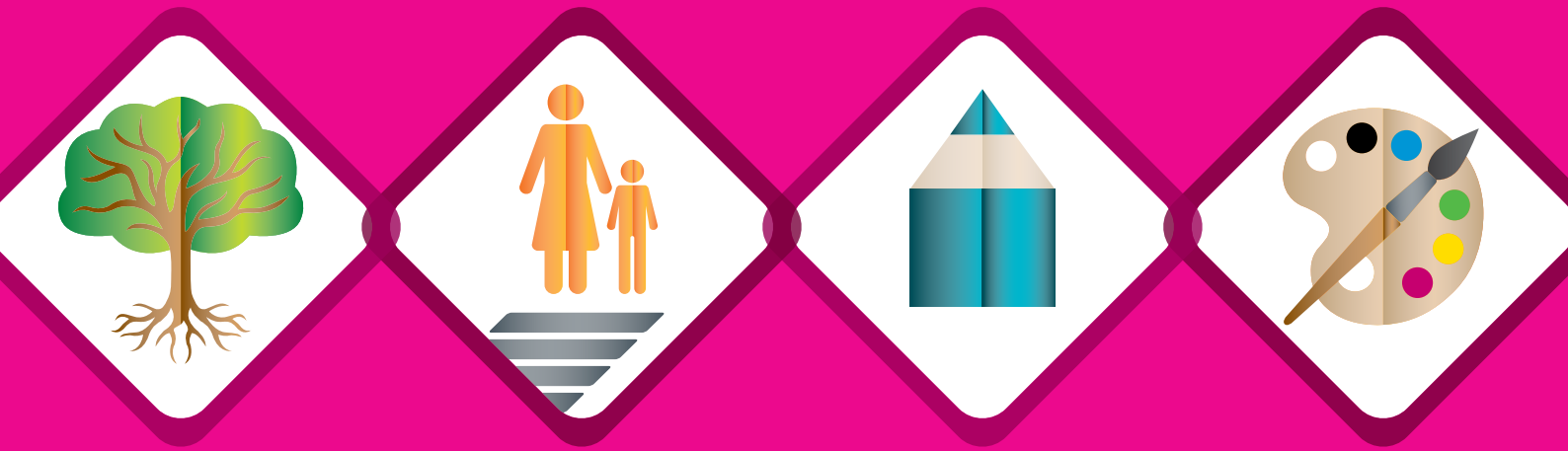


First steps

A new approach for our schools



ambition [noun] a desire and determination to achieve success.

“The correct analogy for the mind is not a vessel that needs filling, but wood that needs igniting.”

Plutarch

First steps is based on detailed discussions with business leaders, teachers, school leaders and academics to understand and examine the performance of the UK's education systems. We have also used analysis provided by McKinsey & Company to identify and learn from the best schools in the UK and successful examples around the world. Our thanks go to McKinsey for this support in both gathering data and structuring analysis effectively.

Contents

Foreword	05
Executive summary	06
1 Better education should be our overriding long-term priority	11
2 Our education systems are not delivering – while average performance rises gently, too many are left behind	17
3 Change is possible – but we must be clearer about what we ask schools to develop in students and for what purpose	27
4 Laying the foundations with parents and communities is crucial	37
5 Empowering school leaders and teachers to deliver is the right choice	45
6 We must drive change through a culture of expectation – aligning curriculum and examinations more effectively with the outcomes we seek	51
Annexes	57
References	61



Foreword



This report deals with the most important part of the UK's long-term growth strategy – improving education. As our work sets out, the potential economic gain from getting this right is enormous, yet today we have a system where a large minority of our young people fall behind early and never catch up. This cannot be acceptable.

In starting the work that led to this report, we were reacting to a growing feeling among businesses that a focus on the CBI's traditional area of expertise – the transition to work – while important, was failing to address the issue of low performance in our education system at source. With our international competitors raising achievement every year a more fundamental approach was required. It is always far better to prevent the injury in the first place than develop a better sticking plaster through apprenticeships or other forms of later education.

This concern gave birth to this substantial piece of evidence-based work. I want to thank the many business leaders, teachers, school leaders, academics and other specialists who have contributed, especially our steering group. Our conclusions justify the decision we took to get involved in this debate. Better education could add £8trn to GDP over the lifetime of a child born today, the equivalent of one percentage point on growth every year. But there is far to travel to achieve this – gaps of up to a year in attainment are already observable by the time children are five, and they widen through the primary years. The high percentage of young people failing to achieve at 16 and 18 is merely one end of a long conveyor belt that has tolerated low performance.

In the report, we set out that underperformance is driven by narrow definitions of achievement that encourage a focus on the average – a kind of cult of relativism that says it is OK for a certain percentage of young people to fail. This must be challenged. A broader, bolder approach has the potential to be transformational.

In practice, this means that we must develop rigour in the curriculum and better exams, but that is only part of the solution. The other factors that make schools systems successful – like community support, good teaching and a culture and ethos that extends rigour beyond the merely academic – also need to be fostered. We set out some key steps governments can take to ensure their visions for vibrant schools are delivered. This includes defining a new performance standard based on the whole person we want to develop, and a rigorous and demanding accountability regime that assesses schools' performance on a wider basis than the narrow measure of exams. I view this as an approach that will build on the positive direction of travel in England and deliver young people who are rigorous, rounded and grounded. While the report goes into depth on the system in England, the principles for reform we set out are applicable in all four UK nations.

There is no more important issue facing this country than education. The title of this report is well chosen – we intend to make this document the basis of a bolder business engagement with education issues over coming years.

John Cridland

John Cridland
CBI director-general

Executive summary

Overview

This report launches the CBI's education campaign. It sets out businesses' views on school reform based on a substantial review conducted this summer of what works in the UK and globally. It was commissioned to identify the key issues facing the UK's schools and the approaches that will help to address them. Based on these examples, evidence shows that the best systems:

- Have a clear sense of what they wish to deliver in terms of knowledge and behaviour and align school accountability frameworks to this
- Use parental and community engagement (especially in early years), effective devolution of power to schools, and a culture and ethos of rigour in everything a school does – including assessment – to deliver the goal.

Successive governments have introduced education reforms designed to improve performance in the UK, but because they have only been partial in their aim (trying to deliver improvement through the exam system or through specific programmes) and have judged success through narrow metrics, they have met with only partial success. For instance, setting targets for just 60% to reach expected levels in English and maths at the end of primary education or for 40% to achieve five or more 'good' GCSEs A*-C, says little about the wider achievement and preparation of those who make the standard and accepts a substantial rate of failure. This has been the pattern of reform across the whole UK – a series of individual changes aimed at improving performance rather than a more co-ordinated approach. The result of this – despite gently rising average performance – is a system that tolerates a large degree of failure, including some grade inflation, and in which there is confusion about overall purpose.

Current reforms in England in particular offer an excellent opportunity to address this issue. They rightly acknowledge the vital role of returning power to school leaders, rigour in the system and lessening prescription from the centre. But unless all reforms are aligned to a clear set of outcomes across academic performance and the behaviours young people need to move on in life – which we task our schools with and rigorously score them against – there is a risk that a tougher exam system will simply lead to higher failure rates. We need a 'whole system' approach to educational improvement. The Westminster government's reform agenda moves us in the right direction on this, as does the Curriculum for Excellence in Scotland, but there is more that needs to be done to ensure success. We set out this approach – which we call rigour-plus – in this report.

Better education should be our overriding long-term priority

Evidence shows that improving education standards has very positive effects across society. As global competition increases, the necessity of educational improvement will only grow as our competitors continue to improve absolute performance in their schools. In China for example, a ten year education reform plan is underway to "*give priority to education and turn China into a country rich in human resources*".¹

In the UK, raising educational attainment to the levels of the best in Europe could add one percentage point to growth annually. Raising the performance of UK schools to match that of Finland on core subjects could have a value of more than £8trn over the lifetime of a child born today – few other changes could make such a powerful difference to the UK's economy.

Meanwhile, raising educational standards is also associated with a range of positive outcomes on both individual and societal measures – including impacts on crime, health and parenting.

Our education systems are not delivering – while average performance rises gently, too many are left behind

The UK's school systems have had 35 years of piecemeal reforms. The result has been a gentle upswing in average performance, judged by international benchmarks. But the average hides the education system's long tail of low achievement with children falling behind long before they reach secondary school, and particularly between the ages of seven and 12. Among pupils qualifying for free school meals in England for example, 81% reach the expected level of maths in Key Stage 1 at age seven. But by the time of Key Stage 2 assessments at age 11, only two thirds (67%) do so.

The system is currently too much of a conveyor belt – it moves children along at a certain pace, but does not deal well with individual needs. This is not a matter of money – we spend more than many competitors with better performing systems – it is the narrow definition of success we give schools at each stage of development, for instance pupils achieving five A*-C GCSEs in any subject at 16, that encourages this approach.

The conveyor belt approach means we fail to properly stretch the able, while results for young people from more disadvantaged backgrounds are particularly troubling. Many fall behind even before they reach school and never catch up. We must replace the notion that it is acceptable for a third of children to fail to achieve expected levels of core knowledge and skills and instead judge success for schools on how they deliver for every child.

There is nothing inevitable about the pattern experienced in the UK. Other high-performing school systems show it is possible to greatly reduce attainment gaps and raise standards on a broad basis.

Change is possible – but we must be clearer about what we ask schools to develop in students and for what purpose

The best systems globally, and the best schools in the UK, start with a clear idea of what their system should deliver. Everything they do is aligned to meet this goal.

In the UK more widely, this has not been the case. Over the years, a patchwork of reforms has confused schools, and encouraged micro-management and a tick-box approach that has alienated teachers. Too often, what is right for the young person may not be what underpins the school's league table position.

We call for a much clearer and broader statement of intended achievement for our school systems. This should set out the core and enabling subjects young people are expected to master, but also the behaviours and attitudes our school systems should foster, which depend more on the wider ethos of the school. The statement should be long-term, stable and widely backed by stakeholders, including political parties. We set out our own views on what this should contain in this report.

Once defined, these core goals for our education system should be handed to Ofsted, or its devolved equivalent, to assess schools. This implies far greater use of narrative reports and a move away from league tables as schools are judged on a more rounded basis. This will require significant investment in our school inspection system to make sure it is robust, some of which is already underway.

Recommendations:

- **Development of a clear, widely-owned and stable statement of the outcome that all schools are asked to deliver. This should go beyond the merely academic, into the behaviours and attitudes schools should foster in everything they do. It should be the basis on which we judge all new policy ideas, schools and the structures we set up to monitor them**
- **Once developed, Ofsted (and equivalent bodies in devolved nations) should be asked to steward the delivery of these outcomes, judging primary and secondary schools on their performance. This implies resourcing these bodies to develop an approach based on a wider range of measures and assessments than are currently in use, and to support inspectors to use them. The outcome of this will be better and more relevant narrative reports that cover both academic and behavioural development, and the use of these for assessment of schools rather than exam result league tables.**

Laying the foundations with parents and communities is crucial

Parental engagement matters to educational performance – in the early years and throughout schooling. The differences between students with strong home learning environments and those without them can be measured in years of development. For example, children from the most disadvantaged areas typically lag behind their counterparts from middle-income homes at school entry at age five by nearly a year in terms of their vocabulary.

Expanding access to high quality, structured childcare in key communities is an essential step towards stopping children falling behind early in life, as is taking action to ensure it is more affordable. Increased regulation of the quality of staff and the teacher-to-pupil ratio has driven up costs to a worrying level, and we need to find ways to ease the burden on families while also ensuring quality.

Once at school, the focus on effective support from parents and communities should not diminish. Businesses too need to step up to the mark. We should expect schools to actively engage the wider community to ensure all young people have exposure to positive role models and ideas of what they could achieve – but those outside the school gates must give the support schools need.

Recommendations:

- **Greater focus of early years spending on parenting support and structured childcare provision in areas where educational performance is low – government must accept an element of differential funding and target the budget on provision in the most disadvantaged communities**
- **Raising the standard of childcare through adoption of the Nutbrown review's recommendations on improving early education quality, in particular staff competence and qualification, and building on the work of the Childcare Commission to review ratios, the structure of tax support for families and the pattern of nursery provision to make this step affordable**
- **Adoption by schools of a strategy for fostering parental engagement and wider community involvement, including links with business**
- **A new commitment for a strategic, systematic and long-term engagement by business to a needs-led school programme, focusing on raising aspiration and attainment.**

Empowering school leaders and teachers to deliver is the right choice

Decentralisation of power to schools is the right policy. The role of good teaching and school leadership cannot be overstated. During the period of just one year, pupils with a very effective maths teacher gain 40% more learning than those with a poorly performing one.² Importantly, the effects are especially significant for young people from disadvantaged backgrounds. Over the course of a school year, these pupils gain 1.5 years' worth of learning with very effective teachers compared with 0.5 years' worth with poorly performing teachers.

Setting schools free to deliver the outcomes we task them with reaching will ensure school leaders can work with their staff to build an ethos and culture that embeds aspiration and ambition. The existing system has hamstrung and micro-managed teachers and headteachers for too long. The drive to decentralise control needs to go further, faster and spread to the devolved nations.

Teachers and school leaders are professionals – we should treat them as such, offering greater freedom in the classroom, better professional development and building a culture of improvement, linked to an effective system of performance management. Poor performance must always be addressed.

Recommendations:

- **The Department for Education should accelerate its programme of decentralisation of control for all schools in England. This should be extended to schools in other parts of the UK, freeing headteachers to deliver real improvements**
 - **Use decentralisation to give teachers greater freedom to tailor their teaching and structure the learning each child does**
 - **Support for professional development of teachers and heads should be enhanced to ensure they can effectively take on this challenge**
 - **In return, headteachers should be expected to be rigorous managers of their staff and accepted as such by teachers. Performance assessment, reward, improvement plans and, where necessary, dismissal should be tools available to and used by headteachers.**
-

We must drive change through a culture of expectation – aligning curriculum and examinations more effectively with the outcomes we seek

Expectation and ambition for young people should run through everything a school does, underpinning and enhancing the effect of a rigorous curriculum. As part of this, getting curriculum reform right is vital. So is structuring our exam system in a way that supports young people's achievement at 18 – which we see as the key focus age for education systems in the UK.

In primary schools, this is about delivering a rigorous core curriculum that also avoids a return to rote learning. This will require teaching quality improvement, but also a curriculum that allows skilled teachers to blend core achievement with an experiential-based approach that engages young people.

Too many young people get lost in the transfer between schools at 11. We need a renewed focus on how we engage them around the time of that change, up to and including a discussion of whether 11 is still the right age. Further work on this is necessary.

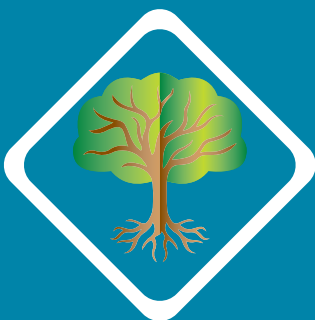
Finally, the exam system drives behaviour in later secondary, so must be aligned to the goals we expect schools to achieve. For the CBI, this means that we should increase the quality and rigour of qualifications at 18 – in both vocational and academic fields, and retain maths and English in all paths as part of this. At 16 – where we believe GCSEs must change and Nationals in Scotland are already changing – there is an opportunity to realign the system rather than simply putting a tougher exam in place. This approach could assess people rigorously on a more formative basis, allowing them to make better decisions about paths at the key points of 14 and 16, without creating such a substantial period of focus on public exams at 16 that will simply be a gateway to qualifications at 18.

Recommendations:

- **Removal of the currently over-specified and repetitive national curriculum from primary schools in favour of clearly defined goals on literacy, numeracy, science and computer science. These targets should be more stretching than the current national curriculum sets out, and would be judged by Ofsted**
 - **Addressing the performance drift between the ages of seven and 12 through teaching quality improvement at primary school and development of a new approach on handling the school transfer age based on a review of what works in the best systems in the UK and globally**
 - **Move the focus of our exam system to 18 and develop clearly rigorous and stretching standards for both academic and vocational A-levels, with maths and English retained until 18 for both**
 - **A move from GCSEs in the middle of this decade, but the development of a more rigorous and diverse assessment approach that helps better decision-making by young people at the key points of age 14, 16 and 18 rather than simply substituting GCSEs with a more rigorous exam at 16**
 - **A study of the routes taken by young people from age 14 should be commissioned to advise on the right balance of timing and the optimal mix between formative and summative assessment to focus the system on the route to high performance at 18.**
-

“... education enhances people’s ability to make informed decisions, be better parents, sustain a livelihood, adopt new technologies, cope with shocks, and be responsible citizens and effective stewards of the natural environment.”

2020 education strategy, World Bank



1 Better education should be our overriding long-term priority

- **A step-change in the UK's performance requires better education**
- **Radical improvements could boost economic growth significantly**
- **Better educational standards will also help address social issues**

A step-change in the UK's performance requires better education

We live in challenging times. A fundamental rebalancing of the world economy was already underway before the summer of 2008 – the global workforce was growing rapidly, businesses were becoming much more international and major economies such as the BRICs³ were growing fast.

This shift confronts western countries with tough issues. It challenges their national economies' ability to sustain living standards their citizens have taken for granted – and poses deeper questions about tackling the scale of their inequalities.

