



Premium Policies:

What schools and teachers believe will improve standards for poorer pupils and those in low-attaining schools

January 2012

Based on work by The Boston Consulting Group

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Introduction

Since the Sutton Trust was established fifteen years ago, our key objective has been the promotion of social mobility, by providing educational opportunities for those from non-privileged backgrounds.

Our ability to do so has been significantly strengthened with the establishment of the Education Endowment Foundation, which we set up in partnership with the Impetus Trust, using funds provided by the Department for Education.

The Sutton Trust has always believed strongly that only with the help of rigorous evaluation can we ensure that educational programmes are as effective as they can be. That is an approach that will also inform the work of the new Foundation.

The key task of the Foundation is to develop and extend effective ways of lifting standards in the lowest attaining primary and secondary schools, and helping narrow the gap between students from the poorest families and their better off classmates.

The Foundation is expected to be innovative in its approach. But it will also draw on what works both at home and abroad.

We therefore asked the Boston Consulting Group to apply their rigorous approach to the target schools and students, talking to students, teachers and policymakers about what they have found to work well in reducing the impact of disadvantage on results.

The result is a combination of tried and tested approaches, and ideas that we could try and test through the Foundation. What they have in common is the potential to make a real impact on the attainment of our poorest pupils and results in our weakest schools.

The Sutton Trust has spent its first fifteen years working to advance and foster talent, so that young people have a more level playing field, regardless of their family background or where they went to school. This report will help the Education Endowment Foundation to work with us to maximise our impact on their lives.

I am very grateful to the Boston Consulting Group for producing this extremely valuable research pro bono. They have made a great contribution to improving educational opportunities for those who need them most.

Sir Peter Lampl

Chairman

The Sutton Trust and the Education Endowment Foundation

Summary and key findings

- This report is based on analysis by the Boston Consulting Group of the views of teachers and schools on what initiatives could make most impact on the educational attainment of pupils in receipt of free school meals attending schools below Government floor targets.
- The analysis and proposed solutions are being considered and developed by the Education Endowment Foundation, to help its work with these pupils and students.
- The Government sees schools with fewer than 60% of pupils gaining level 4 at Key Stage 2 and (in 2011) with fewer than 35% gaining five good GCSEs including English and Maths as being below its floor standard.
- The target students show substantial gaps in achievement not just with better off pupils but also with FSM pupils in schools that achieve above the floor standard. White British students perform particularly badly.
- BCG identified a number of root causes of poor attainment among these pupils and students. Two-thirds of teachers see poor parental engagement as a key factor. Primary schools particularly see local poverty as an important factor. Others cite poor teaching practice and poor school leadership as key issues.
- However, there is a strong view that poor standards of literacy are the biggest single factor leading to low attainment, with difficulties surrounding the transition between primary and secondary school also seen as very significant.
- Lack of engagement and lack of aspiration among students often serve to reinforce other factors that lead to low attainment. These can also lead to poor behaviour.
- BCG suggested five areas where policies could be prioritised to address these issues.
- Improved literacy and numeracy in primary school is particularly important, with phonics playing an important part in early reading, but the need to make a big impact on wider communication skills and on numeracy also vital. Early years work needs to be well focused to help poorer children prepare for school.
- The transition from primary to secondary school could be improved by family liaison officers, and closer working between schools in both phases. Another effective approach – used by Ninth Grade Academies in the US and Mossbourne Academy in England – is to have a small school for Year 7 students to act as a bridge between primary and secondary learning and to address problems of literacy and numeracy.
- Literacy and numeracy also need to be improved in secondary school. This could be helped by improving the range of school library books. Programmes that make the basics relevant to wider life skills or the wider curriculum may also be effective.
- Sharing best practice between schools is crucial to boost the teaching practice and leadership skills of those in the target schools. This could link with the work of the National College and other developed school networks.
- Improved initial teacher training and professional development could make a major impact in improving the quality of teaching and learning for the target pupils – the quality of teaching is the biggest factor in school improvement.

- The EEF might consider piloting other initiatives including work to help prepare children for primary school; work to raise student aspirations; incentives to attract and retain good teachers to target schools; the use of technology to improve learning; and new ways to engage parents in their children's learning.

1. Background

In 2011, the Education Endowment Foundation (EEF) was established by the Sutton Trust, in partnership with the Impetus Trust, as an independent charity dedicated to raising the educational attainment of disadvantaged students in English primary and secondary schools. The Foundation is funded by a £125 million grant from the Department for Education. With investment and fundraising income, the EEF hopes to award as much as £200m over the 15-year life of the Fund.

The EEF aims to break the link between family background and educational achievement, ensuring that all students have the opportunity to fulfil their aspirations and make the most of their talents. It is seeking to identify, develop, support and evaluate projects to raise the achievement of disadvantaged children in the country's most challenging schools. The Foundation has a particular focus on innovation and on scaling-up projects which are cost effective and replicable.

To assist the Foundation with its new challenges, the Sutton Trust, with 15 years experience of working to improve social mobility, asked the Boston Consulting Group to survey teachers and schools to identify what could have most impact in narrowing the attainment gap between disadvantaged students and their peers.

The BCG took a three-pronged approach. First, they diagnosed the key characteristics of the target schools and students – those schools with exam results below the Government's minimum floor standards and those students attending them who are in receipt of free school meals. Second, they undertook substantial fieldwork to understand better the root causes of underperformance. This included interviews with heads, teachers and students at both under-performing and successful schools. In total they spoke in depth to around 100 teachers and 150 students. They also surveyed a further 87 teachers and interviewed academics, civil servants and educational experts. Finally, they used these insights alongside successful international models to develop potential solutions.

This report summarises their work. It also puts forward a series of recommendations, drawing both on the ideas suggested by schools and teachers to the BCG and on the evidence drawn from the wider experience of the Sutton Trust. These recommendations are tailored to reflect what could achieve most for students at a time of financial austerity and growing school autonomy. They may offer schools ideas on how to use the pupil premium, which will be paid at a rate of £600 per pupil on free school meals in 2012-13. They are already helping inform the Foundation in its work.

