The Attainment Gap

//2017

Education
Endowment
Foundation

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Introduction

About the EEF

The Education Endowment Foundation (EEF) is an independent charity dedicated to breaking the link between family income and educational achievement.

We aim to:

- raise the attainment of 3-18 year-olds, particularly those facing disadvantage;
- develop their essential life skills; and
- prepare young people for the world of work and further study.

We support teachers and senior leaders by providing free, independent and evidence-based resources designed to improve practice and boost learning.

We do this by *generating evidence* of what works to improve teaching and learning, funding rigorous trials of promising but untested programmes and approaches.

We then support schools, as well as early years and post-16 settings, across the country in *using evidence* to achieve the maximum possible benefit for young people.

5 ways the EEF has made a difference

1. Over **10,000 schools**, **nurseries** and **colleges** in England have volunteered to take part in an EEF trial: part of a step change in the sector's engagement in robust education research.

2. Since 2011, we have funded work with more than **1,000,000 children and young people**, including some 350,000 eligible for free school meals.

3. Up to **two-thirds of all senior leaders in schools** use our Teaching and Learning Toolkit to inform their decision-making.

4. The EEF's most promising programmes have enabled students to make **+3 months** of **additional progress in a year**. These projects particularly benefited students eligible for free school meals, who made on average **+4 months' additional progress**.

5. The lifetime gains for students taking part in EEF trials amount to **three times** the cost of delivering and evaluating them, according to independent analysis.

Acknowledgements

We would like to thank the many organisations working in this field whose research we have used in producing this report, in particular the Education Policy Institute and the Social Mobility Commission, as well as, of course, the Department for Education.

We are also grateful to our founding partners, The Sutton Trust and Impetus-PEF, for their continuing support of the EEF's work.

A note about the definition of 'disadvantage'

This report uses the broad term 'disadvantage' to refer to those children and young people who face particular challenges because of the economic circumstances they face when growing up.

The most commonly accepted proxy measure of such economic disadvantage is eligibility for free school meals. This was the original qualifying criterion for eligibility for the Pupil Premium, government funding allocated to schools to tackle the attainment gap, introduced in 2011.

Since then, the government has broadened this criterion to apply to pupils who have been eligible for free school meals at any time in the past six year ('Ever-6 FSM'). It has also broadened the Pupil Premium to other categories of children facing disadvantage, such as the children of service families and those who are looked after by local authorities.

The term 'disadvantage' can, therefore, apply to (from the narrowest to broadest measures) FSM-eligible pupils; Ever-6 FSM-eligible pupils / deprivation Pupil Premium pupils; or Pupil Premium pupils. We have aimed to be clear in the text to which category of pupils the data refers, where it is identified. The trends we are highlighting in this report apply to all disadvantaged children and young people, no matter how defined.

January 2018

Executive summary

To begin to tackle the challenge of the attainment gap requires us first to understand it – both the scale and nature of the gap, as well as the factors most likely to help close it.

This report assesses the attainment gap through the lens, first, of children and young people; and secondly, of schools, as well as early years and post-16 settings. It highlights and summarises what we believe to be the key issues, and how our analysis of them informs our practical work with teachers and senior leaders.

We then summarise 15 of the key lessons the EEF has learned from our six years funding work to generate evidence of 'what works' to improve teaching and learning; and then scaling that evidence to create the maximum possible benefit for children and young people, particularly those facing disadvantage.

The attainment gap: its impact on children and young people

- The attainment gap is largest for children and young people eligible for free school meals (the best available proxy measure of economic disadvantage) and those assessed with special educational needs.
- The gap begins in the early years and is already evident when children begin school aged 5.
- The gap grows wider at every following stage of education: it more than doubles to 9.5 months by the end of primary school, and then more than doubles again, to 19.3 months, by the end of secondary school. This shows the importance of intervening early and then of continuing to attend to the needs of disadvantaged pupils.
- A majority of 19 year-olds who have been eligible for free school meals leave education without a good standard of recognised qualifications in English and maths – without which, achieving their goals in the world of work or further study will be much harder.
- While the attainment gap has reduced a little over the past decade, it remains significant. The current slow progress in narrowing the gap means it will persist for decades.
- Our forecast of the attainment gap for the next five years suggests some positive progress for free school meal-eligible pupils in GCSE English and maths; but no headway on Attainment 8 and a widening of the gap in Progress 8.
- Even small improvements in young people's GCSE qualifications yield significant increases in their lifetime productivity returns and in national wealth – highlighting the importance of continuing to focus on improving results for currently low-attaining pupils.