The CBI has repeatedly identified the absolute priority of an effective response to this changing global picture. In the early stages of the recession, for instance, we urged the UK to face up to the reality that long-term employment security could be achieved only by ensuring this country is a more attractive place to invest and do business than other locations.⁴ More recently, in 2011, we pointed out that muted demand from domestic consumers and our traditional export markets means UK businesses need to re-orientate their activities towards fast-growing markets in the global east and south.⁵ In doing so, we have to make sure growing businesses have the capacity to respond effectively – building a kind of UK *Mittelstand*.⁶

There is no doubt this remains the right economic strategy. But it relies for its long-term success on the talent of British people. As the OECD⁷ noted in its 2012 strategy report earlier this year, *“Skills have become the global currency of the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into economic growth, and countries can no longer compete in an increasingly knowledge-based global society.”*⁸



£8trn

– total potential gain to UK GDP over the lifetime of a child born today of reaching Finnish levels of achievement

The CBI would go further than this. We believe the attitudes and aptitudes of the British workforce, underpinned by their skills, are the most critical factors in determining the UK's ability to grow the economy and strengthen its society over the years ahead.

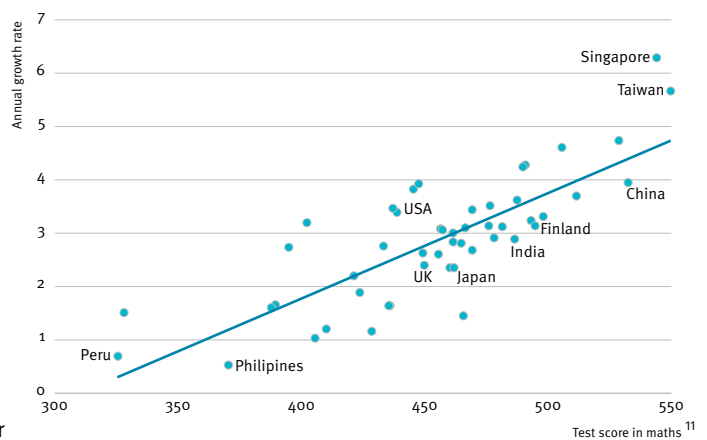
To achieve a step change in the UK's global competitiveness, therefore, we need to start with improving educational attainment among **all** young people. We have been making progress, but we need to go much further and much faster.

Radical improvements could boost growth significantly

There is solid evidence to support the view that education lies at the heart of a sustainable growth strategy. Over the past half century, those countries that have most successfully driven up their educational standards have enjoyed faster growth than those lagging behind in improving education.⁹ For instance, comparing results in international maths assessment tests with GDP-per-capita growth rates between 1960 and 2000 for almost all OECD countries (plus a number of developing countries) shows that as scores rise, so does economic growth – Peru, South Africa and the Philippines trail at the bottom, while Shanghai, Singapore and Taiwan lead at the top (**Exhibit 1**).

Drawing together the data, the OECD estimates that a “modest” target of a 25-point increase in its programme for international student assessment (PISA) test scores delivered over the next 20 years would add \$115trn to the total GDP of OECD nations in the lifetime of those born in 2010.¹⁰ This is based on the theory that increased educational attainment increases the capacity of a nation's economy, and therefore the potential it has to innovate and take advantage of opportunities to grow and attract investment.

Exhibit 1 Growth and maths achievement 1960-2000



Clearly, there is a big economic prize to be won. If we apply the conclusion of a key World Bank paper that a move of just 0.5 of a standard deviation in final results of school leavers can raise GDP by 30% over 75 years, the results are startling.¹² At current GDP levels, 30% of the UK's GDP is over £450bn, equivalent to over £7,000 per person.

Since this result was published, the authors have done further work looking specifically at EU member countries.¹³ For the UK, they estimate that raising the performance of UK schools to match that of Finland on core subjects could have a value of more than £8trn over the lifetime of a child born today.¹⁴ No other change would have such a significant and sustained impact on long-term economic growth. It could boost growth in the UK by more than one percentage point every year (1.08pp) – gold dust in an economy where growth has been flat over the past year.

Better educational standards will also help address social issues

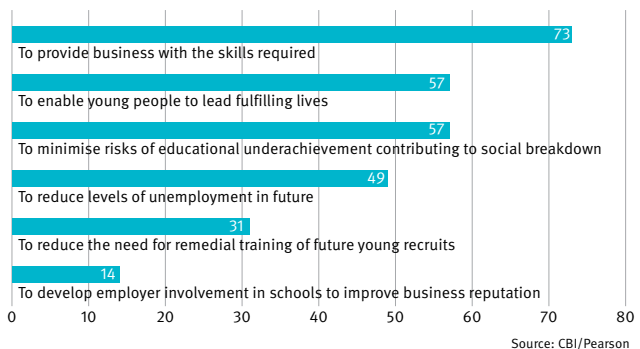
Improved educational performance also brings other important benefits. The purpose of education cannot only be economic. Inspiring ambition and aspiration in young people drives economic performance, of course, but it also predicts wider civic engagement and an ability to cope with modern life. Robert Putnam, for instance, has demonstrated that educational achievement predicts a very substantial range of civic engagement in the United States.¹⁵

There is plenty of evidence in the UK too of the wide-ranging positive social benefits of good schooling and the qualifications it helps people achieve. On every measure of social exclusion and well-being from dependence on benefits to early parenthood, from unemployment to smoking, those with poor levels of education fare worse than those who are better educated.¹⁶ Achieving educational success is associated with greater happiness, life satisfaction, self-esteem, and reduced risk of depression.¹⁷ It is also linked to better health and reduced likelihood of criminal activity.¹⁸

Moreover, the positive impacts of education feed through inter-generationally. People who do well at school and obtain qualifications tend to have children who do the same.¹⁹ The home learning environment and support generated by parents have a major impact on their children’s attainment.

In the light of findings like this, it is easy to see why schools policy should be important to all of us. This view is widely shared by businesses. Of course, firms look to schools to foster young people with the competencies they need to function effectively at work. But they also fully recognise broader individual and social concerns as major reasons to push up standards of educational attainment. Enabling young people to lead fulfilling lives and minimising the risk of educational underachievement contributing to social breakdown both feature among the most important reasons given by employers to raise standards in schools (Exhibit 2).²⁰

Exhibit 2 Employer views on the importance of raising school standards (%)



This child living in the richest 10% of areas in the UK has a 72% chance of getting a C or above in GCSE maths

This child, from the highest income group is three times as likely to enter university as those from the lowest income groups

This child's mother may be one of 81% of the richest mothers who hope their 9 year old will go to university vs. 37% of the poorest mothers

AGE 5

AGE 9

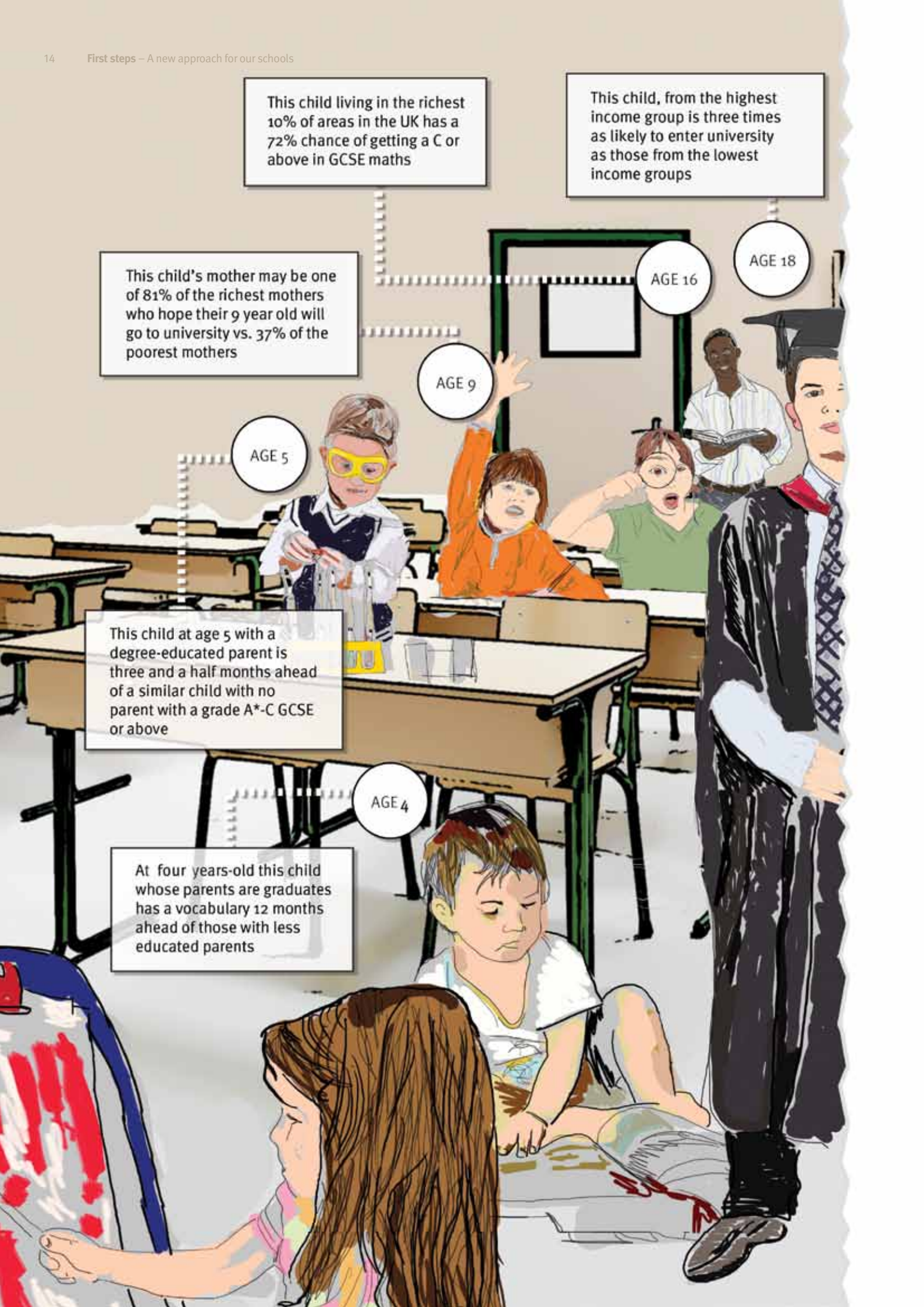
AGE 16

AGE 18

This child at age 5 with a degree-educated parent is three and a half months ahead of a similar child with no parent with a grade A*-C GCSE or above

AGE 4

At four years-old this child whose parents are graduates has a vocabulary 12 months ahead of those with less educated parents





This child lives in the poorest 10% of areas in the UK so has just over a 50% chance of getting a C or above in GCSE maths

By age 11 this child who lives in the poorest fifth of UK households has only a 75% chance of reaching the Government's Key Stage 2 expected levels, compared to 97% of children from the richest fifth

AGE 16

AGE 11



At the age of 4, this free school meals child will have heard 32 million fewer words than children from professional families

This child, from the poorest fifth of families, had a 45% chance of being read to daily at age 3, compared with 8 in 10 of children from the richest fifth of families

AGE 4

AGE 3



“... anyone can create an education system where a few at the top succeed, the real challenge is to push through the entire cohort.”

Andreas Schleicher, OECD



2 Our education systems are not delivering – while average performance rises gently, too many are left behind

- **We have a conveyor belt education system that tolerates a long tail of low performance and fails to stretch the able**
- **This is not about money – the narrow performance targets we give schools encourage a focus on averages**
- **Our exam system has been used as a measure of overall performance – but there is evidence that it may not be a reliable guide**
- **Other systems do better at addressing low performance, while also stretching the best: change is possible here**

We have a conveyor belt education system that tolerates a long tail of low performance and fails to stretch the able

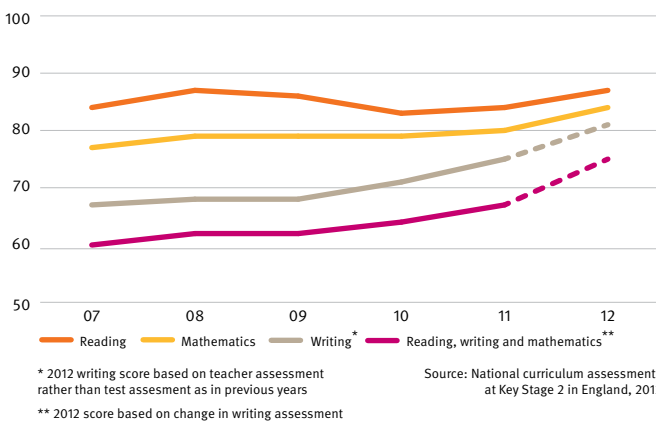
Since Jim Callaghan’s ground-breaking Ruskin College speech of 1976, governments of all parties in all parts of the UK have rightly accepted that education should seek to improve outcomes and

prospects for all children. Callaghan said that the system he saw in the mid-1970s was “*fitting a so-called inferior group of children with just enough learning to earn their living in the factory... in today’s world, higher standards are demanded*”. Education reform undertaken by the Thatcher and Blair governments also subscribed to this broad goal.²¹

We still seem to fail Callaghan’s test despite 35 years of initiatives however. On average, standards have risen – as the annual increase in average scores of GCSEs and equivalent qualifications shows.²² But averages paint a misleadingly reassuring picture. There is a long tail of low achievement among young people in our schools, and at every stage of education more fall further behind. The analysis presented here applies to England, but similar trends are observable across the UK. By age 11, for instance, a quarter of children fail to achieve the expected level in the three Rs (**Exhibit 3, page 18**). These children are disproportionately made up of those from disadvantaged backgrounds (**Exhibit 4, page 18**). The consequences are plain in the adult population. Around 16% of adults have literacy skills below the level expected of an 11 year-old and nearly half of adults have numeracy skills below the level expected at the end of primary school.²³



Exhibit 3 Eleven year-olds achieving Level 4 or above at Key Stage 2 (%)



Focusing on a slowly improving average poses another danger: measuring progress against the UK's past standards can provide false reassurance. The comparisons must be with the best school systems and outcomes across the world. And it's clear that they are not standing still. While England performed very strongly in the Progress in International Reading Literacy Study²⁴ for ten year-olds in 2001, the performance trajectory in reading between 2001 and 2006 was the third worst out of 35 countries, and absolute scores fell some way behind the leading nations²⁵ (**Exhibit 6, page 20**). Similarly, as results in the Programme for International Student Assessment (**Exhibit 7, page 21**) show the slip in performance of 15 year-olds across the UK in maths and reading is concerning despite the increase in the number of countries taking part in the study over time.

Exhibit 4 Make-up of those achieving Level 4 or above at Key Stage 2 (%)

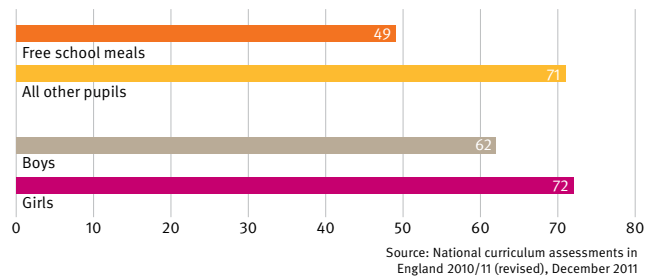


Exhibit 5 Major education initiatives over 35 years have tended to focus on controlling inputs, not outcomes

Action	Aim
1976 – Jim Callaghan’s Ruskin College speech opens ‘The great debate’ about education outcomes for state-educated children	To improve access to university and employment outcomes at a time when a debate over school structure – comprehensive versus selective – was still raging
1988 – Education Reform Act establishes: the National Curriculum, testing system, school league tables and grant-maintained schools	To bring about a standardisation of educational provision offered throughout the country, through curriculum specification
1994 – Dearing review of the National Curriculum, A* grade introduced for GCSEs	To ensure the National Curriculum was balanced in content and amount of teaching time it occupied
1998 – Teaching and Higher Education Act establishes: Sure Start scheme, maximum class size of 30 for five to seven year-olds, literacy and numeracy hours, end to grant-maintained status	Giving every child the chance to succeed through management of the education system by setting specific targets, assessing performance and offering money on ‘a something for something basis’
2002 ²⁶ – First academy school opened	To raise standards, typically in urban schools with high deprivation and a history of failure. Start of decentralisation as a core goal of education policy (if only for some schools)
2003 – Every child matters paper promises greater focus on families and carers in education	To better join-up education and family policy to ensure every child has the chance to succeed – approach taken seeks to specify pathways in great detail
2008 – Education and Skills Act enables government to raise the participation age in England to 17 in 2013 and 18 in 2015, SATS for 14 year-olds scrapped along with science exam for 11 year-olds	<i>“To end school failure and see every child challenged and brought on and no child held back or left behind.”</i> ²⁷ Some movement away from exam focus, but again the scoring approach for schools remains focused on narrow exam goals alone

Exhibit 6 The performance of England and Scotland's primary students in an international reading survey between 2001 and 2006

Country	PIRLS 2001 average score	PIRLS 2006 average scale score	Difference between 2001 and 2006 scores
Russian Federation	528	565	+37
Hong Kong SAR	528	564	+36
Singapore	528	558	+30
United States	542	540	-2
Netherlands	554	547	-7
England	553	539	-14
Scotland	528	527	-1
Romania	512	489	-23

Northern Ireland and Wales do not participate in the study



Exhibit 7 The UK's ranking in the international tests for 15 year-olds in science, maths and reading between 2000 and 2009

Year	2000	2006	2009
Science	4	14	16
Maths	8	24	28
Reading	7	17	25

In analysing the source of our tail of low achievement, the data shows that it starts early and gradually gets worse through the school system. The current system is like a conveyor belt in how it approaches children's progress, driven by the targets we set schools on performance. Those with strong support networks are carried along at the pace of the curriculum and – where they have the capacity to go farther and faster – those with parents and others who can support them to do this progress, while others do not. But for those struggling, there is often no such external support and their progress can be traced through the system:

“children from low-income families typically lag behind children from middle-income families at age five by nearly a year in their vocabulary”

- **The very early years open up big differences** – children from low-income backgrounds typically lag behind their counterparts from middle-income homes at school entry by nearly a year in terms of their vocabulary, and by smaller but still substantial amounts in other types of cognitive development²⁸
- **Primary schooling widens the gap** – a quarter of children in England, predominantly those from disadvantaged backgrounds already behind at age five, fail to make sufficient progress up to the age of 11 to reach the levels of attainment expected in reading, writing and maths. This is despite the bar being set lower in England in some important respects at that age than in high-performing school systems.²⁹ Most test results at age 11 suggest that many pupils from disadvantaged backgrounds are falling steadily further behind between the ages of seven and 11, compounding the achievement gap already in evidence at age seven (**Exhibit 8, page 22**). Among pupils qualifying for free school meals in England, for example, 81% reach the expected level of maths in Key Stage 1 at age seven. But by the time of Key Stage 2 assessments at age 11, only two thirds (67%) do so. The later stages of primary education are therefore seeing achievement gaps widening rather than narrowing. For many children, their early weaknesses are simply not being effectively addressed³⁰

“The later stages of primary education are seeing achievement gaps widening rather than narrowing.”