2. The Target Schools and Students

Floor targets have been used by successive governments since 2000, and have gradually helped raise the bar for the minimum standards expected by both primary and secondary schools. The Coalition has sought to quicken the pace and intensity at which below par schools improve. In early 2011, it identified 1,400 primary schools below the 'minimum floor standard' (less than 60 per cent of the children reaching Level 4 in English and Maths at 11, and where children make below average progress between seven and 11). Of these, about 500 had been below the floor for at least two of the previous four years. A further 200, which have been below the floor for the previous five years, are set to become academies this year.

In secondary schools, a floor target for secondary performance was set at 20 per cent of students getting five A*-C GCSEs (English and Maths not included) in 2004; in 2006, it rose to 25 per cent in 2007, it rose to 30 per cent getting five A*-C GCSEs including English and Maths (the GCSE standard). In 2010, the coalition raised the GCSE standard goal to 35 per cent, combined with the majority of students making above average progress from Key Stage 2 to Key Stage 4. In the 2012 exams, the standard will rise to 40 per cent and by 2015 it will rise to 50 per cent.¹ In 1997, just over 35% of students across the country achieved the GCSE standard compared to 58.3% today², and around half of secondary schools had fewer than 30% doing so.³ In 2010, there were 216 secondary schools where fewer than 35% of students achieved the five GCSE standard including English and Maths.⁴

These 1600 primary and secondary schools below the floor standard in 2010 are key target schools for the Foundation's work. Nearly 300 are already academies or becoming academies. The BCG analysis shows that they are predominantly urban. 60% were graded 'satisfactory' by Ofsted in their latest inspection. In her annual report for 2010/11, acting chief inspector Miriam Rosen noted that too many schools were 'stubbornly satisfactory'. These schools did not improve between inspections.⁵ Interestingly, a significant proportion of secondary schools scoring below the 35% standard in 2010 had been rated good or better in their previous Ofsted inspection. While this judgement could reflect a capacity to improve and an upward trend in results, the new inspection framework may see greater alignment with these standards. However, a majority of these schools also score badly on the Contextual Valued Added measure that makes allowances for a school's intake, with 55% significantly below average. They do have nearly twice as many students eligible for free school meals as the national average – 29% in 2009 compared with a national average of 15%. They also have 4% of students persistently absent⁶ and a higher proportion of students on their special educational needs register – 29% - than the 20% average across all schools.

¹ <http://www.education.gov.uk/inthenews/inthenews/a0077837/michael-gove-face-reality-reform-urgently>

² <http://www.education.gov.uk/rsgateway/DB/SFR/s001034/sfr26-2011.pdf>

³ <http://news.bbc.co.uk/1/hi/education/8269439.stm>

⁴ <http://www.education.gov.uk/inthenews/inthenews/a0072297/parents-get-more-information-about-school-performance>

⁵ <http://www.ofsted.gov.uk/resources/annualreport1011>, p.8

⁶ This is defined as missing at least 20% of lessons. In July 2011, the Government widened this group to include all pupils missing at least 15% of lessons. See <http://education.gov.uk/inthenews/inthenews/a00192057/government-changes-definition-of-persistent-absence-to-deal-with-reality-of-pupil-absenteeism-in-schools>

Who are the target students?

The Government uses free school meal eligibility as its key indicator of poverty. Schools receive additional money through the pupil premium for these students. When the Government talks of narrowing the gap, it is concerned particularly about the low attainment of students eligible for free school meals. These are also the main recipients of the pupil premium, an additional £488 a year paid to schools to help educate its poorest students.⁷ For its analysis, the BCG used 2009 FSM data for completeness, when there were 1.1 million pupils in England eligible for free school meals.⁸ Of that group, 70% are White British, though a higher proportion of pupils in some minority ethnic communities are eligible. These students are twice as likely as other pupils to be placed on the school's special educational needs register. For the EEF, the target group has been narrowed to those in receipt of free school meals who also attend below target schools: this represents 1 in 40 students, or 117,000 primary pupils and 48,000 secondary students.⁹

Pupils eligible for free meals at below target schools (The EEF pupils) are much more likely to achieve lower test and exam grades across the educational cycle. As Chart 1 shows, only 40% of these pupils reach level 4 at Key Stage 2 compared with 81% of non-FSM pupils in schools above the floor target. There is even, significantly, a 21 percentage point gap with other FSM pupils in non-target schools. Similarly, at secondary school, just 18% of FSM students in below floor target schools achieve the five GCSE standard, compared with 35% of FSM pupils in other schools and 61% of better off students in above target schools. In both cases, there is a gap of greater than 40 percentage points between FSM pupils in below target schools and better off pupils in above target schools. And attainment has been falling in below floor target primaries, on average, while it has risen elsewhere.¹⁰ Among the EEF pupils, White British students perform least well, while Bangladeshi and Indian students do significantly better. But very few EEF pupils excel at GCSE: only 7% gain an A* or B compared with 34% in the rest of the population.¹¹

Reading and writing are the foundations for later learning. So it is particularly worrying that the gaps are greatest in literacy at primary school. Only 65% of FSM pupils achieve the expected level 4 in English tests at the age of 11 compared to 84% of all other pupils, a 19 point gap. In Maths, the figures are 66% and 83% respectively, a 17 point gap. In teacher assessments at Key Stage 1, ahead seven, there is a 16-point gap in reading, an 18-point gap in writing and a 12 point gap in maths, in the numbers gaining a level 2.¹²

⁷ This will rise to £600 in 2012-13. The pupil premium is paid to schools for those currently in receipt of free schools and those who had received free meals over the previous six years. A smaller premium of £200 is paid to army children. See <http://www.education.gov.uk/schools/pupilsupport/premium/a0076063/pupil-premium-what-you-need-to-know>

⁸ The 2011 school census showed that the proportion has since increased to 18% with 1.23 million pupils eligible for free school meals. See Table 3b at <http://media.education.gov.uk/assets/files/pdf/sfr122011pdf.pdf>

⁹ EEF (2011) *The Education Endowment Foundation - Its target students and schools*

¹⁰ *ibid*

¹¹ *ibid*

¹² DFE test data from 2010

3. The Root Causes

Through its field research, BCG has sought to identify the root causes of poor attainment among the most disadvantaged students. Interviews were conducted with heads, teachers and students in 13 primary and 12 secondary schools. A survey was completed by 68 teachers. Leading academics, educationists and civil servants were also asked to relate their views.