The attainment gap: the school perspective

- The attainment gap is not a problem found only in schools assessed by Ofsted as performing poorly – the gap is as large in schools rated 'Outstanding' as it is in schools rated 'Inadequate'.
- There does not appear to be a direct relationship between increased school funding and increased pupil attainment – what matters most is how schools can effectively and efficiently use the resources they have (both financial and human) for maximum impact.
- The Pupil Premium is a valuable focus for closing the attainment gap – but it is important schools consider how they can best use all their resources to improve the quality of teaching, as this will benefit all pupils, but particularly the most disadvantaged.
- One region, London, stands out for its success in improving attainment for disadvantaged pupils and closing the gap.
- There is huge variability in outcomes for disadvantaged pupils between schools with similar levels of disadvantage.
- In 10% of primary schools and 8% of secondary schools, disadvantaged pupils are doing better than the national average for all pupils. This shows it is possible to narrow the attainment gap – if we can find effective ways to learn from the successes of the best-performing schools, and achieve greater consistency between similar schools.
- Schools where disadvantaged pupils are currently attaining below the average of disadvantaged pupils in similar schools should consider how they can help those young people to at least reach that average level of attainment as an initial goal.
- Reaching this goal would make a big difference – both in improving the outcomes of disadvantaged pupils and in closing the overall attainment gap.

Executive summary

Closing the attainment gap: 15 key lessons learned in the EEF's first 6 years

More than £96 million has been invested by the EEF and our funding partners in the evaluation of 160 projects since we began our work in 2011. These have involved more than 10,000 schools, as well as early years and post-16 settings, in England and reached over one million children and young people.

We are funding more randomised controlled trials (RCTs) in education than any other organisation globally and have commissioned more than 10% of all known trials in education around the world.

This body of work, alongside the wider international evidence, has enabled us to draw together some key lessons we think are both useful and important. These are summarised on pages 16-17 of this report.

A good education, with the qualifications to show for it, can transform lives for the better.

Conversely, young people who finish their studies without attaining the expected standards will struggle both in further study and the world of work.

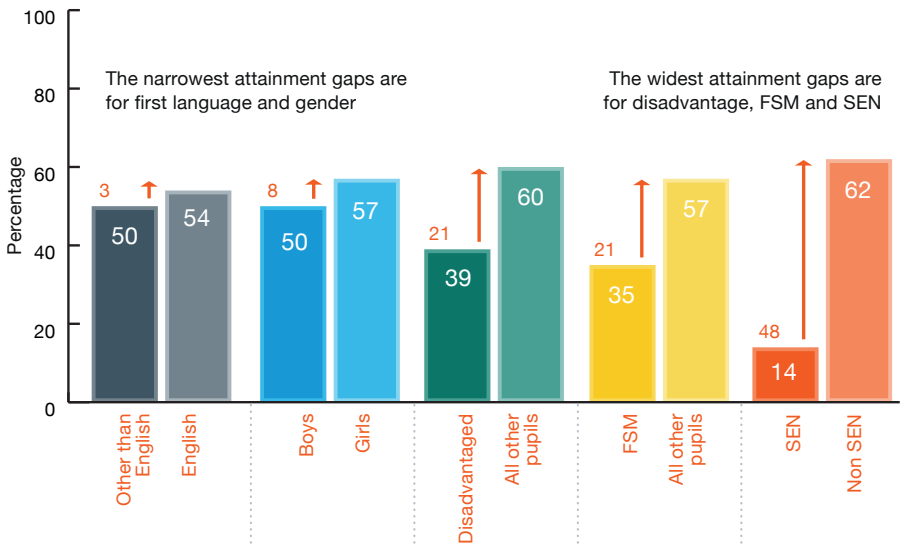
Why we focus on economic disadvantage

The EEF's focus is on the attainment gap between children and young people from economically disadvantaged backgrounds and their fellow students. We use eligibility for free school meals (FSM) as the best available proxy measure of economic disadvantage.

The following charts show the attainment gap between FSM-eligible pupils and all other pupils. As can be seen, this attainment gap is significantly larger than the gap for gender or first language.

