



WHAT WORKS IN INNOVATION IN EDUCATION

**ENGLAND: IMPLEMENTING FORMATIVE ASSESSMENT IN A HIGH
STAKES ENVIRONMENT**

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Overview

England introduced radical changes to its education system with the Education Reform Act (ERA) of 1988. Under the Act, the government:

- Introduced a national curriculum and standards for compulsory schooling.
- Provided schools with a limited amount of autonomy (including control over the managerial and financial decisions, and decisions regarding pedagogical approach).
- Encouraged quality through market-style competition, allowing students to apply for admission to any school, in most cases guaranteeing admission, subject to available space.
- Required pupils to sit tests at the ages of 7, 11, 14 and 16, measuring achievement in relation to the curriculum. Subsequently, media initiated the practice of publishing results of tests in “league tables” as an indicator of individual school quality.

Formative assessment was not new to the British national education agenda when these reforms were introduced. In the 1970s and 1980s, a number of research projects had explored the ways in which assessments might support learning. Such interest in the use of assessment to support learning was given added impetus by the recommendation of the Committee of Inquiry into the Teaching of Mathematics in Schools (1982) that a system of “graded tests” be developed for students in secondary schools whose level of achievement was below that certificated in the current school-leaving examinations. Similar systems had been used to improve motivation and achievement in modern foreign languages for many years (Harrison, 1982).

In 1987, when the government announced its intention to introduce a national curriculum for all students of compulsory school age (ages 5 to 16), it was made clear that the national assessments at the ages of 7, 11, 14 and 16 (the end of each “key stage”) would combine the judgements of teachers with externally-set assessments (DES, 1987). The National Curriculum Task Group on Assessment and Teaching (NCTGAT) asked to make recommendations about the structure for reporting the results of these assessments. They concluded that while ongoing, formative assessments could be aggregated to serve a summative function, in general it was not possible to disaggregate the results of summative assessments to serve learning purposes or identify specific learning needs. NCTGAT’s first report therefore recommended that formative assessments should provide the foundation of national curriculum assessment for key stages 1, 2 and 3 (NCTGAT, 1988). There followed a vigorous debate about how the results from external assessments and those from teachers’ judgments could be reconciled, but this debate obscured the fact that the teachers’ assessments were summative rather than formative, albeit based on different sources of data than the external tests.

Efforts to incorporate formative assessment into the national curriculum were further complicated in the first five years following the introduction of the national curriculum by ongoing revisions to the new curriculum and national tests, and four changes of Secretary of State in five years. The central education agencies did little to promote the use of formative assessment in classrooms either through leadership on the issue, or through the provision of financial resources or teaching materials for teachers to enable them to devote more time to incorporating new teaching methods.

In the early 1990s, a group of education researchers and other professionals formed the Policy Task Group on Assessment, under the umbrella of the British Educational Research Association. The policy task group set up the Assessment Reform Group (ARG) with funding from the Nuffield Foundation. The ARG commissioned Paul Black and Dylan Wiliam of King's College to conduct a review of the research on formative assessment (also with the support of the Nuffield Foundation). The review, "Assessment and Classroom Learning" (Black and Wiliam, 1998), drew upon 681 English-language articles relevant to formative assessment, including a number of controlled experiments. Their synthesis of the evidence showed significant gains in student learning in classrooms using formative assessment.

While the Black and Wiliam article received attention among researchers and at the national educational policy level, the authors also wrote a short booklet, entitled *Inside the Black Box* (Black *et al.*, 2002), aimed at teachers and policy makers, which described the research and drew out some of the policy implications of the research. This booklet has sold over 30 000 copies since its publication, and Black and Wiliam have given over 400 talks about their work in the last five years, addressing over 20 000 teachers directly.

Funding from the Nuffield Foundation supported Black and Wiliam in working intensively with 24 secondary-school teachers (12 mathematics and 12 science teachers) in six schools in the nearby local authorities, where they knew there was both interest and organisational support for such a project. The King's-Medway-Oxfordshire Formative Assessment Project (KMOFAP) began in January 1999 by introducing teachers to the research on formative assessment through a series of three one-day workshops over a six-month period, between which, they were encouraged to try out some innovations in their practice, and to plan the innovations they wanted to implement with one class in the following school year beginning in September 1999 (for further details of the project see Black and Wiliam in Part III of this study). Lord Williams's School, featured here, participated in the KMOFAP study. Seven Kings High School, also included in this case study, developed partnerships with researchers at the University of Cambridge and King's College through the Learning How to Learn Project (based at the University of Cambridge), and through a replication of the KMOFAP project in the local authority of Redbridge. The other two schools in this case study, Brighton Hill Community College and The Clere School, were part of another replication of the KMOFAP work undertaken by King's College London team in Hampshire.