This research identified three sets of root causes related to the wider environment, parents and the school, and student issues. These issues were tested with the interviewees. The biggest root cause identified by schools related to parents. 83% of primary interviewees thought that low parental education was a significant cause, a view shared by all the academics. This means, for example, that children start in nursery well behind. Children are less likely to have books read to them at home, and poor parental vocabulary limits their children's development.

Root causes: parental

Among teachers interviewed, 64% cited low parental engagement, as did 50% of primary and 41% of secondary school interviewees. Some primary schools – where engagement is usually higher – now saw one fifth of their pupils' parents. Many students said their parents never made them do their homework. Poorly engaged parents are also more likely to condone truancy. For some parents, their own poor experience of school is translated into a continuing distrust of the education system.

These two factors are likely to be related to a third factor cited by just over one in three school and teacher respondents: low parental aspirations. Schools often felt that the families of disadvantaged students that had poor results simply placed a low value on education. Conversely, where students aspired for professional careers as doctors, engineers and lawyers, they did so in large part because they were encouraged by their parents in these aspirations.

Root causes: environmental

In the wider environment, poverty was cited as a factor by many, with 50% of primary school respondents and 24% of those in secondary schools and the teacher survey citing material poverty as a cause, and between 15-18% citing local deprivation. Interestingly, the academics interviewed were more likely than the schools to see area deprivation as a factor. Target schools are more likely to be located in deprived areas, and this can reinforce low expectations. If nobody from their estate had been to university, it is not something that they see as being for them. Material poverty can have practical consequences too: pupils who can't afford school trips lack the wider experiences open to their classmates. Smaller homes, often with no internet access, make it harder to study. Poor nutrition harms concentration. And for many, the need to work or care for family members leaves their school life disrupted. Where home life is also disrupted by alcoholism, drugs or violence, students themselves show poor behaviour, low self-esteem and can't relate properly to other pupils.

Root causes: school-related

Among school-related issues, the failure to attract and retain good teachers was cited by over a third of school respondents but by just 5% of teachers interviewed, who may have perceived an implied criticism in the question. It is certainly harder to recruit good teachers to poorly performing schools in disadvantaged areas, though Teach First and golden hellos have made it a bit more attractive in recent years. However, many schools worry that a lack of stability in teaching staff is reinforcing the other root causes. One primary teacher put it thus: “When you have issues with trust and self-esteem, building a relationship with a teacher takes a while.”

While external factors – in the home, in parental knowledge and expectations – undoubtedly play a big part in low attainment among poorer pupils, it is also true that a growing number of schools have been able to overcome these poor odds and achieve good results for students of all backgrounds. The differentials between EEF pupils and other FSM pupils are telling. Most studies point to the quality of teaching and leadership as key factors in improving schools. Among the BCG sample, a third of the primary schools cited poor teaching practices and school management as root causes of low attainment though fewer secondary and teacher interviewees did so. Teachers were particularly concerned at poor knowledge sharing between schools, and there was a sense that teachers did not receive the right training to work with FSM pupils. They wanted more pedagogy in their courses. 50% of academics believed teaching a key issue while 25% cited poor management.

Student issues: literacy

BCG identified eight key student issues that schools face in working with FSM children. These include issues of capability, attitude and behaviour. By far the biggest issue among teachers is poor standards of literacy and numeracy, a perception reinforced by the results data cited in the previous chapter. Half of teachers said that any new initiatives would have most impact if they focused on improving literacy and numeracy. They rated this much higher than, for example, social and emotional aspects of learning or any other curriculum subjects.

This is significant. The proportion of pupils reaching level 4 in English and Maths has risen to 74% in 2011.¹³ But a quarter of pupils still do not reach this expected standard. In 2010, the DFE reported that 56% of pupils known to be eligible for free school meals achieved the expected level in both English and mathematics compared with 77% per cent of those who were not known to be eligible. Among white British boys eligible for free school meals, the total reaching this level was just 50%.¹⁴ This gap is larger in English than it is in Mathematics.

Teachers see literacy skills as key enablers for other subjects, and poor literacy skills as a major factor in the lack of confidence and disengagement exhibited by so many students in this group. The reasons given for these poor skills include a lack of interest in reading at home, weak phonic skills, the absence of rich conversation which means vocabulary skills are slower to develop and sub-optimal teaching practices and curriculum. The Government has recently sought to improve literacy skills with a renewed focus on phonics

¹³ <http://www.education.gov.uk/rsgateway/DB/SFR/s001018/index.shtml>

¹⁴ <http://www.education.gov.uk/rsgateway/DB/SFR/s000972/index.shtml>

and a new assessment of reading skills for six year-olds¹⁵, but clearly this issue remains the major concern in lifting standards among the most disadvantaged.

For schools, the higher levels of special needs among this group are also an important factor. Where schools categorise students' special needs on a sliding scale, those in need of most support will have a statement issued by their local authority, whereas those needing some extra support, often with literacy and numeracy, are placed on 'school action', often temporarily. The table below shows that those with no identified special needs achieve much better results than those on the special needs register. Teachers believed that SEN students would benefit from more one-to-one tuition and small group work, as well as personalised interventions, though such support must be continuous.

SEN status	% at expected KS2 level in Maths & English	% with 5+ A*-C at GCSE incl. Maths & English
Statemented	13%	7%
School Action Plus	29%	17%
School Action	41%	26%
No SEN	87%	66%

Student issues: low engagement, lack of aspiration

The poor attainment of disadvantaged students is reinforced by a combination of low aspirations and poor levels of engagement in school. Primary heads find that some students are simply less willing to get involved, and less keen to please, while such students seem to face greater external distractions than their classmates in their teenage years as they approach GCSEs. Their fellow students recognise the problem with this attitude. "They don't care where they end up," said one. "They just think they'll be fine whatever happens, but they won't." Since these students expect not to do well, it becomes difficult for teachers to change their mindset, and the low engagement can turn into poor behaviour and poor attendance.

But this lack of engagement isn't just about their home environment or the attitudes that may be reinforced on some working class estates. It can reflect boring lessons that fail to hold their attention, or lessons that they see as not relevant to their lives. A growing number of schools are trying to address this by recognising that students learn in different ways, they have different 'learning styles' in the jargon. Students themselves sometimes also feel there is a cultural gap with their teachers. "They're from a completely different background," said one. "They don't get us."