Attainment gap, age 11, by different pupil characteristics:[i]

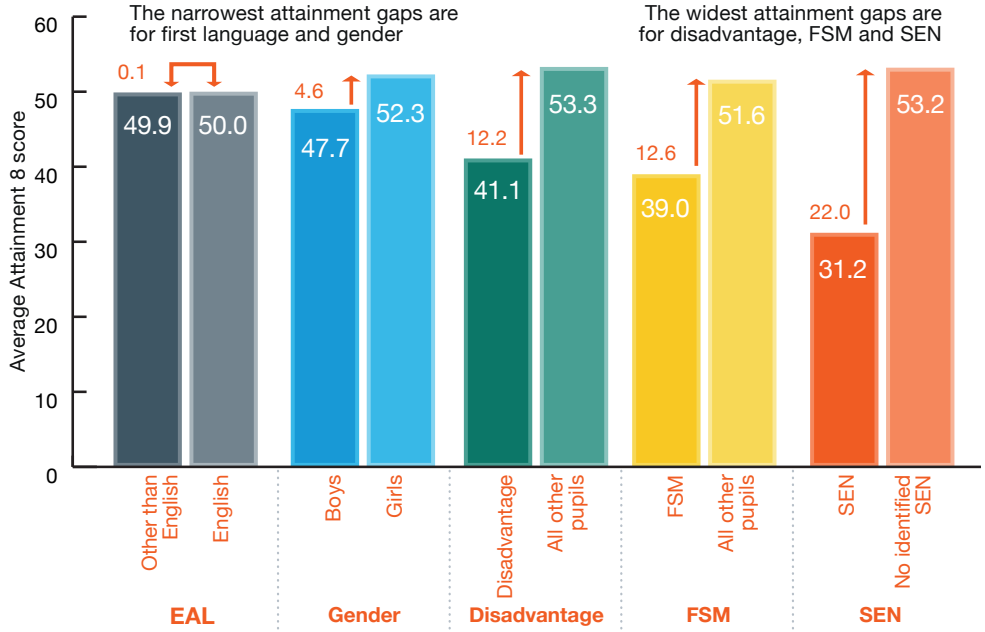
Percentage reaching the expected standard in reading, writing and mathematics for different groups England, 2016 (state-funded schools)



i. 'National curriculum assessments: key stage 2, 2016 (revised)', Department for Education (June 2017)

Attainment gap, age 16, by different pupil characteristics:[ii]

England, 2016 (state-funded schools)



ii. GCSE and equivalent results: 2015 to 2016 (provisional)', Department for Education (October 2016)
iii. 'Special educational needs in England', Department for Education (January 2017)

There is a larger attainment gap for pupils with special educational needs (SEN) than any other group. This is linked closely with economic disadvantage: 27% of pupils with special educational needs are eligible for free school meals compared to 12% of pupils without special educational needs.[iii]

Key point: the attainment gap is greatest for those from economically disadvantaged backgrounds and those assessed with special educational needs.

The following charts show what the attainment gap looks like and how it grows – and the impact this has on the future life prospects of children and young people facing economic disadvantage.

From Early Years to GCSE

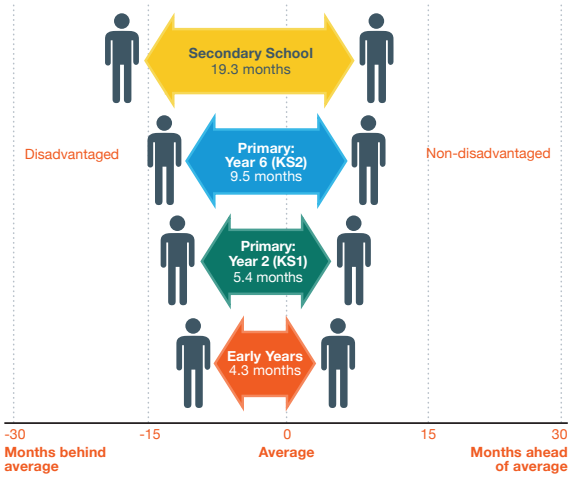
The gap in outcomes between those students from the least well-off backgrounds and their classmates is already evident by the time they begin school, aged 5. Over the next 11 years of full-time education, it worsens.

The chart, right, using data from the Education Policy Institute[iv], shows the gaps between disadvantaged pupils and all others, converted into an estimate of months, and how these grow from age 5 to 16:

- there is a 4.3 month gap at the start of school between disadvantaged children and their classmates;
- this more than doubles to 9.5 months by the end of primary school; and
- then more than doubles again, to 19.3 months, by the end of secondary school

Without at least 5 good GCSEs most young people will struggle to achieve their goals, either for further study or in the world of work.

