

# Classroom craftsman

Interview **Stephanie Sparrow** Photographs **Jim Varney**

**It is 10 years since the publication of *Inside the Black Box*, one of the best-known works on classroom assessment, yet its co-author Dylan Wiliam feels that teachers still need support to engineer effective practice**

**D**ylan Wiliam is thinking big. The deputy director of the University of London's Institute of Education has ambitions for every classroom in the country. "What I have begun to think about systematically

and carefully is what it would take to change practice in 300,000 classrooms in Britain," he says. "My aim and hope is to get teachers creating classrooms where students are much more engaged in their learning, and the teachers are constantly using the information they collect about where the students are, to adjust their teaching to better meet the student's learning needs."

The outcome would suit everyone. "It would be a more enjoyable place for teachers because teaching becomes more interesting and more engaging, and the students would get higher test scores."

Wiliam does not have an action plan in place yet, but it is clear that these ambitions are rooted in much of the other work on assessment for which he is renowned.

The former maths and science teacher has had a high profile in assessment for 20 years, from working on the Inner London Education Authority's secondary mathematics individualised learning experiment in the 1980s to being appointed, in 2003, as senior research director at the Educational Testing Service in the US. He was attracted back to the UK in 2006 by the prospect of combining research, policy and leadership work at the IOE.

It is 10 years since he and Paul Black, emeritus professor of science education at King's College London, wrote *Inside the Black Box*, one of the best-known works on classroom assessment. Wiliam's views of what makes an effective classroom haven't changed in the interim but he says the decade has shown how hard it could be to secure change: "What we need to focus on now is how to support teachers in making changes to their practice."

The government has backed the principles but its support has had mixed

## Testing times

Many of the existing and mooted models of national tests are either too narrow or simply circular, says William.

"I think that we have too much testing and of the wrong sort," he says.

William points out that one of the failures of the National Curriculum Tests is that students learn to brand themselves in a certain way.

"The problem is that when you are below average at age seven, the chances are that you'll be below average at 11, 14, or 16 and you will come to think of yourself in that way."

He wants students to think more positively. "Our assessment systems need to provide information for our adults, assistants, parents and other stakeholders. But the most important function that assessment needs to serve is to help students understand that they can get better. They need to know that smart is not something you are but something you get."

He worries that the current models are too easy to coach towards and that the curriculum has subsequently been narrowed in an attempt to teach to the test. "I think that we have to have tests," he says, "but they have to be tests worth teaching to."

### Basic dilemma

Finding an alternative will be difficult. Although William concedes that there are some good ideas behind the flexibly timed tests being piloted under the Making Good Progress (MGP) initiative (*Make the Grade, Spring 2007*) he sees them as dogged by a basic dilemma.

"If you have testing when ready, how do you know when they are ready?" he asks. "And if you know that they are ready, why do you need to test them?"

If the tests are offered five times a year and the school receives a bonus every time a child is successful then William fears that there is considerable emphasis and incentive for schools under MGP "to do even less teaching and more testing and for the results to be even more meaningless".

MGP does not acknowledge the teacher's expert view, he says. "It is fundamentally flawed. If it's a test and the teacher disagrees, it's the test that wins. That for me is the real issue."

William wants to see a Finnish-style system that would step in early to help students who are failing to thrive.

"The Finnish system intervenes to give them intensive support and that's what we need to do, not penalise them for failing to make progress or reward them for two levels of progress."



benefits, he says. "For example, the government made Assessment for Learning one of its five priorities in the transforming teaching and learning component of the Secondary National Strategy in 2001.

"This was helpful in drawing attention to AfL but it was unhelpful because it was in some sense boiled down to an easy, deliverable format and watered down by the omission of key messages such as the harmful effects of grades and scores."

William believes that this had led to a "tokenistic approach" with devices – almost gimmicks – such as the traffic-light system being deployed, as opposed to his vision of teachers embedding formative assessment within their practice.

For William an embedded approach means that the teacher checks on understanding "in a deep way all the time". Teachers would not move the lesson on until they have collected evidence from every member of the class. This takes a lot of informed planning.

"So, for example, you might, at the end of a lesson on probability, ask each child to write an exit ticket where they have to answer a question like 'why can't you have a probability greater than one?'"

As the children walk out of the door they have to hand this in on an index card.

"The teacher doesn't attempt to mark these, he just reads through these things and throws them in the bin because he then knows when to start tomorrow's lesson."

William sees this as a constant process of adjusting the teaching to better meet the

students' learning needs. It is also a way, he says, of peers and students keeping the learning on track, and of students taking responsibility for their own learning.

He warns this won't be easy. "These are incredibly hard changes to make because they involve changes to teachers' habits. We're not only equipping the teachers with new knowledge – because in my experience the teachers have most of the knowledge they need already – but it's giving the teachers experience and a safe and supportive environment in which to try out new ideas and then consolidate them."

### Consistent development

Consolidation is key. He wants a consistent approach to teacher development.

"We need professional development because no one is ever good enough as a teacher. I'd never say teachers aren't good, but what I am saying is that no teacher is so good that they can't be better."

His views are born not from criticism but from the quest for perfection.

"You show me a teacher who thinks they are doing a good job and I'll show you a teacher with low expectations of their students. For me, the biggest challenge is to get teachers to embrace the idea that you need to keep improving. Not because you are not good enough, but because you can be better, and it's a lifelong quest."

Questioning and listening are part of this, and building on the research on *Inside the Black Box*, William and a colleague, Marnie Thompson, took a broader view of

Paul Black's ideas of formative assessment and formative interaction, and re-termed questioning as "engineering effective classroom discussions, tasks and activities that elicit evidence of student achievement".