- **Further periods of drift are being tolerated** – in the transition from primary to secondary school around 40% of pupils fail to make progress in their first year.³¹ This period of slippage would be serious enough in itself, but for many pupils in this category it signals the onset of further relative decline in their educational performance³²
- **...and we are too ready to write off some young people** – in the later stages of schooling, by 14-16, many of those lagging behind at age 11 (and at earlier stages) have not caught up with others. The tendency could be to park them in courses that may help them get close to the expected exam standard, which meets the school’s goal but may be of questionable value and relevance in their future lives. This approach represents a triumph for relativism, with pupils either taught to the test while developing no real mastery of the subject being studied or left to fester in study of subjects where they will do least harm to the school’s overall results and league table position. In truth, however, this cult of relativism has blighted every stage of their educational journey. GCSE results in England (**Exhibit 9**) are merely the final confirmation of this.

For more able pupils from lower income backgrounds, a focus on the average also harms them. As **Exhibit 9** shows, performance seems to correlate with deprivation, suggesting they struggle to shine. Partially, this can be explained by a failure to focus on low performers who can then become disruptive, but it is also a sign that the UK system encourages teachers to file these young people in a box marked “will be OK” where they can be left to drift in the same way as lower performers.³³

Exhibit 8 Disadvantaged pupils achieving expected level at the end of Key Stages 1 & 2 (%)

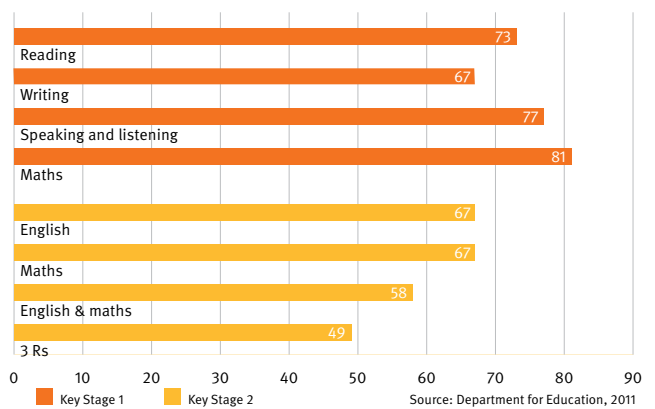
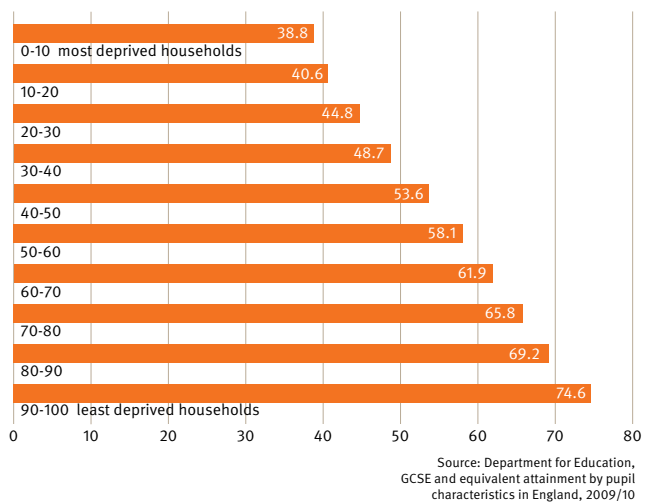


Exhibit 9 Pupils achieving five or more A*-C grades including maths and English GCSEs by household income group 2009/10 (%)



This is not about money – the narrow performance targets we give schools encourage a focus on averages

Funding is essential to raising educational performance, but it is clear that it cannot be sufficient on its own as a solution. Successive governments have devoted rising levels of funding to schools over decades (Exhibit 10). Over the period from 1956 to 1997, public spending on education climbed by 3.7% a year after allowing for inflation.³⁴ Spending on education accelerated still further after 1997, rising in real terms by 71% by 2010-11.³⁵

As a result, the UK ranks among the highest spending OECD countries measured in terms of percentage of GDP on education (Exhibit 11, page 24).³⁶ There has been serious and sustained investment in schools – but we are being outperformed by nations which spend less. In part, this is attributable to the amount of ring-fencing – leaving schools without the flexibility to be able to decide their spending. But overall, it is clear that the challenge lies not in what we spend, but in what we do.

The best explanation for the conveyor belt comes not from money, therefore, but from other incentives that schools face. Schools have become used to governments setting blanket targets, whether they are Key Stage assessments at primary school or the current benchmark in England of five A*-C grades at GCSE at secondary level. We should not be surprised that these drive behaviour – but not always the behaviour that the Department for Education wants.

Our exam system has been used as a measure of overall performance – but there is evidence that it may not be a reliable guide

The percentage of pupils gaining five ‘good’ A*-C GCSEs has increased by 50% over the last decade. If the target is correct, this should be an indicator of great success. Yet the true scale of the improvement in levels of attainment has been questioned by many commentators. In particular, movement of more pupils from just one side of the C-D grade boundary to just on the other side is unlikely to indicate a more general improvement.

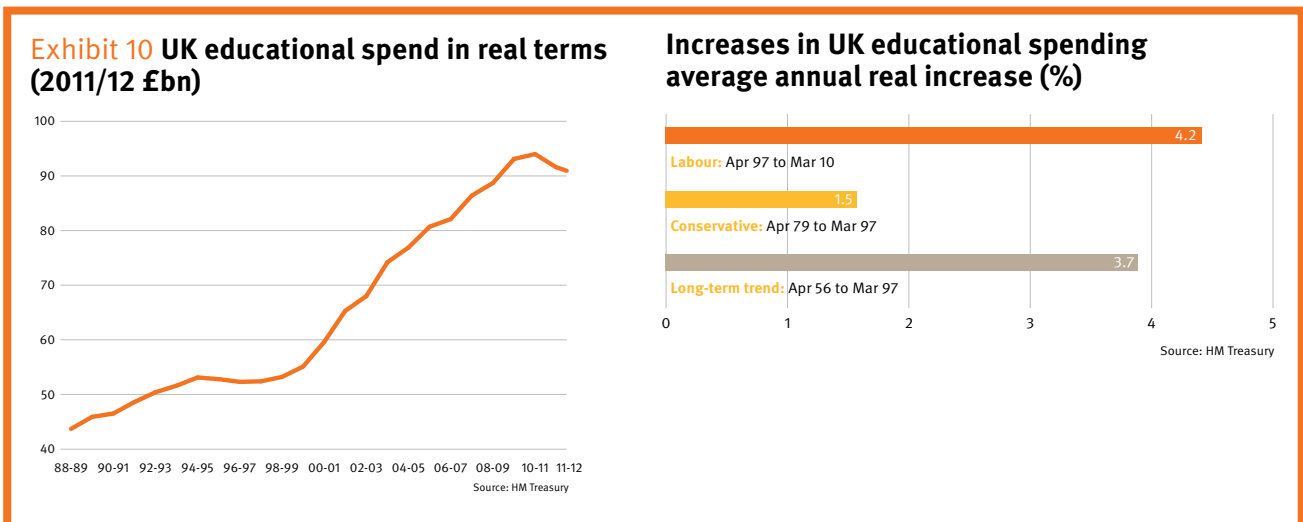
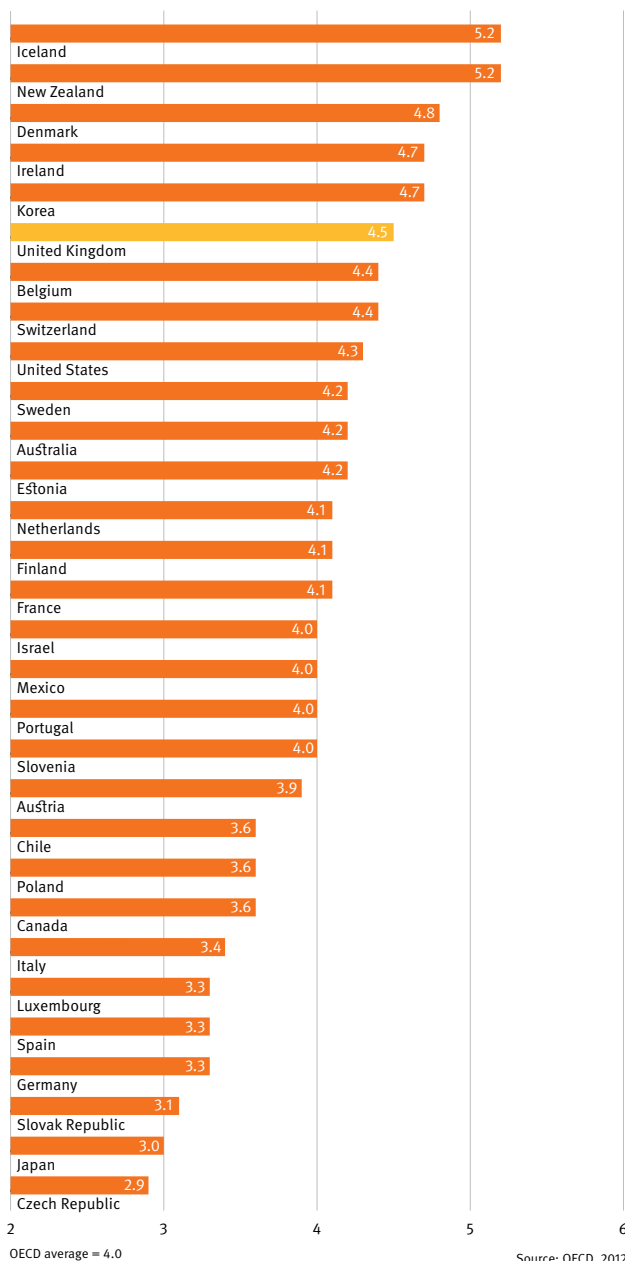


Exhibit 11 Comparison of primary, secondary and post-secondary non-tertiary education spend, 2009 (% of GDP)



When we look at whether the improvement on the GCSE metric is general or specific to those close to the grade boundary, it is clear that this measure is driving what is happening in schools. Firstly, there has been only a 10% increase in performance at GCSE in the traditional subjects that form the core of education. Much of the increase has been delivered through ‘equivalent’ qualifications, the rigour of some of which – though by no means all – have been called into question.³⁷ Secondly, grades awarded to candidates of average ability – the core group that the current accountability regime encourages schools to focus on – have gone up most when compared to a fixed standard (**Exhibit 12, page 25**).³⁸ This suggests some mix of grade inflation, intensive targeting of resources on pupils just below the C grade and/or an increase in teachers’ expertise in ‘teaching to the test’ has been behind improvements. Whatever the explanation, it doesn’t inspire confidence that the rise in exam grades for average ability candidates really reflects an increase across all groups in mastery of the subjects studied.

Narrowly-defined targets like these, based only on exam results subtly inhibit the overall education of young people. It discourages teachers from developing them into the accomplished adults needed in our society and economy, and it reduces the incentive to focus on those at the extremes of the distribution.

This is just one example of how narrowly-defined performance criteria can not only hide problems such as the conveyor belt highlighted earlier, but in fact embed it. At earlier stages in the system, similar testing frameworks focus school accountability on achieving a certain percentage of pupils reaching a defined average, rather than a focus on absolute attainment. If an acceptable level is reached, failure among a substantial minority is tolerated.

Exhibit 12 Average GCSE grade achieved across 26 subjects against a fixed standard (by grade)

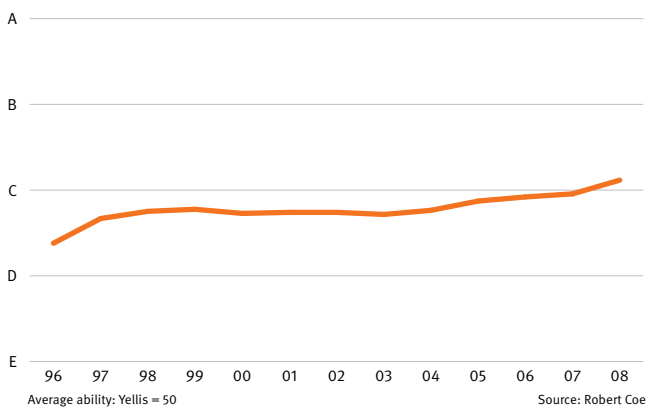
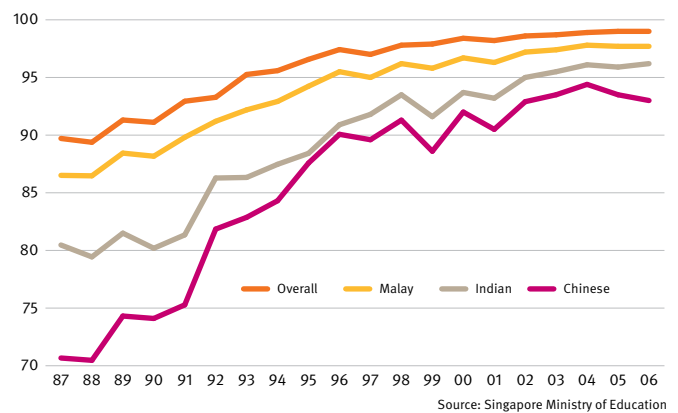


Exhibit 13 Singaporean children achieving eligibility for secondary school, by ethnic background (%)



Other systems do better at addressing low performance, while also stretching the best: change is possible

There is nothing inevitable about this pattern of children falling behind then not catching up. Other high-performing school systems have shown it is possible to dramatically reduce attainment gaps in their primary school populations and raise standards on a broader basis than the UK has managed. Over the past 20 years Singapore, for example, has markedly narrowed the achievement spread among its ethnic groups by the end of primary school (**Exhibit 13**).

By comparison, such absolute improvement has not been on the agenda here. The Westminster government, for instance, has set a

clear bar for primary schools in England, requiring them to ensure at least 60% of 11 year-olds reach the expected standard for their age in English and maths. Experience elsewhere in the world shows we should be looking for much more than that, and morally we should question whether it is acceptable for 40% of our young people to be behind. High performance, as seen in places like Singapore, requires a focus on every child, not an average. These systems also tend to do better at stretching the best, because they have a clear focus on every child, and therefore a clearly articulated approach to gifted and talented young people, but they also reduce classroom disruption caused by a tail of low achievers, which benefits all learners.



“What we want is to see the child in pursuit of knowledge, and not knowledge in pursuit of the child.”

George Bernard Shaw



3 Change is possible – but we must be clearer about what we ask schools to develop in students and for what purpose

- **The best systems and schools have a clear idea of the achievement – academic and personal – they should foster in students. This forms a guardrail that keeps them on track**
- **In the UK, some schools and systems do this, but establishing a broader definition of achievement at the centre would combat confusion**
- **Clear goals will emphasise culture and ethos in schools – a piece of the jigsaw governments still need to address**
- **The primary goal of school accountability systems should be coming to a more deeply-based view on whether a school is achieving the prescribed goal**

The best systems and schools have a clear idea of the achievement – academic and personal – they should foster in students. This forms a guardrail that keeps them on track

In addressing what can be done to shift our system to raising attainment and ambition for all children, we sought to learn from the best schools in the UK and successful examples around the world. In particular, we were looking for an explanation as to why decades of change had left us with a system which tolerated low attainment in a significant minority, while other systems had surpassed the UK – often spending less.