All disadvantaged pupils



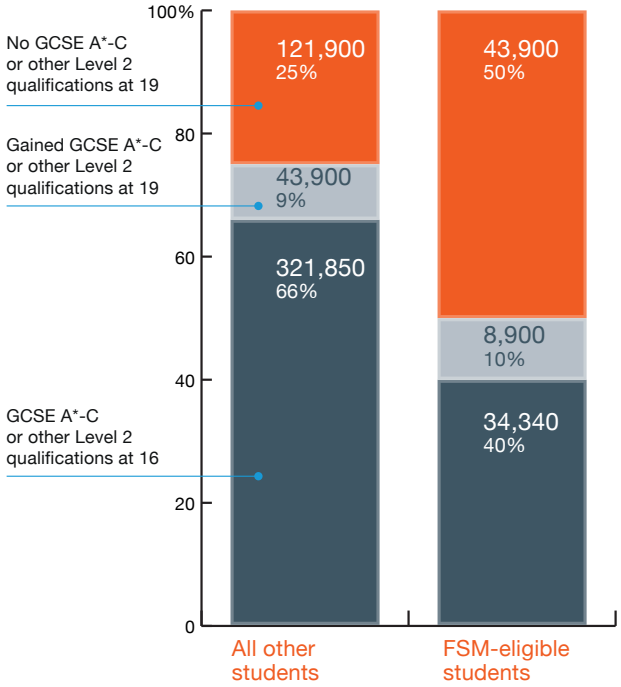
iv. 'Closing the Gap? Trends in educational attainment and disadvantage', Education Policy Institute (July 2017)

Key point: the gap between disadvantaged pupils and all others is evident even when children begin school at age 5 and grows bigger at every stage of education afterwards.

Post-16

Since 2015, all 16 to 18-year-old students who did not achieve at least a pass grade in their English and maths GCSEs – formerly a C-grade, now a '4' – are required to continue studying and resit the GCSE (or an alternative 'stepping stone' qualification, such as a level 2 functional skills qualification). Achieving this level is widely accepted as demonstrating good literacy and numeracy skills.

Attainment at age 16 and 19 in English and maths by eligibility for free school meals (FSM)



v. "Level 2 and 3 attainment in England: Attainment by age 19 in 2016', Department for Education (March 2017)

EEF support:
Assessment – particularly teacher assessment - is a crucial skill which provides teachers with up-to-date and accurate information about the specifics of what pupils do and don't know. Effective assessment helps teachers identify pupils in need of additional support so they can catch up and keep on track. However, assessment is a big challenge for teachers: how do you assess efficiently, effectively, and without any accidental bias? The EEF's **Assessing and Monitoring Pupil Progress guide** – a free, interactive online tool – is designed to help teachers unpick some of the problems and offers some practical next steps to put into practice. Our aim is to support improving teacher assessment and monitoring, ensuring the evidence put to use in schools has the best possible chance of targeting the right pupils at the right time.

The latest official figures show the scale of the challenge, in particular for students from disadvantaged backgrounds[v]. By age 19 over 164,000 students – 30% of the total cohort – had still not achieved a good standard of recognised qualifications in English and maths. Worryingly, this includes a majority (50.2%) of all students who had been eligible for free school meals.

These qualifications are prerequisites for progressing into secure, good quality employment, including apprenticeships; as well as into further study, including higher education.

Failure to reach this level is, therefore, a personal and individual tragedy, the cumulative impact of which can lead to long-term, structural challenges – political, economic and social – for the nation as a whole.

Key point: a majority of 19 year-olds who have been eligible for free school meals leave education without a good standard of recognised qualifications in English and maths.

Historic trends

The attainment gap is a stubborn, persistent problem in all phases of education. We see this in Early Years all the way through to GCSE...[vi]

Attainment gaps over time for disadvantaged pupils in primary and secondary school (months)

SCHOOL TYPES	YEAR	EARLY YEARS	PRIMARY SCHOOL	SECONDARY SCHOOL
State-funded mainstream	2007	5.5	12.3	21.9
	2008	5.3	11.8	21.8
	2009	5.2	11.5	21.7
	2010	5.0	11.0	20.7
	2011	4.9	11.1	20.2
	2012	4.9	10.2	19.6
	2013	4.7	10.0	19.0
	2014	4.6	9.9	19.0
	2015	4.3	9.6	19.2
	2016	4.3	9.5	18.9
	2015-2016 Change	-0.1 (-1%)	-0.1 (-1%)	-0.3 (-1%)
	2007-2016 change (%)	-1.2 (-22%)	-2.8 (-2.3%)	-3.0 (-14%)
All state-funded	2016	4.3	9.5	19.3