However, more successful schools and academies have overcome these problems, particularly where they have consistent discipline and behaviour policies, and high expectations for all. Low levels of engagement often go hand in hand with low aspirations. A 2010 Department for Children Schools and Families survey of pupils found that 25% of FSM pupils had low aspirations compared with 14% of other pupils, with a further 9% saying they didn't know.¹⁶ Among teachers, low aspirations came next to poor literacy as the most important factor in the low attainment of FSM pupils. It seems particularly to be an issue for white British pupils. Several

¹⁵ See <http://www.education.gov.uk/schools/teachingandlearning/pedagogy/phonics>

¹⁶ DCSF (2010) *Identifying Components of Attainment Gaps*

reasons for these low aspirations were identified by BCG in their research, including low parental aspirations – especially among those experiencing intergenerational unemployment – and low aspirations among their fellow students. When these are combined with a lack of exposure to different and inspirational experiences, they make it much harder to broaden students’ horizons.

Student issues: behavioural

Behavioural issues are not just about indiscipline and poor attendance. They are also the result of the trauma that sometimes accompanies the transition from primary to secondary school, and the disruption that occurs when students move school frequently.

Nevertheless, the poor behaviour which often goes with low self-esteem remains a significant issue in many schools. Addressing bad behaviour and instilling a culture of clear rules and rewards, which are applied fairly and rigorously, is often the first step taken by a school coming out of special measures. But the causes of poor behaviour are varied. Teachers see a lack of parental boundaries as the major cause of bad behaviour. “Some of these children have never been told the difference between right and wrong,” said one secondary head. But poor behaviour is more than just a problem for the pupil concerned: it can lead to bullying, and disruption that makes it hard to teach other students. Better classroom discipline was the top demand of the students interviewed by BCG, when they were asked what would help them to learn better.

However, poor behaviour can also be a front for students who think little of their own abilities. They find it hard to trust adults, including teachers, and it takes them a long time to become comfortable with new people. They also find it hard to make new friends and they don’t have the confidence to apply themselves to learning. “Nobody has ever believed in these children,” said one secondary teacher. “They can’t even look you in the eye.” There are a small minority of pupils who have more extreme behavioural problems, often because of abuse or neglect at home, and most of the target schools also have to deal with the problems caused by gangs, drugs and alcohol on a regular basis. When asked what initiative might do most to deal with these issues, a third of teachers cited improving the social and emotional aspects of learning, which came third behind literacy and numeracy as their top priorities.

Many schools have been delivering the Social and Emotional Aspects of Learning (SEAL) programme, which the Department for Children Schools and Families described in 2007 as “a comprehensive, whole-school approach to promoting the social and emotional skills that underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools.” However, a 2010 evaluation for the Department found that its delivery in secondary schools was ‘patchy’ and as a result it had failed to impact on key outcomes. It argued that future such programmes should have greater structure and consistency.¹⁷

Students face several important transition periods during their school life, all of which can have an adverse impact on learning as they adjust to new friends and environments: these can occur between nursery and

¹⁷ DFE Research Report RR049 at <https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR049.pdf>

primary school; between primary and secondary schools; and moving into the sixth form. There is also a significant change of pace as students begin Key Stage 4 and start to prepare for their GCSEs. Concerns about these transitions have seen a growth in all-through state schools, particularly academies, in recent years, where students are taught from 3 to 18.

But addressing transition effectively is important: these students need a degree of consistency, and they take time to get used to new staff and different approaches to teaching. Once again, where basic literacy is weak, the transition is much more difficult. “Those with a lot of issues often get lost in secondary school,” one primary head said. “They can’t cope in a larger school and struggle with new routines. We hear they’ve dropped out by December.” Primary and secondary schools communicate more than they used to, and secondary schools often run open days in the summer term for those joining in the autumn, but lack of communication remains a problem. But the transition problem can be exacerbated where schools try to use mixed ability teaching, particularly in the early secondary years. “I’m trying to teach the other kids probability while some of them count to ten,” lamented one secondary maths teacher. “It’s hard to cater for different abilities when the gap is that wide.”

Where students don’t adjust to secondary school well, they are more likely to truant. And persistent absence grows significantly between the ages of 11 and 16, particularly among FSM students. Using the definition of persistent absence where 20% of days are missed in a year, 14% of EEF pupils are persistent absentees during Key Stage 4, and this is true of 4% in target primaries. Even in schools above the floor target, 10% of GCSE-level FSM students are hard core truants. Successive governments have tried to address the problem, using parental prosecution, targeted interventions and a tougher approach towards term-time holidays, but it remains a significant problem. And being absent from school affects this group of students hardest: they miss vital lessons and find it harder to catch up when they do come to school. Sometimes absence is condoned by parents, for childcare or long holidays or trips to home countries. “I’d love to have more resources to be chasing up on absent children,” said one secondary head.

A particular problem for some groups of children is the extent to which they change school. This is an issue for Irish Travellers and South Asian children, in particular, but it also impacts on army children, whose mobility has been recognised in the pupil premium. Schools that are below the floor target experience higher levels of pupil mobility than other schools, with 31% of primaries having more than 8% of their pupils joining mid-year in Year 5, and 32% of secondaries having a similar proportion joining in years 7-9. This compares with 22% of other primaries and 12% of other secondary schools that are above the floor target. “Some of my families come and go regularly,” said one primary head. “When they return, the children are always behind.” Such mobility presents practical problems. Teachers in a new school may not know how a particular child learns best, what interventions will work best or how best to manage their behaviour. Students can find it hard to adjust to a different curriculum and lesson plan, as well as to make new friends. And all these issues are particularly important with FSM students.

4. What Initiatives Would Work Best?

BCG analysed a range of 90 potential initiatives for its analysis, checking whether each was well targeted at FSM students and improving results. They also considered whether the initiative represented an advance over tried and tested programmes, and whether it could be rolled out cost-effectively in schools. Each was then evaluated against its perceived impact by BCG's focus and survey groups, the number of students impacted, measurability, cost, implementation effort and the strength of any underlying assumptions. This detailed cost-benefit analysis helped prioritise particular initiatives and programmes. They categorised the most promising initiatives as 'safe bets', 'experimental' and 'innovative' based on this analysis and interviews with those in schools as well as academics and civil servants.

In suggesting where resources should be targeted, we see these are potential areas for investment by the Education Endowment Foundation. But we also see these as providing ideas to Government, chains of academies, and schools keen to improve their own results.