The most telling difference between successful and less successful schools and systems lay in how they articulate what their schools should achieve, and in the willingness of the system to align three key enablers to this – parental and community engagement, decentralisation of responsibility for delivery of the outcomes and an ethos and culture of stretch in everything a school does, including the curriculum. This avoids each change to the system being its own stand-alone debate, and the creation of confusion in the system sown by inappropriate incentives. In effect, it forms a guardrail around the system that ensures all actions are aligned to supporting every child's development towards a clearly articulated set of goals.



“Being clear on outcomes establishes a common purpose for educators.”

In the UK by contrast, we have often set out aspirational goals, whether about the percentage of children who go to university or the number of a certain type of school we want to encourage, but we have rarely been clear about how the system will deliver them. These goals have also changed too regularly – there has rarely been true consensus about what we are asking of schools, which is a recipe for confusion. In addition, delivery has been judged by an institutional measure – exam results – that is often not well linked to the goals set out at the political level. This means that our system lacks the effective and clear guardrails of the best systems, which makes transformational change of the sort currently being sought by the government in England difficult to achieve.

School systems in Singapore, Finland and leading areas of the US follow this approach – and so can the UK. In Finland, the goals of education are explicitly linked to competitiveness, research and

innovation.³⁹ Singapore operates with an explicit statement of the ‘desired outcomes of education’ (**Exhibit 14**). In the US, KIPP schools – which have been successful in raising attainment in disadvantaged areas, such as post-Katrina New Orleans – follow a similar approach. All of these focus on defining a holistic vision of the young person they are trying to develop, encompassing knowledge, attitudes and behaviours – not just exam passes. Only initiatives and behaviours that help achieve the shared outcome are taken forward.

Exhibit 15 pulls these strands together in diagrammatic form, illustrating their interconnected nature. For more than 35 years we have tinkered with individual elements in isolation – a repair to a pillar here, adjustment to the roof angle there. The time has come to think about the structure as a whole, based on an explicit understanding of what we are asking schools to deliver.

Exhibit 14 Singapore: building a world-class education system

First formulated in 1997, the desired outcomes of education (DOE) are attributes that educators aspire for every Singaporean to have by the completion of their formal education. These outcomes establish a common purpose for educators, drive policies and programmes, and allow the government to determine how well the education system is doing:

“The person who is schooled in the Singapore education system embodies the desired outcomes of education. He has a good sense of self-awareness, a sound moral compass, and the necessary skills and knowledge to take on challenges of the future. He is responsible to his family, community and nation. He appreciates the beauty of the world around him, possesses a healthy mind and body, and has a zest for life. In sum, he is:

- A confident person who has a strong sense of right and wrong, is adaptable and resilient, knows himself, is discerning in judgment, thinks independently and critically, and communicates effectively
- A self-directed learner who takes responsibility for his own learning, who questions, reflects and perseveres in the pursuit of learning

- An active contributor who is able to work effectively in teams, exercises initiative, takes calculated risks, is innovative and strives for excellence
- A concerned citizen who is rooted to Singapore, has a strong civic consciousness, is informed, and takes an active role in bettering the lives of others around him.”

The DOE are translated into a set of developmental outcomes for each key stage of the school and education system, spelling out what the education service aspires to develop in students through primary, secondary, and post-secondary education. In recent years the balance of teaching has shifted to reduce the amount of subject matter taught and to increase the learning of life-long skills, the building of character and competencies such as critical thinking and creativity.

Singapore repeatedly emerges as one of the top-performing school systems in comparative studies such as PISA and PIRLS. In all, 99% of young people complete secondary education and 93% progress to post-secondary education.⁴⁰ Attrition rates in the schools have been reduced – from about 5% in 1997 to about 1% today – through programmes and pathways to help at-risk students.

Exhibit 15 Framework for raising achievement across the whole education system

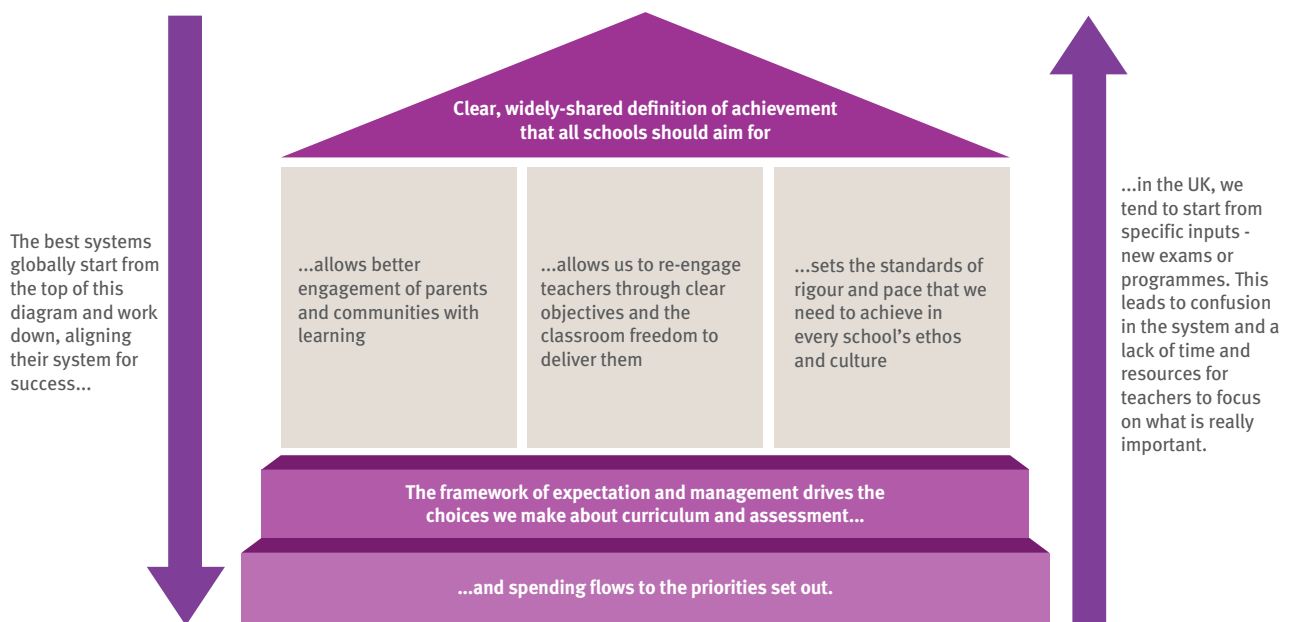


Exhibit 16 Business views on education reforms in England since 2010

“The government believes that we need to reform our school system to tackle educational inequality, which has widened in recent years, and to give greater powers to parents and pupils to choose a good school. We want to ensure high standards of discipline in the classroom, robust standards and the highest quality teaching. We also believe that the state should help parents, community groups and others come together to improve the education system by starting new schools.”

– coalition agreement, 2010

Business wholeheartedly supports this statement. The direction of government reform – decentralising powers to schools, high standards and better teaching – is right. Our major concern is that without a system guardrail in place that sets out the overall outcome we are looking for young people to achieve and aligns school accountability to it, the vast array of worthy initiatives that are underway to improve our schools will get bogged down, while

important parts of achieving a high performing system – like wider rigour beyond the curriculum – are lost. Unless the accountability system is changed to measure delivery against the overall goal, for instance, schools will still be incentivised to prioritise those things that help them achieve against an exam-based measure, even where that leads to a focus on averages rather than overall achievement. Likewise, we share the government’s concern to improve the quality of teaching and educational performance between seven and 11, but specifying the academic curriculum in great detail without reference to wider development risks killing off the very creativity in schools that the decentralisation programme is meant to harness.

This requirement for a system guardrail, aimed at the overall outcome of the system in both non-academic and academic terms, is the rigour-plus approach that this report advocates.

Annex A sets out a review of the position in the devolved nations.

“The lack of a comprehensive statement of the achievement we are looking for schools to deliver is a key failing.”

In the UK, some schools and systems do this, but establishing a broader definition of achievement at the centre would combat confusion

With the exception of Curriculum for Excellence in Scotland – which sets out key goals but does not yet align the school system effectively to deliver them – such clear outcome statements are rare in our system, and nowhere in the UK do they really drive the terms under which schools are assessed.

In England, the government has defined its approach as being based on curriculum rigour. And it is clear from looking at high performing systems globally and the best schools here that this is a vital part of any successful definition of achievement – but it is not enough on its own. Exam and curriculum rigour must be part of a wider system that also addresses social and behavioural aspects of education. In Singapore, as **Exhibit 14, page 28** shows, the definition of achievement goes far beyond exam scores.

This lack of a comprehensive statement of the achievement we are looking for schools to deliver is a key failing. In business, demand signals are relatively easy to pick up – customers either buy your products, or they don't. Leading private schools can read their market in the same way. State schools have a more difficult job to do as demand signals are less clear, especially in areas of high disadvantage. We have found that the best schools in such areas are typically led by headteachers who define the outcome they need to hit for themselves, in the face of the complex and inconsistent demands the system places on them.

One such school leader told us they had taken a conscious decision with one group of young people to focus on five key subjects and some life skills, knowing that the accountability system would score them down for it, as it expected eight qualifications from all students at that time. The school felt its approach would have better long-term outcomes for the pupils involved. Even this head – willing to swim against the tide – admitted to second thoughts when he saw the league tables.

Our system should reward schools making brave decisions which focus on boosting long-term outcomes for pupils, not punish them. Doing this requires a single statement of vision that schools can use to justify the decisions they make in a truly devolved system.

Clear goals will emphasise culture and ethos in schools – a piece of the jigsaw governments still need to address

The agenda of localising decision-making and increasing rigour that the secretary of state for education has set out for England offers the potential to deliver change that accords with the best of what the CBI has observed globally. But this change is currently partial; it must extend to all aspects of how schools in England are run – not just curriculum and exams – to be truly successful.

For real transformation in our education system to be possible a national consensus needs to be reached on a clear and stable statement on what schools should deliver. This is needed at the centre so that an important guardrail is in place for all schools. It should be able to survive changes of government and provide the test against which policy changes and school actions are judged. It should also help shine the light on whether the system is truly addressing the needs of all students, rather than just the few required to meet a government target.

From discussion with companies across the UK, businesses believe the school system should:

- Focus on raising the ambition and attainment for **every** child as far as their abilities permit
- Start from the principle of ensuring everyone leaves school with the basics of literacy and numeracy required for success in every walk of life...

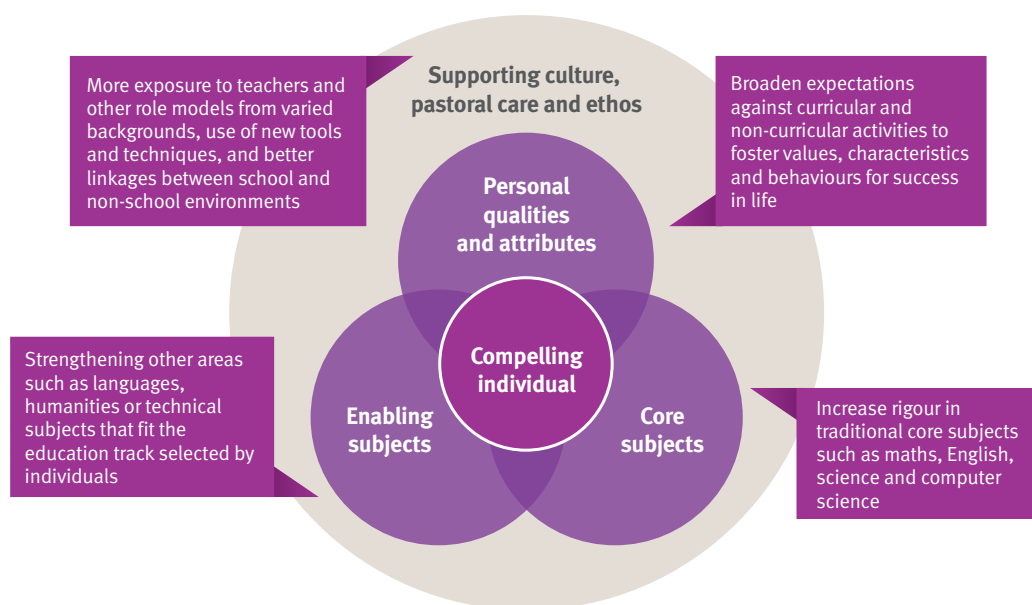
...embed wider core subjects (like the sciences and computer science) and guide young people effectively on their choice of enabling subjects...

...expect schools to create the ethos and culture that build the social skills also essential to progress in life and work, and allow them time to focus on this

- Have a school accountability and assessment framework that supports these goals rather than defining them.

Exhibit 17 sets out these goals, emphasising the role of the school in fostering all three. It suggests governments are right to focus on boosting the core, but that the other two elements of a compelling individual are less well developed in policy across the UK at present.

Exhibit 17 Elements of a successful outcome for schools



In the view of businesses, this kind of outcome can be delivered through development and measurement of school achievement across the three areas. First, every young person must master a range of core subjects to an adequate level – including critically maths, English, the sciences and – increasingly – effective use and understanding of computer science. These are core because only when young people have reached a sufficient standard in them can they make substantive progress in their studies and wider life. They furnish the essential scaffolding for gaining other knowledge and skills, whether in the classroom or a workplace.

Secondly, there are what we term the ‘enabling subjects’ – those that expand and enhance the core subjects – including humanities, languages, arts, technical and practically-based subjects. The range of these and the extent of specialisation in their study will vary according to interest and design, particularly from the secondary phase of schooling onwards. These are the subjects that equip a

young person to move on – either to university, or to an apprenticeship or vocational qualification. Every student will do a different mix of these, but all routes should be rigorous and stretching.

Finally – and far too neglected in the current debate – there is a set of behaviours and attitudes, a kind of social literacy that we must foster. An exclusive focus on subjects for study would fail to equip young people with these, though rigour in the curriculum does help. These personal behaviours and attributes – sometimes termed character – play a critical role in determining personal effectiveness in their future lives, and should be part of our vision. Businesses we consulted have set out their view on what the key ones are (**Exhibit 19, page 33**). Developing a pattern of behaviour, thinking and feeling based on sound principles, integrity and resilience involves broadening our traditional expectations, using curricular and non-curricular activities to help bring out those qualities in young people.

Exhibit 18 Examples of core and enabling subjects across education phases

Core subjects	Enabling subjects
English and functional literacy	Humanities
Maths and functional numeracy	Languages
Sciences	Art, design & technology
Computer science	Economics
	Employer-led apprenticeships
	BTECs/GNVQs

In the past, the CBI has tended to discuss many of these areas in terms of ‘employability skills’. This terminology was misleading, giving the impression that they could be taught separately in the curriculum. That is not the case – the curriculum is the space in which we deliver core knowledge and enabling subjects.

Behaviours can only be developed over time, through the entire path of a young person’s life and their progress through the school system. Everything that happens in a school should embed the key behaviours and attitudes.

None of this can happen without the right context at school and in the lead-up to formal schooling. A supportive culture, pastoral care and the right ethos are all needed to make the difference. Greater use of role modelling, exposure of young people to teachers and others from a wide variety of backgrounds, use of new techniques and tools, and stronger linkages between school, home and other non-school environments all have a part to play, alongside a culture and ethos of expectation and rigour.

An essential feature of this approach is that a long tail of pupils failing to achieve the desired outcomes can no longer be accepted. Different and innovative methods will be needed, but the aim must be to enable all of our young citizens to reach the desired standards.

The primary goal of school accountability systems should be coming to a more deeply-based view on whether a school is achieving the prescribed goal

For reform to be a coherent whole, all the incentives acting on schools need to be addressed. This includes the essential role of the accountability system, and the many conflicting expectations placed on schools. Judging real outcomes for every child and the steps schools are taking to deliver them is complex and not easily reducible to a league table or test, but this is the key point – a renewed system should be able to judge performance against the goals based on more complex metrics. For instance, a primary school should be judged on a basket of measures, not just testing scores at age 11. This basket would include the judgement of the inspector on overall culture and ethos, teaching and governance, but it would also include a group of data points, including testing but also outcomes data. These should be the building blocks of a balanced scorecard for schools and they should form the backbone of Ofsted narrative reports.

The implication of this is that the role of Ofsted (or its equivalent in the devolved nations) as producer of narrative reports should be greater, and that of league tables and simple exam-based metrics lessened. Reports from Ofsted should be the basis of effective challenge to heads and governing bodies on low performance, which should not be tolerated. We agree with Sir Michael Wilshaw in this regard, that satisfactory is no longer sustainable given the challenges we face in the 21st century. It will be necessary to support Ofsted and sister bodies to build capacity – particularly on inspector skills – to deliver this.

