

# Commission on Inequality in Education

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## ABOUT THE COMMISSION

The commission was convened in January 2016 by Nick Clegg. The other members are Rebecca Allen of Education Datalab, Suella Fernandes MP, Sam Freedman of Teach First and Stephen Kinnock MP. The secretariat is provided by the Social Market Foundation.

To produce this report, the commission reviewed the evidence on inequality in education, produced new analysis of issues where further focus was needed and consulted with stakeholders across the education system.

## INTRODUCTION

Reducing inequality in education is a challenging task where progress has been all too slow. This report reviews the evidence on inequality across time and observes how little it has changed, and in some cases how the situation has actually worsened over time.

The evidence we set out shows that how much money a child's parents earn, which region they live in and their ethnicity are all very significant factors in how successful they are at school. Where someone comes from can still matter much more in determining where they end up in life than their talents or efforts. This is the reality that should be weighed against political discussions of Britain as a meritocracy.

The evidence on the widening educational gap between regions is particularly noteworthy. As the Government's Industrial Strategy paper acknowledges, regional disparities are wider in the UK now than in other western European nations. Six in ten people live in areas with incomes 10 per cent below the national average.<sup>1</sup> Only in London and the South East has GDP per head recovered to its level before the financial crisis.<sup>2</sup> Improving educational outcomes in regions with weaker economic outcomes is an obvious answer, but we find that poorer regions of England are actually falling further behind the capital.

In addressing these problems, structural reform – such as the introduction of grammar schools – might seem appealing. However, the evidence for the

effects of structural reform in reducing inequality is disputed and limited, and any pursuit of greater selection in state-funded schools would be likely to provoke political debate that distracts from more useful solutions.<sup>3</sup> We also note the significance of school budgets; overall pressure on school resources will inevitably create obstacles to progress in this area.

In this context, rather than reviewing the configuration or funding of the education system, the commission has focused on the role of teachers and families. We find compelling evidence of the impact they can have on outcomes; and the differences across local areas and socio-economic circumstances both in access to teachers and the engagement of families are stark.

The importance of both high-quality teaching and parental engagement in a child's educational experience are well known but inadequately studied. Our research, for instance, sheds new light on the way that more experienced and highly-qualified teachers gravitate to schools whose children come from wealthier families, leaving children in poorer areas with lower-quality teaching and thus widening the gap between them. We offer practical solutions to address these disparities by helping schools in poorer areas to recruit and retain teachers with higher qualifications.

Disparities of family engagement are one of the most challenging and sensitive issues in education policy; many policy-makers have been wary of even discussing the role that different parents play in their children's educational experience, much less finding ways to help parents offer better support to their children. That reticence has meant that educational inequalities harmful to individual children and society more widely have gone unchallenged. Our report therefore breaks this taboo, in order to provoke a debate about the role and responsibility of parents and what schools can do to support them.

Finally, we note that this report was written and developed by politicians and others expert in the central policy-making process in Westminster and Whitehall. In some aspects of education policy, such as school structure or funding, government can simply order changes to be made. Many of the issues of inequality that we identify, however, are not so susceptible

to instructions from above. Effective remedies will instead rely on the understanding, commitment and effort of teachers and families, and our aim here is to support them in this work.

## KEY FINDINGS

- The performance gap between the richest and the poorest has remained persistently large between the mid-1980s and the mid-2000s, with no significant improvement.
- GCSE performance at age 16 across England reveals marked disparities between regions, with over 60% of pupils in London achieving 5 good GCSEs (including English and Maths) compared to 55% in the West and East Midlands.
- Comparing the performance of 11-year olds born in 2000 with those born in 1970 reveals that the geographic area a child comes from has become a more powerful predictive factor for those born in 2000 compared to 1970.
- While Asian students born in 1970 performed poorly, Chinese, Indian and Bangladeshi-heritage children born in 1999/2000 were the best performers. White students have fallen from outperformers to under-performers on average.
- At age 11, Yorkshire & Humberside and the West Midlands have disproportionately high numbers of low-scoring pupils. By contrast, the North West and London have disproportionately high numbers of high-scoring pupils.
- The Chinese, Indian, Black African and Other Asian groups have disproportionately high numbers of high scoring pupils. The Pakistani, Bangladeshi, Black Caribbean and other Black groups have disproportionately high numbers of low scoring pupils.
- Schools with more affluent children have 12% of teachers with more than ten years of experience while the poorest have just 7%.
- Pupils in schools serving areas of higher deprivation are much more likely to have teachers without an academic degree in a relevant subject.

- A secondary school teacher in the highest deprivation quintile school is, other things being equal, 70% more likely to leave than one at a neighbouring school in the lower deprivation quintile
- In verbal reasoning tests for 11-year-olds, the median score for children with someone attending parents' evening is 3 points higher than for those without.
- On average, not reading to a child at age 5 decreases their age 11 test score by 1.5 points.
- Children that had someone at home making sure their homework was completed before undertaking other activities (such as watching TV) had scores that were 1.93 points higher than those that did not.
- Those who have a regular bedtime have a score 1.13 points higher than those that do not,

## RECOMMENDATIONS

- Schools in disadvantaged areas should have access to a fund for providing incentives to teachers that make housing more affordable. This should be run as a trial and the findings used to inform whether such schemes can be expanded in the future.
- It should become a condition of gaining the headship qualification that a teacher has been in middle leadership in a school in a disadvantaged area. This would encourage experienced and aspiring teachers and school leaders to spend time in disadvantaged schools.
- The Government should compel schools to publish data on training provision and turnover rates for early-career teachers in different schools and across multi-academy trusts. This should be produced in a standardised form so as to promote comparability and shine a light on retention and development problems.
- The Government should plan and launch a programme of after-school "family literacy" classes in primary schools with above-average proportions of children eligible for Free School Meals. Funding for these classes should be ring-fenced within the Skills Funding Agency budget.



- Schools should take a new approach to contracts between teachers and parents, which should be signed by both parties as equals who both have responsibilities. Teachers should commit to setting high-quality homework that demonstrably improves the child's educational development and to supporting parents in helping their children; parents should commit to ensuring that this homework is completed and given due care, and to having regular contact with the school to discuss progress. Contracts should be signed in the early weeks of first attending school and renewed annually with each year's teachers as the child progresses through the school.
- New benchmarks for independent schools to meet in order to retain their charitable status should include their provision of out-of-school activities to the children of parents who live locally. In addition, independent schools that are registered as charities should publish information on the value of any support ('public benefit') they provide to the local community, whether this takes the form of teaching support, making sports facilities available or running extracurricular activities for children from the state-maintained sector in the local area. This should be published alongside an estimate of the monetary value of the tax reliefs that the school enjoys due to charitable status.

## CHAPTER 1: THE EVIDENCE ON INEQUALITY IN EDUCATION

Our starting point for analysing inequality is to look at the gap in outcomes between young people of different backgrounds. We look within cohorts and across them, to get both a snapshot of inequality and to understand how it has changed over time.

This chapter sets out our findings on inequalities in educational attainment at age 16 and age 11. It describes four aspects of inequality and how these affect school results: region, family income, gender and ethnicity.

We also examine how these trends in inequality have evolved over time, looking at cohorts of children born in different years: ‘1958, 1970 and 1999/2000’.

### Headline findings

#### *Regional inequalities*

- In 2015-16, GCSE performance at age 16 across England reveals marked disparities between regions, with over 60% of pupils in London achieving 5 good GCSEs (including English and Maths) compared to 55% in the West and East Midlands areas.
- Regional differences in attainment are already apparent by the end of primary school and they are observable even when we allow for other factors such as ethnicity and income.
- Our analysis across different cohorts of children sitting exams at age 16 shows that regional inequalities have remained stubborn and in some cases worsened over the last three decades. Areas such as the North East, Yorkshire and the Humber, the West Midlands and the East Midlands have persistently under-performed, falling behind whilst London’s performance has improved.
- Comparing the performance of 11-year olds born in 2000 with those born in 1970 reveals that the geographic area a child comes from has become a more powerful predictive factor for those born in 2000

compared to 1970. **Where a child comes from now matters more for their success in later life than it did a generation ago.**

### *Inequalities by family income*

- A very low proportion of pupils who receive Free School Meals achieve 5 or more A\* to C at GCSEs (including English and Maths) (33%) compared to those not receiving Free School Meals (61%).
- The performance gap between the richest and the poorest has remained persistently large between the mid-1980s and the mid-2000s.
- When using the measure of '5 A\* to C grades', the attainment gap between FSM pupils and non-FSM pupils has narrowed over the last decade. However, when more demanding measures, such as '5 A\* to C including English and Maths,' are applied, no such progress is observed.

### *Inequalities by ethnic group*

- Educational performance varies significantly across different ethnic minority groups. Around 77% of Chinese heritage pupils get five good GCSEs including English and Maths. Only 45% of Black Caribbean pupils achieve this benchmark.
- Ethnic differences are important in their own right – as distinct from income, region or other factors – with the performance of a Chinese child at age 11 higher than for a white child of the same age, income and region.
- Over the last three decades, ethnic inequalities have altered radically but a similar level of unevenness remains. **While Asian students born in 1970 performed poorly, Chinese, Indian and Bangladeshi-heritage children born in 1999/2000 were the best performers. White students have fallen from over-performers to under-performers on average** over the three decades.

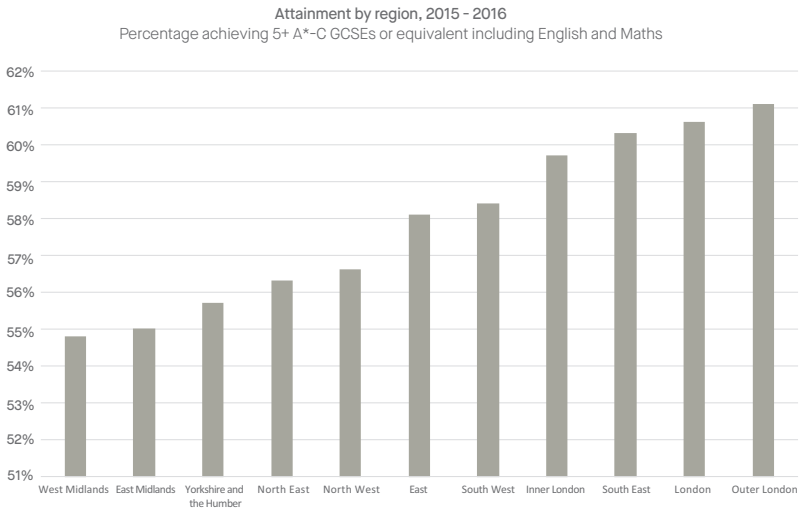
## Gaps in attainment at age 16 – present

Our analysis of GCSE results is based on Department for Education statistics, broken down by income, gender, ethnicity and region. These statistics are

based on exam results of all students taking GCSEs in state-funded schools in England.

We observe big differences in GCSE results between worst performing and best performing areas. As shown in figure 1 below, over 60% of pupils in London achieve five good GCSEs including English and Maths compared to 55% in the West and East Midlands.

**Figure 1: Attainment by region**

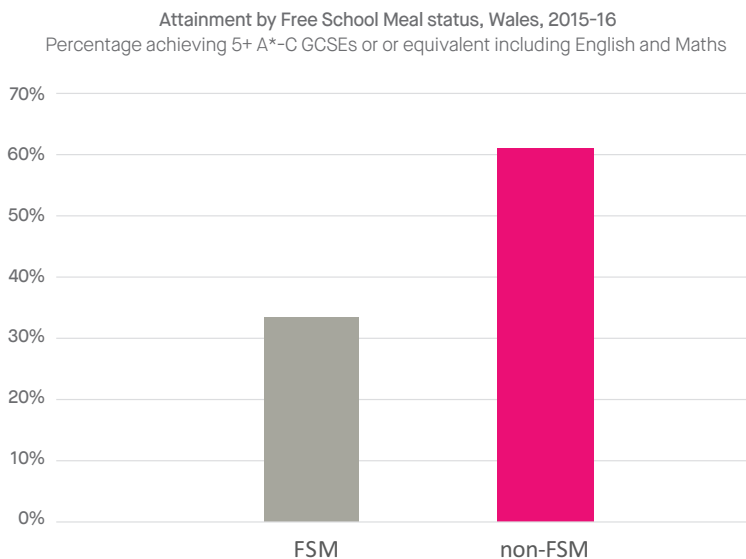


Pupils are eligible for free school meals if their families receive certain income-related benefits. As such, it provides a proxy for pupils from a low income background.

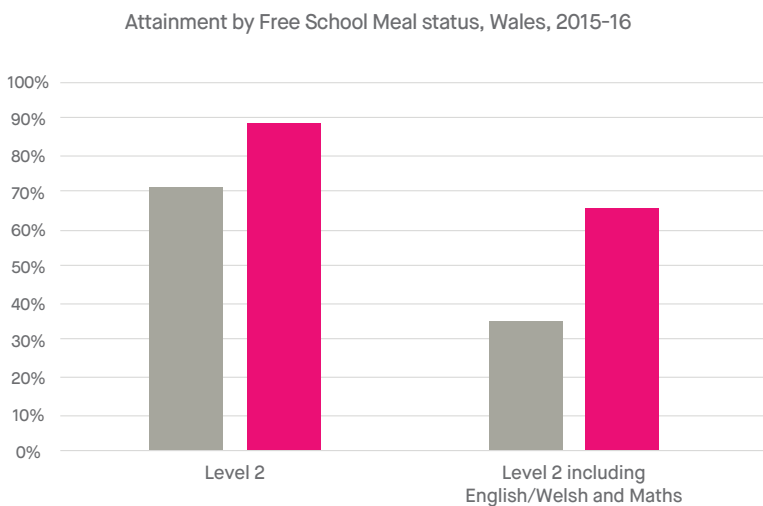
One in three (33%) of pupils eligible for free school meals get five good GCSEs (including English and Maths) compared to above 60% of pupils who are not eligible for free school meals. This is shown in figure 2.