Five 'safe bets'

Based on what heads, teachers, students and educationists told BCG, they suggest five areas for priority working to help improve results in below target schools and among FSM students in particular. In each case, they argue that approaches should be tested to establish best practice.

i. Building Literacy and Numeracy in Primary School

Successive governments have recognised the importance of improving primary school literacy and numeracy. Between 1995, when the first national test results were published by school, and 2000 after the introduction of the national literacy and numeracy strategies, there were significant improvements in primary test scores in both literacy and numeracy. While some of these gains may simply have reflected a more effective teaching to the test, there is evidence that particular approaches have had a particularly strong impact in this area.

Successive governments have emphasised the importance of systematic phonics in teaching reading to young children. Although some teachers still argue that phonics doesn't work for every child, there is a growing body of evidence of its impact. Since the Rose review of 2005, schools have been encouraged to use this systematic approach, and that message has been strongly reinforced by the current government, which has placed stronger emphasis on synthetic phonics where children listen to sounds and then blend them. For its analysis, BCG focused on the phonics programme developed by Read Write Inc. In an analysis of 12 successful schools in 2010, six of which were using the Read Write Inc programme, Ofsted concluded:¹⁸

The best primary schools in England teach virtually every child to read, regardless of the social and economic circumstances of their neighbourhoods, the ethnicity of their pupils, the language spoken at home and most special educational needs or disabilities. A sample of 12 of these schools finds that their success is based on a determination that every child will learn to read, together with a very rigorous and sequential approach to developing speaking and listening and teaching reading, writing and spelling through systematic phonics.

¹⁸ Ofsted (2010) *Reading by six: how the best schools do it*. <http://www.ofsted.gov.uk/resources/reading-six-how-best-schools-do-it>

The Read Write Inc programme focuses on phonics from ages 4-7, on comprehension and spelling from 7-11 and on offering a fresh start where students need it aged 9-11. 48 schools act as model schools for the programme, one of several schemes approved by the Department for Education.¹⁹ The Read Write Inc programme adds an in-depth literacy programme for children who can read and daily 10 minute spelling lessons to its systematic phonics instruction. There is also intensive intervention for struggling readers providing an effective catch-up programme. “Before using Read Write Inc phonics, we had many children achieving level 2C,” said one London primary literacy co-ordinator. “This year, all children achieved level 2b and above.” Level 2b is seen as the best predictor of achieving Level 4 and above at the end of Key Stage 2. “In the first four months, the average child made over a whole level progress,” another teacher enthused.

BCG also looked at the Early Reading Research programme where pupils have three structured 12-minute literacy lessons a day, focusing on phonological awareness, phonic skills, sight vocabulary and reading to children. The Warwick University programme has seen significantly improved test scores after one year. The programme is not on the DFE’s list of approved schemes as it uses real books and a different approach to phonics. However, BCG believes that the approach of short sharp 15 minute sessions could significantly improve literacy, numeracy and communication. In both cases, teacher training is crucial.

A good pre-school programme is important to ensure that disadvantaged students come into primary school with skills that others may take for granted. The Sutton Trust has supported the Peers Early Education Partnership (PEEP) aims to increase the educational achievement of disadvantaged children through weekly sessions. It does this through a mix of ‘talking time’ involving parents discussing pre-agreed themes with their children, and circle time, linking stories, songs and rhymes with the week’s theme. A University of Oxford evaluation showed that PEEP groups performed better on vocabulary, verbal comprehension, early number concepts and phonological awareness than comparison playgroups.

Drawing on its discussions with teachers and academics, BCG recommended a revised early years’ curriculum and several 15-minute intensive sessions each day focused on literacy (including phonics), oral communication and numeracy. They also argued for more peer mentoring – where older pupils help younger children learn to read. Two less cost-effective ideas they considered were more catch-up programmes and an intensive early years arts programme.

ii. **Smoothing the transition from primary to secondary**

Of all the transition points facing a young person, that between primary and secondary school is often the most traumatic. Providing stability at this time could avoid a damaging loss of learning, particularly among EEF pupils. It could also reduce absenteeism and improve engagement, enabling all pupils more effectively to access the secondary curriculum. A growing number of schools have developed ways of tackling this, providing more intensive support and better links between the two schools. BCG considered four possible approaches.

¹⁹ See the DFE approved list at <http://bit.ly/tB7fJ7>

First, they looked at using trained family liaison officers to improve communication and build relationships with the new school at the time of transition. The officers could be particularly valuable helping pupils with high mobility or those moving to secondary schools outside their area. Many local authorities already employ choice advisers to help disadvantaged families through the admissions minefield. There are also many home-school workers, often employed in the voluntary sector. Linked to those networks, family liaison officers were judged as the most cost-effective way of helping FSM pupils through transition.

Schools increasingly find ways to improve continuity between Years 6 and 7. Fifteen US states have Ninth Grade Success Academies recreating a middle school environment as students start high school. The academy operates in a separate section of the building, effectively a 'small school' within the main school. Students take part in numerous activities, including addressing any literacy and maths problems, to prepare them for High School. The successful Mossbourne Academy in Hackney operates a similar learning environment for this group, as its former head, and current chief inspector, Sir Michael Wilshaw has described.²⁰

Mossbourne's Year 7 building, one of six small school learning areas, also facilitates transition arrangements from primary school. Pupils have their own dedicated space in the first year of secondary education, allowing staff to focus intensely on the needs of the transferring year group and ensure that they do not have as much movement around the academy as other year groups. This provides much needed stability at a time when many pupils see their learning suffer.

Mossbourne has 40% of pupils on FSM and around 62% at level 4 on intake, yet by the end of year 7, this has risen to 90%, helping the academy to exceed 82% reaching the GCSE standard and to be judged 'outstanding' by Ofsted.²¹ In the US, evaluation of success academies has shown that students advance significantly faster in core subjects than those in schools without ninth grade academies, including in maths, algebra and English.²² The approach is seen as highly cost effective in the BCG analysis.