“If the education revolution of the 20th century was that basic education became available for most people in democracies – the education revolution of the 21st century should be that good education will become available for an increasing proportion of children”

Professor Niall Ferguson, Harvard University

Exhibit 19 Characteristics, values and habits that last a lifetime

The system should encourage young people to be	This means helping to instil the following attributes	Pupils will, for example:
Determined	Grit, resilience, tenacity	<ul style="list-style-type: none"> • Finish tasks started and understand the value of work • Learn to take positives from failure experienced • Work independently and be solutions focused
	Self-control	<ul style="list-style-type: none"> • Pay attention and resist distractions • Remember and follow directions • Get to work right away rather than procrastinating • Remain calm even when criticised • Allow others to speak without interruption
	Curiosity	<ul style="list-style-type: none"> • Be eager to explore new things • Ask and answer questions to deepen understanding
Optimistic	Enthusiasm and zest	<ul style="list-style-type: none"> • Actively participate • Show enthusiasm • Invigorate others
	Gratitude	<ul style="list-style-type: none"> • Recognise and show appreciation for others • Recognise and show appreciation for their own opportunities
	Confidence and ambition	<ul style="list-style-type: none"> • Be willing to try new experiences and meet new people • Pursue dreams and goals
	Creativity	<ul style="list-style-type: none"> • Identify and develop new ideas
Emotionally intelligent	Humility	<ul style="list-style-type: none"> • Find solutions during conflicts with others
	Respect and good manners	<ul style="list-style-type: none"> • Demonstrate respect for feelings of others • Know when and how to include others • Be polite to adults and peers
	Sensitivity to global concerns	<ul style="list-style-type: none"> • Be aware of pressing global issues, and contribute to leading society internationally

Recommendations:

- **Development of a clear, widely-owned and stable statement of the outcome that all schools are asked to deliver. This should go beyond the merely academic, into the behaviours and attitudes schools should foster in everything they do. It should be the basis on which we judge all new policy ideas, schools, and the structures we set up to monitor them**
- **Once developed, Ofsted (and equivalent bodies in devolved nations) should be asked to steward the delivery of these outcomes, judging primary and secondary schools on their performance. This implies resourcing these bodies to develop an approach based on a wider range of measures and assessments than are currently in use, and to support inspectors to use them. The outcome of this will be better and more relevant narrative reports that cover both academic and behavioural development, and the use of these for assessment of schools rather than exam result league tables.**

With these steps in place, it becomes possible to move exams to be about young people, rather than scoring schools. New rigorous exams in academic and vocational subjects at 18 – with retained elements of maths and English – can be introduced with confidence, and previous testing reformed to focus on developing better outcomes at 18

The curriculum should be structured around rigorous expectations of every child, on both knowledge and the development that we expect schools to deliver...

4. Better teaching – delivered by more flexible, decentralised schools and teachers who are better managed and have more freedom in the classroom – makes the biggest difference. Over just one year, pupils with a very effective maths teacher gain 40% more learning than those with a poorly performing one, for instance

2. A clear focus on attainment for every child ensures focus on progress for everyone in the school system

...and we should hold schools to account for delivering all of these outcomes

3. Better parental and community engagement leads to more vibrant schools, which introduce children to the wider world – including business – effectively, and give children from challenged backgrounds better role models. Good parental engagement can be worth two to three years of education to a young person. This opens young people's eyes to what they might achieve

1. Structured pre-school settings and parental support programmes in disadvantaged areas help to reduce attainment gaps that build up before children reach school

“The effect of parental engagement over a student’s school career is equivalent to adding an extra two to three years to that student’s education.”

Professor John Hattie, University of Melbourne



4 Laying foundations with parents and communities is crucial

- **Parental engagement matters – especially in the early years. Action is needed on parenting and childcare to ensure children from disadvantaged backgrounds avoid starting school behind their peers in terms of development**
- **Schools too need to harness parental involvement more effectively**
- **It is up to the wider community – including business – to step up to the mark and support schools where they need role models, advice or experience**

Parental engagement matters – especially in the early years

We all know that a school is only one part of the educational equation for young people. Parents and the wider community shape expectations and aspirations before and during schooling. But it is in the early years that the falling behind of a significant minority

of our young people begins. Without action before children start school, we will always be fighting a losing battle. By five, children are already at very different levels of attainment – sometimes by as much as a year of development.⁴¹

In the UK, we have introduced a number of early years initiatives that have shown encouraging results. The Sure Start programmes – now Sure Start Children’s Centres – provide parenting workshops as well as childcare, enabling parents to build a good home-learning environment. Home visits also allow staff members to engage with vulnerable families and model positive and engaged parenting behaviours.⁴² Evaluation indicates parents in Sure Start areas give their children a better home learning environment and a warmer parenting style than those in other areas, and that their children demonstrate better levels of independence and greater ability to regulate their own behaviour. Likewise, Family-Nurse Partnerships, offer regular home visits by a nurse to vulnerable young parents from before birth to the age of two. This programme is based on a US model which showed benefits that persist until the child is aged nine, including higher achievement in school. The early signs are the programme in England is yielding positive results.⁴³



Despite this, much of our debate has focused on childcare rather than child development – a balance that needs to be redressed if we are to tackle the gaps in achievement that open up early. Improving emotional stability, cognitive skills and school readiness should be our strategic goal. Social background or low levels of parental education don't have to be barriers to good home learning – and readiness for learning at school – yet they seem to be currently in the UK. When it comes to a child's learning, the reality is that what parents do is more important than who they are (**Exhibit 20**).

A valid criticism of UK interventions in this field to date is that governments have shied away from paying particular focus on the most disadvantaged communities. Sure Start centres are spread widely across the country, and there has been a tendency for more advantaged households to make fullest use of the available services. The effects tend to be less strong in lower skilled households and enrolment is lower too – with 77% of three to four-year olds from families in high disadvantage enrolled in early years education, compared to 94% of children of the same age from families in low disadvantage. These families also tend to be harder to reach directly through health visitors and community organisations, as our example from Glasgow shows (**Exhibit 22, page 39**).

Given the constraints on available resources, a tighter focus on supporting key communities is necessary. This should have two aims: firstly, to align funding and effort in a way that allows groups working in communities to build the trust they need to give effective advice to parents of young children and secondly to focus on the delivery of structured childcare to those families, irrespective of their parents' participation in the labour market. Children who need the most help to develop school readiness must have access to high-quality structured provision. Governments must accept different spending in different areas according to need, targeting resources at key areas to address a generational cycle of low educational performance.

For pre-school interventions to have the best impact on a child's development, the type and quality of the setting is of real importance. The analysis of evidence for the Nutbrown review on early education and childcare qualifications highlights the enduring positive impact of structured, high-quality settings, with a particular emphasis on highly qualified staff.⁴⁴

Exhibit 20 Standardised effect size of factors on age five outcomes

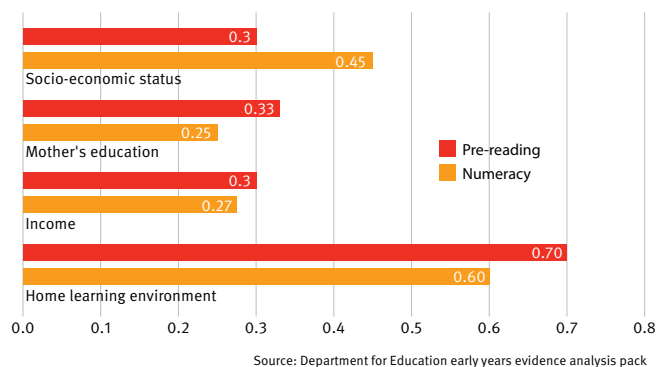


Exhibit 21 The value of structured childcare

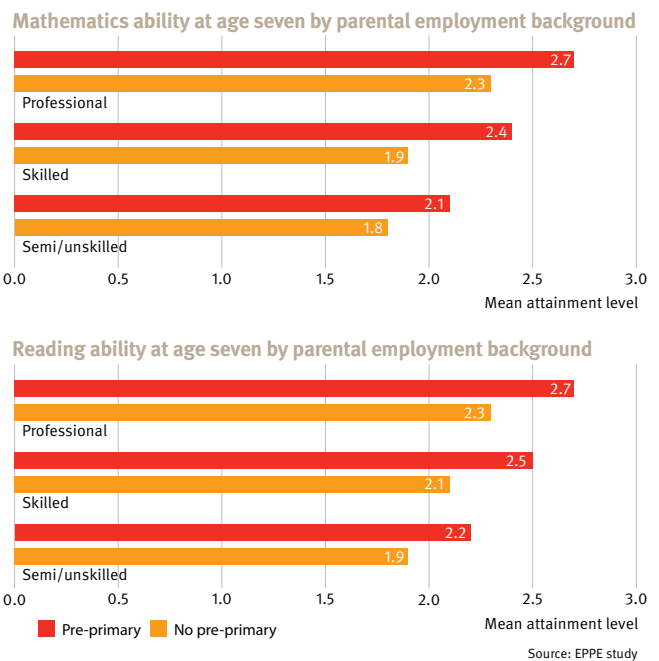


Exhibit 22 **With Kids – working with children and families providing individual, social and practical support**

With Kids is a charity based in the east end of Glasgow, which grew out of the work of the Big Issue Foundation in the city. It now also works in other areas of Scotland's central belt.

In some postcode areas of the east end, over 60% of children live in workless households. Life expectancy is among the lowest in the UK, and many children grow up without role models for what they might achieve. With Kids' success is based on embedding the understanding that while these statistics are bleak, they hide as much as they reveal – not all families face the same issues, and they will not face them at the same time.

With Kids says that the critical part to helping children and families is a more intelligent understanding of their needs, so the charity focuses on building a network and investing in trust between families and their trained family workers. It is through

this investment that With Kids is able to make decisions that impact positively on young people's lives, yet director Tricia Hughes reports that this is the area of their work where they most struggle for funding.

At the same time, there is over-provision of services elsewhere. Tricia cites a lack of co-ordination in some districts where the charity works that leads to a duplication of some services. That is no surprise, as it reflects the UK government figure of over £8bn spent each year on 120,000 families with the most complex issues. Co-ordination and effectiveness of funding is the primary issue. A better understanding of the parents and children concerned is the only way to align this spending. It suggests we should focus policy on understanding the families we are trying to help, before deciding what will make a difference.

An improved approach would focus more resources on key communities, giving workers time and space to build the relationships to ensure action and support is meaningful in the context of each family's needs.

Increasing the number of highly qualified staff in these settings means delivering the Nutbrown review's final report, *Foundations for quality* and in particular increasing the standard of early years practitioners across the board. We should aspire to have one person with qualified teacher status (QTS) in each structured setting, with a special focus on supporting staff with a depth of knowledge of early years children.

One of the main barriers to achieving this target is funding. Over the past decade, the increased recognition of the importance of early years care has led to higher regulation, in terms of quality of staff and ratios, and this has constrained supply of care, and driven up costs. Trying to drive up the quality of early years staff without preventative action on cost may well further constrain supply. The government was right to set up the Childcare Commission this summer to try to address this issue.

One means of increasing the standard of staff while containing costs is to make child-to-staff ratios more flexible where this will not have a negative effect on the standard of care. The ratios we expect in the UK are lower than in almost any other western European country.⁴⁵ This suggests they can be slightly increased without

compromising the safety of the child or the standard of the care. This would contain costs and support the drive for more highly qualified staff.

Changing the regulation on early years care – for example to bring child-to-staff ratios more in line with other European nations – could help improve the affordability of structured, high-quality care, but reforms of this type will take time to work through. A further means of supporting this change is to restructure state support to help with user costs. The cost to poorer parents of funding high-quality child care is high and leads to a significantly less structured element in the market that is of more questionable value to long-term development.⁴⁶

At the moment, the government transfers approximately £7bn to parents to support their children through direct funding of the early years entitlement for three and four-year-olds, child tax credit, child benefit and the government-funded element of child care vouchers. But the child tax credit and child benefit are both evenly spread and do not reflect the additional cost of early years care, when statutory provision of care is at its lowest and children need to be constantly attended.

Exhibit 23 Characteristics of effective structured childcare settings

- Lead by qualified, trained teachers
- Focus on structured learning
- Offer more experience of curriculum linked with effective learning strategies
- The best settings have structured discipline policies that help children find a balance between assertiveness and conflict
- They have a structure for sharing information on the child's development with parents or carers and offer strategies for following up on learning at home
- Often have a stated focus on developing numeracy and reading.⁴⁷

Restructuring child tax credit, childcare vouchers and child benefit to reflect the high costs of early years care could help parents secure high-quality early years provision, delivering the nudge necessary to move children into more structured settings. Work with businesses to tax incentivise and ease the provision of workplace-based structured care settings would also help. Restructuring state support so it prioritises the first five years of a child's life, with tapering thereafter, would help ensure that crucial early years care is available to all.⁴⁸

Schools too need to harness parental involvement more effectively

Children learn best when their parents are actively interested and involved in their education. The effect of good parental engagement over a student's school career is equivalent to adding an extra two to three years to the student's education.⁵⁰ In maths, for example, 'parent push' has been shown to have an important positive impact

Exhibit 24 Parenting interventions to boost learning⁴⁹

Home instruction for parents of pre-school children was a US programme which aimed to increase parental involvement and enhance school readiness for children aged between three and five.

Parents worked with their child for 20 minutes a day using a curriculum of role playing with weekly activity packs including story books and equipment for studying maths and science. The curriculum was designed to encourage the development of language, problem solving, logical thinking and physical, emotional and social skills. The main findings (Nievar et al in Cummings et al, 2012) were:

- It produced a more enriched home environment (reading materials etc)
- It resulted in a significantly higher level of parenting 'self-efficacy'
- It produced maths scores significantly higher than for the control group (although it did not have the same impact on reading scores).

The Houston parent-child development centre project was a two-year US project targeting Mexican-American parents. It started when children were aged one and aimed to improve

school ability via a series of home visits, family workshops and education-focused classes for parents about child development and childcare. Results (Johnson, 1990, in Cummings et al, 2012) showed that:

- At age two and three, children demonstrated significantly better mental development (based on IQ measures) than the control sample and stayed at or near national average while the control group's scores fell on average by eight points
- The project resulted in more stimulating home environments than in the control sample.

The family literacy initiative involved several family literacy programmes in England and Wales. Parents and children aged three to six took part in a 12-week course of accredited basic skills instruction for parents and early literacy development for young children. It also included parent and child sessions which encouraged pre-reading and early reading skills. It found that:

- Gains were made in vocabulary, reading and writing and maintained after two years
- Parents became better equipped to support children in reading and writing.

on pupils' progress.⁵¹ When parents take an active role in setting expectations, delivering instruction and supporting learning, and backing up teachers while holding the school accountable for excellence, the benefits extend beyond better academic performance to a range of other outcomes that touch on the key behaviours we identified in the last chapter, including:

- Better preparation for school
- Better school attendance
- Improved study habits
- Fewer disciplinary problems
- Stronger links between students and teachers and between family and school.⁵²

Leading examples around the world – for instance the work of KIPP schools and the Harlem Children's Zone in the US – show that an effective strategy for this requires schools to take a leading role, but that they must seek commitment from parents and other partners. There are good examples of this in the UK as well, including the work highlighted at Gillespie School (**Exhibit 25**), or the use of Greggs-sponsored breakfast clubs in the north-east to bring more parents past the school gates. All schools need to consider how best to engage parents, but the contract-based approach between a school and parents of a decade ago when

Exhibit 25 Gillespie School parental engagement strategy

Gillespie primary school in north London was judged to be satisfactory by Ofsted when headmaster Mark Owen joined the school in 2006. In six years under Mark's leadership the school has progressed to outstanding, achieving a 100% Key Stage 2, Level 4 pass rate in 2011.

A key part of achieving this transformation has been actively reaching out to parents and the local community, involving them at every opportunity and demonstrating their role in the school's success. Special events aimed at bringing parents and teachers together in an informal atmosphere and a 'bring your parent to school week' that has seen every child bring a family member to one lesson, ensure that all parents, regardless of background feel comfortable coming into the school and engaging in their child's progress.

The school also employs bilingual parent support advisers who have made a difference in supporting and engaging with parents whose first language is not English.

statutory Home-School Agreements were introduced can too easily be seen as a confrontational approach, as well as being toothless.⁵³ More positive methods of building engagement need to be developed, based on:

- Articulating the tangible benefits and values of education in terms that people can relate to
- Providing guidance on pre-school preparation and helping parents understand how to put this advice into practice
- Ensuring information and advisory support is accessible and understandable
- At the outset of formal schooling and during later phases, setting out for parents the roles they should expect to play in supporting their child's learning and development
- Establishing a welcoming atmosphere for parents, centred on courtesy, openness, regular contact and an emphasis on the value of a strong partnership between school and parents.

There is no right formula for a successful parent engagement strategy. But there are simple things that can be done. Schools in the Australian state of Victoria use redesigned report cards to start a discussion with parents and produce student improvement plans which include actions suggested for parents. What is important is for every strategy to reach beyond the vocal, already-committed parents to those who are more hesitant or reluctant – particularly those who may have experienced educational failure themselves. This is critical to breaking cycles of low achievement, and can be broken down in innovative ways. For instance, many schools use parents' sessions around maths weeks to help parents who may be hesitant to help their children because of fears about their own maths ability.

It is up to the wider community – including business – to support schools more where they need role models, advice or experience

Strengthening parental engagement is the most important thing that we can do to underpin expectation and ambition. But this cannot be left to schools alone. In particular, the value and importance of education must be widely emphasised and communicated by all stakeholders in the community – including business and politicians.