We observe a similar pattern in Wales. This is shown in figure 3 below. Differences between England and Wales mean it is difficult to compare results across the two directly. The gap between poorer and richer pupils in Wales though seems to be of a similar magnitude to that in England.

**Figure 2: Attainment by Free School Meal status**



**Figure 3: Attainment by Free School Meal status in Wales**

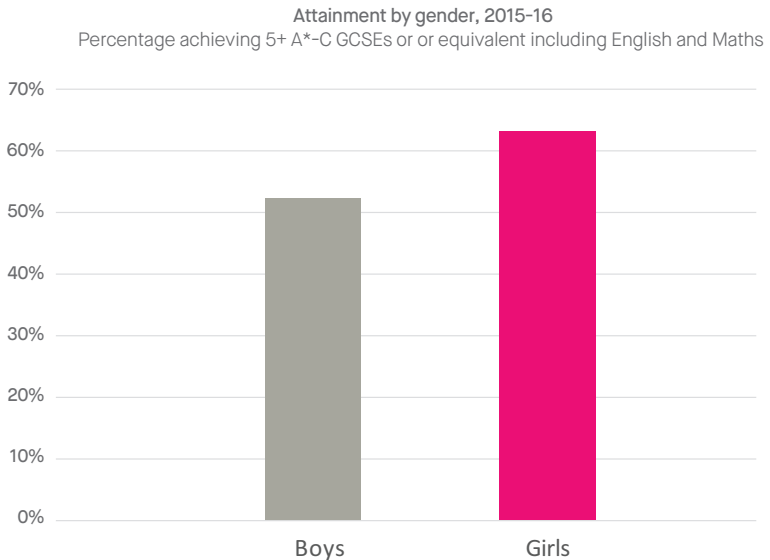


We can also observe differences in attainment by gender. Figure 4 illustrates that 62% of girls achieve five good GCSEs (including English and Maths) compared with 52% of boys.

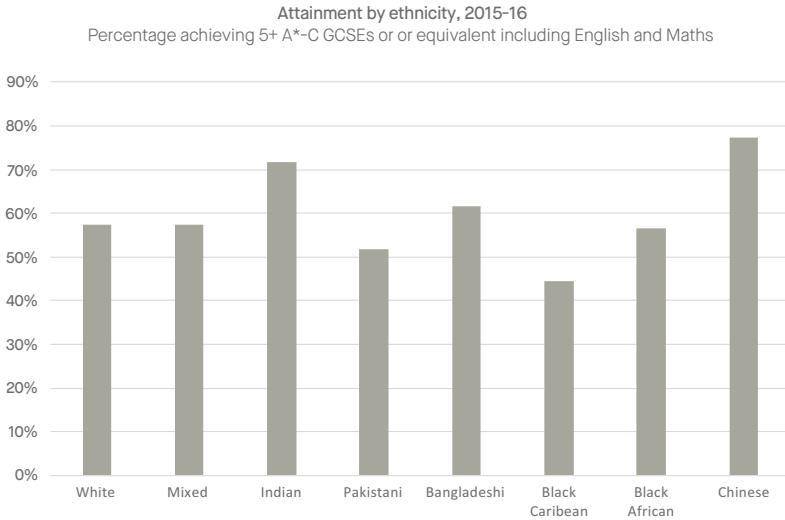
Finally, we can observe that there are substantial differences in attainment across ethnicity. Some ethnic minority groups out-perform by a large margin: almost 75% of Chinese pupils get five good GCSEs, including English and Maths.

But others lag behind. Only around 45% of Black Caribbean pupils get five good GCSEs. These differences are shown in figure 5.

**Figure 4: Attainment by gender**



**Figure 5: Attainment by ethnicity**



This simple analysis of GCSE performance at age 16 across state-funded schools illustrates the significant inequalities that exist across region, family income, ethnicity and gender.

Particularly noteworthy is the significant disparity between regions: over 60% of pupils in London achieve good GCSEs (including English and Maths) compared to 55% in the West and East Midlands. Free School Meal status, while an imperfect proxy for family income, nevertheless reveals a further and large gap in attainment.

In the next section, we look at how attainment at age 16 has changed over time. Our aim is to understand whether there have been improvements in closing the gaps and where inequalities may have worsened.

### Gaps in attainment at age 16 – changes over time

To observe changes over time, we use the 1970 British Cohort Study (BCS), which follows the lives of 17,000 children born in 1970, and contains data on their O-level results, taken in 1985-1986. We do this rather than use official

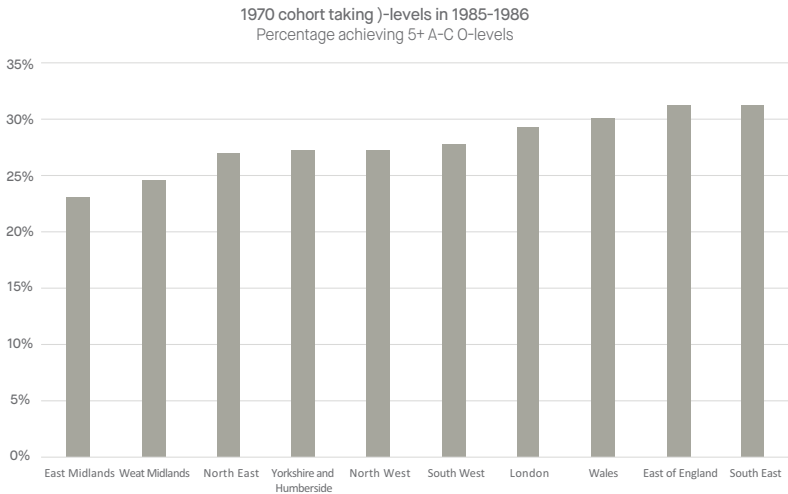
examination results for all pupils because BCS is a rich source of data that allows us to break down results by family background, region and gender.

Fundamentally, we see that there is little progress in evening out regional inequalities over three decades, with some areas falling further behind. The earlier results are reported in figure 6; and the latest in figure 7.

The East Midlands, West Midlands, North East and Yorkshire & Humberside have persistently under-performed other regions. They lagged behind in 1985-85 and still lag behind now.

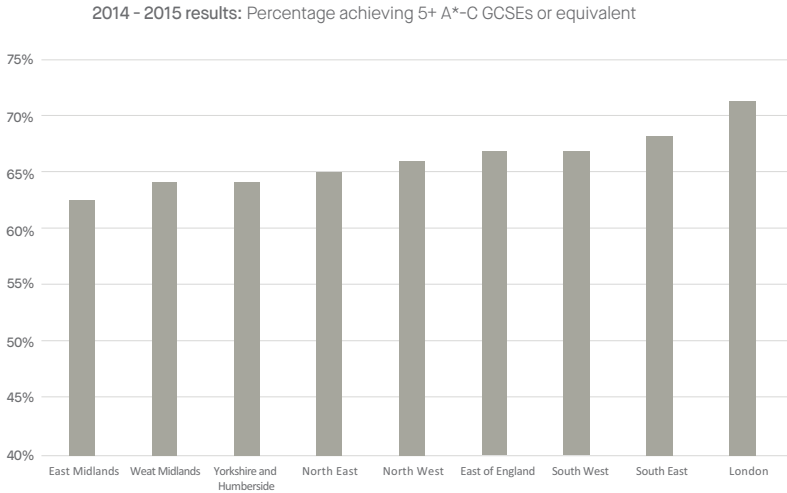
The South-East has maintained higher than average performance. The change in London's performance has underlined the regional divide. London was in the middle of the pack of regions in 1985-85 and has since risen to the top bypassing the wider South East, which nevertheless is the region closest to London in the level of attainment.

**Figure 6: Attainment by region in 1985-86**





**Figure 7: Attainment by region in 2014-15**

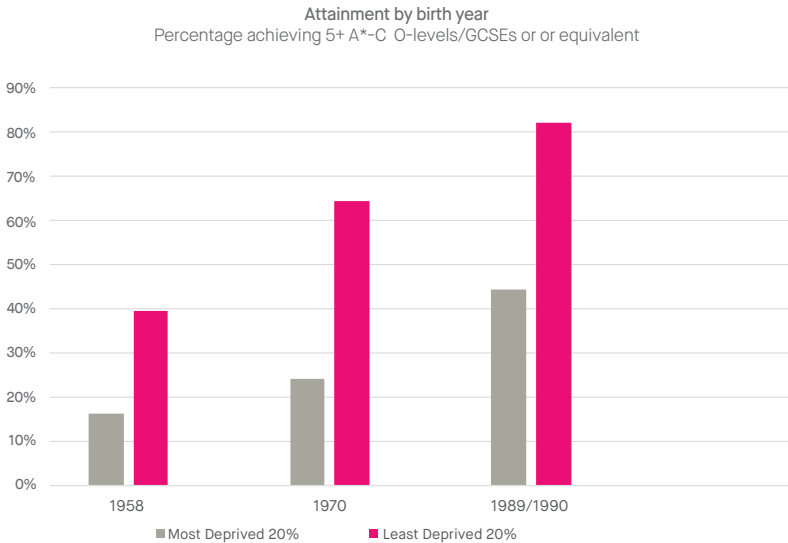


Turning to gaps in attainment by family income, these are persistent and long-standing. Figure 8 illustrates results from previous research by Blanden and Macmillan comparing the O-level/GCSE performance of cohorts born in 1958, 1970 and 1989/90.

The first bar for each cohort is the attainment of the most deprived 20% of young people; and the second bar is the attainment of the least deprived 20%. The gaps are substantial, almost 40 percentage points for the latest birth cohort in the study, 1989/90. The gap is almost precisely the same size for the 1970 birth cohort. That essentially means that there has been no progress in closing the gap over two decades.

The only consolation is that attainment has been rising across the board.

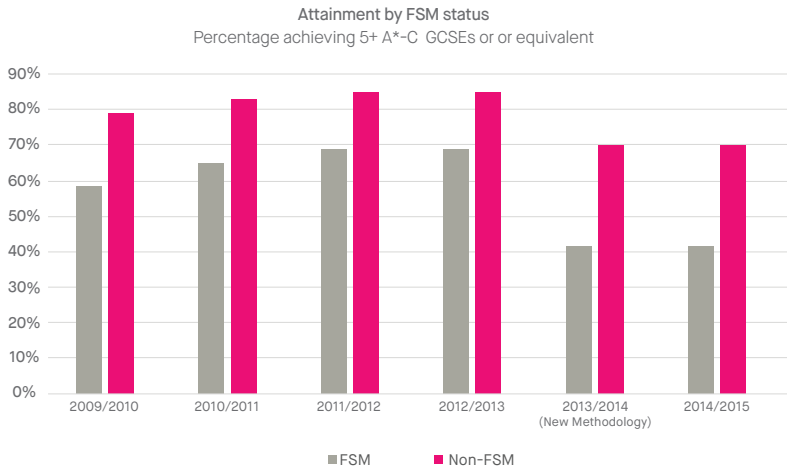
**Figure 8: Attainment by birth year**



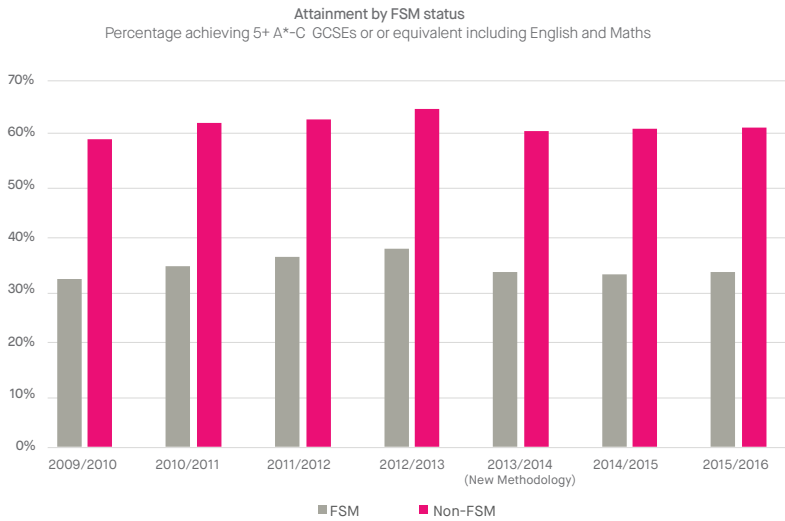
In recent years, since the wider study, there was an apparent narrowing of the gap in performance between pupils on Free School Meals and other pupils. However, this narrowing is mainly observed in the measure of how many young people attain 5 A\*-C grades in GCSEs or equivalents (Figure 9), not in the perhaps more rigorous measure of 5 A\*-C grades in GCSEs including English and Maths (Figure 10), which is the performance measure currently favoured by the Government.

And on that measure, when in 2013-14 a new methodology was brought in to measure performance, the seeming progress on closing the gap seemed to disappear. The new methodology is more restrictive in what qualifications are counted as equivalent to GCSEs. On this measure, as can be seen in figure 8, the gap between pupils on Free School Meals and others is much larger.