Another way to improve the transition is through intensive preparation for secondary school. This can involve spending time in the new school, particularly in the last term of primary school. But it can also be supported through formalised peer mentoring. This is sometimes eased where schools operate a house or vertical tutoring system, where students of all ages mix in the same 'house' and look out for each other. But a more structured approach which has been piloted in 180 schools has not only made the transition easier and raised pupil confidence, it also led to measurable improvements in attainment and attendance, as well as fewer incidences of bullying and exclusions or suspensions.²³ In this programme, Year 7 students are matched to Year 10 students of the same gender, feeder school and neighbourhood, with similar hobbies and interests. BCG see this as having medium-level impact and cost.

²⁰ See M Wilshaw "Curriculum" in J Astle and C Ryan (eds), *Academies and the future of state education* (Centreforum, 2008)

²¹ *ibid*

²² J Kemple and C Herlihy, *The Talent Development High School Model* (MDRC, 2004) available at <http://www.mdrc.org/publications/388/overview.html>

²³ C. Parsons et al, *Formalised Peer Mentoring Pilot Evaluation* (DCSF, 2008) at <https://www.education.gov.uk/publications/eOrderingDownload/DCSF-RR033-R.pdf>

There are now 28 all-through academies in England, with more than 70 federations involving both primary and secondary schools. In the all-through school, a child starts at the age of 3 or 4 and continues through to 18. Common in the private sector, there is increasing interest in both primary and secondary state-funded schools in developing this model, particularly as a growing number of outstanding schools opt for academy status. Ofsted sees the development as having a positive impact on transition, particularly in the more common federal arrangements. The model also allows shared specialist teaching in areas like languages and science where primary schools. However, this model seems more likely to develop organically, where a new academy is being established or existing schools want to merge.

iii. **Boosting literacy and numeracy in secondary school**

While the goal must be to get primary pupils up to the expected standard in literacy and numeracy, the reality is that secondary schools often have students who have not mastered the basics, and are therefore incapable of accessing the wider secondary curriculum.

To address this, BCG considered the simple idea of getting more engaging books into school libraries. Backed by a reading programme, the right selection of books could more effectively engage students with reading, particularly boys. Doing so would be relatively easy, even with tighter budgets, but potentially highly cost-effective. But for some students, this will be no substitute for intensive literacy and numeracy in Year 7. While recovery programmes can be costly, BCG looked at other approaches.

The RSA's Opening Minds programme promotes an integrated competency-based rather than a subject-based approach to the curriculum, a framework that has already been used in 200 schools including the RSA-sponsored Academy in Tipton, Sandwell. Students learn about citizenship, learning, managing information, relating to people and managing situations, all important skills. While Ofsted has praised many aspects of the curriculum in Opening Minds schools, it has also been concerned about the degree of progress made in English and Maths in some.²⁴ However, a skills-based approach is regarded by many schools as effective in engaging all students. The John Cabot Foundation's Bristol Metropolitan academy sees literacy, numeracy and developing 'good habits of learning' as its main goals at Key Stage 3. The proportion of its students reaching the GCSE standard rose from 30% in 2009 to 43% in 2011.²⁵

Another programme considered by BCG was Core Knowledge, a scheme used in US elementary and middle schools, up to 8th Grade (age 13-14). A strong link is made between learning literacy skills, including speaking and listening, with core knowledge in history, arts and science. Implementation often occurs over two or three years, with schools phasing in topics subject-by-subject or grade-by-grade. The approach is used by 770 US schools and 440 pre-schools. In the Iowa Test of Basic Skills Assessment, students scored significantly after one year on the Core Knowledge programme in reading comprehension, vocabulary, maths and science than other similar students.²⁶

²⁴ Ofsted inspection report of the RSA Academy, Feb 2011

²⁵ <http://www.cabotlearningfederation.net/>

²⁶ www.coreknowledge.org

However, teachers felt the most useful and cost effective initiatives would be better use of libraries, followed by master classes in English and Maths taught by experts in particular topics (building on the ideas behind Core Knowledge). Intensive literacy and numeracy in Year 7 is expensive, though many schools see it as essential.

iv. **Driving FSM Best Practice sharing**

The internet has made it much easier to share best practice. There are a growing number of networks where effective practice is shared both formally and informally. The most successful academy chains, for example, try to ensure consistency of practice across their schools, and have shared professional development sessions. Subject networks have developed over the years among specialist schools, notably in languages, sports and science. And the Government's new teaching schools will have an important role sharing good practice and professional development opportunities among their partner schools.

But one important fact stands out in the research: the quality of teaching is what matters most. Research for the Sutton Trust has shown that English schools could improve their low position in international league tables in Reading and Mathematics and become one of the top five education performers in the world within ten years if the performance of the country's least effective teachers was brought up to the national average. A review of evidence by education economists at the London School of Economics and Stanford University showed that for poor pupils, in particular, the difference between having a highly effective teacher and a poorly performing teacher is a whole year's learning.²⁷ So, spreading effective practice is essential: we cannot simply rely on improvements in initial teacher training making the difference.

Among a package of pay and rewards for good teaching, the Sutton Trust report recommended that governors should receive an annual report on the performance of teachers and plans for their professional development. This is particularly important in below target schools. BCG argues that by sharing best practice there could be improved instructional and leadership practices. It examined the work of the Achievement Network (ANet) in the US, which works with 167 schools, and has achieved significant improvements in Maths and English through shared best practice, assessment and training.²⁸ However, an evaluation of the Leading Teachers programme, introduced in 2007, where teachers support colleagues and share best practice, showed improvements in level 4 but not at level 5 in primary schools where they worked.²⁹

The Government is using two programmes to spread best practice, beyond its support for academy chains. Teaching Schools, managed by the National College for School Leadership, are intended to give outstanding schools a leading role in the training and professional development of teachers, support staff and headteachers, as well as contributing to the raising of standards through school-to-school support.³⁰ The first 100 such schools have now been designated. Allied to this, the National Leaders of Education (NLEs) programme is being extended so that there will be 1000 NLEs by 2015. NLEs are outstanding headteachers or principals who, together with the staff in their schools use their skills and experience to support schools in

²⁷ Sutton Trust (2011) *Improving the impact of teachers on pupil achievement in the UK – interim findings*

²⁸ Achievement Network Annual Report 2010. See www.achievementnetwork.org

²⁹ University of Wolverhampton (2011) *Evaluation of the National Strategies' Primary Leading Teachers Programme*