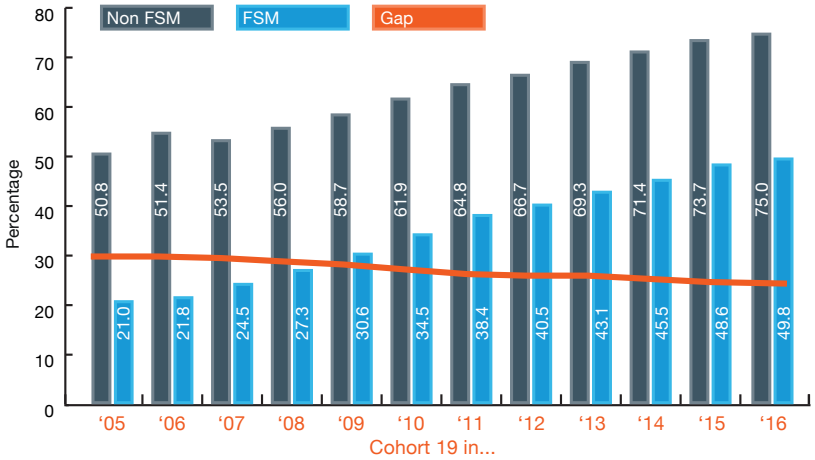
vi 'Closing the Gap? Trends in educationalattainment and disadvantage', Education Policy Institute (July 2017)

vii 'Level 2 and 3 attainment in England: Attainment by age 19 in 2016', Department for Education (March 2017)

... and also in post-16 attainment:[vii]

Level 2 English and maths attainment by age 19 by FSM eligibility at 15

England, young people in state-funded schools at academic age 15, cohorts 19 in 2005-2016



While the gap in schools has narrowed over the past decade, on current trends it will take another 50 years to close it, according to the Education Policy Institute.

Key point: while the attainment gap has reduced a little over the past decade, it is still significant and progress in narrowing it is too slow.

A 5-year forecast of the GCSE attainment gap

We know that there is significant correlation between how pupils attain at Key Stage 2 (when they are 11) with how they attain at Key Stage 4 (when they are 16). For example, in the 2016 GCSE cohort, just 11% of students assessed as below the expected standard at KS2 went on to achieve at least a C grade in English and maths.

This correlation between KS4 outcomes and prior attainment at KS2 allows us to project the national attainment gap at GCSE on the following measures:[viii]

	GCSE ATTAINMENT 8 SCORE GAP (between Pupil Premium-eligible pupils and all others)	GCSE PROGRESS 8 % PT GAP (between %-age Pupil Premium-eligible pupils making greater than average progress and all other pupils)	GCSE ENGLISH AND MATHS % PT GAP (between %-age Pupil Premium-eligible pupils with at least a good pass grade and all other pupils)
2017	11.0	14.8	24.0
2018	11.2	15.2	23.4
2019	11.3	15.7	22.4
2020	11.0	15.7	21.8
2021	10.8	15.6	21.5

viii. Bespoke analysis by FFT for the Education Endowment Foundation.

These figures suggest that, across the five years, 2017-21, the GCSE attainment gap:

- narrows slightly based on Attainment 8 scores;
- widens slightly based on Progress 8; and
- narrows more significantly based on the proportion of good passes in English and maths.

We should note that, looking at the data up to 2016, the gaps for Attainment 8 and Progress 8 have both narrowed, principally because disadvantaged pupils are now taking more subjects that count towards the Attainment 8 score.

As this forecast for 2017-21 is based on prior attainment at KS2, there is leeway for changes in secondary schools to make a difference.

For instance, if the trend for entering Pupil Premium-eligible pupils for more subjects that count towards Attainment 8 and Progress 8 continues, then the gap will close by more than the forecast. If Pupil Premium-eligible pupils were entered for the same number of subjects as all other pupils, the Attainment 8 score gap would close by about 2 points – for 2021, this would reduce the gap from 10.8 to 8.8, a significant reduction.

Key point: improvements at Key Stage 2 mean there is some good news in our 5-year forecast of the English and maths GCSE attainment gap. However, the forecast also suggests that, as it stands, there will be little or no further headway in closing the overall attainment gap by age 16, as measured by either Attainment 8 or Progress 8 – unless secondary schools take steps now to boost GCSE outcomes for their Pupil Premium-eligible pupils.

EEF support: Teachers and senior leaders are inundated with information about different programmes and training courses to help boost their students' outcomes. There are thousands of studies, too, most of which are presented in academic papers and journals. It can be difficult to know where to start. That is why the EEF publishes our **Guidance Reports**, clear and actionable recommendations for effective teaching based on the best research available and EEF work to date. They are designed to help practitioners navigate the wealth of information out there and give all learners – particularly those from the poorest backgrounds – the skills they need to succeed. Recent reports have focused on Improving Literacy in Key Stages 1 and 2 and Improving Mathematics in Key Stages 2 and 3. A further seven reports are scheduled for the coming year addressing high-priority issues for teachers, such as Science in secondary schools, use of digital technology, and metacognition and self-regulation.