**Figure 9: Attainment by Free School Meals status**

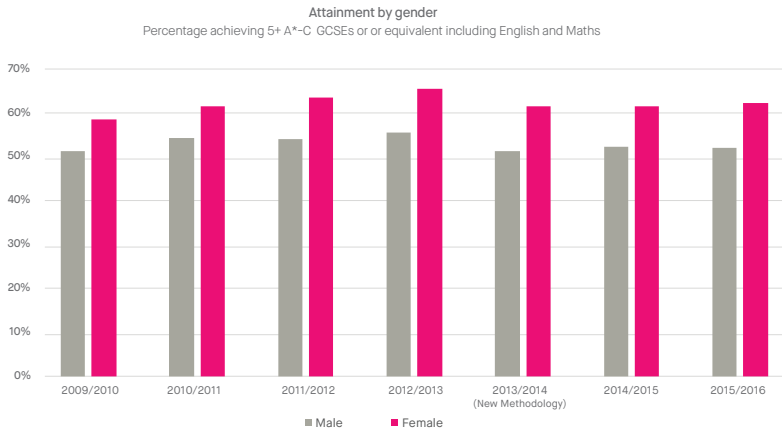


**Figure 10: Attainment by Free School Meals status**



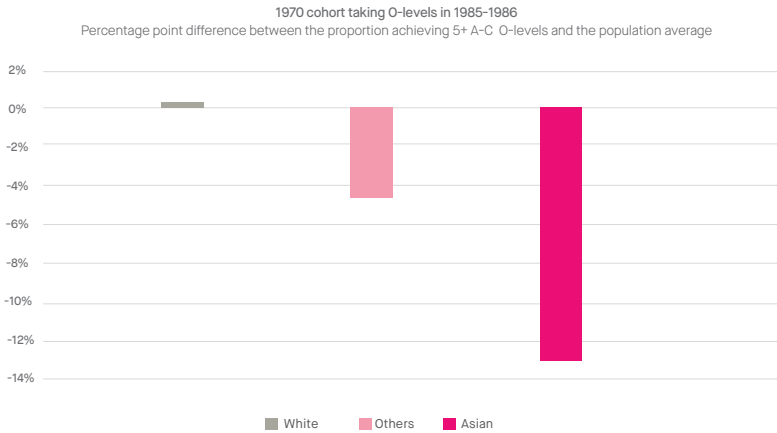
Regarding gender, the evidence is even starker. The gap in attainment has plainly become wider over time. Girls were already starting to outperform boys among the 1970 cohort, taking O-levels in 1985-86, but the gap was minimal. Using the new performance measure of more than five GCSEs or equivalents, including English and Maths, young people taking their exams in 2015/16, born in 1999-00, the gap has grown to more than 10 percentage points. The change is illustrated in figure 11.

**Figure 11: Attainment by gender**

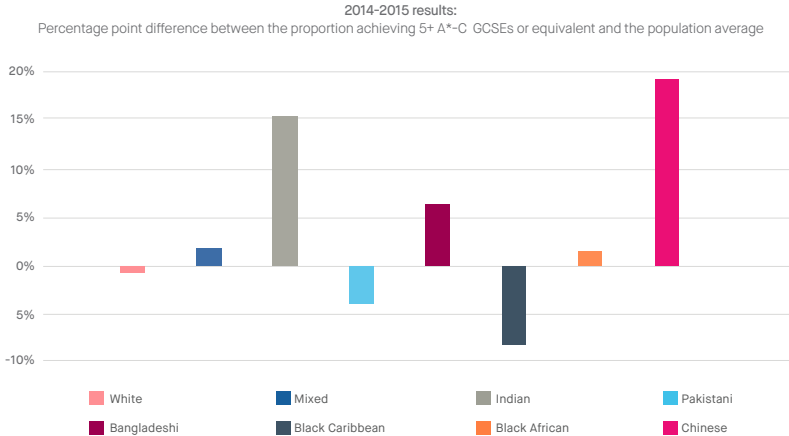


Children from some ethnic groups are now doing much better than average. It is hard to compare against past performance as ethnicity was not recorded in the same way but the large penalty previously associated with being “Asian” appears to have fallen dramatically; Chinese and Indian students now outperform the average by a large margin. The negative gap experienced by non-white students among the 1970 birth cohort is illustrated in figure 12. Figure 13 provides the more recent picture.

**Figure 12: Attainment by ethnic background**



**Figure 13: Attainment by ethnic background**



**Conclusions from the latest GCSE results**

- Marked disparities between regions, with over 60% of pupils in London achieving 5 good GCSEs (including English and Maths), compared to 55% in the West and East Midlands.

- Low proportion of pupils who receive Free School Meals achieving 5 A\* to C at GCSEs (including English and Maths) (33%) compared to those who do not receive Free School Meals (61%).
- Attainment varies across different ethnic minority groups. While 77% of Chinese pupils get five good GCSEs (including English and Maths), only around 45% of Black Caribbean pupils achieve this benchmark.

### *Conclusions on changing pattern of inequalities over time*

- Regional disparities persist, with some areas such as the North East, Yorkshire and the Humber and the East Midlands falling further behind and London's performance surging over the last three decades.
- The performance gap between the richest and the poorest has remained persistently large between the mid-1980s and the mid-2000s.
- When using the measure of 5 A\* to C grades, the attainment gap between FSM pupils and non-FSM pupils is observed to narrow over the last decade. However, when more demanding measures are applied, this progress is no longer observable.
- Ethnic inequalities have altered radically but have not levelled out. While Asian students born in 1970 performed poorly, Chinese, Indian and Bangladeshi born in 1999/2000 were the best performers. White students have fallen from over-performers to under-performers on average over the three decades.
- Between 1970 and 2014/15, girls have advanced their attainment compared to boys.

## Gaps in attainment at age 11

Our next step is to observe whether the differences in attainment are present at age 11. These differences are harder to track over time as there are no comparable qualifications taken at age 11.

What we do therefore is to use cognitive test scores from two different cohort studies: BCS, a study of children born in 1970, (already mentioned in the previous section); and the Millennium Cohort Study (MCS), a study of children born in 2000. Specifically, we use the results from verbal reasoning

tests administered to children at age 11 as part of the study. The rationale for doing this is threefold:

- These tests are comparable over time (unlike Key Stage 2 tests which were introduced more recently, and other cognitive test scores which are not consistently available).
- Evidence suggests that verbal reasoning is an important indicator of later attainment (Strand, 2006).
- Analysis of attainment levels in verbal reasoning tests provides a complementary method of assessing inequalities. It strips out the potential effect that grade inflation or deflation in public exams may have on attainment and the inequalities that we observe.

We use the two sets of test scores to examine inequality across the following dimensions: region, income and ethnicity. We do not report results for gender as the evidence suggests that the performance of boys and girls may vary depending on the type of test.

To start, we analyse the data for the children born in 2000. We split them into three groups depending on their test results: low ability, mid ability and high ability. As soon as we do this, we observe some significant differences by region. Table 1 below shows the distribution of each group across regions, and compared to the survey population as a whole.

We observe that **Yorkshire & Humberside and the West Midlands have disproportionately high numbers of low-scoring pupils**. While the former, for example, accounts for only 9% of the survey population as a whole, 12% of the low ability group live there. By contrast, **the North West and London have disproportionately high numbers of high-scoring pupils**. The former, for example, accounts for only 11% of the survey population, and yet 14% of the high ability group live there. Young people in London are over-represented in the high ability group by a similar margin.

**Table 1: Ability groups by region**

	Survey population	Low ability group	Mid ability group	High ability group
North East	4%	4%	3%	3%
North West	11%	9%	9%	14%
Yorkshire & Humber	9%	12%	9%	5%
East Midlands	7%	7%	8%	7%
West Midlands	8%	9%	7%	7%
East of England	9%	9%	11%	8%
London	10%	9%	10%	13%
South East	15%	15%	17%	14%
South West	9%	9%	9%	7%
Wales	18%	17%	17%	21%

We use the same methodology to look at gaps in attainment by family income. High ability children are more likely to come from the top income deciles. As before, we split pupils into three groups depending on their test results: low ability, mid ability and high ability. Table 2 below shows the distribution of each group across family income deciles, where decile 1 is made up of the poorest households, and decile 10 is made up of the richest.

A disproportionately high number – 14% of high scoring pupils - come from the richest 10% of households. Meanwhile 17% of low scoring pupils come from the poorest 10% of families.



Table 2: Ability groups by family income

Income decile	Survey population	Low ability group	Mid ability group	High ability group
1 Poorest	10%	17%	8%	5%
2	10%	15%	9%	6%
3	10%	12%	10%	8%
4	10%	11%	10%	8%
5	10%	9%	10%	11%
6	10%	9%	11%	10%
7	10%	8%	10%	12%
8	10%	7%	11%	13%
9	10%	6%	11%	12%
10 Richest	10%	5%	10%	14%

Turning to ethnic background, several ethnic minorities out-perform the average, but many lag behind. Table 3 below shows the distribution of each ability group across ethnic minority.

**The Chinese, Indian, Black African and Other Asian groups have disproportionately high numbers of high scoring pupils.**

**The Pakistani, Bangladeshi, Black Caribbean and other Black groups have disproportionately high numbers of low scoring pupils.**

**Table 3: Ability groups by ethnic background**

Ethnic group	Survey population	Low ability group	Mid ability group	High ability group
White	88.1%	86.1%	90.0%	88.9%
Mixed	2.5%	2.2%	2.7%	2.6%
Indian	1.7%	1.4%	1.6%	2.3%
Pakistani	2.8%	4.5%	2.1%	1.9%
Bangladeshi	1.2%	2.2%	0.6%	0.6%
Other Asian	0.6%	0.6%	0.5%	0.7%
Black Caribbean	0.7%	0.8%	0.7%	0.7%
Black African	1.4%	1.3%	1.4%	1.5%
Other Black	0.2%	0.3%	0.1%	0.2%
Chinese	0.1%	0.0%	0.0%	0.2%
Any other	0.5%	0.7%	0.4%	0.5%

These aspects of difference that we have described are related to each other. There are a number of inter-relationships between ethnicity, income and region. For example, Black Caribbean children are, on average, in lower income households than Indian children. Some regions have higher average incomes, and some regions have higher proportions of certain ethnic groups.

## WHICH FACTORS MATTER MOST?

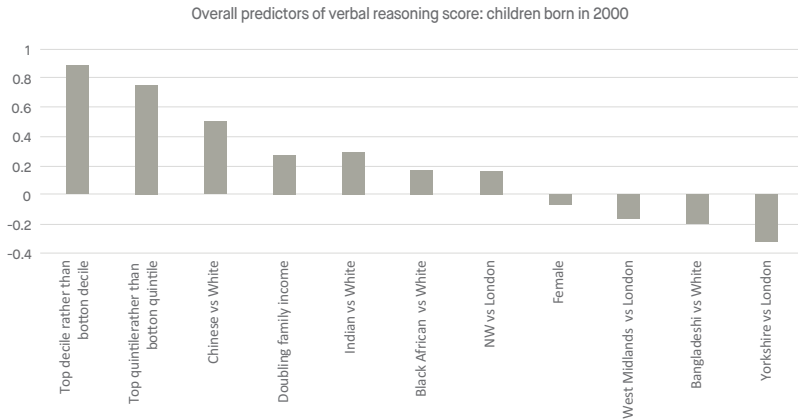
To understand these inter-relationships, we carry out a regression analysis which explores which effects – ethnicity, income or region – are strongest once other factors are taken into account. In the figures that follow, the verbal reasoning test scores are standardised: mean 0, standard deviation 1. This means:

- a score of 0 represents the average score;
- a score of 1 loosely represents an average high ability score; and
- a score of -1 loosely represents an average low ability score

The regression analysis suggests that being in the top income decile rather than the bottom income decile increases a child’s expected score by about 0.9 – for example, it takes the expected score from being average to being high ability. This is after taking into account other effects such as region and ethnicity. Doubling family income adds around 0.3 to the expected score. In other words, parental income was the most significant predictor of the results for children born in 2000: having relatively high-paid parents is the biggest boost to results.

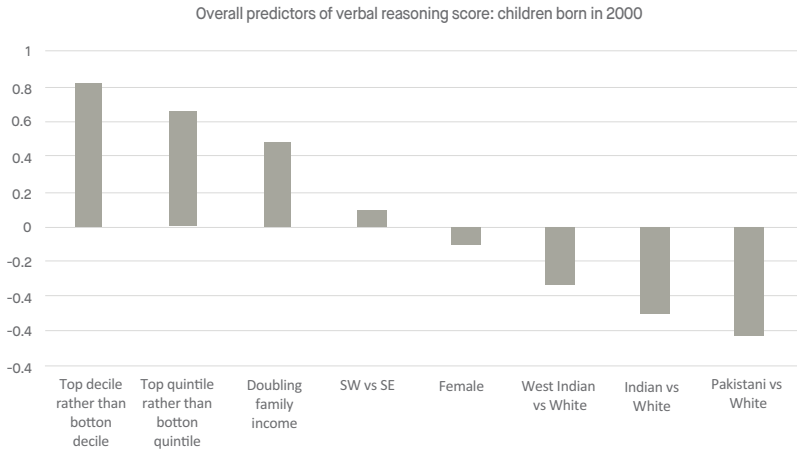
However, other factors can have a significant influence: **Chinese heritage is associated with test results around 0.5 points higher than those of a white child of similar income and region. Indian heritage also increased the expected score by more than 0.3 points.** Both of these effects are more significant than the increase in scores associated with a doubling of parental income. These, and other results, are shown in figure 14.