³⁰ See <http://www.nationalcollege.org.uk/index/professional-development/teachingschools.htm>

challenging circumstances. In addition to leading their own schools, NLEs work to increase the leadership capacity of other schools to help raise standards. The programme is based on the London Leadership Strategy, which Ofsted has identified as a significant reason for faster than average improvements in the capital's schools in the 2000s.³¹ Two other initiatives are designed to spread best teaching practice: the teaching schools will host networks of specialist leaders of education, middle or senior school leaders (such as heads of department or deputy heads) who will have particular expertise in subjects or aspects of school management.³² A new Master Teacher grade has been recommended by the Independent Review of Teaching Standards as a replacement for the existing Advanced Skills Teacher and Excellent Teacher grades: the best teachers would be paid more while staying in the classroom.³³

However, research, particularly by the OECD has also shown that in-school variation – differences in standards between departments within schools – is often greater than the variation between schools. The OECD has said this is an important issue for leaders to tackle.³⁴

The leadership of learning communities will include encouraging evidence based practice with time for collective inquiry, facilitating collegial and coaching relationships, ensuring that performance management is effectively implemented and designing professional development to tackle within-school variation and share internal best practice.

BCG estimates that programmes to improve the sharing of best practice with FSM pupils within and across schools should be both cost-effective and relatively straightforward to implement, although they would require critical mass to be cost-effective. Building on existing networks, including those run by the National College and the Schools Network would have an initial critical mass, but it would be important to reach those schools that don't actively engage in such networks. The Government has said that 'outstanding' schools that become academies should share good practice with weaker schools. Formalising that expectation alongside existing networks may provide an effective way forward.

v. Building teacher skills to support FSM pupils

Allied to this sharing best practice is the fifth 'safe bet' identified by BCG: building teacher skills to support FSM pupils. Initiatives that they considered were improving the training of new and serving teachers and heads, as well as the use of summer booster classes to update teachers' skills. The government has committed itself to improvements in initial teacher training, with more training taking place within schools and through Training Schools, and the National College has announced a strengthening of its main headteacher qualification, which will no longer be compulsory for new heads.³⁵ New teaching standards will come into force later this year.³⁶ At the same time, serving teachers normally have five professional development days a year, though the effectiveness of how those days are used varies enormously, and the best schools supplement these opportunities through classroom observation and feedback, and a strong appraisal system.

³¹ Ofsted (2010) *London Challenge* at <http://www.ofsted.gov.uk/resources/london-challenge>

³² See www.nationalcollege.org.uk/index/professional-development/specialist-leaders-of-education-programme.htm

³³ <http://www.education.gov.uk/a00200711/great-teachers-could-become-master-teachers>

³⁴ OECD (2007) *Improving school leadership: Country Background Report for England*, p.74

³⁵ See www.nationalcollege.org.uk/index/professional-development/npqh.htm

³⁶ See www.tda.gov.uk/training-provider/itt/qts-standards-itt-requirements.aspx

BCG looked at the impact of Teach First, a programme that places top graduates into teaching positions in inner city schools for at least two years. An evaluation of the programme, which has been already been extended by the coalition, shows that students at schools with Teach First teachers gain better results than other comparable schools, and the benefit is greater where there are more Teach First teachers.³⁷ They are also seen by their heads as good teachers. A second initiative examined by BCG was the Framework for Understanding Poverty, a programme initially developed in the US that seeks to break down social misunderstandings between middle class teachers and disadvantaged students. Once those barriers are broken down, it becomes easier to ensure structure in the students' approach to schools. It is delivered through training days with lectures from leading experts, group activities and best practice sharing sessions for teachers at disadvantaged schools. Three-quarters of teachers attending a conference in Reading in 2010 said they were likely to change their practice as a result of what they had heard and learnt.

BCG suggested that the Framework for Understanding Poverty approach could be included in initial teacher training, while the most effective teachers could mentor colleagues. Successful heads would help train colleagues. Teachers could be presented with summer schools, offered in universities or by teacher associations and networks, as an opportunity for professional development, based on their specific needs as assessed by heads. While there may be resistance, particularly to giving up some holiday time, BCG estimates that all these approaches could be highly cost effective. In practical terms, the issue will be developing them alongside existing initiatives and reforms.

Other programmes

While these five initiatives were seen as 'safe bets', BCG looked also at three programmes that were more experimental, where pilots could develop better practice, and two areas where real innovation was needed in a highly targeted way.

In **Preparing for Primary School**, they considered the benefits of parenting classes, which have been increasing over recent years, and the idea of primary school teachers paying visits to pre-school children's homes. They looked the benefits of pre-school booster programmes for FSM pupils, drawing on evidence from the PEEP programme cited above. They saw benefits in having nursery schools attached to primary school, easing transition just as all-through schools are believed to do. And they considered have a full nursery school day for the most disadvantaged, that might be funded as an alternative to increasing the early years entitlement from 12.5 to 15 hours a week. All these approaches would need to be highly structured, with a strong emphasis on improving pre-literacy skills. However, with the exception of booster classes, each was assessed as relatively costly given the potential benefits. These initiatives should be effectively piloted before being more widely used.

³⁷ University of Manchester (2010) *Maximum Impact Evaluation: The impact of Teach First teachers in schools* available at http://www.teachfirst.org.uk/web/FILES/TeachFirstMaximumImpactEvaluationReport15980_833.pdf

The Sutton Trust has supported a range of initiatives designed to ensure that the brightest young people from poorer backgrounds apply to leading universities. These are about **Raising Student Aspirations**, and they have encouraged more applications. BCG looked at how such programmes might impact on FSM students as a whole. They considered university visits for FSM Year 10-12 students, accompanied by their parents. They looked at the benefits of programmes to support students applying to university. One successful initiative run by Liverpool University is the Professor Fluffy programme, targeted at raising primary pupils' aspirations.³⁸ They considered the value of external career-focused speakers and careers fairs. They looked at the importance of strong careers advice and guidance, and the benefits of introducing it in primary school. While many of these initiatives were potentially very cost-effective, there is too little strong practice in many of these areas. So, BCG recommended that pilots be developed to test what works best with FSM pupils.