The KMOFAP, Learning How to Learn and Hampshire stories are important not only because of what teachers and researchers have achieved in these schools, but also because national level policy makers have paid close attention to these projects – as well as other research by Black and Wiliam and ARG – to learn more about what works. The experiences of schools included in this case study hold implications for national strategies to scale-up with the use of formative assessment across schools in the United Kingdom. In addition, Black and Wiliam have continued to make regular presentations on their research findings to teachers throughout the United Kingdom, an approach they have found to be quite effective in raising practitioner interest in formative assessment.

In 2002, the Department for Education and Skills (DfES), the Qualifications and Curriculum Authority (QCA) and the Office of Standards in Education (OFSTED) adopted the Assessment Reform Group's (ARG) interpretation of assessment for learning:

Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where they are in their learning, where they need to go and how best to get there.

The Assessment for Learning (AfL) project aims to provide teachers, school heads, local education authorities and other stakeholders with guidance and resources on the principles of good classroom assessment, as supported in research. The AfL campaign is perhaps the most visible national effort to

promote the use of formative assessment in classrooms. Teachers are able to access a number of tools, background materials, and references on formative assessment from the DfES's www.teachernet.gov.uk. Teachernet materials include sample lesson plans, a case study database, an online pupil achievement tracker, links to professional development opportunities, ARG materials describing the basics of good assessment practice and a national benchmark tool to help schools answer how well they are doing as compared to other schools. In addition, DfES's The Research Informed Practice Site (TRIPS, www.standards.dfes.gov.uk/research) makes available summaries of recent assessment for learning research written for teacher audiences.

Changes to the Key Stage 3 (KS3) strategy for students in grades 7-9 (ages 11 to 14) have also been an important part of the Ministry strategy for reforming teaching and learning in lower secondary schools. According to the DfES, the KS3 strategy, "... helps schools to improve standards by focusing on teaching and learning. It offers continuing professional development for subject teachers and school managers, plus consultancy, guidance and teaching materials" and encourages "engaging and well-paced lessons".¹ Several strands of the revised KS3 strategy were piloted between April 2000 and March 2002, and were introduced to schools on a national level in the 2002-03 school year.

Highlights from the case studies

The four case study schools partnered with researchers at the King's Formative Assessment Programme in projects developed following publication of Black and Wiliam's 1998 literature review on "Assessment and Classroom Learning". Black, Wiliam and other King's College researchers involved in the project (Lee, Harrison and Marshall) worked directly with teachers to develop and incorporate formative assessment methods into their daily classroom practice, and to measure the impact of the new teaching approaches by tracking the performance of their students with students in comparable classes at the same school (Black and Wiliam, 2003).

Each participating school identified four to five teachers for the project – usually department heads who would be in a position to influence practice throughout their departments. Many of the teachers found that by making little changes they could get some very convincing results from students. In the schools visited, programmes quickly scaled up.

Some of the most striking features of the case study schools were:

- Focus on the process of learning as well as the content of what students were being asked to learn.
- Efforts to identify and put into practice more often those things that work well.
- Greater attention to what students retain, rather than curriculum coverage.

The research team tracked outcomes for the project, using a "local" design method that took advantage of available data to track progress. The details of their evaluation methodology are described in Black and Wiliam (2003). Researchers derived a standardised effect size for each class, with a median effect of 0.27, and mean effect size of 0.32. In practical terms, the researchers note, such improvements, "... if replicated across a whole school, ... would raise the performance of a school at the 25th percentile of achievement nationally into the upper half".

¹ "Funding to Double over Next Two Years as Drive to Boost Standards in Secondary Schools Gains Pace – Blunkett", 23 March 2001, News Centre, www.dfes.gov.uk

This study includes four schools – one in Oxfordshire (Lord Williams’s), one in East London (Seven Kings High School), and two in Hampshire (Brighton Hill and The Clere School). The experiences of these schools are described below.