In the most challenging areas, parental role models and wider experience of what young people might be able to achieve may not be readily available to young people, particularly because the UK has unintentionally built one of the most highly socially segregated school systems in the world. Some 79% of UK pupils from an

“79% of UK pupils from an immigrant background with low-educated mothers are in disadvantaged schools”

immigrant background with low-educated mothers are in disadvantaged schools, compared to 55% across the EU and 56% across the OECD as a whole.⁵⁴ In effect, we are selecting young people’s education by income. This matters because a country’s success in integrating immigrant students is a key measure of its education system’s quality and equity. And students in schools with high concentrations of students from disadvantaged backgrounds tend to make less progress than in other schools.⁵⁵

This is where businesses and the wider community has an obligation to step in. While effective links between businesses and schools can help every school deliver more, starting with the most challenging areas – where other role models or sources of support may be missing – makes sense.

And we can achieve a lot. Many schools and businesses already have active links, particularly in the secondary phase (**Exhibit 26**). But interchange in the primary phase – at a time when aspirations and attitudes are being shaped – is more limited.⁵⁶ There is a strong case for doing a great deal more at this stage to broaden pupils’ horizons and to help them understand the exciting practical applications, for example, of maths and science, as demonstrated by the example of The Wroxham School (**Exhibit 27, page 43**). But businesses can be just as adept in supporting school development, underpinning the skills and behaviours heads and teachers need to develop to lead more autonomous schools.

Exhibit 26 Business support for secondary schools goes beyond the classroom

The **JCB academy in Rocester**, Staffordshire is a 14-18 school with a focus on engineering and business, with school hours that more closely resemble the working day, and a strong emphasis on self-discipline, good behaviour, uniform, teamwork and co-operation. JCB has been extensively involved in developing the curriculum which is based on delivering GCSEs and A-levels through business partner challenges. The ethos and structure of the school is to ensure its pupils leave well-prepared for the world of work.

At the **Manchester Creative and Media Academy**, the professional services firm **KPMG** – through the Business Class programme run by Business in the Community – provides support to school leaders and to pupils. It has helped the school through a change management process using practical tools to help keep staff

motivation and morale high at a difficult time. For students, KPMG staff provide academic mentoring.

The firm also offers students identified as at risk of becoming NEET (not in employment, education or training) a day in business working on a challenge aimed at improving their team work, communication and time management.

Also through the Business Class programme, the **Nationwide Building Society** has been working with the **Nova Hreod school** in Swindon on professional development. A senior manager from its professional development team works with the school’s middle and senior leadership team on personality testing to support self-reflection, judgement and areas for improvement. Nationwide also carried out a customer service workshop with teaching staff on the business perspective and professional communication to help front line staff communicate effectively and professionally when faced with challenging circumstances.

Recommendations:

- Greater focus of early years spending on parenting support and structured childcare provision in areas where educational performance is low – government must accept an element of differential funding and target the budget on provision in the most disadvantaged communities
- Raising the standard of childcare through adoption of the Nutbrown review’s recommendations on improving early education quality, in particular staff competence and qualification, and building on the work of the Childcare Commission to review ratios, the structure of tax support for families and the pattern of nursery provision to make this step affordable
- Adoption by schools of a strategy for fostering parental engagement and wider community involvement, including links with business
- A new commitment for a strategic, systematic and long-term engagement by business to a needs-led school programme, focused on raising aspiration and attainment.

Exhibit 27 Innovative use of community links: The Wroxham School’s transformative approach to learning

The Wroxham School has achieved national recognition for a transformative approach to learning. The school moved from the Ofsted category of requiring ‘special measures’ to ‘outstanding’ in the space of three years. This recognition was achieved through a principled approach to teaching and learning that refused to label children by ability.

The school was designated a national ‘School of Creativity’ in 2009. Schools of Creativity are funded through Creative Partnerships, a programme that brings creative workers such as artists, architects and scientists into schools to work with teachers to inspire young people and help them learn. The model of partnership between creative experts and teachers aims to extend professional development for both and acts as a catalyst for further innovation. The teachers’ learning, through increased access to expertise, has encouraged them to offer the children new creative learning experiences and engages children effectively.

“Those who educate children well are more to be honored than they who produce them; for these only gave them life, those the art of living well.”

Aristotle



5 Empowering school leaders and teachers to deliver is the right choice

- **Decentralising control to schools is the right thing to do and should progress quickly – we need to support headteachers to make it work**
- **Teachers are the key – we need to end the culture of micro-management and treat them as professionals, within a clear framework that expects high performance**

Decentralising control to schools is the right thing to do and should progress quickly – we need to support headteachers to make it work

Businesses support the drive to decentralise control to schools. We have already set out that we would like to see this go further by changing the accountability framework to judge schools on a balanced scorecard rather than only narrow, exam-related criteria.

Unlike narrow performance criteria, there is no conflict between a high-level statement of expected outcomes and autonomy for schools in how to achieve them. In fact they form two strands of a single policy.

OECD research clearly shows that where schools have greater autonomy over what is taught and how students are assessed, students perform better.⁵⁷ Decision-making power and control should be devolved so school leaders can lead and manage as senior professionals, teachers can focus on teaching and every child can achieve goals. Swift progress on this is essential, especially where there are not currently plans in place to deliver it.

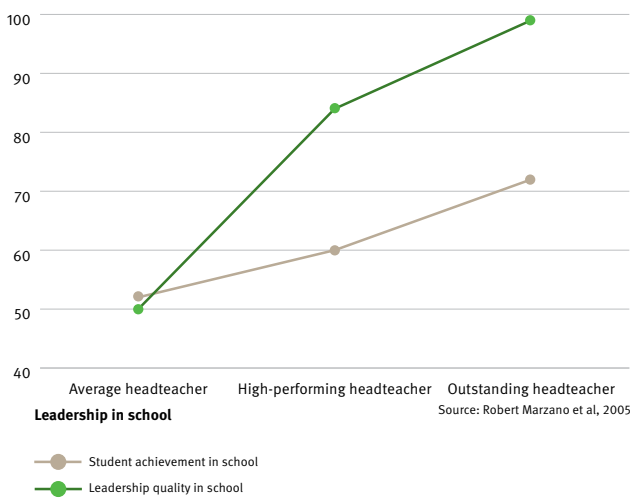
But devolution of power must be allied to ensuring we support the development of high quality school leaders. The evidence shows pupil achievement is closely related to the quality of leadership and management in a school (**Exhibit 28, page 46**). Together with the strong evidence for the importance of devolving power to schools in improving and sustaining school standards, this means headteachers are critical to transforming our system.



“We run the risk of running out of heads, with dramatic damage to the trend of school improvement”

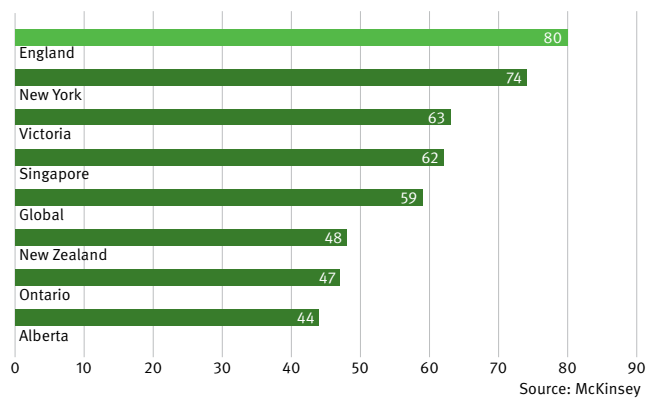
Russell Hobby, general-secretary,
National Association of Headteachers

Exhibit 28 Relationship between school leadership and overall achievement (percentile)⁵⁸



At the moment, inspirational headteachers still tend to be mavericks – rebelling against the system to do what is best – rather than the norm. This is because the system we have micro-manages them. The problem of box-ticking and over-regulation that weighs down many teachers affects heads to an even greater extent. Headteachers should be able to focus on the essential task of improving educational outcomes rather than spending their time engaged in endless reporting on activities. Accountability is important, but the present balance is wrong and the effects are acutely felt in the profession: 80% of heads in England have identified accountability requirements as the biggest obstacle to taking on a leadership role – far ahead of the levels experienced by school leaders in other high-performing school systems (Exhibit 29).⁵⁹ Devolution of power to heads is the best way to resolve this: with a single, clear goal, judged against a balanced scorecard, heads should be able to set strategy and manage accountability more easily.

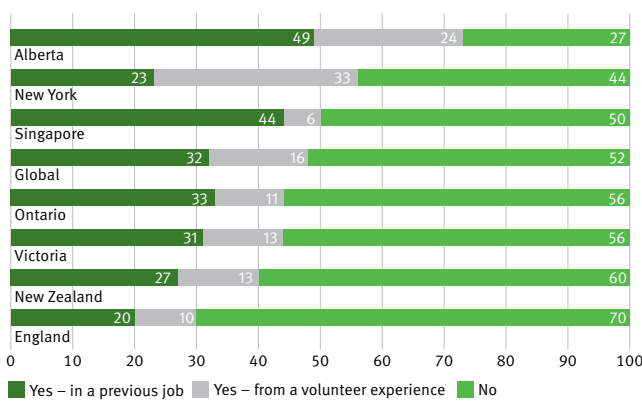
Exhibit 29 High-performing heads citing accountability requirements as biggest obstacle (%)



Such a move makes professional development for heads of major importance. Their relative isolation in the school makes it essential for them to have the scope to learn from practice elsewhere and be able to review the operation of their school critically. The UK’s National College for School Leadership (NCSL) at present offers a one-size-fits-all approach to professional development. By contrast, heads elsewhere around the world have more diverse leadership experience (Exhibit 30, page 47).⁶⁰ More than two-thirds of headteachers in England, for example, have no experience of leadership in roles outside education, whereas nearly three quarters (73%) of headteachers in Alberta, Canada have external leadership experience. We do little in the UK to expand the experience of school leaders outside education, and should do more through the revisions currently taking place to the NCSL curriculum and the development of opportunities outside schools for heads to develop.



Exhibit 30 Headteacher candidates with experience of leadership outside education (%)



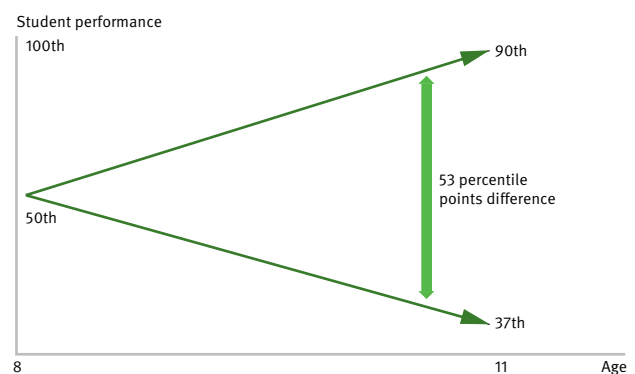
Source: McKinsey

Teachers are the key – we need to end the culture of micro-management and treat them as professionals

The role of good teaching cannot be overstated. During the period of just one year, pupils with a very effective maths teacher gain 40% more learning than those with a poorly performing one.⁶¹ Importantly, the effects are especially significant for young people from disadvantaged backgrounds. Over the course of a school year, these pupils gain 1.5 years’ worth of learning with very effective teachers compared with 0.5 years’ worth with poorly performing teachers. In brief, the international evidence shows the difference in impact between very good and poor teachers is strikingly large (**Exhibit 31**).

Given the importance of teaching, we do not find ourselves in a good position. Years of micro-management has led to a climate of fear among too many teachers, which limits their effectiveness. For too long, teachers – particularly in England – have been constrained by an overly prescriptive curriculum. This has been coupled with excessively narrow accountability measures, repeated political interference and what is experienced as constant criticism from politicians and the media.

Exhibit 31 The quality of teaching is a major determinant of student outcomes (percentile)



As a consequence, large sections of the profession are now demoralised and demotivated, despite their firm – and correct – belief that education is of the utmost importance. Over half of school leaders describe teacher morale as poor or worse.⁶² Teachers often do not feel they are sufficiently in control of what happens in the classroom.

This has to change. Teachers do a hugely important job. But its significance and the scale of professionalism involved is consistently underrated in society. In part because of these perceptions, teaching has not been seen as a leading career of choice among British graduates. While demand for teacher training places has remained consistently high in Northern Ireland, with 12.5 applications for each teacher training place, in England there are just 2.3 applications for each teacher training place, compared with six in Singapore and ten in Finland (**Exhibit 32, page 48**).⁶³ These much greater levels of competition mean high-performing school systems can draw their trainee teachers from among the highest calibre graduates. As we highlighted earlier, much of this is not about money – teachers in Finland do not have a significant pay advantage by comparison to their UK equivalents.

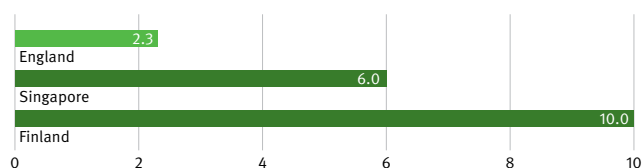
There is nothing inevitable about this – and experience in England is already showing how rapidly it can be changed. Since its launch a decade ago, the Teach First programme has become highly competitive because of its perceived high status and the scope it gives to develop skills (**Exhibit 33, page 49**). The scheme has also successfully put across the message of the immensely valuable social contribution of teaching, with its focus on the most challenging schools. Initiatives of this kind need to be further developed, based on the principle that teachers as professionals are trusted to do the right thing in the classroom to work towards delivery of desired educational outcomes.

Decentralisation of power to schools, a clearer outcome goal and consequent lack of rigidity in the curriculum ought to empower teachers as professionals, re-engaging those who have become disillusioned by years of micro-management as well as raising the status of the profession. This greater freedom should be at the heart of a strategy that expects high standards of teachers. This implies better support for teacher development, but also an acceptance that performance management is an essential part of ensuring that the profession delivers high standards.

International experience can also provide pointers as to effective professional development. Singapore, for instance, has crafted an effective value-proposition for teachers stressing career progression and professional development. Teachers are offered a variety of attractive career tracks, including paths into leadership and senior specialist options. The importance of continuing professional development (CPD) is stressed, with 100 hours of training each year.⁶⁴

While the UK has high pre-entry standards for teaching compared to a number of countries, once qualified, support for teachers' personal development fails to match that provided by the highest-performing school systems.⁶⁵ Strengthening CPD and career opportunities are crucial strands in re-motivating teachers and improving practice and, as a result, education outcomes. We also need to get away from the feeling that CPD is something 'done' to teachers – they are professionals and part of that professionalism should be a sense of personal ownership of development, a hunger to grow personal expertise and push boundaries.

Exhibit 32 Applicant numbers per teacher training position



Effective performance management is just as vital. This is not only because of the importance of the role but also because research has shown there is no reliable way to predict who will make a good teacher before they enter the classroom.⁶⁶ Therefore hand-in-hand with a higher status and confidence in teachers, there needs to be a boost to professional rigour and accountability. That means shaping a system that recognises and rewards high performance and takes prompt action to remedy under-performance.

Again, there is practice in other high-performing school systems that can help us in shaping our own approach. A policy pursued by Washington DC for example rated teachers on their effectiveness in the classroom, rewarding highly effective teachers with additional compensation and removing poorly performing teachers who failed to improve. This formed part of changes enabling the city to lead US figures for reading growth.⁶⁷ Singapore's appraisal system for teachers has a quota system to ensure differentiation, with top performers receiving a bonus equivalent to two and a half months' salary.⁶⁸

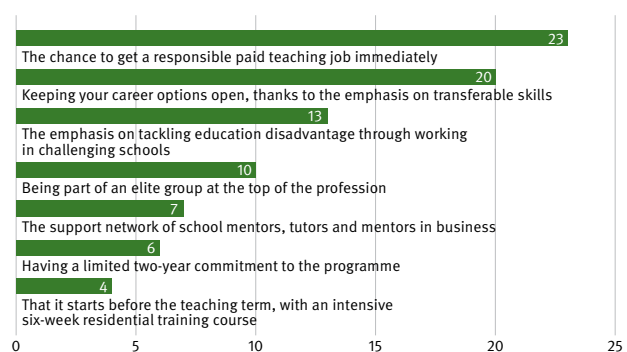
Performance management has already been receiving attention across our school systems.⁶⁹ This is the right approach – addressing poor teachers by improvement or, ultimately, removal is critical to rebuilding the image of the profession. It is the corollary of more freedom in the classroom and professional development. Any other approach would be irresponsible. Research shows that raising the effectiveness of the bottom 10% of UK teachers to the average level would greatly improve the UK's performance in international rankings of educational outcomes – and transform the prospects for many individual children.⁷⁰ Unions in particular need to accept that the profession is devalued if poor teaching is not effectively addressed.

Exhibit 33 Teach First shows how teaching can be a highly sought career

Since 2002, Teach First has placed over 2,520 teachers in schools in challenging circumstances to work with students to raise their achievement, access and aspirations. Modelled on Teach for America, it has also been voted one of the top graduate employers, positioning it as the highest ranking charity in the history of The Times survey of top 100 employers.

Teach First is founded on a vision for the future where no child's educational success is limited by their socio-economic background. Working in partnership the organisation recruits dynamic, passionate individuals and supports them to raise the achievement, aspirations and access to opportunity of pupils from low socio-economic backgrounds. Teach First trainees join a leadership development programme which involves teaching for a minimum of two years, achieving a PGCE and wider leadership skills training. After the two years, more than half continue to teach within schools in low-income communities, with many moving into middle and senior leadership positions.

