropriate, bring the two into closer alignment.

A study should be undertaken to explore alternative ways in which schools might respond to guidance on evidence of appeals in ways that promote deeper learning and greater challenge and enjoyment.

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Almost 50 years ago, the psychologist and educationist Jerome Bruner argued that 'examinations can be allies in the battle to improve curriculum and teaching'. With the advent of A Curriculum for Excellence, it is time now to ask how this might be made real in contemporary Scottish Education.

Differences in teaching and learning

In addition to the differences teachers identified in their own pedagogy, teachers also identified changes in pupils' learning and performance.

Teachers cited reflection, peer- and self-assessment, pupil autonomy, and understanding as the main changes in pupils' learning. The key word was dialogue: pupil-pupil, pupil-teacher and teacher-teacher. Pupils were actively engaged in their learning.

The teachers were highly committed professionals. They had confidence in both the innovative pedagogies they had used and their pupils' abilities. Yet they were unsure whether the current examination system would recognise the pupils' development as learners during the year's work. Thus, they were reluctant to predict whether the pupils would be successful in the final examinations.

There was some evidence of actual improvements in pupils' performance in the examinations — achievement of higher grades than expected by pupils in Higher and Standard Grade classes. It is important, however, to recognise the small scale of this study.

Recommendations

There should be explicit expectations of the kinds of learning S4, S5 and S6 pupils engage in. Derived from these, there should be a clear statement of how external examinations promote and assess these types of learning.

The review of assessment for CfE should consider how the new examination system might reflect what is identified as important in CfE. This is likely to involve a reconsideration of the balance between external assessment by examination and teachers' moderated professional judgement of school work.

The impact of increased use of assessment to inform learning as part of day to day classroom activities on examination results should be monitored over time. Its apparent positive impact is potentially an extremely important finding of this study.

The impact on examination results of a pedagogically sound use of summative assessment material - such as questions, marking instructions, arrangements, Principal Assessor reports, standards website, should be investigated. Its apparent positive impact is potentially an extremely important finding of this study.

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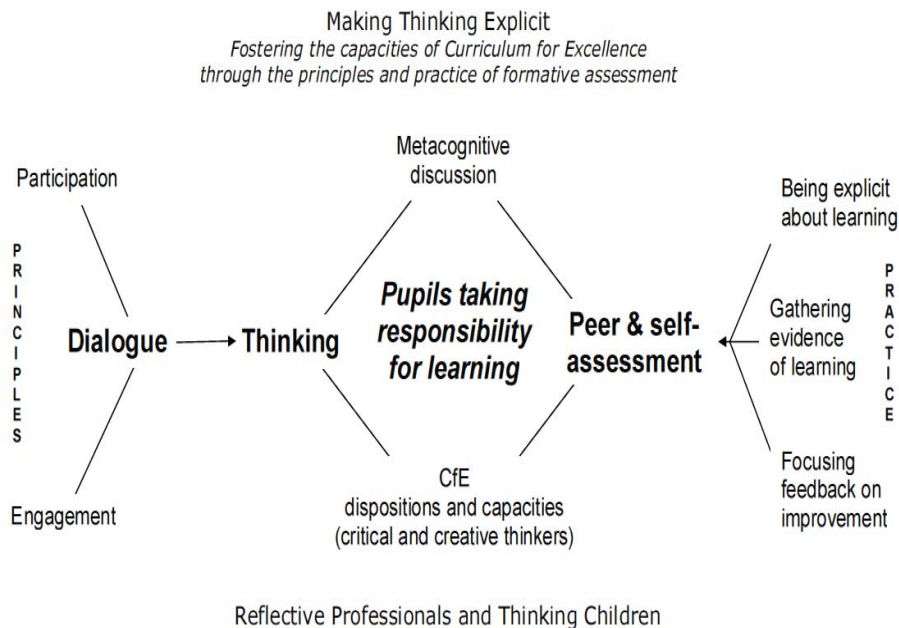
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Appendix A: the Highland Model

The Highland Model can be succinctly summarised as follows:



Highland Council engaged teachers in the application of this model in their classrooms through its Learning and Teaching CPD Reflection Framework. This is designed to stimulate, support and sustain the levels of professional reflection and self-evaluation needed to enable teachers to promote pupils' active engagement with what they are learning and how they are learning. This engagement was seen as crucial to the policy initiatives the Council was taking forward, including Curriculum for Excellence, Assessment is for Learning, and Determined to Succeed.

The CPD Framework takes account of research principles relating to processes of promoting and sustaining real change in educational practices. It comprises six units, two in each of three sections:

- ◆ Section A: Managing Transformational Change (aiming to stimulate a capacity for professional change and sustain approaches shown by research to have been successful previously; and to alert school managers and teachers to approaches likely *not* to be successful).
- ◆ Section B: Embedding Formative Assessment (introducing principles of participation, dialogue, engagement and thinking as essential for meaningful learning in classroom work).
- ◆ Section C: Extending Formative Assessment (developing the principles and practice discussed in Section A to guide schools' engagement with personal learning planning, local moderation of summative assessment and Curriculum for Excellence).