Case Study 1: Lord Williams’s School

Lord Williams’s School in Oxfordshire County serves 2 142 students between the ages of 11 and 19 (the school includes a 6th form, which caters to students preparing to enter university. Schools with 6th forms generally attract the best teachers in the system). There are 120 teachers at the school. Lord Williams’s School is bigger than the average secondary school (Office for Standards in Education, OFSTED, 2002). It is on a split campus, with two sites more than three kilometres apart.

Four teachers from Lord Williams’s joined the King’s-Medway-Oxfordshire Formative Assessment Project (KMOFAP) in early 2000. Each of the teachers involved in the KMOFAP had a lead role in his or her subject-department and played a strategic role in disseminating the lessons they were learning and the new techniques that had developed through the project with others in their departments.

Teaching and assessment at the school

At the time of the case study visits, teachers at Lord Williams’s School said they were doing a variety of things differently than they would have even a few months earlier. Importantly, teachers say that their lesson plans now focus on the regulation of learning (what students learn in class), as opposed to the regulation of activity (what students do in class). A teacher notes, “Rather than thinking of which article in the newspaper or which page in the text I’m going to use, I’m really thinking of which formative assessment I’m going to use, or a bit of both. ... But you’ve got to have the energy to do it.”

Lessons are now more transparent. Teachers often set up learning objectives at the beginning of class. One teacher said, however, that she prefers not to always write up aims – instead, at end of lesson she asks, “what was the point of that lesson?”. Teachers also use criteria in a more systematic way. Students are also given criteria regarding teachers’ expectations for homework.

Teachers may also share exemplars with students, asking them to look at the difference between a piece of work that would merit a D grade, and one that would merit an A grade. Usually, however, the teachers do not leave the exemplars of prior work with the students for too long, for fear that the students will just mimic the good work they’ve seen (although that may have its value, too, teachers note).

Often, teachers will give students learning targets in science, mathematics, English and history classes. Each student will receive a different target, depending on what the teacher thinks individual students need to work on. Targets include goals such as: “use more variety in your vocabulary, use more conjunctions; check over your work more carefully” and so on.

Teachers at Lord Williams’s School have given a lot of thought to their modes of questioning, for example, playing more emphasis on “why” questions so that students are forced to use their own logic to understand a concept. A teacher notes that “Sometimes you’ve got to start out with the difficult question first off, talk about fewer questions, in-depth. There is quite of bit caring about the answers, ... how they get the answers ...”. In the science department, teachers discovered that a very good task was to uncover students’ misconceptions. For example, teachers started asking students what would happen if chlorophyll stopped working, and discovered a common misconception – that all the world would be dark. Teachers have found that giving thinking time (the three second pause) has improved the quality of responses from students. Teachers also ask other class members to add to ideas discussed in class.

The Green/Amber/Red light strategy works well as a method for gauging student levels of understanding. Using this strategy, students will hold up a green card to indicate “yes I understand the concept”, amber for “I think I understand, but I’m not sure”, and red for “I don’t understand”. When students don’t understand, teachers take a variety of approaches. For example, they may reinforce the concept through repetition. Sometimes they will ask a peer to explain the answer – an approach they often find has worked well. At other times, the teacher will do a bit of scaffolding with the students, helping them to the point where the new concept starts to become clear.

Students are now sometimes asked to mark their own work, or the work of their peers. However, they note, there are two issues with peer work. One is that the students have to be really well trained to do this. The other is that students have to understand the nature of the error when they are marking. Teachers often engineer the pairs, putting weak students with stronger students, depending on the task, or taking other dynamics into consideration. Peer marking takes more time, teachers note, and therefore takes time away from the curriculum. Some teachers would prefer to spend more time on content, particularly in the sciences, where the national curriculum is quite content-heavy. Many teachers have taken a closer look at the actual content they feel they most need to cover. They say the rush through curriculum is difficult. Most of the teachers interviewed for the case study said that it is more important to focus on quality than quantity in their classes. They also try to emphasise connections between lessons.