Undergraduate views on the attractiveness of applying to Teach First (%)



Recommendations:

- **The Department for Education should accelerate its programme of decentralisation of control for all schools in England. This should be extended to schools in other parts of the UK, freeing headteachers to deliver real improvements**
- **Use decentralisation to give teachers greater freedom to tailor their teaching and structure the learning each child does**
- **Support for professional development of teachers and heads should be enhanced to ensure they can effectively take on this challenge**
- **In return, headteachers should be expected to be rigorous managers of their staff and accepted as such by teachers. Performance assessment, reward, improvement plans and, where necessary, dismissal should be tools available to and used by headteachers.**

“Education isn’t just about exam results, it is about education for character, for community and for citizenship.”

Lord Adonis



6 We must drive change through a culture of expectation – aligning curriculum and examinations more effectively with the outcomes we seek

- **Expectation and ambition need to stretch to everything schools do – including the curriculum**
- **At primary, we need to improve teaching and curriculum flexibility to effectively deliver core learning in ways which engage young people**
- **Addressing the performance drift between the ages of seven and 12 also requires reassessing how we support children in their change of school around 11**
- **Exams should be focussed on the outcome we seek at 18 for both academic and vocational paths. While GCSEs need to change, their replacement should be about supporting development to 18, not simply substituting a harder exam**

Expectation and ambition need to stretch to everything schools do – including the curriculum

Much of the recent political debate has focused on why successful schools are successful. Rigour has been a word widely used, chiefly about the curriculum and exams. It is certainly true that good systems – for instance Shanghai, or Singapore – set high standards. But our study of the world’s leading systems prompted the question whether this was a causative relationship. While the world’s leading systems have demanding exams, are they the world’s leading systems simply because of their exams?

In short, no. We have already set out how clearly Singapore and other successful systems define an outcome for their system that goes far beyond exams. They expect rigour, challenge and ambition in everything their school system does. Uniforms, rules, competitive sport, clubs, teacher management, engagement with the community and businesses all really matter. The best schools in the UK – private and state – know this. It is no surprise that the rise in standards at Gillespie School (see section four) occurred alongside a massive rise in school clubs.

Nonetheless, rigorous examinations and a stretching curriculum – while not sufficient to build a world-leading system, are certainly necessary to doing so, and must be addressed as part of the “whole system” reform we seek.⁷¹



“Practical and experiential learning should embed and enhance core skills – it is not at odds with them”

At primary, we need to improve teaching and curriculum flexibility to effectively deliver core learning in ways which engage young people

In section two, we set out the scale of the achievement drift that happens in our primary schools, even taking into account the varied starting points of children. International comparisons of performance in literacy, maths and science at age ten show pupils in the UK lagging behind their peers elsewhere.⁷² Moreover, other school systems are continuing to drive up their standards.

Part of this drift in performance must be attributable to disengagement within our primary curriculum. It is certainly true that we expect less of our young people than other systems, failing to stretch the able, but at the same time over-prescribing the curriculum in a way that means tailored support for the less able is not easily delivered. In maths, for example, other school systems are more demanding in key areas, for instance beginning to calculate with fractions at an earlier stage than in the English national curriculum.⁷³

The reason for this lies in the conclusions of the Cambridge primary review that a false dichotomy has arisen between mastery of core skills and knowledge.⁷⁴ The curriculum has encouraged teachers to focus narrowly, with memorisation and recall being valued over understanding and enquiry, and transmission of information over the pursuit of knowledge in its fullest sense. The review cites evidence from Ofsted that standards and breadth are

interdependent and high-performing schools can achieve both. Unless we accept this in our approach to primary schooling, we will continue to work against the engagement of children losing the rich opportunities that early education has to offer.

Achieving such a balance is not easy, but delivering the core skills in ways which engage and excite learners should be perfectly possible. Through community engagement ideas like the energy education centre at National Grid’s London power tunnels project, or the Reach Out and Lab 13 initiatives reported here (**Exhibit 34**), there are places already doing just that.

The challenge with a more balanced approach to teaching a broader curriculum between the ages of seven and 11 is that it relies on having highly skilled teachers to do it effectively. The Cambridge review identified a shortfall of skills among teachers in the 7-11 age range, and it is essential this is addressed, in part through some of the steps we have identified in an earlier section. Specific features of classroom processes, such as quality of teaching, tend to be good predictors of children’s progress.⁷⁵ They are also important for children’s progress in terms of reducing boredom and promoting pro-social behaviour and self-regulation – key forerunners of some of the behaviours we have set out that are central to rigour-plus. In this sense a more balanced approach can deliver on the three aspects we set out, but it requires active management of the quality of teachers in this vital age range.

Exhibit 34 Imperial College London & University College London: inspiring the young about science

Imperial College London opened the Reach Out lab in 2010. Championed by professor Lord Winston, chair of science and society, the Reach Out Lab invites schools through its doors for a day of experimenting and hands-on learning activity in science, technology, engineering and mathematics. The lab not only helps spark children’s interest in the sciences but also helps better equip their teachers to continue this learning once back in school.

The Lab 13 project offers a similar concept but delivers this in school. Using a temporary or resident science expert and eager

university students, participant schools create space to allow children to experiment, develop their curiosity and question scientific concepts. Professor Andrea Sella of University College London who set up a Lab 13 at Gillespie School in north London points out: *“It is by connecting the science with their myriad questions and with real world devices that children become engaged and inspired. By doing more messy play and involving university students we can expand the range of ideas that our children are exposed to. We can deepen their learning, foment creativity, and most importantly of all, open and nurture their minds.”*

Addressing the performance drift between the ages of seven and 12 also requires reassessing how we support children in their change of school around 11

Reforming the primary curriculum to give better teachers more freedom will help address the drift in performance we identified in section two. But this drift is something that also extends into the early years of secondary school. One possible explanation for this – alongside curriculum content – is whether the effect of changing school at 11 is different now than it was when the split was designed decades ago.

It is certainly true that children’s pace of development is fundamentally different to sixty years ago. A central issue is whether the current pathways children take match their cognitive development, given that the system has not changed substantially for a long time but the cognitive development and IQ of young people has seemingly altered, particularly in recent years (the so-called Flynn effect).⁷⁶ This is a result of both physical change (earlier puberty) and a change in the lives young people lead. It suggests that the pastoral support frameworks around children should shift with child development, especially close to puberty, which is when the school split currently happens. With 40% of children failing to make progress in their first year at secondary school, this merits further investigation – the CBI believes a study, looking in particular at the effect on development of different settings, like middle schools, is required. The results would not necessarily require a change to the structure of schools, but might point to changes in curriculum and teaching practices that would better address patterns of cognitive development among this age group and pastoral support – importantly, it would form the basis for better parental and community engagement.

“The importance of 14 and 18 as decision points is rising – our curriculum and exam system needs to recognise this”

Exams should be focussed on the outcome we seek at 18

Exam reform has been a hot topic in 2012 in England, with GCSE and A-level both under review. Given the observations made earlier about grade inflation, teaching to the test and the use of GCSE equivalent qualifications of varying quality, it should come as no surprise that an injection of rigour and simplicity into the system is something that businesses would welcome.

In reviewing qualifications, we also have the opportunity to redesign them to fit modern needs and mirror the paths young people take to making a good start in life. It is as important that we take the opportunity of the current debate to do this as it is to make exams more rigorous.

Our view is that the importance of different exams at different dates is changing fundamentally. In particular, most young people make important decisions about their future at three points – 14, 16 and 18. At present the importance of 14 is rising (beyond choosing exam subjects it is, for example, the entry age for university technical colleges), as is the importance of 18 as more and more young people stay on, and the raising of the participation age in England approaches. Sixteen is a less fundamental point than it was when GCSEs were created. Some 554,000 16-18 year-olds were in work without an education element in 1988: following a steady decline, this figure was 123,00 by the end of 2011.⁷⁷ Our system should be able to guide young people at all three points.



“French for business, not Moliere”

Lord Baker, speaking about tailoring the curriculum for different routes

The CBI’s conclusion from our review of the evidence is that the main summative exam in our education systems should be at 18. It should be rigorous and demanding, and be the peak of a system aligned to achievement at that point. This will require several important changes.

Firstly, a gold standard at 18 would be required for technical and vocational routes just as much as for academic ones. A new gold standard vocational equivalent to A-levels has long been necessary to ensure that high quality non-academic routes get the recognition and differentiation they deserve and to avoid the confusing mass of different offers that are currently available. Such a change also introduces scope for some students to focus on technical education earlier, combined with a tailored core skills curriculum, from the age of 14 by moving on to institutions such as the growing number of university technical colleges (**Exhibit 36, page 55**). Finally, it allows higher apprenticeships, which offer entry at 16, to be fully aligned with the school system.

Secondly, this kind of change of approach allows us to address UK exceptionalism among advanced economies in not requiring compulsory study of maths and English after the age of 16.⁷⁸ England, Wales and Northern Ireland have the lowest proportions of students studying maths during the upper phase of secondary education. Elsewhere, study of the country’s first language is almost always compulsory in the upper secondary phase.⁷⁹

What is important though is that this core study can be tailored to the path that a young person is on, especially post-16. Maths study for a retail apprentice and for an A-level student will be fundamentally different, but it is vital that both are undertaken.

Finally, and most importantly, a clear focus on 18 as the key age will allow us to align the whole system to delivery at that point. It is clear to business that GCSE reform is essential, for both standards and effectiveness reasons. We should design curriculum and exams in a way that best enables young people to navigate their way from 14 to 18 with stretch, engaging learning and a testing regime that enhances their learning. The reforms set out earlier in this report will enable such a change, because they seek to disentangle the exam system – which should be about individual achievement – from the school accountability system.

The current five A*-C grade GCSE target, for instance, is little more than a scoring standard for government to measure schools.

Through this lens, it is clear that high stakes testing at 16 must not be allowed to be a barrier to achievement at 18. This is our concern about the proposed English Baccalaureate Certificate (EBC). The high standards it is designed with are right, but it is at 18 not 16 that we should be thinking in terms of externally marked, high value qualifications. There is a risk that the mistakes of the past – both teaching to the test by schools and micro-management of the school system through the means of exams and league tables – may be repeated in the EBC. For this reason, we favour pausing to ask a more fundamental question about the role of examinations before 18, namely what their purpose is.

International evidence from high-performing education systems suggests more formative assessment during schooling would be beneficial alongside public exams, as it would underwrite better decision making while helping students based on achievement at 18. For instance, Germany’s highly successful system relies on the ability of schools and young people to know where they stand earlier than age 16, and make decisions accordingly.

For the UK, we believe that there are two options that could be effective. Either we draw core skill testing forward – to perhaps 14 – and conduct it on a narrow band of core skills, allowing there to be a four year run up to exams at 18, or we move to a rolling assessment system, such as the GPA approach popular in many systems worldwide (**Exhibit 35, page 55**). The transparency, consistency and rigour public examinations provide are valuable – particularly if standards are kept reasonably stable over time. But an over-reliance on summative assessment can distort the quality of education by becoming the dominant focus of school activity. We risk putting young people into a ‘holding pattern’ for five terms, when they should be striving for a high standard at 18. A change like this will help avoid this distraction, so long as it is done with a focus on maintaining high standards of rigour.

Exhibit 35 Possible alternative routes to pre-18 assessment

Early EBCs

With students narrowing their curriculum by options at 14, the most general and core-focused stage of education ends at this point – as is shown by the range of vocational options that become available at that age. Having a general, core skills exam at 14 is one way of assessing achievement before a young person starts down a particular path, and could act as a trigger point for remedial work if they fail to meet a rigorously policed standard.

Greater use of formative assessment (GPAs)

Formative assessment is a range of formal and informal assessment procedures employed by teachers during the learning

process in order to modify teaching and learning activities to improve student attainment. It is commonly contrasted with summative assessment, which seeks to monitor educational outcomes, often for purposes of external accountability.

A well-known and widely-used version of formative assessment is the grade point average, used widely in the US and Europe, including Sweden and Germany. In Bavaria, for instance, assessment is made up of surprise tests and other tools leading to a pupil achieving two school certificates a year, which allow them to know where they stand in each area of study. Each grade from A down has a numerical score, and the mean average of these grades in each subject – and across them – is used to assess where students stand. By contrast, pupils in the UK make choices at age 14 based only on the feedback from school reports.

Exhibit 36 University technical colleges offer a different approach to vocational education

University technical colleges offer 14-19 year-olds the opportunity to take a full-time, technically-oriented course of study. The colleges are sponsored by businesses, colleges or universities. Five UTCs are open and a total of 34 have been approved – with an aim of opening 100 by 2015.

UTCs specialise in subjects that require technical and modern equipment, for example, engineering, product design, health sciences, construction, and land and environmental services. But they all teach business skills and the use of ICT. The chosen specialism reflects the university's areas of excellence and the needs of local employers.

A fundamental principle of UTCs is that they do not judge students on their past performance. Students are given new opportunities and new ways of learning which allow them to achieve to a higher level than they may have done before.

The school day typically runs from 8:30am to 5:30pm and they have a school year of 40 weeks with either four or five terms. These major changes significantly increase the amount of

teaching time, adding a whole extra year of instruction for every two years a student is in the UTC. There is a broad general curriculum and the core subjects of English, maths and science are taught through demanding and collaborative technical projects. Pre-16 students will spend 60% of their time on academic subjects and 40% on technical ones. Post-16 the percentage is reversed with 40% academic teaching, 60% technical. The curriculum content is determined and shaped through the partnership of employers and universities. All students study a foreign language related to their technical curriculum. The value placed on high quality work experience is high and is a central element of the curriculum.

Importantly, UTCs take young people from the age of 14, but the current system's focus on age 16 means that there is not a natural trigger for young people looking to move schools at that age. More formative assessment or an earlier exam would help with this, as students would be better placed to know where they stand.

Recommendations:

- **Removal of the currently over-specified and repetitive national curriculum from primary schools in favour of clearly defined goals on literacy, numeracy, science and computer science. These targets should be more stretching than the current national curriculum sets out, and would be judged by Ofsted**
 - **Addressing the performance drift between the ages of seven and 12 through teaching quality improvement at primary school and development of a new approach on handling the school transfer age based on a review of what works in the best systems in the UK and globally**
 - **Move the focus of our exam system to 18 and develop clearly rigorous and stretching standards for both academic and vocational A-levels, with maths and English retained until 18 for both**
 - **A move from GCSEs in the middle of this decade, but the development of a more rigorous and diverse assessment approach that helps better decision-making by young people at the key points of age 14, 16 and 18 rather than simply substituting GCSE with a more rigorous exam at 16**
 - **A study of the routes taken by young people from age 14 should be commissioned to advise on the right balance of timing and the optimal mix between formative and summative assessment to focus the system on the route to high performance at 18.**
-

Annex A – assessment of current state of play in the devolved nations

Scotland

“The Curriculum for Excellence (CfE) will deliver the connected, balanced and flexible approach which we need and it will free our teachers to teach. It will make teaching more enjoyable for those who do it, and those who benefit from it. We will enable our teachers and schools to deliver new learning through CfE, making it the cornerstone of education, providing the educational route from the earliest years through school to college, university and beyond. This will equip all our young people for life, work, leisure and further learning in the modern world.

The CfE will have at its core a new emphasis on literacy and numeracy so we get the basics right from the early years. And we will work to improve outcomes and deliver a more flexible and personal learning experience for every child. Scotland’s ambition should be to eradicate illiteracy and innumeracy and the actions we take over these next five years will be focused on delivering significant progress towards this goal.

Ultimately, our new curriculum will nurture young people as successful learners, confident individuals, effective contributors and responsible citizens. And, like the best education systems in the world, it will focus on quality of the teaching, which requires investment in teachers, and on the quality of the resources available.” – SNP Manifesto, 2011

Education in Scotland has undergone significant reform since the National Debate on Education in 2002 and the CfE’s introduction in August 2010. The CBI supports the Scottish Government’s focus on the development of the core skills of literacy and numeracy as well as the increased focus on higher order skills which will help to ensure young people have the ability to compete and prosper. We also support the ‘Determined to succeed programme’, which is now fully embedded into the CfE, which ensures pupils are exposed to what will be required of them in the world of work. We question, however, whether the system in Scotland is yet aligned to deliver CfE. In particular, we would welcome greater decentralisation of powers to schools.

Early years

We support the on-going work of the Scottish Government in the development of its early years education policy. The establishment of early years teaching within CfE – ensuring a

single curriculum from the ages of three to 18 – means children have smoother transitions from pre-school through to high school. The CBI has been a strong supporter of the Literacy Commission and welcomed the Scottish Government’s decision to implement its recommendations through the Standing Literacy Commission’s Literacy Action Plan. But we would like to see a scaling up of the projects to ensure its benefits are felt across Scotland.

Curriculum

We support the aspirations of CfE which will develop four critical capacities central to the ability of businesses to grow the Scottish economy. In particular, we recognise and support the aims of *Determined to succeed* and expect that enterprise and enterprising education will be sustained within the framework of CfE.