Figure 14: Overall predictors of verbal reasoning score – children born in 2000



The advantage of these predictors is that we can compare them readily with results from the earlier cohort survey - children born in 1970 – and look at how they have changed over time. The overall predictors of verbal reasoning score for children born in 1970 are illustrated in figure 15.

Figure 15: Overall predictors of verbal reasoning score – children born in 1970



We find that, for children born in 1970, doubling family income had a stronger effect – adding 0.5 rather than 0.3 to the test score. This might suggest that family income has become slightly less important over time. However, being in the top decile of family income rather than the bottom decile was slightly less important for children born in 1970 compared to those born in 2000 – adding 0.8 rather than 0.9 to a child’s expected score.

In any case, measures of family income were the largest predictors for children born in 1970 and remain so for children born in 2000.

For children born in 1970, non-white ethnic groups did much worse than the white group. Those negative gaps have certainly narrowed and some ethnic groups are now predictors for stronger performance than the white group.

Regional differences were very small for children born in 1970. The only regional difference that was statistically significant was living in the South West as compared to living in the South East and even at that was a minor factor. By contrast the number of regional differences that are significant for children born in 2000 are higher and the effect sizes are larger too. For two children of similar income and ethnicity born in 1970, it did not matter significantly if one went to school in London and the other in Yorkshire. For

two such children born in 2000, the Londoner's predicted scores would be around 0.3 points better than the Yorkshire child.

### **Findings for 11 year-olds born in 2000**

Regional differences in attainment are already apparent by the end of primary school.

High ability children at age 11 are much more likely to come from families in the top income deciles and low ability children to come from families in the bottom income deciles.

When controlling for all other observable factors, we find that:

Being in the top income decile rather than the bottom income decile increases a child's expected score from being average to being high ability.

Ethnic differences are important in their own right with the performance of a Chinese child higher than for a white child similar in all other ways.

Regional differences matter: for instance, being from London rather than Yorkshire is associated with better attainment all other things being equal.

### **Conclusions on changing pattern of inequalities over time**

The effect on attainment of doubling the family income was lower for children born in 2000 than those born in 1970 suggesting a flattening of inequalities.

However, this masks more marked inequalities at the extremes. Being in the top rather than bottom decile became a stronger predictor of a high score in 2000 than 1970 (adding 0.8 for the 1970 cohort rather than 0.9 for the 2000 cohort)

The geographic area a child comes from has become a more powerful predictive factor for those born in 2000 compared to 1970.

## How the analysis guides the rest of the report

The scale of the inequalities identified above and their persistence over time are the motivation for the commission's work.

The two factors to which we give the highest importance are family income and place. Family income has retained a large role in a child's prospects, with little evidence of that role diminishing over time. The region in which a child grows up has appears to have grown over time. These two features of inequality interact. Differences in income in our country have a very strong regional and local dimension.

As for the other factors assessed above, the changing role of ethnicity in results is something that may warrant further study.

For now, our focus therefore is this intersection of family income and place. In real-world terms, we are thinking about the families who have been left behind by economic change in the towns and areas that are left behind. And we are thinking about what can be done to help them, to allow them to compete more equally with children elsewhere.

## CHAPTER 2: TEACHERS

The quality of teaching is the most important school-based determinant of educational success. Previous research shows pupils make less progress when they have a teacher that does not have a formal teaching qualification; is newly qualified; is less experienced; is without a degree in the relevant subject; and when teacher turnover at their school is high.

Despite their importance, the issues involved in the recruitment, retention and distribution of teachers across the country have had far less attention than school structures or the curriculum. For too long we have assumed that there will be enough high quality teachers for all schools and treated the distribution of the teacher workforce as a management issue for every school to manage for itself rather than a fundamental driver of educational attainment.

The commission decided early on that we will prioritise the role of teachers. We do this for two reasons: the first is that high quality teaching matters, much more than a lot of education policy tends to recognise; and the second is that the distribution of teachers across the country may help us to understand why young people from some backgrounds – fundamentally, those living in poorer areas, the intersection of family income and place we described in the previous chapter – are doing less well in education than others.

Rather than assuming that young people with these backgrounds have lower aspirations or lower ability, or that they need special help or a different curriculum to help them, we test the hypothesis that it is inequality in their access to teachers which leads to the inequality in their attainment. Fix that, and we will create a better future for them.

Starting from that hypothesis, our analysis finds that schools serving lower income communities experience a combination of challenges. They are more likely to have teachers that do not have a formal teaching qualification; if their teachers are qualified then their qualifications are new; their teachers have less experience of teaching; are more likely to be without a degree in the subject they are teaching; and teacher turnover is higher too.

This cocktail of disadvantage offers a powerful explanation as to why there continue to be substantial and persistent inequalities in educational outcomes between pupils living in areas where family income levels are low and others.

### Headline findings

- The proportion of teachers who are not qualified in primary schools with the highest concentration of Free School Meals pupils is 4%, while in the most affluent quintile this is 2%. The gradient is similar for secondary schools where the schools with the richest pupils have 5% unqualified teachers and the poorest have 9%.
- **Schools with more affluent children have 12% of teachers with more than ten years of experience while the poorest have just 7%.** Among secondary schools the figures are 12% and 8% respectively. The schools with more advantaged intakes also have a higher proportion of teachers with between five and ten years of experience.
- There are also inequalities in expertise. **Pupils in schools serving areas of higher deprivation are much more likely to have teachers without an academic degree in a relevant subject.** The ‘expertise gap’ is 10 percentage points for Key Stage 4 Maths, 14 percentage points for Chemistry and a remarkable 22 percentage points for Physics.
- The schools serving more disadvantaged communities also experience higher levels of teacher turnover than neighbouring, more advantaged schools. **A secondary school teacher in the highest deprivation quintile school is, other things being equal, 70% more likely to leave than one at a neighbouring school in the lower deprivation quintile.** The odds of leaving the highest deprivation quintile school at primary level are 20% higher.

### The importance of teachers

The quality of teaching is by far the most important school-based determinant of a pupils’ educational attainment.<sup>4</sup> Indeed, moving a child from an average to top teacher means they will learn in six months what would otherwise have taken twelve.<sup>5</sup> So while policies focusing on the school curriculum,



accountability, collaboration and funding might contribute to closing the gap, they are missing the point of greatest leverage.

In this chapter, we focus on this one critical point: do pupils living in areas where there are high concentrations of families with low incomes have access to good quality teachers?

Measuring the quality of teachers is tricky. In the US, detailed data linking teachers to pupils allows researchers to measure the pupil achievement in teachers' classrooms directly.<sup>6</sup> In the UK the data is not detailed enough to do this; so we take a different approach. Instead of measuring pupil progress we measure the characteristics of the teachers themselves and use this to make inferences about the distribution of high quality teachers.

We know from the extensive literature on teacher effectiveness that pupils tend to make less progress if their teachers have certain characteristics. For example, empirical evidence shows that:

- Pupils make less progress when they have a newly qualified teacher.<sup>7</sup> This is to be expected since new teachers are inexperienced and are still acquiring teaching skills.
- Pupils make less progress when they have an unqualified teacher.<sup>8</sup> This is also highly intuitive since unqualified teachers will not have received the same level of training as those who have acquired a formal qualification.
- Pupils make more progress when they have a very experienced teacher.<sup>9</sup> On average, teachers improve rapidly during their first two or three years in the classroom and then continue to improve, albeit at a slower rate, across the first ten years of their career.
- Pupils make less progress when teacher turnover at their school is high.<sup>10</sup> Research shows that high turnover in a school has a disruptive effect on pupil learning and reduces attainment as a result.

There is also a live debate about whether pupils make less progress when their teacher does not have a degree in the relevant subject.<sup>11</sup> Some research suggests this is particularly important for technical subjects, such as maths, being taught at secondary level, though that conclusion is disputed.

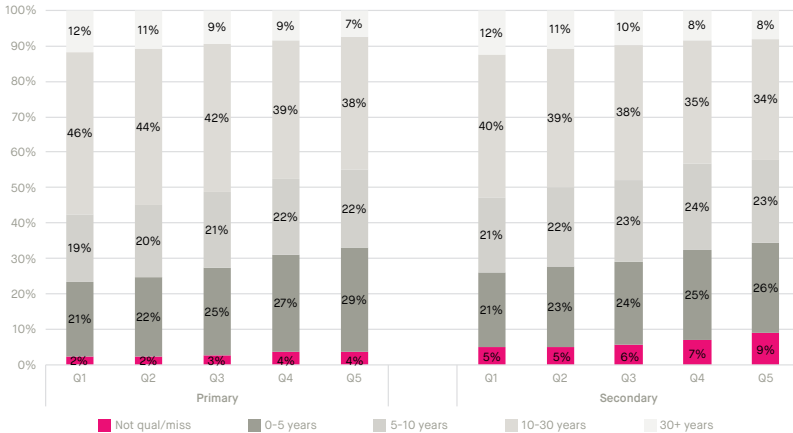
These characteristics are particularly useful for our analysis because they can be observed in the School Workforce Census (SWC), the dataset which covers all staff working in English state schools. To compare the characteristics of teachers working in different types of schools, we divide schools into five groups or quintiles. These distinguish schools which have the lowest proportion of pupils on Free School Meals (FSM), Quintile 1, all the way through to schools which have the highest proportion of these pupils, Quintile 5. From now on we refer to these as deprivation quintiles. We then compare the teachers working in each of these five deprivation quintiles on each of the five characteristics of effective teachers set out above.

### **Do schools serving disadvantaged communities get lower quality teachers?**

Figure 16 compares the proportions of qualified teachers and levels of experience across the five deprivation quintiles for both primary and secondary schools. Schools on the left have more affluent intakes and schools on the right have more disadvantaged intakes. The proportion of teachers who are not qualified in primary schools with the highest concentration of FSM pupils is 4%, while in the most affluent quintile this is 2%. The difference is similar for secondary schools: the richest have 5% unqualified teachers and the poorest have 9%. The most affluent quintile schools also have more highly qualified teachers. The lowest deprivation primary schools have 12% of teachers with more than ten years of experience while the poorest have just 7%. Among secondary schools the figures are 12% and 8% respectively. More affluent schools also have a higher proportion of teachers with between five and ten years of experience.

Teacher qualifications by Free School Meal (FSM) quintile of school, November 2014

Figure 16: Teacher qualifications by Free School Meal (FSM) quintile of school, November 2014



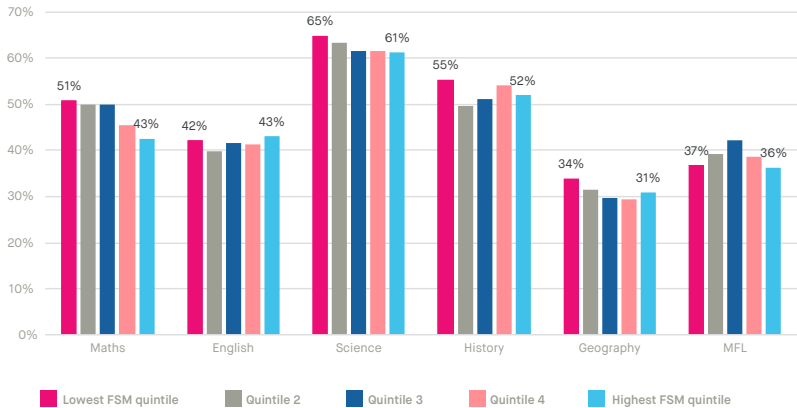
Source: School Workforce Census

These inequalities in experience are accompanied by inequalities in expertise. Figure 17 shows whether KS3 teachers have an academic degree in the subject they are teaching across the five deprivation quintiles. Figure 18 shows the same for KS4 teachers. The results show a clear division between arts and science subjects. In both Key Stages, English, History, Geography and Modern Foreign Languages teachers are just as likely to have an appropriate degree across the deprivation quintiles. However, for Maths and science subjects a clear gradient emerges, with more deprived schools much more likely to have teachers with inappropriate qualifications. The ‘expertise gap’ is 14 percentage points for KS4 Chemistry and a remarkable 22 percentage points for Physics. That the largest expertise gaps occur in technical subjects like Maths and Physics. These are also the subjects for which some research suggests that teachers having a relevant degree is most important.<sup>12</sup>

The subjects with the biggest expertise gaps are closely correlated with the subjects for which teacher shortages are the most severe (Physics, followed by Maths and then other sciences).<sup>13</sup> This is what we might expect, since schools struggling to recruit in a specific area are more likely to have to settle for teachers with less appropriate qualifications.<sup>14</sup> If subject-specific qualifications are important to teaching quality, this suggests that teacher shortages are disproportionately harming the poorest students.