A third area considered by BCG was the **use of incentives to attract and retain teachers**. Successive governments have used 'golden hello' to improve recruitment in hard to recruit subjects like maths, chemistry, physics and languages. For 2012 recruits, bursaries of up to £20,000 a year are available for graduates training in these subjects, with the highest rewards for those with first class honours degrees.³⁹ At the same time, the Government is overhauling the system of performance related pay, which it regards as too bureaucratic, focusing on a new Master Teacher grade for the best teachers. BCG looked at the potential of awards for individual teachers and schools that achieved outstanding improvements or success. They also considered the value of incentivising the best teachers to teach in underperforming schools, and a much more transparent link with performance related pay to pupil performance and progress. In particular, they looked at the Future Leaders programme, which accelerates promising teachers into leading disadvantaged schools.⁴⁰ Improvements in some, though not all, Future Leaders schools are well above average. They also looked at the ProComp programme in Denver, Colorado, where all teachers at challenging schools receive a bonus, with extra bonuses for high performance and completing relevant qualifications. Teachers believe it has improved their teaching, and it has helped improve teacher retention.⁴¹ In England, the School Achievement Award Scheme (SAAS) ran from 2000-2003, rewarding the most improved and highest performing schools. A typical school received a one-off payment of up to £30,000, depending on its size. Most staff received a bonus of £100-£300. A MORI research evaluation in 2003 showed that winning the award was more important than receiving the money in most schools, but just over 40% of heads and teachers saw it as an extra incentive to improve pupil progress further and a quarter said it had made a positive impact on their results.⁴² However, new initiatives in this area are potentially high cost and contentious, and many have relatively low impact. There may be opportunities to pilot approaches to rewarding teachers to test the potential impact further.

The **use of technology to improve learning** has been a major goal both of educators and the ICT industry over the last decade. However, the content has not yet matched the technology. In a 2011 speech, the Education Secretary, Michael Gove said that too much emphasis had been "placed on machines that quickly become obsolete, rather than on training individuals to be technologically as literate and adept as they need to

³⁸ See <http://www.liv.ac.uk/educational-opportunities/primary/index.htm>

³⁹ See www.tda.gov.uk/get-into-teaching/subject-information-enhancement/teach-maths/funding-pay-benefits.aspx

⁴⁰ www.future-leaders.co.uk

⁴¹ University of Colorado (2010) *An Outcomes Evaluation of Denver's Alternative Teacher Compensation System*

⁴² J Stevens, C Simm and H Shaw (2003), *Evaluation of the School Achievement Award Scheme (SAAS)*, DFES Research Brief no RB247. www.education.gov.uk/publications/standard/publicationDetail/Page1/RB427

be.”⁴³ Yet there is also a sense that technology should be able to do more to engage students and to personalise lessons. Some schools do achieve this, but analysis by the former technology agency Becta showed that they were in the minority. One particularly innovative school is the Shireland Academy, in Sandwell, which was the first in the country to develop a learning portal that could be accessed by parents, teachers and students. The portal is visited 3000 times a day and has helped the academy gain outstanding status from Ofsted. The inspection report found that “...almost all lessons are sharply focused, skilfully managed, well paced and free from disruption. Technology is used very well in lesson planning and delivery....the expectation that students themselves will be actively engaged in lessons challenges the natural reticence of many students..... Many lessons are outstanding because teachers are skilful and imaginative in achieving rapid and secure gains in students' skills and understanding.”⁴⁴ Analysis of a personalised technology programme in New York schools showed bigger gains for the poorest students.⁴⁵ Under the School of One programme, computer generated ‘personal playlists’ are provided by students, listing teacher contacts, work schedules and project work during and after school. The playlists are appropriate to each student, and set at the right level of challenge. While all categories of student improved, progress over a trial three month period was twice as high for low performers and three times as high for mid-low performers as for others. BCG saw strong benefits in an effective school portal, like that in Shireland, and reasonable benefits in using IT to engage FSM students and families and in providing students with palmtop computers. But they also saw real risks that computers could simply act as ‘babysitters’ and substitute for strong teaching; individual PDAs could easily be lost; and portals could be hindered by lack of IT access at home. Given the potential cost, these were programmes that would need testing in highly targeted ways.

Finally, BCG looked at the potential benefits of **encouraging parental education, engagement and aspiration**. Many teachers regard this as one of their biggest obstacles to lifting the horizons of poorer students. BCG looked at three projects. Supporting Parents on Kids Education in Schools (SPOKES) aims to improve the behaviour and literacy of poorer children by improving the skills of their parents. It is delivered in a number of schools and children’s centres, and a randomised control trial analysed by Oxford University has shown significant improvements in reading scores among participants’ children.⁴⁶ Families and Schools Together (FAST) helps the families of challenging children improve parenting skills and connect with schools. The programme, which operates in 14 countries, uses family evening groups to address parental concerns. 80 per cent of parents complete the eight week programme, and most report greater involvement in their children’s schools and wider community.⁴⁷ Positive Parenting Programme (Triple P) is designed to use family intervention to prevent and treat behaviour problems in young people. Depending on the intensity required, interventions range from advice sheets to one-to-one coaching. Assessment of a Triple P trial in Stoke-on-Trent found young people whose families had participated had fewer conduct or peer problems, were more attentive at school and were more likely to behave well. Parents were more likely to address issues calmly

⁴³ Speech to the Schools Network, December 2011. <http://www.education.gov.uk/a00200484/michael-gove-speaks-to-the-schools-network>

⁴⁴ Ofsted (2011) *Shireland Collegiate Academy Inspection Report* available at <http://www.ofsted.gov.uk/provider/files/1512695/urn/135170.pdf>

⁴⁵ NYC Department of Education (2010) *School of One: Results from afterschool and in school program* available at www.schoolofone.org

⁴⁶ Roberts, F. & Sylva, K. (2009). *Training parents to support their children’s reading at home: a randomised controlled trial*. British Psychological Society (BPS) Developmental Section Annual Conference, Nottingham

⁴⁷ McDonald, L., Moberg, D. P., Brown, R., Rodriguez-Espiricueta, I., Flores, N., Burke, M. P., et al. (2006). After-school multifamily groups: A randomised controlled trial involving low-income, urban, Latino children. *Children and Schools*

and without over-reacting.⁴⁸ While all these programmes clearly had an impact on their participants, BCG questions whether such an indirect route is the best way to improve results for the target students and schools. It is an area for further innovation and highly targeted interventions.

⁴⁸ Information provided by First Steps Psychological Service on Triple P in Stoke-on-Trent. See <http://www.combined.nhs.uk/ourservices/childreyoungpeople/Pages/FirstSteps.aspx>