Both teachers and students say that using formative assessment is quite different than what they have been used to. For the teachers, it involves “... running around the classroom, because you’re thinking, what have I taught, how do I pick this up, what do I need”. “In the past”, teachers say, “... it was the teacher speaking, I’m going to take you there, I’m going to see what I think you’ve picked up, what you haven’t picked up, and I’m going to teach you. It’s faster. The pace is faster. It is a much tighter regulation of learning”.

These techniques have been quite useful in creating a safe environment for students to take risks and make mistakes in the classroom. The students report that “... it’s okay if we give wrong answers. That’s life. You learn more that way”.

For teachers, an important part of the process has been making the good things they often do intuitively, more systematic. One teacher commented that “If you’re aware that you’re doing it, and you’re aware of why you’re doing it, rather than it just being a happy accident, then you’re more likely to acquire it. It’s the same thing we have to do with marking. Being able to analyse the flaws is the first step pointing in the direction of solving the flaw”.

Not all teachers in the school have bought in to formative assessment. Several teachers feel that they don’t need to change their teaching methods, or that it’s too much work. Those participating in the project observe that “You have to be quite a confident person to go into your classroom and do something completely different. If you’re struggling with the class anyway, or struggling with discipline, then you’re not going to put yourself in that position”. A significant number of teachers in the school have been getting an increasing number of children with behavioural difficulties, and lack adequate support to work well in these circumstances. If the teacher is not in a position to manage a classroom discussion, then trying to change teaching methods isn’t necessarily going to help, teachers say. These “more confident” teachers note that they still have a hard time “providing high quality” formative assessment with some of their classes.

Teachers also noted that they do not see formative assessment as a panacea, nor as a special programme. Rather, they see formative assessment as being about the nature of the relationship between the teacher and the learner. It has been helpful with other very good and important innovations they are involved in at the school.

Significant changes in the curriculum for Key Stage 3 have provided another very important push for change. The new Key Stage 3 curriculum embeds guidance on the use of formative assessment in nationally distributed materials. Teachers note that while they had to re-write curriculum to make things work with the new guidance, they already had staff well-trained in formative assessment, so the new schemes were easily adapted at the school.

Creating conditions

The current Lord Williams's head teacher joined the school in September 2000 – just as teachers and managers were talking about bringing formative assessment methods to classrooms throughout the school (the prior head teacher had initiated Lord Williams's involvement in with KMOFAP). At the beginning of his tenure, the incoming head teacher comments that he observed a strong focus on teaching and learning at the school, and was happy to support directions chosen by the faculties.

Because Lord Williams's is a big school, the head teacher comments, he has relied heavily on his management team, and on initiatives from teachers and departments. He sees the high calibre of middle management as having been very important to Lord Williams's success. Middle managers at the school have a high degree of autonomy, and teachers also “have permission to be innovative”.

There are a number of indicators of a strong school culture including peer-to-peer professional development. Several key informants pointed to the fact that the school is big as being important to this culture. Because teachers often have to teach outside their own specialist areas, specialist teachers in departments develop and share valid “schemes of work” to support the non-specialist teachers. For example, two different teachers teaching an English module will follow the same sequence, using the same or similar resources. This type of sharing also happens within the humanities and science faculties. Within departments teachers are all expected to contribute to and follow the schemes of work – which also make their own work easier. Teachers have confidence in the quality of the schemes of work.

Many of the faculty do not have that much in common so teaching is the thing people at Lord Williams's talk about. According to teachers at the school, a lot of dissemination has happened informally by talking to people in the staff room. There is an atmosphere of collaboration and consistency in practices in each faculty, and between faculties, so ideas from even small-scale projects spread.

Whole school inset days (that is, time set aside for professional development and whole-school discussions) have also been quite important, as teachers will make presentations on what they've done – including the meeting where formative assessment was discussed and subsequently taken on as a whole school focus.

The initiative to focus on formative assessment across the school came shortly after the core group of teachers began working with the KMOFAP, at a September 2000 inset meeting. Several teachers had seen Black and Wiliam present their research to the whole school, had heard about what the Lord Williams's teachers involved in the KMOFAP were working on, and had been impressed by their enthusiasm as well as reports that their methods were working well with students. The timing for KMOFAP also appeared to be right: teachers at the school had been focusing on teaching and learning for several years. KMOFAP made sense to a lot of the teachers at the school, and therefore, very quickly scaled-up from a core group of four teachers to whole-school involvement.