Proportion of Key Stage 3 teachers with a degree in the subject they are teaching, by school FSM quintile

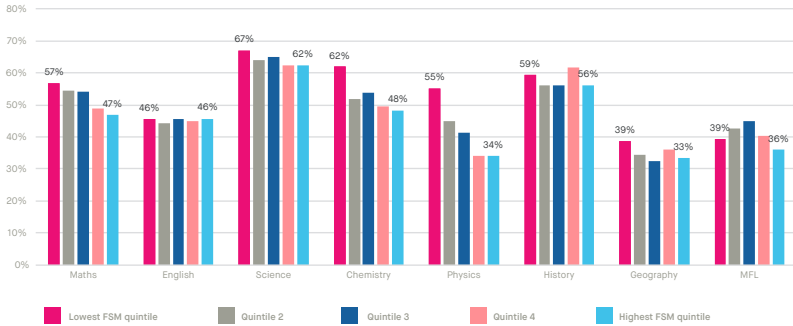
**Figure 17: Proportion of Key Stage 3 teachers with a degree in the subject they are teaching, by school FSM quintile**



Source: School Workforce Census

Proportion of Key Stage 4 teachers with a degree in the subject they are teaching, by school FSM quintile

**Figure 18: Proportion of Key Stage 4 teachers with a degree in the subject they are teaching, by school FSM quintile**



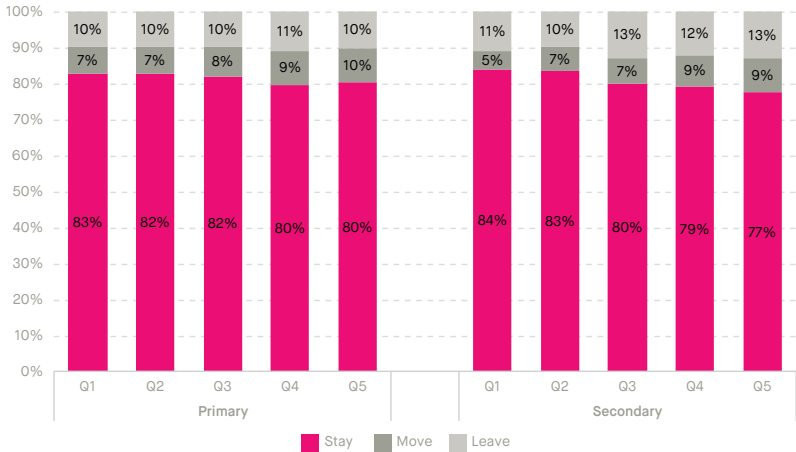
*Note: We assume that one-third of KS4 science teaching time is devoted to each of physics and chemistry, regardless of school deprivation quintile*

The last of the five characteristics we identified at the outset is turnover. Research shows that persistent high turnover in a school tends to be damaging for pupil attainment, although it can be an important factor in school turnaround situations.<sup>15</sup> There are several different reasons for this.<sup>16</sup> First, it may damage pupil learning by reducing continuity or coordination between teachers, especially if supply teachers are used in the interim period. Second, the teachers that leave may take with them hard-won knowledge about specific pupils and their learning needs. Third, school leaders have to spend time and money recruiting new teachers in their place. Fourth, if replacement teachers are of a lower quality than those leaving the school, then average teacher quality will be reduced.

Figure 19 compares turnover across the deprivation quintiles for both primary and secondary schools. Once again, a clear gradient emerges with poorer schools seeing higher levels of turnover. The gradient is steeper at secondary level where the most deprived quintile of schools have almost a quarter (23%) of their teachers leave each year while the equivalent figure for the least deprived quintile is 16%. This is consistent with other research from the UK showing that a 10% increase in the proportion of FSM pupils at a school increases turnover by 1%.<sup>17</sup>

Proportion of teachers leaving the profession and moving schools, by school FSM quintile

Figure 19: Proportion of teachers leaving the profession and moving schools, by school FSM quintile



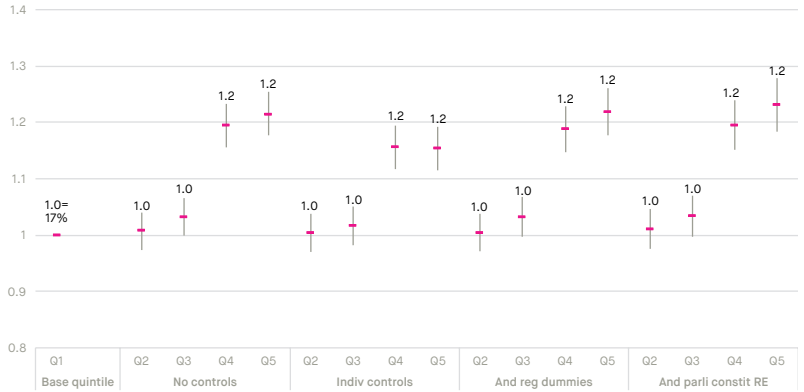
Note: Data quality is such that overall attrition from the sector may be overstated, but this should not affect schools differentially by FSM percentage.

The overall differences in teacher turnover by school deprivation do not uncover why these differences exist. Is it because schools serving disadvantaged communities are situated in labour markets (such as London) where turnover tends to be high? Or is it simply that they recruit younger teachers that have a greater propensity to move schools or leave the profession? These distinctions are important because they each point to very different policy implications.

We are able to disentangle these competing reasons by modelling the odds of leaving a school, accounting for all these reasons in turn. Figure 20 shows that the odds of a teacher leaving a primary school are 20% higher for the highest deprivation quintile, compared to the lowest deprivation quintile. This difference in the odds of leaving is persistent, even when we control for the demographic characteristics of teachers at the school, for differences in regional turnover rates and when we directly compare primary schools located in the same parliamentary constituency.

Chances of a teacher leaving a primary school by FSM quintile, summer 2013

**Figure 20: Odds ratio estimates of chances of a teacher leaving a primary school by FSM quintile, summer 2013**



Source: School Workforce Census

These differences are far more marked among secondary schools, as shown in Figure 21. A teacher in the highest deprivation quintile school is 70% more likely to leave, once we take account of the individual teachers’ demographic characteristics and make direct comparisons between schools located in the same parliamentary constituencies. These inequalities in the propensity to leave a school are similar for both inexperienced and more experienced teachers.

Chances of leaving a secondary school by FSM quintile, summer 2013

Figure 21: Odds ratio estimates of chances of leaving a secondary school by FSM quintile, summer 2013



Source: School Workforce Census

In summary, across all five of our characteristics, we find stark inequalities in access to the highest quality teachers resulting in poorer pupils being taught by poorer quality teachers. Furthermore, we think that the presence of these characteristics in the workforce at more disadvantaged schools suggests they have greater difficulty hiring staff in general and so may not hire the staff they optimally want. This provides an explanation as to why educational inequality persists.

**Why do schools serving disadvantaged communities get lower quality teachers?**

The clear patterns that emerge from the data may seem somewhat surprising. How have we managed to get into a position where well-funded schools serving disadvantaged communities appear to have difficulties in recruiting and retaining experienced and suitably qualified teachers?

These patterns are consistent with a situation where the typical teacher finds teaching in a higher deprivation school less agreeable. Pupil behaviour may be more challenging; teachers find they need to deal with



social difficulties the child is experiencing; and there is less home support for learning. The emotional challenge of teaching in some of our more disadvantaged schools can be considerable. Furthermore, the threat of the accountability system in the form of negative Ofsted judgements and test results that fall below government 'floor' standards affect those in more disadvantaged schools far more.

Given this, it may be understandable that more experienced and well qualified teachers prefer to take jobs in less challenging environments; that high deprivation schools have fewer applicants for jobs; and that those who do work in more challenging schools might continue their job search whilst in post with a view to moving a less challenging school in the future.

This means a system where young, newly qualified teachers naturally take jobs in schools that are recruiting. As we, and others, have shown, schools with more deprived intakes have higher teacher turnover and are therefore more likely to be recruiting.<sup>18</sup> This alone explains why poor pupils are more likely to have unqualified and inexperienced teachers who will be less effective.

There is an additional factor. As it turns out, young, newly qualified teachers often start their careers with a strong sense of social mission and so may often seek out positions in a more challenging school environment. A recent survey investigating teachers' motivations for entering the profession found the most frequently cited reason was "making a difference to pupils' lives", with 60% of respondents cited this as a being "very important".<sup>19</sup> A further 45% cited the "opportunity to make a difference to society" as being very important. This sense of social mission that new teachers have is a real asset to the education system.

But why are they then more likely to leave these very same schools? Unfortunately, we also know that more deprived schools tend to be less supportive of new teachers, with less high-quality mentoring, less supportive colleagues and tougher teaching assignments.<sup>20</sup>

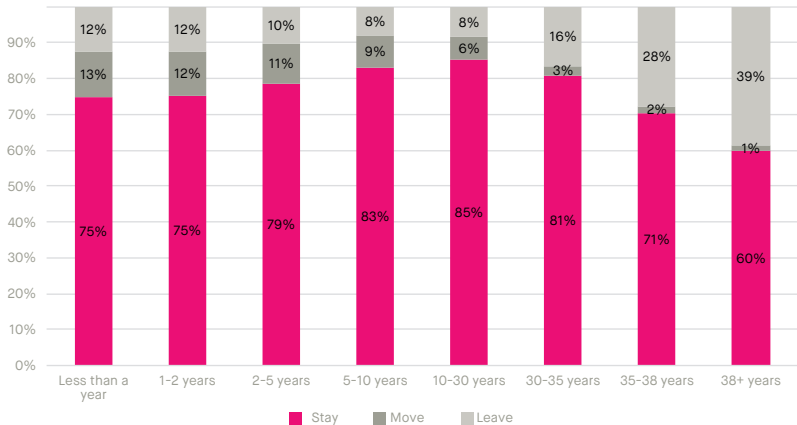
This lack of support makes it harder for young, inexperienced teachers to master the basics of teaching and a wealth of research shows that new teachers tend to leave their schools if they feel they are not developing new

skills and improving their teaching practice.<sup>21</sup> The same survey which asked teachers about their motivations for entering teaching also asked them about their motivations for staying in teaching. Although “changing pupils’ lives” remained an important reason, the most frequently cited reason for staying is actually “being good at it”, with 55% of respondents describing this as very important.<sup>22</sup> So it appears that many new, inexperienced teachers are getting jobs in deprived schools but are not getting the support they need, are struggling to cope and then are leaving as a result. This helps explain why poor students are also exposed to higher teacher turnover.

Figures 22 and 23 confirm this pattern in our own data: young and inexperienced teachers are indeed more likely to leave their school. Around a quarter of teachers with less than two years of experience leave their school each year. Among those with five to ten years of experience this drops to 17%. Similarly, teachers under thirty are more likely to leave their schools than those below fifty.

Percentage of teachers moving schools and leaving profession by time since qualified by school FSM quintile, summer 2014

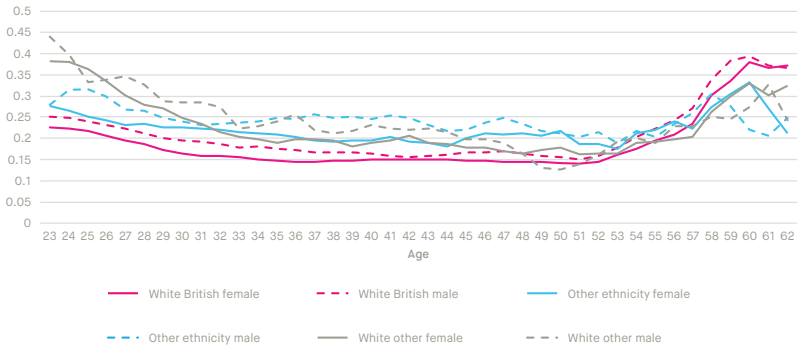
Figure 22: Percentage of teachers moving schools and leaving profession by time since qualified by school FSM quintile, summer 2014



Source: School Workforce Census

Proportions leaving a school by age, gender and ethnicity, summer 2013

Figure 23: Proportions leaving a school by age, gender and ethnicity, summer 2013



Source: School Workforce Census

These patterns of behaviour are starker in the secondary sector than across primary schools. It is hard to ascertain why this might be. In general, teacher shortages are less pronounced in the primary sector and so fewer schools face these recruitment difficulties. It could be argued that behavioural difficulties associated with much younger children are less challenging for teachers to manage. While the support systems in place in the primary sector are quite different, quite simply due to the scale of the schools.

In summary, less effective teachers are more likely to find a vacancy at schools with disadvantaged intakes, more likely to successfully secure an appointment there, and then more likely to leave these schools within a few years. The chances are that they will then be replaced by yet more young and inexperienced teachers.<sup>23</sup> It is important to point out that this is only true on average; many schools with disadvantaged intakes have managed to halt and even reverse this cycle.

But the fact remains: the way the system currently operates means that **schools serving communities with higher proportions of low income families are much more likely to get poor quality teachers.**

## CHAPTER 3: PARENTS AND FAMILIES

The impact of parents and the family environment on outcomes in education is often neglected in policy and research, possibly because politicians and policy-makers are wary of being seen to intervene in the “private” issue of how people raise their children. By contrast, popular discussion of education might place too much emphasis on the role of parents compared to that of schools and teachers.

Even when the role of parents and the family environment is in the scope of policy and research, there are challenging questions about disentangling the effect of family income and parents’ qualifications from their engagement per se; and how to support parents in being more engaged. It is all too easy here either to end up criticising families who are already living in tough circumstances; or to advocate measures that involve the government reaching too far into family life.

Our aim in this chapter is to explore the importance of parental engagement in education; to identify its impact separate from that of family income or parents’ qualifications; and begin to consider how we can best overcome social inequalities in parental engagement.

We draw inspiration for this focus from recent initiatives such as the Parent Engagement Project, funded by the Education Endowment Foundation, and run by research teams from the University of Bristol and Harvard University. The project involved parents being sent text messages from their children’s school with the aim of increasing parental engagement in learning. After a one year trial involving 36 secondary schools, the project found small positive impacts on Maths and English, and a reduction in absenteeism.