William explains that he is keen to improve how teachers listen, and to move them away from listening "evaluatively" (where they listen for the right answer) to listening "interpretively" (where they listen in order to learn more about the student's thinking).

"What we are really looking at is classroom interactions that are constantly generating evidence about student achievement and adjusting to it," he says.

When teachers listen and think in this way it helps them to understand what kind of model is in the student's head and what their thinking is. William points out that even the poor listeners think about something, even if it's how to avoid the next question.

"Students are making synaptic connections between their neurons at a rate of hundreds every minute. You don't get to decide how many connections a kid makes, but you do get to decide what they make them about."

Teachers have to make children think about what is relevant at the time and the need for formative assessment arises because what students will learn from a particular piece of teaching isn't predictable.

"If teaching could be made perfect, if we could actually explain things so that we knew that the sense that the students made of it was the same as what we intended, there would be no need for checking on learning as it is going on," he says

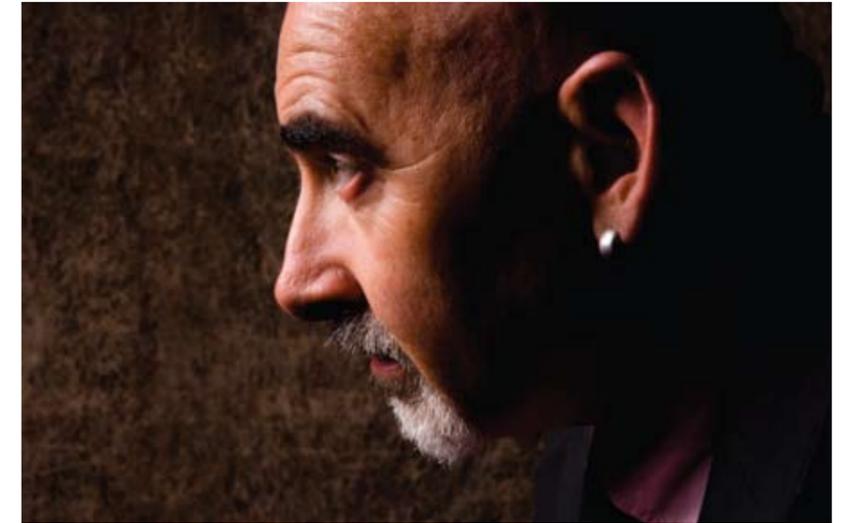
There is some unpredictability in how students make sense of what teachers say, but this can be managed and is a strong example of the type of listening that formative assessment requires.

"It may be the most important revolution in psychology in the last century that the kinds of wrong ideas that students assemble, particularly in science and mathematics, are predictable," he says.

Teachers don't know what a child is thinking but they should know that children generally think one of a number of things. The child's errors are predictable, he says, because they arise from the application of an inappropriate model in the wrong situation (such as adding together the top and bottom numbers of fractions).

"And so again, the important thing about formative assessment is that teachers listen to students, so they can say 'I think the reason you said that is that you believe this'. Then you are in a position to help the student."

Hearing William interpret classroom interaction is the next best thing to actually being there and watching it happen. As he explains the processes and exchanges, he seems to dismantle, display and rebuild them in front of the listener. This interest in creating and refining is integral to William's personality (it comes as no surprise to learn that his weekend hobby is renovation and carpentry work) and vernacular (he sees teaching "as a craft you can't master in



a lifetime"). William believes that teachers should not ask themselves how good they are, but how they can get better.

"People often ask if I have any instruments for measuring teachers' formative assessment performance," he says. "I have never been interested in measuring performance because any teacher can improve, so my task has always been to move from where they are rather than to worry too much about describing exactly where they are right now."

### Forthright views

William is forthright in presenting his views, as delegates at April's IEA annual conference in London will discover. But he does not want to preach at teachers to change their behaviour, rather see them working together on change. Since starting at the Institute of Education in 2006, he has been vociferous in recommending the take-up of teacher learning communities to embed formative assessment. These communities would meet regularly to discuss how they use formative assessment and to observe one another at work.

"We have discovered that groups of teachers who make plans individually and then get the support of the rest in putting them into practice seems to be the most cost-effective way of producing change. The only way to win change in the outcomes for students is to change what teachers do."

So far, he believes, schools are "paying lip service" to such an approach and he has found no school that has implemented learning communities in a systemic or institutionalised way (in other words, they would continue even if the leadership left).

Lest there be any doubt of the value of formative assessment in raising standards, William has done the maths. He calculates that it is more effective than methods such as class size reduction or investment in ICT. William says that reducing class size by 30 per cent gives children four extra months of learning a year but costs £20,000 a class, whereas supporting teachers in Assessment for Learning provides eight extra months of learning for £2,000.

"My research indicates that it is about twice as effective as reducing class sizes and it's about a tenth of the cost. In other words, it's 20 times as cost-effective. I shall carry on going on about this," he laughs. ■

• Dylan William is a keynote speaker at the IEA annual conference on 23 April in London. See [www.ioea.org.uk](http://www.ioea.org.uk)

### About the author

Stephanie Sparrow is editor of *Make the Grade*

## CV

Age: 52

Qualifications: BSc (University of Durham), BA (Open University), MSc (Polytechnic of the South Bank), PhD (University of London)

### Employment includes:

1976-84 Maths and science teacher  
1984 Chelsea College, later part of King's College London. Works on innovative assessment schemes in mathematics before taking over leadership of the mathematics teacher education program at King's  
1986-94 Lecturer in mathematics education; senior lecturer in education  
1999-01 Seconded as academic co-ordinator of the Consortium for Assessment and Testing in Schools  
1996-2001 Dean of the school of education, King's College, London  
2001-03 College assistant principal  
2003-08 Research director, the Educational Testing Service, Princeton, New Jersey, US  
2008 Deputy director, Institute of Education, University of London