The four teachers participating in the KMOFAP believe that the model of having a core group working with the King's College researchers has worked well. They comment that “sitting there and sharing our ideas is training. It is invaluable to hear about how other people have been experiencing the practice”. However, they were surprised that they were actually “inventing” teaching methods as they went

along. “What we were kind of expecting was, ‘this is formative assessment, here’s how you do it’. What we found is that we were kind of working it out together. That’s the impression we got.”

Case Study 2: Seven Kings High School

Seven Kings High School, in the east London Borough of Redbridge, serves 1 292 students between the ages of 11 and 19. There are 376 students in the school’s comparatively large sixth form.

During the 2001-02 school year, Seven Kings High School attained notice as having the second highest level of “value-added” in the country. All students attending the school, including special education and bilingual students, were entered into the exams (75% of the students are bilingual, and 2.5% of students have statements of special educational needs). The school has “Beacon/Specialist School” status, which means that it has been identified as among the best performing in the country, and charged with sharing effective practice with other schools.

Seven Kings was part of the Learning How to Learn project of the University of Cambridge in 2002 (and involving some King’s College, London researchers from the KMOFAP project, including Black, Wiliam and Marshall). The project has quickly scaled up, and teachers are now using formative assessment strategies throughout the school.

Teaching and assessment at the school

Prior to the introduction of formative assessment in classrooms, Seven Kings was already a very strong school. Teachers nevertheless have continued to seek ways to improve their practice. Some of the things that they are doing differently now are:

- Providing students with criteria for a good piece of work before they actually receive an assignment. Before, teachers would mark a piece of work, and then tell students the basis on which they had been marked.
- Making sure that students feel safe to take risks. One teacher notes that he asks students to write down their ideas, share them as a pair, and then share ideas with the whole class.
- Organising more group-work and more discussion-based activities. A science teacher says that they probably did not do as much of that in science before, but that formative assessment forces the teacher to do more questioning and to get students to talk.
- Having students mark their own and each other’s work, and they have a better idea now of what they’re looking for than they did before.
- Not giving students marks. One teacher noted that in the past she wouldn’t write anything on student papers, or if she did, the students would just look at the grade and ignore the comments.

Teachers say that integrating formative assessment into their teaching has involved a process. They have had to think about how to prioritise what they will cover in the curriculum; using formative assessment in the classroom can take time away from the curriculum (although teachers commented that they do not see it as more time-consuming in terms of their own planning). Teachers have found that they have given more attention to what students are retaining, rather than trying to rush through the curriculum. Finally, they note that new Key Stage 3 requirements have forced them to re-think how they use assessment in their classrooms.

Teachers note several indicators of improvements resulting from using formative assessment. For example:

- Teachers feel that they get different and much better products from their students now that they share information before the students work on their assignments.
- In classroom discussions, students are more confident that they've got something to share if they've thought it out and shared with a partner first. Students are also doing a better job of presentation.
- Teachers comment that students are doing more in the classroom, and pay attention to the criteria for a good piece of work much more than they used to. Teachers also feel that, in the absence of marks, students are doing much better because they actually read the comments on what they are doing well and how they can improve their work.
- Teachers as well as the students share the language about formative assessment.

In January 2002, the Office of Standards in Education (OFSTED) highlighted several strengths at Seven Kings, reporting that:

“... Standards of attainment are high and pupils' achievements are excellent across the whole range of ability in comparison with similar schools. ... The school constantly reflects on and reviews its provision to improve it further. The full integration of pupils from different ethnic origins and groups into the school – including pupils with special educational needs, pupils with physical disabilities and those with refugee status – has produced a very harmonious community that is dedicated to high achievement. Pupils are achieving at a very high level when compared with pupils with a similar starting point”. (OFSTED, p. 8)

Creating conditions

The head teacher at Seven Kings has been at the school since 1985 and has seen the school through a number of changes and experiments in teaching and learning. He notes that early in his career at Seven Kings, there was not a culture of class observation – typical of English schools at the time. Moreover, he claims, nobody believed that teachers made a difference.