Personal impact of improved qualifications

It is no surprise that the better a young person's academic qualifications at school, the greater the likelihood of securing a well-paid job. What, perhaps, is more surprising is the big difference that can be yielded by even a modest improvement in young people's qualifications.

The Department for Education has undertaken an analysis[ix] to estimate the lifetime productivity returns associated with achieving five good GCSEs, including English and maths. This found:

- Individuals who achieve 5+ good GCSEs including English and maths as their highest qualification, have estimated lifetime productivity returns in excess of £100,000, compared to those with below level 2 or no qualifications.
- Even achieving very low levels of qualification – just one or two GCSE passes compared to no qualifications – is associated with large economic gains.
- Modest incremental improvements in GCSE attainment also have sizeable lifetime productivity returns, across the spectrum of GCSE achievement.
- Leaving education without any qualifications at all carries a large economic cost to the individual (as well as to society in terms of lost output).

These figures take no account of the wider benefits to the individual and society from improved educational attainment, such as better health outcomes or reduced crime; nor of the increased numbers of pupils progressing to higher qualification levels (such as A- levels, apprenticeships or degrees) from improved GCSE performance.

Key point: even small improvements in young people's GCSE qualifications yield significant increases in their economic benefit to society.

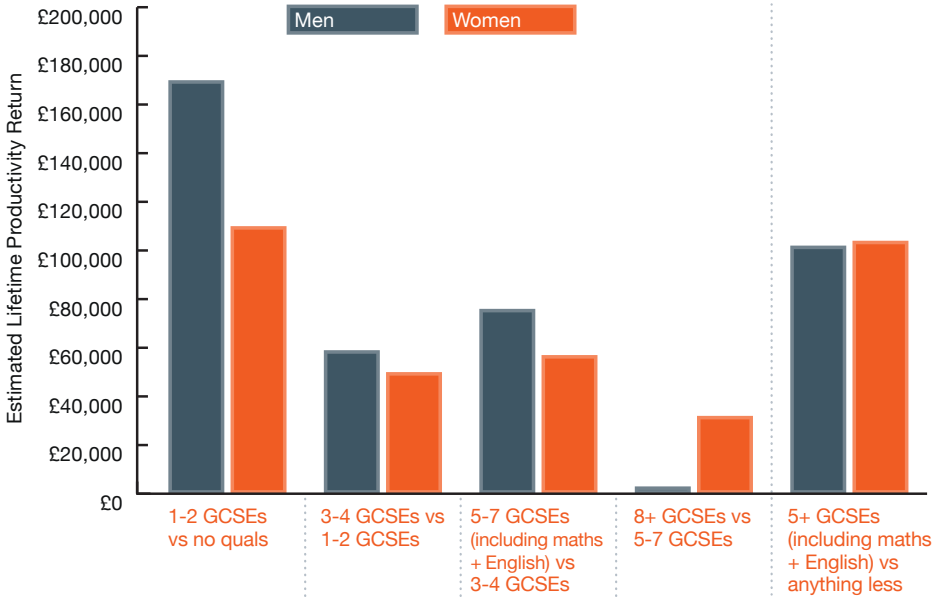
National impact of improved qualifications

The clear gain to the individual from improved attainment is also true for the national economy. An analysis conducted in 2013[x] estimated that, if the UK had, in recent decades, taken action to close the attainment gap at 11 so that the poorest pupils achieved the same levels as others by the end of primary school, GDP in 2020 would be around £30 billion, or 1.8%, higher.

Similarly, in December 2017[xi], the Department for Education published an analysis suggesting that if disadvantaged pupils in all regions performed as well as disadvantaged pupils in London, this would lead to an overall economic benefit of around £20 billion in present value terms.

ix. 'GCSEs, A levels and apprenticeships: their economic value', Department for Education (December 2014)
x. 'Too young to fail', Save the Children (October 2013)
xi. Economic returns to GCSEs: region and disadvantage', Department for Education (2017)

Estimated lifetime productivity returns to achieving GCSEs at A*-C as highest qualification



Key point: raising the attainment of young people from disadvantaged backgrounds and closing the attainment gap is likely to yield significant increases in national wealth.

EEF support: The EEF's grant-funding is designed to test the impact of a range of programmes and approaches, offering those with encouraging initial evidence the opportunity to put their idea to a fair but rigorous test. To date, more than £96 million has been invested by the EEF and our funding partners in the delivery and evaluation of 160 projects. Collectively, these have involved over 10,000 schools, as well as early years / post-16 settings, in England – and reached more than one million children and young people, 35% of them eligible for free school meals. The lifetime gains for students taking part in EEF trials amount to three times the cost of delivering and evaluating them, according to independent analysis.