That project is emblematic of the higher focus on parental engagement that is seen in many high-performing schools or schools seeking to make significant improvements. Other techniques – albeit unproven through equivalent research evidence – include stronger parental engagement on attendance and timekeeping; and the use of parent contracts when children are admitted to a school.

## What our analysis shows

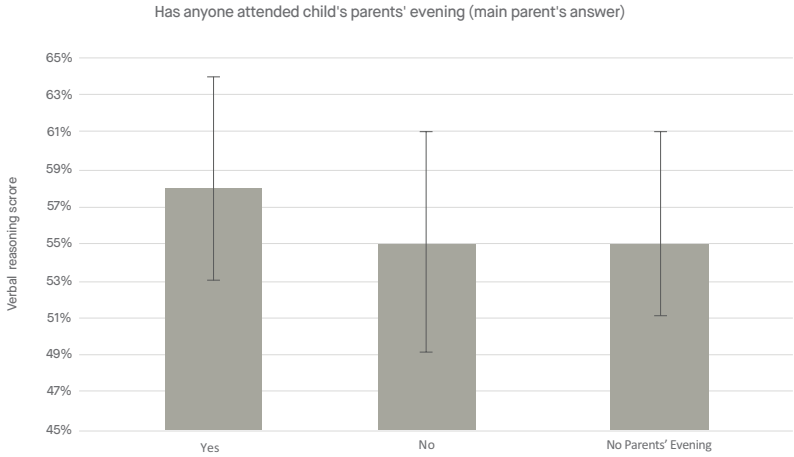
For the purposes of our analysis, we use the latest wave of the Millennium Cohort Study (MCS), taken when children were 11. This allows us to identify the impact of parental engagement on test scores at age 11, as well as to control for characteristics such as parental income and qualifications. We are limited to observing the impact of the forms of parental engagement recorded in the survey.

Previous evidence suggests that **parental engagement can have the greatest impact when it occurs early**. Therefore we also look at indicators of engagement at age 5, when the child has just started school. Our indicator of attainment is a standard verbal reasoning test conducted as part of the MCS at age 11. This is the best indicator of attainment available in the dataset.

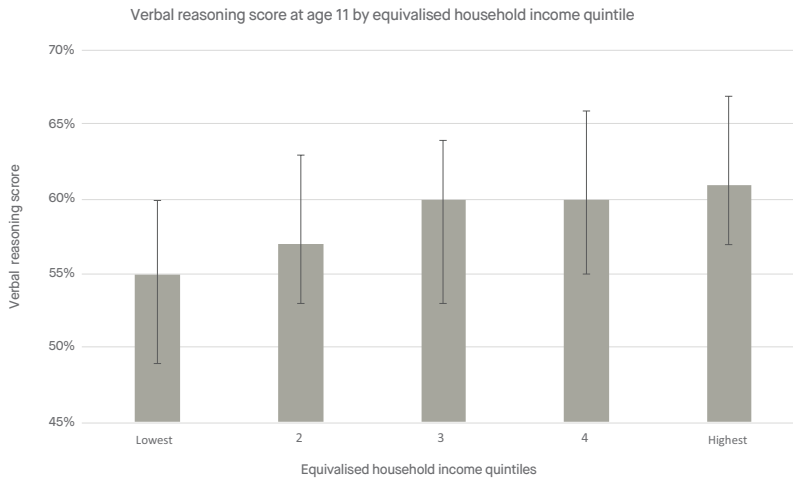
Straight away we see that Age 11 verbal reasoning scores vary by indicators of parental engagement. For example, attending parents' evening is correlated with higher verbal reasoning score. As shown in figure 24, **the median score for children with someone attending parents' evening is 3 points higher than for those without**.

The reason why we need to be careful with this result is that Age 11 verbal reasoning scores also vary by parental income. As shown in figure 25, the median test score for the highest income quintile is 6 points higher than the median score for the lowest income quintile.

**Figure 24: Attending parents' evening & verbal reasoning score**

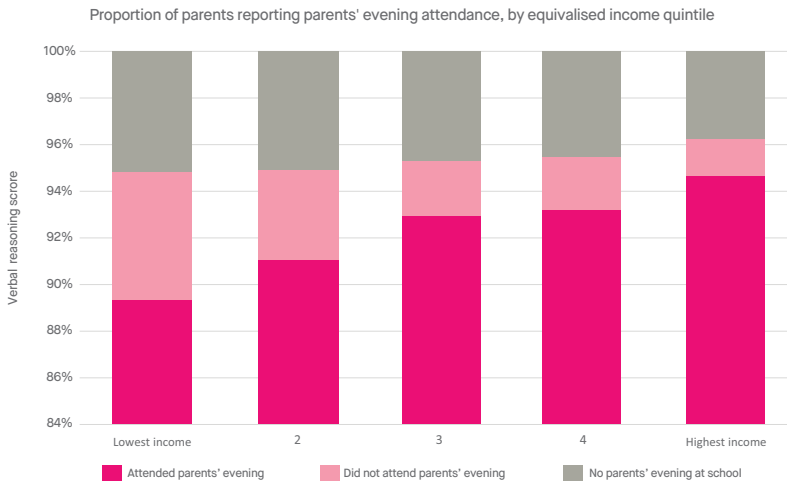


**Figure 25: Verbal reasoning score by family income**



On top of this the more a parent earns, the more likely they are to be engaged in children's education. We can see in figure 3, for example, that they are more likely to attend parents' evening.

Figure 26: Attending parents' evening by family income



So, are test scores related to engagement, or to family income? To get underneath this central issue, we constructed a regression model to analyse the factors most strongly related to verbal reasoning test scores at age 11. We used several controls:

- Parental income
- Highest parental qualification (main parent – usually the mother)
- Parental age

Then we looked at indicators of parental engagement at both age 5 and age 11, including:

- Child's assessment of parents' interest in their school work
- Whether a parent has attended parents' evening
- How often someone ensures a child has completed homework before doing other things (e.g. watching TV)
- How often the child receives help with homework at home

## Reading at home

After controlling for income, parental education, and parental age, we found that if a parent does not read to their child at age 5, this has a strong and negative association with age 11 test scores. **On average, not reading to a child at age 5 decreases their age 11 test score by 1.5 points.**

However, reading to a child at age 5 does not have an impact on their progress between ages 5 and 11, over and above the disadvantage already apparent by age 5.

This suggests that the negative impact of parents failing to read to children can be seen by age 5, and that the disadvantage neither worsens nor improves during their school years between ages 5 and 11. In other words, parental engagement is most important early in a child's life; after that, teachers and schools may matter more.

However, at all ages, whether the child reports reading for enjoyment outside school remains important. **Children who never read for enjoyment have test scores that are on average 1.88 points lower at age 11,** and also make poorer progress between ages 5 and 11 (1.53 points lower). Furthermore, the more frequently a child reads, the better their age 11 test score.

This suggests that **developing the habit of reading at an early age continues to drive better outcomes in education for several years;** and underlines the importance of parents in helping to do that.

## Help with homework

We find that parents have an important role in ensuring homework is completed. **Children that had someone at home making sure their homework was completed before undertaking other activities (such as watching TV) had scores that were 1.93 points higher than those that did not.**

They also made much better progress between ages 5 and 11, with an improvement of **1.73 points** compared to those that did not have someone ensuring homework was completed.



We also looked at parental help with the child's writing at home. This did not have a significant effect on their age 11 test score, or on their progress between ages 5 and 11.

Finally, we looked at parental help with homework. The results here are counter-intuitive but make sense on closer reflection. We find that **parental help with homework is negatively associated with age 11 test scores: in other words, children whose parents help frequently with homework have lower test scores, and also make poorer progress between ages 5 and 11.**

This makes sense when we consider that it is likely that parents are providing more help if the child needs more help, and that this is an indicator of a child having difficulties with their school work. Children who are headed for higher test scores may not on the whole require parental help with homework.

### Other indicators of parental engagement

We also looked at attendance at parents' evenings. Children who had someone attending their parents' evening had much higher test scores at age 11. This is due to them making better progress between ages 5 and 11. **Children with someone attending parents' evening made 1.26 points better progress between ages 5 and 11 than those that did not.**

Children faced an even bigger disadvantage if their parent reported there being no parents' evening at their child's school, with their progress between ages 5 and 11 being 1.88 points lower than those with someone attending a parents' evening.

It is unclear exactly how to interpret this: it may be the school had no parents' evening, or it may be that the parent was simply unaware of it. We expect that the latter is more likely. Either way this is a significant gap in parental engagement; and one that has a clear impact on test scores.

Finally, we looked at the child's assessment of how often their parents take an interest in their school work. Those reporting their parents never took an interest in their school work had an age 11 test score 2.32 points lower than those whose parents took at least some interest. These children's progress between ages 5 and 11 was also 1.84 points lower.

**Parents' evenings: unsatisfactory evidence**

Our analysis has also raised concerns about the nature and level of engagement between schools and parents. We established that parental attendance at parents' evenings is a strong predictor of higher test scores; failing to attend is associated with lower test scores at age 11, not because the act of attending parents' evenings can itself increase test scores, but because it denotes parental engagement that is strongly associated with higher scores. Clearly, greater parental engagement here is desirable, whether via parents' evenings or other means.

Yet official measures of engagement are unsatisfactory. Ofsted uses its Parent View survey to ask parents about their school's parents' evening. Parents are told about the survey and encouraged to fill it in when their children's school is being inspected by Ofsted. They can also choose to fill it in at any time of year via the Parent View website.

Current survey data could suggest broad satisfaction with parents' evenings. For example, only 16% of parents 'disagree' or 'strongly disagree' with the statement 'I receive valuable information from the school about my child's progress'. But the response rate to the survey is extremely low: it was completed by only 3.1% of parents in state schools during the 2015/16 academic year. The figure marked a fall from the 3.7% response rate in the previous year.

Not only is the response rate for this survey very low, it is almost certainly self-selecting, in a way that significantly reduces its value. Parents who do not attend parents' evening (either by choice or because they do not know about the event at all) are highly unlikely to complete such a survey. It is also likely that the schools that are ineffective in engaging parents are also ineffective in telling them about the survey. There is therefore a risk of "false positive" results suggesting that parents' evenings are working well; that could reduce the impetus on schools to think more creatively about different means of engaging parents.

## Indicators of a child's home life

Being able or allowed to undertake some recreational activities outside school is positively associated with age 11 test scores. **Children who never listen to or play music outside school have age 11 test scores 2.03 points lower than those who do**, with progress being 1.02 points lower. **Children who never draw or paint outside school have age 11 test scores 2.37 points lower than those who do**, with progress being 1.76 points lower.

Having a regular bedtime in term-time matters. **Those who have a regular bedtime have a score 1.13 points higher than those that do not**, and have progress between ages 5 and 11 that is 0.74 points higher.

We also find small positive impacts where children aged 5 have no one in the home around them who smokes.

## Parental income, or engagement?

While we find significant associations between test scores and indicators of parental engagement, it is worth remembering again that parental income and qualifications may be bigger factors.

When indicators of parental engagement are left out of the regression model, a child from the highest income quintile on average has a test score 5.21 points higher than a child from the lowest income quintile.

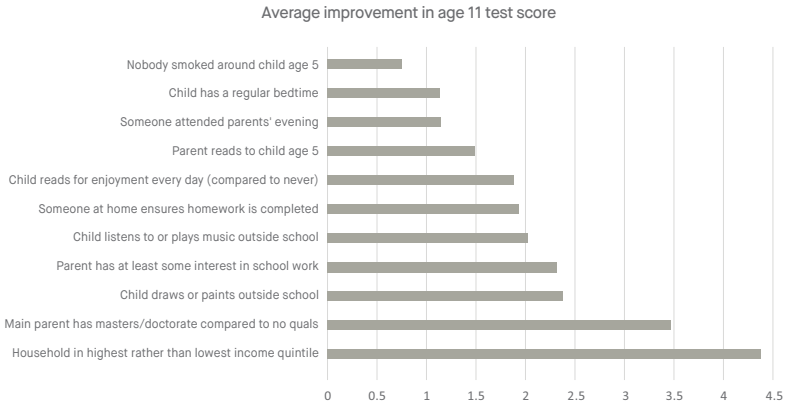
A child with a main parent (usually mother) with a Masters or Doctorate on average has a test score 4.43 points higher than a child with a main parent with no qualifications.

Where a child is from a family with both a high income and a high level of qualifications, these differences added together are such that a child's score would be almost 10 points higher on average.

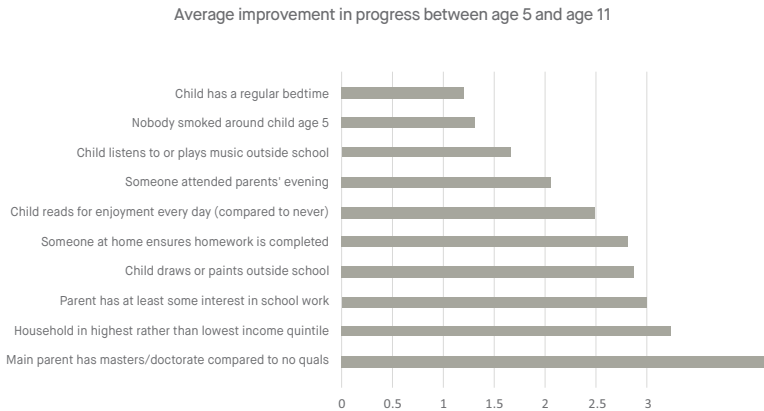
So these are very big factors. Nevertheless parental engagement has a significant role to play. We can illustrate that role by comparing the size of the impact on test scores from various indicators of parental engagement,

on the same scale as that of parental income and qualifications. None of the impacts are of the same size on their own, but they are large of themselves. These impacts are illustrated in figures 27 and 28.