The head teacher believes that the 1988 Education Reform Act, while painful, encouraged a number of positive changes in schools. The best changes, he notes, were in the ability to manage the school's own resources. The use of data, as encouraged by school reforms over the last 15 years, has also been important. In the past, he says, the culture of the school was to “let a thousand flowers bloom”. No one looked at data to see if innovations were really working or not.

Over the period of his tenure, the head teacher has encouraged the development of a strong management team. The former deputy head teacher was responsible for getting the school involved with KMOFAP. The project has been important to school-wide discussion on what teaching and assessment should look like.

The head teacher and his management team have tried to ask questions, and to put things on the agenda in order to lead change. For example, they have asked teachers what their aspirations would be in two years time. They have also created expectations for high quality teaching, and have followed up by looking at student outcomes. In 1993, the head teacher established baseline standards which he expects all teachers to observe (and not just a cluster of teachers involved in an innovation). Most people want to do

well, he comments, so they will try to meet the expectations set out. In turn, teachers have developed high expectations as to the type of training they will get, and the kinds of speakers they will have for the teacher inset days. The leadership and management feel they need to deliver (if they don't, they hear about it).

Other strategies for encouraging change in the school have included:

- Insisting that teachers set homework assignments at the beginning of lessons (and ensuring that the assignments are directly related to the lesson). This strategy has allowed more students to do well on assignments (in the past, underachieving students often left the classroom not knowing what they were expected to do for homework, or how to do it), thus building student confidence.
- Supporting school-based research for up to 12 staff a year. Their projects must be approved as being of benefit to the school.
- Creating opportunities for teachers to learn from each other about what types of pilots and projects they are trying in their departments. There has been a "buzz" about formative assessment, so people have wanted to get involved.
- Recruiting the best and the brightest for the school's special education programme. These teachers have pioneered many changes at the school.
- Using the school's reconstruction project – bringing the formerly split school together on to one campus – as an opportunity to encourage seemingly unrelated changes in curriculum. The head teacher recounts that he told teachers, "we're moving, so we have to think how we might address Religious Education differently in the future". The bringing together of the two campuses also created a culture change for the school.

While there are some staff offices at the school, teachers are encouraged to use the collective staff room. Teachers confirm that the school has a very "fertile culture". They hold departmental meetings about 12 times a year. In order to keep the focus on teaching and learning and not on administrative issues, staff get notes on administrative matters so that they don't have to spend time in departmental briefings. All teachers at the school participate in the AfL programme.

Case Study 3: Brighton Hill Community College

Brighton Hill Community College in Basingstoke, Hampshire serves 1 250 students between the ages of 11 and 16. There are 75 teachers at the school. According to the most recent report (1998) of English inspectorate (OFSTED), the school is popular in the area, and "substantially over-subscribed". Students are primarily from middle-class homes, with 9% of students eligible for free school meals. In 1998, approximately 23% of students were on the school's register of special educational needs (SEN). The OFSTED report noted that "[v]ery few students are from ethnic groups other than white". (OFSTED, 1998, p. 9)

Brighton Hill's head teacher agrees with a 1998 OFSTED appraisal that assessment at Brighton Hill has been and still is a weak suit. And it is perhaps for this reason that Brighton Hill signed on to the King's Formative Assessment Programme in late Spring 2002.

Teaching and assessment at the school

Teachers at Brighton Hill use common strategies in classrooms. For example:

- It is now common to share lesson objectives and criteria and standards for a good piece of work with students.
- Teachers also use the “traffic light” strategy, asking students to hold up a green, amber or red sign to indicate they understand the concept, think they understand the concept but aren’t quite sure, or do not understand at all.
- Teachers commonly use the “no hands up” approach across the school, where students are called upon at random rather than calling upon those students who put their hands up first.

There is now wide use of peer-assessment across the school. Teachers note that it has taken some effort to train students in using peer-assessment. Several of the teachers commented that they initially found students to be very critical of each other. They developed the “two stars and a wish system” – where students were asked to find two things they liked in their peer’s work, and something they wish that person would improve in relation to the shared objectives of the work.

Brighton Hill was not included in the original set of KMOFAP schools, but school managers were eager to be involved in the project, and asked for project leaders to consider taking on one more school. School leaders and teachers across the school have been enthusiastic about the project, and have not only scaled-up with good practices quite quickly, but have also started the process of considering what they will need to do to change the existing school culture, which has been heavily focused on student grades, to an emphasis on more frequent communication, including more specific feedback, with students and parents. The system of grade cards is under review.