Teaching

The McCrone Agreement in 2001 and the subsequent McCromac review and Dondalson review of teacher education were welcomed by the CBI due to the focus on attracting talented people into teaching, recognising and encouraging excellence in the classroom, developing leadership capacity and recognising the need for a flexible, creative, learner-centred teaching profession that supports CfE and excellent education for the future. The most recent development of a £3m fund over the next three years to support higher quality learning for teachers will enable more teachers to learn at a Masters level.

Assessment and inspection

The establishment of the new National 4 and 5 qualifications in Scotland have seen exam reform for pupils in S4. Only those sitting National 5 qualifications will face external examinations with the new qualifications using a new type of unit that will be more skills-based, less prescriptive, and will require knowledge and understanding. We are cautiously supportive of this approach – while welcoming the focus on developing assessments which take into account more than the ability to memorise specified text we believe it’s important that businesses are aware of what these assessments mean and how they relate to what went before.

Wales

The formative early years are fundamental to children's potential for learning and their future life chances. We want children to be equipped with the skills they need. In schools, our priorities are to improve standards in literacy and numeracy, and to reduce the impact of deprivation on educational achievement.

For those moving into further education we want access to good quality provision with no barriers to participation. In higher education we intend to transform the sector so that HE supports the economy in Wales, whilst providing the appropriate financial support to students – Programme of Government 2011

Since devolution, successive Welsh Governments have gradually created a distinct Welsh education system – the Foundation Phase, the Welsh Baccalaureate (16-18) and the abolition of league tables being the main Wales-only reforms that have been implemented. The current Welsh Government has set out an ambitious review of 14-19 education which the CBI supports. It will report this autumn, with decision on how to proceed with qualifications at this age expected in the new year.

The CBI supports the Welsh Government's drive for choice and quality in the education system, which has rightly focused on setting a firm foundation for pupils with considerable investment in primary education and parity of esteem at 16 between vocation and academic learning pathways. The CBI would like to see the drive to raise standards continue in all parts of Wales with clarity on the outcomes the government is looking for schools to deliver and the role business can play.

Looking ahead to 2013, the life chances of Welsh pupils are best served by all qualifications awarded in Wales being understood and recognised across the UK. The Welsh Government must ensure any reform programme recognises this important principle. Improving Wales' position in the PISA rankings by 2016 should be a key government goal.

Early years

The Foundation Phase is an excellent example of the Welsh Government leading the way. The emphasis on basic skills and “learning through play” are the right ones. An issue for Wales is ensuring pupils experience a smooth transition between primary and secondary education and the gains won in primary school continue.

Curriculum

The Welsh Government's vision is for a coherent and integrated curriculum and assessment framework for schools to raise standards of achievement and widen educational opportunity. A key challenge will be to ensure consistency and progress is delivered across Wales. The 20-point School Improvement Action Plan, if implemented successfully, should improve this picture. The CBI supports the review of the 14-19 curriculum, with the aim to better reflect the outcomes that young people need for success. Ensuring that vocational qualifications are equally rigorous will be important.

Teaching

The Welsh Government has made improving teaching quality a priority and has made welcome changes to drive up standards and ensure that school leaders have the power to performance manage effectively. The practice review and development model should raise standards of teaching and improve learner outcomes if it successfully ensures that professionals work together to develop their practice. For the wider reform package to be successful we believe the profession needs greater support and trust to use professional judgement and not be constrained by narrow measures of success.

Assessment and inspection

The current review of 14-19 education will be key in determining the best solution for Wales and Welsh pupils. The CBI welcomes the review because it accords to taking a holistic view of the routes that young people will take.

Northern Ireland

The Northern Ireland Executive has an ambitious vision for its schools to ensure that every pupil will have *“a high-quality education, which both enriches their lives and grows the economy”* and has committed to achieving *“excellence for all”* so that *“every school can be not just a good school, but a brilliant school”*.

The CBI supports the government’s drive for radical reform but we believe more must be done. Every year Northern Ireland funds 80,000 empty school places, which is equivalent to 150 schools due to the segregated nature of the school system. Although transfer tests were officially ended in November 2008 by the Northern Ireland Executive, many grammar schools and others continue to select students by testing at age 11.

Early years

A strategy document which will set out a vision and plan for ensuring better outcomes for children by improving the provision and quality of services to the youngest children is expected at the end of 2012. There is an accepted need for fully integrated early years and child care services and for making the strategy inter-departmental or Executive-led to reflect current co-operative delivery and operational arrangements between departments and agencies.

Curriculum

The revised curriculum was introduced in September 2007 across all Key Stages with emphasis on the core skills of literacy, numeracy and ICT as well as developing key personal, thinking, critical and creative skills. The Entitlement Framework offers schools the flexibility to provide access for pupils, based on their needs aspirations and interests, to a broad, balanced and coherent curriculum with a minimum number of applied courses. It is a key contributor to the overall goal of raising standards and of reducing the levels of educational underachievement that currently exist. From 2013, all Key Stage 4 pupils statutorily must have access to a choice of 18 GCSEs and all Key Stage 5 students must have access to a choice of 21 post-16 courses. While the focus and attempt to

inject rigour is welcome, more must be done to ensure that schools are encouraged to promote economically significant subjects to their students.

Teaching

Almost one in five post-primary school principals inspected in Northern Ireland failed to provide satisfactory leadership. The inspectors report found *“A fragmented approach to leadership development, which is not responding quickly or effectively enough to the changing needs of our education system. There is a clear need to improve the effectiveness of school leaders at all levels in the well-targeted deployment of resources to provide high-quality education and to raise expectations, aspirations and, as a consequence, standards for all pupils. Leadership, in the context of reform, requires of school principals a much broader base of multi-disciplinary skills and professional knowledge than before and consequently there is a need for appropriately designed leadership development programmes which are capable of supporting leaders for 21st-century schools.”* The CBI supports the Minister in his efforts to introduce more effective performance management in schools to deal with poor performing teachers and headteachers in a more effective and efficient manner.

Assessment and inspection

The Education minister has committed to reviewing GCSEs and A-levels in light of the reforms taking place in England. The reviews will be taken forward by CCEA and a final report is expected in June 2013. In the recent report of the Education and Training Inspectorate, as quoted by the Education Minister, *“inspections and follow-up inspections of 62 post-primary schools resulted in overall effectiveness being evaluated as good or better in 59%. It is right that we pay tribute to the staff and governors in those schools. But the other side of that statistic gives me real cause for concern because it tells us that, in 41% of the post-primary schools inspected, provision was not good enough.”* We support the Minister’s decision to bring forward legislation to *“strengthen the role of the General Teaching Council as the professional body in supporting teachers and in upholding the highest professional standards.”*

Annex B – Outline of on-going CBI campaign

The CBI is committed to a long-term campaign for raising ambition in schools. We intend to take forward the specific recommendations of our First Steps report with a particular focus on:

- Campaigning for changes which support the outlook set out in this report
- Building consensus and working with external experts to deliver on these recommendations
- Deepening these recommendations with new work, including in the devolved nations.

Our work will be guided by members of the CBI's new employment and skills board.



References

- 1 China's National Plan for Medium and Long-term Education Reform and Development, 2010-2020, accessed at https://www.aei.gov.au/news/newsarchive/2010/documents/china_education_reform_pdf.pdf
- 2 Improving the impact of teachers on pupil achievement in the UK – interim findings, The Sutton Trust, September 2011
- 3 Brazil, Russia, India and China
- 4 *Jobs for the future*, CBI, 2009
- 5 *Winning overseas: boosting business export performance*, CBI, November 2011
- 6 *Future champions: unlocking growth in the UK's medium-sized businesses*, CBI, October 2011
- 7 Organisation for Economic Co-operation and Development
- 8 *Better skills, better job, better lives: a strategic approach to skills policies*, OECD, May 2012
- 9 *Education is the key to a healthy economy*, Schultz G, and Hanushek E, Wall Street Journal, 1 May 2012
- 10 *The high cost of low educational performance: the long-run economic impact of improving PISA outcomes*, OECD, 2010
- 11 *How much do educational outcomes matter in OECD countries?* Hanushek E and Woessmann L, 2011, *Economic Policy* 26, no. 67: 427-491
- 12 *Education quality and economic growth*, The World Bank, 2007
- 13 *The economic benefit of educational reform in the European Union*, Hanushek E and Woessmann L CESifo Economic Studies, Vol 58, 1/2012 and Hanushek E and Woessmann L, *Cognitive skills and growth*, LSE Growth Commission, March 2012
- 14 This represents the present value (discounted at 3%) of the gains from improving educational achievement to the top performer (Finland) out to 2090. This represents a significant increase in future GDP (about 1/6 higher in present value terms). Source: <http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%2BWoesmann%202012%20CESifoEstu%2058%281%29.pdf>
- 15 *Bowling alone: The collapse and revival of American community*, Putnam R, New York: Simon & Schuster, 2000
- 16 *The roles of schooling and educational qualifications in the emergence of adult social exclusion*, Hobcraft J, Centre for Analysis of Social Exclusion, LSE, 2000
- 17 *The impact of lifelong learning on happiness and wellbeing*, Sabates R and Hammond C, Institute of education, January 2008
- 18 *The social and personal benefits of learning: A summary of key research findings*, Feinstein L, Budge D, Vorhaus J and Duckworth K, Centre for research on the wider benefits of learning, Institute of education, October 2008
- 19 *A model of the inter-generational transmission of educational success*, Feinstein L, Duckworth K and Sabates R, Research report 10, Centre for research on the wider benefits of learning, Institute of education, 2004
- 20 *Learning to grow: education and skills survey 2012*, CBI/Pearson, 2012
- 21 Education reforms implemented by the Blair government post-1999 applied only to England
- 22 Source: GCSE and entry level certificate results published each summer by the Joint Council for Qualifications
- 23 *Working on the three Rs: Employers' priorities for functional skills in maths and English*, CBI, 2006
- 24 Progress in International Reading Literacy Study (PIRLS) conducted by the International Study Center
- 25 Programme for International Student Assessment (PISA) conducted by the OECD
- 26 England only reforms from this year onwards in the exhibit
- 27 Speech by Gordon Brown to the Labour Party Conference, September 2006
- 28 *Low income and early cognitive development in the UK*, Waldfogel J and Washbrook E, The Sutton Trust, February 2010
- 29 *What can we learn from the English, mathematics and science curricula of high-performing jurisdictions?*, Review of the National Curriculum in England, Research report DFE-RR178, Department for Education, February 2012
- 30 *The impact of school transitions and transfers on pupil progress and attainment*, Galton, M, Gray J and Ruddock J, Homerton College, Cambridge, September 1999
- 31 *Transfer and transition in English schools: reviewing the evidence*, Galton M, Morrison I and Pell T, *International Journal of Educational Research*, 33, 4, 341-363
- 32 *The impact of school transitions and transfers on pupil progress and attainment*, Galton M, Gray J and Ruddock J, Homerton College, Cambridge, September 1999
- 33 From 1997 to 2002, government funding for gifted and talented children was spent on helping deprived children in cities. The National Academy for Gifted and Talented Youth was established at the University of Warwick in 2002 to help deliver the government's programme for gifted and talented learners. In particular by developing, promoting and supporting educational opportunities for gifted and talented children up to the age of 19 and by providing support for parents and educators. Its initial target was to work with 20,000 learners (10% of the 'top 5%' of the cohort) but this was increased to 200,000. In 2007 a new Young, Gifted and Talented Learners Academy was opened following concerns the academy was not reaching children from poorer households. The government closed the programme in 2010 and pledged to redirect the funding into getting more children from disadvantaged backgrounds into university. Source: DfE and TES, Gifted and talented programmes face 'decimation' as funding dries up, 2011
- 34 Source: HM Treasury, Institute for Fiscal Studies – spending figure includes primary, secondary and tertiary education. Real terms figures are the nominal figures adjusted to 2010-11 price levels
- 35 Ibid
- 36 Source: OECD 2009 data

References

- 37 *Review of vocational education – the Wolf report*, Wolf A, March 2011
- 38 *How have standards changed in science at GCSE and A level over the last two decades?*, Coe R, 2009
- 39 Finnish Ministry of Education and Culture website: <http://www.minedu.fi/OPM/?lang=en>
- 40 *Building a national education system for the 21st century: the Singapore experience*, a paper by the Singapore Ministry of Education for *Building blocks for education: whole system reform*, Toronto, September 2010
- 41 *Low income and early cognitive development in the UK*, Waldfogel J and Washbrook E, The Sutton Trust, February 2010
- 42 Ibid
- 43 *The family-nurse partnership programme in England: third year report*, Department of Health, 2011
- 44 *Foundations for quality: final report of the independent review of early education and childcare qualifications*, ‘The Nutbrown review’, Department for Education, June 2012
- 45 *The provision of childcare services: A comparative review of European countries*, European Commission, 2009
- 46 Source: OECD, McKinsey analysis
- 47 *The effective provision of pre-school education (EPPE) project: Findings from the early primary years*, Sylva K, Melhuish, W, Sammons P, Siraj-Blatchford I and Taggart B, Institute of Education, University of London, University of Oxford, Birkbeck, University of London, University of Nottingham, 2003
- 48 Once the Universal Credit is introduced, such a taper should be easier to implement
- 49 *The role of aspirations, attitudes and behaviour in closing the educational attainment gap*, Joseph Rowntree Foundation, April 2012
- 50 *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*, Hattie J, November, 2008
- 51 *Predicting student growth in mathematical content knowledge*, The journal of educational research, Vol 95, No 5, Wilkins J, May/June 2002
- 52 *Approaches to parental involvement for improving the academic performance of elementary school children in grades K-6 2008*, Nye C, Turner HM and Schwartz JB. *Family, school and community influences on children’s learning: a literature review*, Christenson SL and Christenson CJ, Report No 1, Live and Learn Project, Minneapolis: University of Minnesota Extension Service, 1998
- 53 *Evaluation of home school agreements*, DfES Research Report RR455, 2003
- 54 *Education at a glance*, OECD, 2012
- 55 Duckworth, K, Akerman, R, Morrison Gutman, L, and Vorhaus, J., *Influences and levers on low levels of attainment: a review of literature and policy initiatives*, Centre for Research on the Wider Benefits of Learning, Institute of Education, 2009
- 56 *Learning to grow: education and skills survey 2012*, CBI/Pearson, 2012
- 57 *School autonomy and accountability: Are they related to student performance?*, OECD, October 2011
- 58 Based on a ‘meta-analysis’ of 69 studies of school leadership conducted between 1978 and 2001, involving an estimated 14,000 teachers and 1.4 million students, Robert Marzano et al, 2005
- 59 Ibid
- 60 Source: McKinsey, International Survey of School Leaders, 2010
- 61 *Improving the impact of teachers on pupil achievement in the UK – interim findings*, The Sutton Trust, September 2011
- 62 *The future teacher workforce: quality and quantity*, Howson J, The Pearson Think Tank, August 2012
- 63 *Great teachers: attracting, training and retaining the best: Ninth report of session 2010-12*, House of Commons education committee, April 2012
- 64 Source: Singapore Ministry of Education: <http://www.moe.gov.sg/>
- 65 *Teachers matter*, OECD, 2004
- 66 *Improving the impact of teachers on pupil achievement in the UK – interim findings*, The Sutton Trust, September 2011
- 67 Source: District of Columbia Public Schools
- 68 Source: McKinsey Education Practice
- 69 Revised performance management arrangements came into effect in England in September 2012. In Wales, schools must move to a new system by December 2012
- 70 *Improving the impact of teachers on pupil achievement in the UK – interim findings*, The Sutton Trust, September 2011
- 71 In this section we primarily focus on the curriculum in England though the principles we set out are applicable in the other jurisdictions. The CBI will pick up on this in the next stage of our campaign
- 72 Trends in International Mathematics and Science Study (TIMSS), 2011 and Progress in International Reading Literacy Study (PIRLS), 2011
- 73 *What can we learn from the English, mathematics and science curricula of high- jurisdictions?*, Review of the national curriculum, Research report DFE-RR178, Department for Education, 2012
- 74 *Children, their world, their education: final report and recommendations of the Cambridge Primary Review*, Alexander R, Routledge, 2010
- 75 Ibid
- 76 *IQ Gains over time: toward finding the causes*, in *The rising curve: long-term gains in IQ and related measures*, Flynn J, American psychological association, 1998
- 77 *Participation in education and training of 16 and 18 year-olds from 1985 onwards*, Office for National Statistics: www.ons.gov.uk
- 78 *Is the UK an outlier? An international comparison of upper secondary mathematics education*, Nuffield Foundation, 2010
- 79 Ibid

For further information on this report, or for
a copy in large text format contact:

James Fothergill
Head of Education & Skills
CBI
T: +44 (0)20 7395 8229
E: james.fothergill@cbi.org.uk



November 2012
© Copyright CBI 2012
The content may not be copied,
distributed, reported or dealt
with in whole or in part without
prior consent of the CBI.

Printed by Colourscript on
Revive 75 Pure White Silk, containing
75% recovered fibre certified by the FSC®.
Colourscript is certified to ISO 14001 and
registered to EMAS environmental
management systems NEZ052.

CBI

Our mission is to promote the conditions in which
businesses of all sizes and sectors in the UK can
compete and prosper for the benefit of all.

To achieve this, we campaign in the UK, the EU and
internationally for a competitive business landscape.

www.cbi.org.uk