**Figure 27: Key predictors of age 11 test scores**



**Figure 28: Key predictors of progress between ages 5 and 11**



## Summary of findings

Parental characteristics such as income and education level matter a lot, and efforts to reduce inequality in attainment by focusing on parental engagement should not come at the expense of efforts to tackle other inequalities.

Nevertheless, we demonstrate aspects of parental engagement that are associated with attainment, and well-designed policies in these areas could have the potential to improve children's educational prospects. If several areas of parental engagement were addressed at once, the results could be powerful.

Equally our results show that most indicators of parental engagement that appear to affect the progress of children between ages 5 and 11 also affect children's test scores at age 11 more broadly. This suggests that policies designed to help children during early years could also have beneficial effects for children during later ones.

One important caveat is that our analysis only identifies associations between forms of parental engagement and test scores (albeit associations that stand up to closer scrutiny). Here it is worth bearing in mind that a major literature review, supported by the Nuffield Trust, was unable to find high quality evaluations of interventions that demonstrate a causal link between higher parental engagement and improved attainment. But as the authors of that review commented: "This does not mean that we should stop trying to increase parental involvement in education. Rather, it means that if we are going to invest in significant interventions, we also need to invest in high quality, rigorous research that will show to what extent they are effective in raising attainment and other outcomes."<sup>24</sup>

## CHAPTER 4: RECOMMENDATIONS

### Access to teachers

What can be done to improve access to good (more experienced, more appropriately qualified and more likely-to-stay teachers) teachers in the most disadvantaged schools? Broadly speaking there are two strategies available. The first is to try and divert inexperienced teachers away from disadvantaged schools and try to attract more experienced teachers in their place. We call this the **redistribution strategy**. The other way is to try to improve support for young, inexperienced teachers working in disadvantaged schools in order to improve their teaching and increase retention. We call this the **support strategy**.

### The redistribution strategy.

We could require more experienced teachers work in disadvantaged schools for a period, perhaps as a condition of becoming a senior leader. Multi-academy trusts are particularly useful vehicles for facilitating fixed-term transfers with the right to return to original post. But this may only serve to make the teaching profession a less attractive prospect at a time when recruitment is already a problem. It would also disadvantage teachers who are geographically constrained through family commitments.

Financial incentives are another way to attract more experienced teachers to disadvantaged schools, and are already effectively in use to some extent.<sup>25</sup>

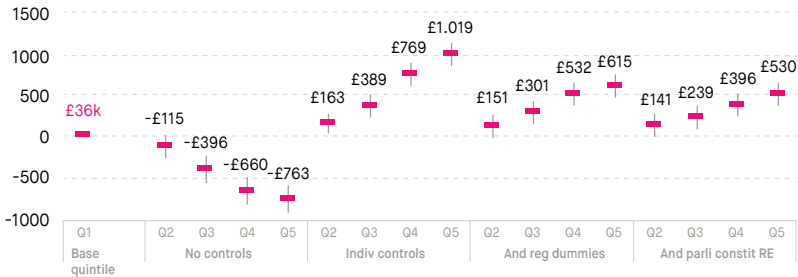
Figures 28 and 29 show how pay varies across the different deprivation quintiles. The average teacher at a more disadvantaged school is paid less, but this is because they are on average less experienced. So, the four data points on the right hand side of the graph control for teacher characteristics and local labour market characteristics. These show how much extra a given teacher is paid to work in a more deprived school than a similarly-qualified and experienced peer in a school with a more affluent intake.

In primary schools the same teacher would get paid £530 per annum more

to work in the most deprived quintile of schools than in the least deprived. In secondary schools the equivalent figure is £1,289 per annum. The figure below shows the average annual pay rise for those staying in their schools between 2010 and 2014. It shows pay rose faster in more deprived schools over this period, though this may simply be because they were less financially constrained.

Teacher pay by primary school FSM quintile, November 2013

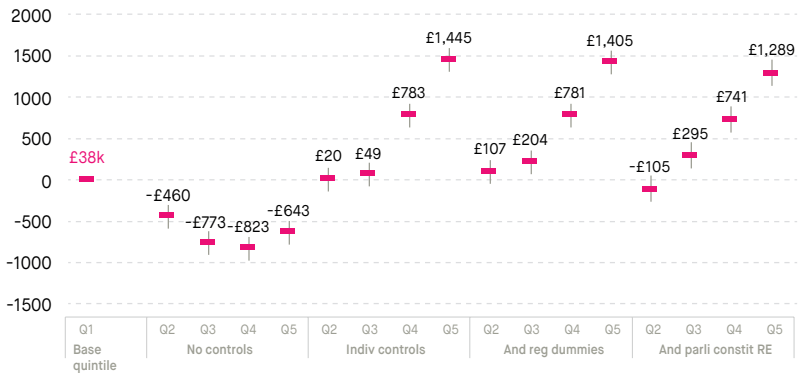
Figure 29: Teacher pay by primary school FSM quintile, November 2013



Source: School Workforce Census

Teacher pay by secondary school FSM quintile, November 2013

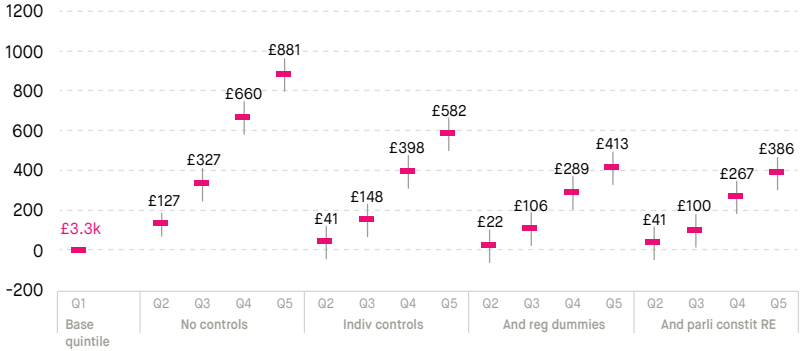
Figure 30: Teacher pay by secondary school FSM quintile, November 2013



Source: School Workforce Census

Pay rises 2010-2014 for full-times remaining in school throughout

Figure 31: Pay rises 2010-2014 for full-times remaining in school throughout



Source: School Workforce Census

These graphs show that differences in pay are already providing some incentives for teachers to work in schools with the poorest pupils. However, given the social inequalities in access to high quality teachers we showed earlier, these incentives are clearly not sufficient to compensate people for the perceived disadvantages of working in a more challenging environment. Bluntly, teachers in more challenging schools are already being paid more than those in more comfortable schools, but that is not enough to prevent the inequalities we have observed in our work.

It is hard to know how large the pay incentives would need to be to attract experienced teachers into schools in disadvantaged areas. Detailed qualitative research following 50 teachers during their first two years in the profession shows that teachers value working conditions rather than pay when choosing whether to stay at or leave their current school. If the redistribution strategy is to work, the incentives therefore need to be significantly larger than they are at present.

We should also bear in mind that the teachers we are focusing on here – those who already have a few years’ experience – are more likely to be at



the stage in their lives where they are looking to buy a house or move into a larger house because they have or are planning to have children. Financial incentives might usefully be targeted on housing costs, especially given that retaining teachers is a significant problem for challenged schools.

Helping teachers with housing costs, as an incentive to teach in a disadvantaged area, could have the effect of anchoring them firmly in that area, meaning that they will teach there not only for a year or two, but for a sustained period of time and look to advance their career in school leadership in the same area. As the box below sets out, this may be through helping with a deposit to buy a home or rent subsidies.

### **Housing support schemes**

While under our proposal schools would be free to design their own programmes, current and past schemes provide some case studies for how this could work. A number of previous schemes were run successfully offering equity loans to teachers. Under the Starter Home Initiative teachers that qualified as 'key workers' were eligible for loans at preferential rates (interest rate free for five years).<sup>26</sup> Half of respondents stated that the scheme had persuaded them to stick in their current employment; 38% said they would have had to change job without the scheme. Results were similar from the Key Worker Living initiative. More recent initiatives include Oxford City Council and a housing association setting up a capital pot of £1.5m to offer equity loans of up to £75,000 to teachers.<sup>27</sup>

Help with renting a home may also act as a tool to recruit and retain teachers. In North Carolina, local bodies collaborated to build new apartments to be rented to teachers for below-market prices. Although the evidence is not conclusive on causality, the regions saw decreases in teacher dropout and larger falls in dropout than other areas.<sup>28</sup>

In the UK context, help-with-rent schemes could be run by individual schools or in partnership with Multi Academy Trusts, local authorities or other partners. Southend-on-Sea Borough Council, in partnership with a local housing association, set up a scheme to allow teachers to access affordable housing for teachers moving into the borough.<sup>29</sup> Depending on their design, such initiatives may be able to offer greater security of tenure as well as lower rents, which may be particularly important for teachers with young families. Harwich and Dovercourt High School provides a choice of housing support measures for teachers relocating including subsidies for rent, for mortgage payments and for relocation expenses.<sup>30</sup>

**Recommendation 1: Schools in disadvantaged areas should have access to a fund that could be used to help teachers buy or rent a home.**

This policy should be introduced as a pilot scheme in a selected group of local authority areas, giving school leaders the scope to devise innovative incentives to attract and keep better-qualified staff. This money would be made available to schools that have high intakes of children on Free School Meals and are in areas where there is a current teacher recruitment or retention problem. Schools bid for money from this recruit-and-retain fund, demonstrating when they do how teacher recruitment will form part of a broader plan for improvement and getting better outcomes for their pupils. We suggest that the budget for this initiative should be £12m.

A budget of this scale for instance could facilitate 20% equity loans on the average house in England for around 250 young teachers. The Government could expect to recoup the majority of this capital over time although interest may be foregone.<sup>31</sup>

In addition to this recruit-and-retain fund, there is also more scope for creating an expectation that teachers will work in a school in a disadvantaged area as part of their career development. Establishing this as a norm in the pattern of a successful leadership career could increase the number of experienced teachers that spend time in these schools.

To achieve this goal we believe that it should become a condition of gaining the headship qualification that a teacher has been in middle leadership in a school in a disadvantaged area.

Since holding a headship qualification is not an absolute requirement for becoming a head teacher, it would remain theoretically possible to become a head without teaching in such an area. But making that experience a prerequisite for the qualification would, we believe, help establish the norm that all aspiring leaders should demonstrate their leadership by working in a disadvantaged area.

**Recommendation 2: Time spent in middle leadership in a school in a disadvantaged area should become a condition of gaining the headship qualification for aspiring school leaders.**

### **The support strategy**

The main problem with the status quo is not that inexperienced teachers work in disadvantaged schools. It is that so many of them leave within the first two years and are then replaced by yet more inexperienced teachers. This means that the average level of experience in disadvantaged schools is kept low.

It follows from this that, if we can improve retention of young teachers in disadvantaged schools, there will be a rapid increase in the average level of experience of teachers in those schools. It only takes a few years for a young, inexperienced teacher to become an experienced teacher and mentor to others. The trouble is that many of them leave the profession or move on to a less disadvantaged school before this happens. The 2017 Conservative Party manifesto<sup>32</sup> appeared to acknowledge the problem of retention among newly qualified teachers, committing to “bring in dedicated support to help them throughout their careers”, without elaborating.

How could this be done? As discussed earlier, qualitative work investigating teachers’ motivations for moving schools shows that they are attracted to supportive schools in which they can see themselves improving and becoming better teachers. This has since been validated by a number

of sophisticated quantitative studies which have convincingly linked improved support to reduced turnover.<sup>33</sup> Taken together they suggest that the following factors are important:

- High quality mentoring by somebody with experience teaching similar age groups and subjects;
- A supportive network of colleagues that work together to plan lessons and share resources;
- Engaged school leadership that support teachers' professional development and help enforce a consistent school-wide discipline policy; and,
- Provision of the necessary instructional materials and resources for teachers to do their job.

Fundamentally, these are not changes that can be decreed from Westminster or Whitehall. School leaders, and a network of colleagues, have to make them for themselves. Many know this and we heard many examples of how support and mentoring is rapidly improving. Some successful schools are making increased use of in-house training for a "grow your own" approach to teaching staff, in some cases encouraging teaching assistants to qualify as teachers.

There are, however, important roles for government. One of these is in offering 'challenge' to ensure that more schools take proactive steps. This could be achieved by collecting data on training provision and turnover rates for early-career teachers in different schools and across multi-academy trusts. This data could be used in two ways. Regional Schools Commissioners could compare similar schools in their area, and then work with schools who are failing to support and retain early career teachers, for example by brokering support from schools that do a better job.