Teachers say that they have had to give time to including formative assessment in their classrooms and that they have had to give up some things. But, they have developed much stronger relationships with pupils.

Creating conditions

The deputy head teacher, who has been at the school for more than 20 years, notes that the school has participated in a number of innovative projects. She comments that no two years at the school have been the same. Many of the changes resulted from the Education Reform Act of 1998, which she believes have created positive changes in schools over time. For example, the staff sit down together to discuss policy changes, the subject leaders attend briefings at the Local Education Authority and they are responsible for sharing this information with their colleagues; and, the GCSE national tests have involved a large-scale national training programme.

Teachers participating in the King’s Formative Assessment Programme are already having an impact throughout the school. Thus far, they have been able to influence the teaching practices of staff through word of mouth, observations, informal discussions, and departmental discussions.

Teachers at Brighton Hill say that they are taking the formative assessment strategies on as extensions of their own personal teaching styles, selecting those “bits” that feel right for them. The English department uses Assessment for Learning strategies as a regular part of teaching practice.

More recently, Brighton Hill has also been involved in a “High Impact Teaching” programme and implementation of the national Key Stage 3 and the literacy and numeracy strategies. Key Stage 3 has also helped to focus the effort to bring formative assessment to classrooms, and has provided practical suggestions about how to teach reading and learning.

One of the biggest challenges at Brighton Hill has been to bring these various strategies together and make them coherent. School staff are also paying close attention to teacher workload, and trying to “... clear away the clutter”. Formative assessment has helped them to make sense of the various innovations in the school.

In terms of ongoing professional development, every teacher is allowed five non-teaching periods per week, and soon, all teachers will reduce their teaching time from 80% to 60% (this will be accomplished by bringing on more classroom assistants). With the reduction in teaching time, 40% of teachers’ time will thus be devoted to preparation of high quality teaching materials.

School leaders are also placing more emphasis on classroom observation. Everyone at Brighton Hill has a line manager and is observed two to three times a year. They are also looking at having more peer-teacher assessment in the future. Brighton Hill became a training school in September 2003. The school leadership hopes to provide professional development with observation/classrooms and video. According to the head teacher, Brighton Hill is trying to grow talent in response to teacher shortages

Case Study 4: The Clere School

The Clere School, a rural school in Hampshire County, Southeast England, has 530 students between the ages of 11 and 16 years. According to the most recent report of OFSTED (November 2000), there are an “average number of pupils with special educational needs and very few pupils from minority ethnic groups. A high proportion of pupils attend the school from a large number of dispersed communities who rely on buses to get to and from school”.

OFSTED inspectors note that the previous report (1996) had been quite critical of the school, but that “[s]ince then, and particularly in September 2000, there has been a high staff turnover caused in the main by the school’s effective improvement strategies”. (OFSTED, p. 7) The school is now one of the schools of choice in the region.

Joining in September 2001, The Clere School is among the most recent members of the KMOFAP, but drew whole-school interest almost from the beginning of the project.

Teaching and assessment at the school

Five volunteer teachers at The Clere School have been working with researchers from King’s College, including three science teachers, one drama teacher and one English teacher since early 2002. Two teachers involved in the core group are fairly new to teaching. One has just completed his first year of teaching, the other has been teaching for five years. The two note that in their teacher training, formative assessment did not receive a lot of attention. Instead, they had studied formative assessment from a political viewpoint. Nor did they receive much guidance about how to assign marks in their teacher practice – they were merely asked to mark the schemes already being used by the teacher with whom they were assigned for their practice. The practical ideas they are developing with researchers at the King’s Formative Assessment Programme are thus very new to these young teachers.

The Assistant Headteacher notes that, in many ways, the project has helped to “... build on the experience of the teachers participating in the project, reinforced things we were doing instinctively and

put a label on it". They clarified and categorised their teaching methods. Then, they were asked to look at the difference the variety of methods made in student learning.