It is clear there is a consistent gap in children and young people's attainment linked to economic disadvantage.

There are a range of explanatory factors (family background and circumstances) beyond the control of teachers and senior leaders to affect.

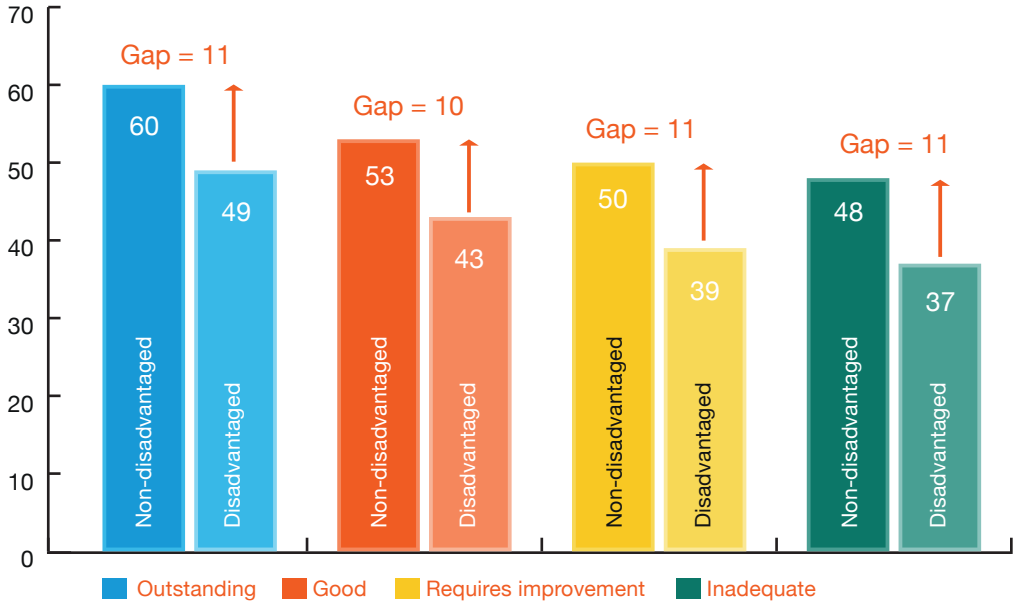
However, one factor – the quality of teaching in formal education – holds huge potential in reducing, and in some cases even eliminating, the attainment gap.

The gap exists in all types of schools

The attainment gap is not a problem restricted only to schools classified as under-performing: it is found in all types of schools.

This chart shows the GCSE outcomes (Attainment 8 scores) for disadvantaged pupils and non-disadvantaged pupils grouped according to their school's overall effectiveness, as assessed by Ofsted.[xi]

GCSE Attainment 8 scores for disadvantaged and non-disadvantaged pupils
By school overall effectiveness judgement



xii. Chart supplied to EEF by Ofsted (September 2017)

As might be expected, Attainment 8 scores for all pupils is higher in 'Outstanding'- or 'Good'-rated schools[xiii] than in schools rated as either 'Requires improvement' or 'Inadequate'.

However, the size of the Attainment 8 gap between disadvantaged and non-disadvantaged pupils is all but identical across all four Ofsted-rated categories of school.

So while wanting more schools to achieve a Good/Outstanding rating from Ofsted is itself a valid aim – after all, absolute attainment levels for all pupils in 'Outstanding' and 'Good'-rated schools is higher – it is not in itself sufficient to close the attainment gap.

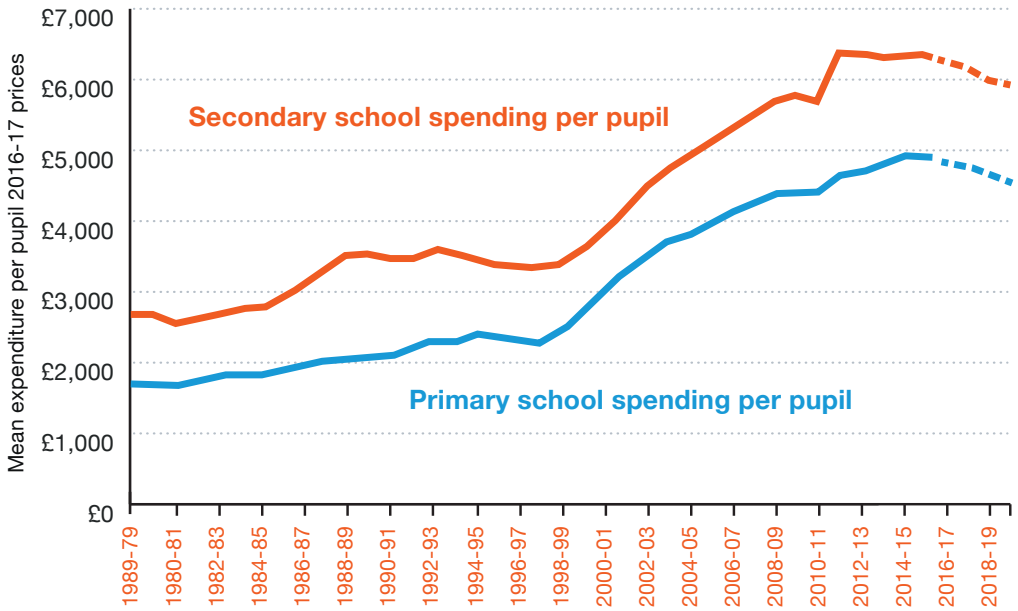
Key point: the attainment gap is consistent across all types of schools, regardless of their Ofsted rating.