Transparency itself would help shine a light on the problem. A second option would be to make the early career retention and training information freely available to newly qualified teachers so that they can take it into account when making decisions about where to take jobs. Schools would then face a strong incentive to improve their retention rates in order to ensure they

remain an attractive prospect for new teachers. It is worth pointing out that this system is similar to the way retention figures function in the market for new solicitors, where retention rates for different law firms are published by magazines and are an influential signal of how attractive different firms are to work for.<sup>34</sup> An equivalent measure for schools would have to be constructed carefully to reflect the fact that turnover is not always bad, often rises during successful school “turnaround” efforts and is volatile where staff numbers are small, and so might be more meaningful at the level of the multi-academy trust.<sup>35</sup>

**Recommendation 3: The Government should compel schools to publish data on training provision and turnover rates for early-career teachers in different schools and across multi-academy trusts. This should be produced in a standardised form so as to promote comparability.**

In practical terms, this would mean the Department for Education publishing, on the basis of workforce census data, the relevant metrics for each school and requiring that schools link to their own metrics when they advertise vacant positions. By this measure, the schools that are making a success of improving support and mentoring will get credit for doing so, and access to a better pool of applicants; whereas schools that have yet to focus on such improvements will experience added pressure to do so. This greater transparency would underline the great importance of school leadership, and the need for schools with the greatest challenges to have the strongest leaders.

## Parents and families

Bearing in mind the caveat that future interventions should be accompanied by robust evaluation, our analysis indicates where greater support for parental engagement could focus.

A priority should be **support for parents in helping children to read**. Our research shows that, on average, not reading to a child at age 5 decreases their age 11 test score by 1.5 points; and children who never read for enjoyment have test scores that are on average 1.88 points lower at age 11, and also make poorer progress between ages 5 and 11 (1.53 points lower).

Schools are now highly focused on reading; but there may be benefits to them doing more to engage parents in **early literacy**. Campaigns such as Read On, Get On led by Save the Children, the National Literacy Trust and others, are seeking to promote reading amongst children. This campaign endorsed by the Department of Education aims to help parents spend more time reading.<sup>36</sup> Research in the USA has found positive effects for children who had ten minutes in-school reading time with significantly higher achievement on word recognition reading comprehension from ten minute reading sessions.<sup>37</sup>

Some parents themselves have poor literacy (the OECD ranks England 22nd of 24 countries for adult literacy) which limits their ability to help their children's learning. Equally many parents did not learn to read using modern techniques such as phonics. Schools could do more – as part of the extended school day – to support parents in becoming more confident in these techniques and using them with their children. Simply put, schools could teach parents how to teach and support their children.

In particular, research by the National Endowment for Educational Research and others has shown that parenting styles improve as a consequence of receiving support and training.<sup>38</sup> Parents acquire knowledge, skills, confidence and empathy. Interventions focused on parenting approaches and academic outcomes (test scores etc) had the greatest effect. The impact is felt most significantly for children's literacy. Findings from the Family Literacy Programme – which provided school-based literacy support to both parents and children – found positive effects on reading scores for children aged 5 to 7.<sup>39</sup>

Estimates by the Education Endowment Foundation suggest after school clubs cost, on average, £7 per session per person. A four-week session for parents and their children to improve parental engagement in literacy would, on this basis, cost £56 per parent and child pair. The average size of infant classes taught by one teacher is 27.4; and hence the cost is roughly £1,500 per class, assuming 100% take up.

The provision of family literacy classes is currently inconsistent and there is no distinct budget for such programmes, which are funded on an ad hoc basis from the Skills Funding Agency’s “community learning” budget. That budget was frozen at £210 million a year for ten years until 2015 (meaning a real-terms cut) then increased to £215 million. There are many demands on this budget, which is also available to local authorities to fund general adult education programmes such as those aiming to increase “employability”.

**Recommendation 4: The Government should plan and launch a programme of after-school “family literacy” classes in primary schools with above-average proportions of children eligible for Free School Meals. Funding for these classes should be ring-fenced within the Skills Funding Agency budget for community learning. The results of the programme should be assessed and – if the classes are found to be effective – Government should fund family literacy classes in all primary schools in disadvantaged areas.**

#### Family learning

There is a considerable weight of evidence suggesting that teaching parents how best to support their children’s learning is a highly effective way to improve educational outcomes.

A three-year study for the Nuffield Foundation (The impact of family literacy programmes on children’s literacy skills and the home literacy environment Nov 2015) reviewed previous literature and assessed 27 family literacy programmes across England offered to children in Years 1 and 2, and their parents.

It concluded that family literacy programmes have a positive effect on Key Stage 1 reading scores, increase parental understanding of school literacy processes and pedagogies, and are associated with increased frequency in parent-child shared reading and other literacy activities.

The report concluded: “Programmes can improve reading skills, enrich family relations, increase parental empowerment, develop levels of social and cultural capital, enhance parent-school relations, increase home school partnerships and improve parent school alignment.”

The study found that the impact of family literacy programmes is more pronounced among those pupils who are eligible for Free School Meals but suggested that this needs further exploration using greater sample sizes.

Family learning is distinct from adult education, in that the aim is to develop parents’ skills in order to support children in learning: the child, not the adult, is the target of the programme. Despite that significant distinction, family learning is funded from the adult education budget. Perhaps as a result, provision of family learning programmes is inconsistent and total national spending opaque. Funding is the responsibility of the Skills Funding Agency, which has an annual budget of around £210 million for “community learning”, which is available to local authorities. However, that budget also funds non-family training, including general training in IT and “employability” programmes.

For their part, parents rightly expect that homework should provide the opportunities for children to consolidate or extend their learning. Evidence even for KS3 children suggests that this is not always the case. A survey of school leaders and pupils for Ofsted found that around half of children said that their homework never, or only some of the time, helped them to make progress. A fifth of the 100 senior leaders interviewed acknowledged that the monitoring and evaluation of homework was an area that needed to be improved in their schools.<sup>40</sup> Poor quality homework is likely to lead only to a downward spiral of engagement.



## Parents' responsibilities

More should also be done to establish positive patterns of engagement between parents and teachers in order to set high expectations for home learning. Our research findings support the conclusion that parents have an important role in ensuring homework is completed. This should not mean parents writing their children's homework. It should mean parents understanding that their role is to make sure that children do their homework. Embedding this expectation early among parents would make it easier for teachers to challenge parents where this does not occur. It should be the job and duty of school leaders to challenge parents where their commitment falls short. Leadership from headteachers is particularly important here: it can be difficult for teachers (especially relatively young and inexperienced ones) to have potentially awkward conversations with parents, who may themselves be older than the teachers; such teachers should see heads leading by example, and know that they have the full support of their leaders.

The reciprocal responsibilities of parents and teachers here should be embedded in the culture of schools, starting with primary school intakes. Parents of newly arrived children should understand their duties to support children in their journey through the school, understand that the school stands ready to help them provide the best support, and that the school expects them to live up their commitments. The school, in turn, should understand that it has a duty to support not just children but parents. The way both parents and the school are upholding their responsibilities should be discussed regularly, at parents' evenings or other forums.

For the sake of clarity, our interest in parents' evenings is as a sign of parental engagement, not as events in their own right. There are many different ways of successfully engaging parents in their children's education. There is also a clear need for better data on parents' views of and participation in parents' evenings and other forms of engagement.

**Recommendation 5: Schools should take a new approach to contracts between teachers and parents, which should be signed by both parties as equals who both have responsibilities . Teachers should commit to setting high-quality homework that demonstrably improves the child's educational**

development and to supporting parents in helping their children; parents should commit to ensuring that this homework is completed and given due care, and to having regular contact with the school to discuss progress. Contracts should be signed in the early weeks of first attending school and renewed annually with each year's teachers as the child progresses through the school. (Depending on the evidence for their performance, family literacy classes could become a part of the undertaking the school gives parents to support them in their engagement.)

### Home-school contracts

In 2016, the Government ended the statutory obligation on schools to have in place home-school agreements, arguing that this would reduce the burden of "red tape" on schools. However, schools still have the freedom to adopt contracts on a voluntary basis, and some find them a successful tool to increase parental engagement.

One example is the Michaela Free School in Wembley, north London, which was co-founded by Suella Fernandes, a co-author of this report. It requires new parents to sign a detailed contract committing themselves to show "support and competence" in helping their children meet the school's standards, including a homework regime specifically designed to require "self-testing" and address the seemingly paradoxical finding that children whose parents help them do homework have lower test scores

Holding parents to account for their part of the contract, and helping them support their children, is a cultural norm the school. Parents who are judged not to be supporting the homework practice and policy are invited to meet a teacher who will teach them how to support the child at home.

Katherine Birbalsingh of Michaela Community School has written: "We make it clear that we will hold not only the child to account, but the parents too. Too often, schools have parents sign home-school contracts that are vague and then never refer to them again. Not only do we refer to them time and time again during a child's time with us, but before the parent signs, we emphasise just how important that signature is."

## The independent sector

The **final area for further action is to consider how other educational institutions can help to support parents in their engagement with children's learning.** Shortly after first taking office in 2016, the Prime Minister announced that independent schools would be subject to a tougher standard in demonstrating that they provide 'public benefit' in order to maintain their charitable status.

Around half of schools in the independent sector benefit from tax advantages relating to their status as registered charities.<sup>41</sup> The 2017 Conservative manifesto promised a link between charitable status and sponsorship of academies or free schools. That followed the Government Green Paper 'Schools that Work for Everyone', which envisages that there will be new benchmarks for independent schools to meet; and, if they fail to do so, then the Government will legislate to make them compulsory: "*We propose to set new benchmarks that independent schools are expected to meet, in line with their size and capacity. We think it is essential that independent schools deliver these new benchmarks. If they do not, we will consider legislation to ensure that those independent schools that do not observe these new benchmarks cannot enjoy the benefits associated with charitable status.*"

In drawing up these benchmarks, the Government should encourage independent schools themselves to provide out-of-school activities to the children of parents living locally who are unable to pay for or provide those activities themselves. We find, for example, that children who listen to or play music, or draw or paint outside of school have higher test scores at age 11 and make more progress between ages 5 and 11.

Independent schools may have the facilities and staff expertise to provide such activities more widely to other children. We recognise that independent schools may not be distributed evenly across the country and that such policies may be of greater benefit to some local areas than others. However, we feel that the successes of the independent sector should be maximised for the wider benefit of the local communities in which they operate.

The new benchmarks set by the Government should also be accompanied by transparency and conditionality. Independent schools that are registered as charities should report on the activities and benefits in kind that they provide to the local community and calculate the value of this activity. This information should be reported publicly on their websites alongside an estimate of the monetary value of the benefits that the school receives from charitable status in terms of tax relief.

**Recommendation 6:** New benchmarks for independent schools to meet in order to retain their charitable status should include their provision of out-of-school activities to the children of parents who live locally. In addition, independent schools that are registered as charities should publish information on the value of any support ('public benefit') they provide to the local community, whether this takes the form of teaching support, making sports facilities available or running extra curricula activities for children from the state maintained sector in the local area. This should be published alongside an estimate of the monetary value of the tax reliefs that the school enjoys due to charitable status.

## ENDNOTES

1. HM Government, *Building Our Industrial Strategy* (2017)
2. Michael Jacobs et al, *Out of shape: Taking the pulse of the UK economy* (IPPR, 2017)
3. For grammar schools, see <https://epi.org.uk/report/grammar-schools-social-mobility/>; <https://www.ifs.org.uk/publications/8469>
4. For a recent summary, see: Burgess, S. (2015) *Human Capital and Education: The State of the Art in the Economics of Education*. Available at: <http://www.coeure-book.ceu.edu/HumanCapital.pdf>; Hanushek, E. and Rivkin, S. (2012) The Distribution of Teacher Quality and Implications for Policy, *Annual Review of Economics*, 4 (1) (July): 131–157. doi:10.1146/annurev-economics-080511-111001.
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11. Wayne, A.J. and Youngs. P. (2003) Teacher Characteristics and Student Gains: a review, *Review of Educational Research* 73 (1): 89–122. doi:10.3102/00346543073001089. Baumert, J., Kunter, M., Blum, W., Brunner, M., Voss, T., Jordan, A., Klusmann, U., Krauss, S., Neubrand, M. and Tsai, Y.-M. (2010) Teachers’ Mathematical Knowledge, Cognitive Activation in the Classroom, and Student Progress. *American Educational Research Journal* 47 (1): 133–180. doi:10.3102/0002831209345157. As a contrast, last year we published research showing no advantages to being taught GCSE science by a team with a physics specialist, but did not explore impact on physics GCSE or A level take-up. See: Education Datalab (2015) *Seven things you might not know about our schools*, accessible at: <http://www.educationdatalab.org.uk/getattachment/Blog/March-2015/Seven-things-you-might-not-know-about-our-schools/EduDataLab-7things.pdf.aspx>.

- Teach First also report no association between first degree subject mis-match and QTS achievement or drop-out.
12. Wayne, A.J., and Youngs, P. (2003) Teacher Characteristics and Student Gains: a review. *Review of Educational Research* 73 (1): 89–122. doi:10.3102/00346543073001089.
  13. See also National Audit Office (2016) Training New Teachers. Accessible at: <https://www.nao.org.uk/report/training-new-teachers/#>.
  14. It is consistent with evidence from the OECD Teaching and Learning International Study that shows 25% of teachers in the lowest attaining schools taught 3 or more subjects, compared to 13% of teachers in the highest attainment schools. See Ilie, S., Jerrim, J. and Vignoles, A. (2016) *Teachers attitudes and characteristics in English schools: Evidence from TALIS*. Presentation to Sutton Trust Best in Class Summit.
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## Commission on Inequality in Education

Under the chairmanship of Nick Clegg, the Commission on Inequality in Education brought together politicians of all parties and experts in education policy, to study one of the persistent problems of British social policy and produce innovative, practical solutions that will help improve the prospects of children from low-income households who are still too often let down by the education system.

The Commission's work was proudly supported by the Social Market Foundation, the leading non-partisan think-tank that has for almost 30 years been dedicated to developing policies that will make Britain more prosperous and fair.