Teachers are using several creative formative assessment strategies in their classrooms. For example:

- One teacher says that he uses the students' questions on tests (although students tend to ask a lot of closed questions).
- Teachers use "feed forward" methods so pupils know what objectives of each class are.
- One of the teachers mentioned that he will often ask two pupils to run the end-of-lesson plenary – to give a summary of the topic and to ask three or four questions to the rest of the pupils. This method prompts work well, he says.
- When pupils do not understand, teachers often revise with the traffic light (as do teachers at several of the schools working with researchers at the King's Formative Assessment Programme). Teachers will spend longer with the students who show more amber. The majority of the students said they are now clearer about what they need to understand. The whole school has now adopted the traffic light approach.
- Teachers are including time for more frequent student peer-assessment.
- Teachers are trying to increase time for students to answer questions. They comment that this is one of the harder things to do, as they find it is difficult not to jump in themselves during gaps in the discussion.

Teachers say that they also make efforts not to be too formulaic. They step back and think about what works with the methods (for example, they like sharing objectives because pupils tend to take control of their learning). Teachers feel they "own the methods" when they had a better understanding of the effect of what they were doing in classrooms. Teachers also comment that in the past they would have been focusing on creating opportunities for learning, rather than managing classroom activities.

Creating conditions

At the time of the case study, the school was awaiting appointment of a new head teacher. The former head teacher was proactive about promoting innovation at the school and the school's management team continued with reforms the former head teacher started, including work with the KMOFAP. The Assistant Headteacher has taken on the leadership position in the interim and is moving forward with efforts to scale-up with formative assessment throughout the school.

An important aspect of the reform and of their communication with each other, the Assistant Headteacher believes, has been the teachers' sophisticated use of data. Teachers get a data booklet which includes IQ test scores, Key Stage 2 test scores plus current performance as of their last report as a record of each student's prior achievement. Teachers look at whether there are potential problems or challenges, and create a historical plot of the student's past progress. Individual departments then set out criteria for success and also set numerical targets for what they hope students will achieve on summative assessments, and use a regression model to predict the minimum GCSE level students should be able to achieve. There is also an extraordinarily high level of information technology at the school to use data.

The school management team has also asked teachers to use data to be more strategic in their teaching. Management have put data into staff hands and asked what questions the data raise. The

Assistant Headteacher notes that when teachers become skilled at interpreting data, some things leap out. Looking at the data is also a form of triangulation, so even if teachers can automatically predict performance of all their students, it helps to have their views confirmed by the data. The Assistant Headteacher likens the process to statistical process control in Total Quality Management models. School managers also follow the data to ensure that important factors are being dealt with, and that students are making progress as they should.

There is also a systematic interaction between the tutor and the senior staff (each English school has a pastoral department charged with taking care of individual students' social needs). The academic staff heads of department and head of year oversee the social welfare of the group. The pastoral team is keen to look at the progress students should make – not just limiting their view to the students' behaviour. The pastoral staff also ensure that students in need receive mentoring.

School leaders want to bring formative assessment to classrooms across the school as quickly as possible. The Assistant Headteacher has helped to prepare the ground for scaling-up the assessment through the annual cycle of school improvement planning. She asked teachers ahead of time to think about how they assess students and to identify some of the strategies they use. Prof Dylan Wiliam led a staff inset day during which teachers talked about the formative assessment strategies they use now, or could use. Teachers were asked to quantify what they said they were going to do, and how it worked out. The Assistant Headteacher then asked teachers to start with simple formative technique(s), and to discuss their efforts with other teachers.

This approach, the Assistant Headteacher explains, was intended to introduce formative assessment “not as another initiative ... [but as] ... something that could be really useful, and that was part of what they are already doing [in classrooms]”. She noted that she did not want teachers to think that they should throw years of books and marks out the window. Moreover, she said, she wanted to send the message to teachers that they are already quite good, but need to be better at some things. The Assistant Headteacher believes that motivation is what's best for teachers, commenting that “They can't make progress if they are not happy”. Logistically, teachers have also been helped by having a lowered classroom load.

The Assistant Headteacher hopes to create a “buzz” about formative assessment throughout the school. She asked teachers to make presentations on what they were doing with formative assessment when all teachers are involved in developing the school improvement plan in September. With this kind of attention, it is difficult for those teachers to pretend that they are using formative assessment if they are not. The 2003/06 School Improvement Plan now includes Assessment for Learning as a Key Issue and this means all departments have a commitment and responsibility for development.

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