The programme of Continuing Professional Development and the development and use of the Highland Journey were underpinned by research. The study by Hayward, et al (2006) of the implementation of Assessment for Learning had identified a set of principles to underpin any significant development that aims to enable teachers to be genuinely reflective and to change the nature of learning and teaching profoundly. The three crucial principles are:

- ◆ **Educational Integrity:** the development needs to be very clearly such that pupils' learning benefits.
- ◆ **Professional Integrity:** it is clearly recognised by teachers as central to their professional concerns and skills and it enables them to think for themselves and take key decisions about their work and pupils' learning and progress, finding their own effective approaches to achieving overall aims in their particular contexts.
- ◆ **Systemic Integrity:** there is clear commitment to and support for the development from all key players in the whole educational system, including national and local policy-makers, and providers of support, school management and networks of teachers actively involved in the work.

These three principles should underpin successful action to implement Curriculum for Excellence. The processes integral to the Highland Learning and Teaching CPD Reflective Framework are underpinned by the three principles (the third in relation to the education authority's and headteachers'/teachers' roles, rather than the national system). In addition, the Highland Journey and the CPD Framework incorporate clear principles derived from theory on effective learning and the role within it of assessment for learning.

These pedagogical principles, relating to the role in learning of dialogue, thinking, metacognition and self- and peer-assessment, also emerged from the Hayward et al study as very important in developing effective assessment for learning, as well as from other research on assessment (such as Black and Wiliam, 1998). They are also central to pedagogy based on development of thinking skills, which has been actively promoted in Highland Council since the early 1990s and which, a decade later, became a natural part of the approach to implementing Assessment is for Learning and Curriculum for Excellence.

The progress that has been made using the CPD Reflection Framework and the Highland Journey, has been documented by Kevin Logan, Development Officer, and others, not least in the material included in the CPD Framework.
(<http://www.hvlc.org.uk/ace/aifl/>)

Appendix B: Interview schedules

Learners

The following questions will form the basis of the discussion with pupils. However, consistent with methodological ideas of authentic conversation in qualitative research, the interview schedule may be amended to allow issues emerging from pupils to be explored.

Introduction

Thank you for agreeing to have a chat with me. As you may be aware this investigation is intended to explore your experiences in your Higher/Standard/Intermediate... Class.

I have already had a discussion with your teacher who was telling me about (insert relevant teaching methods and materials). I would really like to hear about your experiences as a learner.

1. What did you think about... ?
2. How did these approaches/materials help you with your own learning?

Probe the four capacities.

3. In what ways did these approaches help you with your examination preparation? (If they did?)
4. Can you estimate for me how much time you spent on assessment activities that gave you marks or grades and exam practice during the course of your Higher year?

Conclusion

Thank you very much for your reflections. If after this discussion there is something you wish you had said, or a further example that you might have to share, please get in touch.

Teachers

The following questions will form the basis of the discussion with teachers. However, consistent with methodological ideas of authentic conversation in qualitative research, the interview schedule may be amended to allow issues emerging from teachers to be explored.

Introduction

Thank you for agreeing to talk with me. As you are aware, this investigation is intended to explore changes made in your classroom with your Higher/Standard Grade/Intermediate classes as you have been attempting to bring together ideas from AifL and CfE. You have been identified for us as someone who has been involved in the Highland CPD programme and that you would be prepared to share your experiences with us.

We want to try to understand what changes you have made and why? What impact, if any, you have noticed in your class? And the extent you believe it is possible and desirable to bring together CfE, AifL and preparing for examinations.

Can you begin by telling me about the kinds of changes that you have made in your Higher class/es as a result of having been involved in CfE/AifL in Highland?

What made you decide to put into practice these particular changes?

What did you expect to happen when you began to change your practice in the ways you have described?

Can you give me some examples of what these changes looked like in practice? Do you have any examples from pupils' work, or from things they said, did or wrote to illustrate the issues you are raising? Sometimes examples help others to understand more deeply the points you are making.

The Higher class in schools is often described by teachers as a really pressured experience. Can we think for a moment about curriculum and assessment. How did you manage to relate ideas from CfE to examination preparation? How did you manage to relate ideas from the four capacities to examination preparation? How did you manage to relate ideas from AifL to examination preparation?

6. Can you estimate for me how much time you spent on summative assessment and exam practice during the course of the Higher year? What kinds of activities did you use for summative assessment and examination practice?

Thank you very much for your reflections. If after this discussion there is something you wish you had said, or a further example that you might have to share, please get in touch.