xiii. 87% of all learners are in schools currently rated 'Outstanding' or 'Good', according to Ofsted (as at 31 March 2017)

The link between school funding and attainment

Public spending per pupil in real terms has more than doubled in both primary and secondary schools over the past 40 years, with much of that increase concentrated in the period 1999-2012.[xiv]

Spending per pupil in primary and secondary schools, actual and plans (2016-2017 prices)



It is much less clear that there has been a similar increase in attainment outcomes for pupils over that period. As Professor Robert Coe of Durham University has noted, when reviewing the evidence from international surveys, independent studies, and national exam results: 'a clear and definitive answer to the question of whether standards have risen is not possible. The best I think we can say is that overall there probably has not been much change.'[xv]

The funding situation now facing schools is very different. While their overall funding has been maintained in recent years, even as other parts of the public sector have faced cuts, school budgets are likely to be much tighter in the coming years. Getting value for money is going to be critical to schools' ability to secure improvements in pupil outcomes.

Key point: While a good level of funding for schools is important for a range of reasons - and some research suggests is particularly beneficial for disadvantaged students - there does not appear to be a direct and straightforward relationship between increased school funding and increased pupil attainment – what matters most is how schools can effectively and efficiently use the resources they have (both financial and human) for maximum impact.

EEF support: It was to help schools make best use of funding for disadvantaged pupils that the Sutton Trust first published what is now known as the EEF **Teaching and Learning Toolkit**,[1] an accessible summary of the international evidence on teaching 5-16 year-olds. Together with its Early Years companion, it aims to guide senior leaders and teachers towards the 'best bets' for improving pupils' attainment on the basis of high-quality research of what has (and also what hasn't) worked in the past. The Toolkit covers 46 topics, each summarised in terms of the average impact on: (1) attainment, (2) the strength of the supporting evidence, and (3) the cost. Independent surveys indicate the EEF Toolkit is used by up to two-thirds of all senior leaders in schools.

xiv. 'Long-run comparisons of spending per pupil across different stages of education', Institute for Fiscal Studies, (February 2017)
xv. 'Improving education: a triumph of hope over experience', Professor Robert Coe (June 2013)

Pupil Premium

Additional money – the Pupil Premium – is available to schools to support the learning of disadvantaged pupils.

When launched in 2011, it totalled £623 million (£430 per eligible pupil). By 2017, the total funding pot had grown to £2,412 million, which includes £1,320 for each eligible pupil at primary school and £935 for each eligible pupil at secondary school. The Pupil Premium has been guaranteed in cash terms by the current government to 2022.

In 2016-17, just over 1.1m (24.9%) primary school pupils in England were eligible for Pupil Premium funding; in secondary schools there were 805,649 (29.1%) Pupil Premium-eligible pupils. The Pupil Premium represents a considerable amount of discretionary funding for most schools. The average value per school in 2017 is:[xvi]

- Primary school = £81,441
- Secondary school = £167,948

How schools use their Pupil Premium allocation is entirely up to them, though they are expected to publish information on what it has been spent and what impact it has had on educational attainment.

Valuable as the Pupil Premium is in helping schools to target support towards their disadvantaged pupils, it represents a relatively small part of a school's overall budget.

Quality of teaching is one of the biggest drivers of pupil attainment, particularly for those from disadvantaged backgrounds. It is crucial, therefore, that schools focus all their resources (not just the Pupil Premium) on proven ways of improving teaching, such as tried and tested continuing professional development courses and feedback methods.

By being clear about the issues facing disadvantaged pupils, using evidence to identify the solutions most likely to work, and thinking hard about these are implemented, schools will be in the best position to deploy limited resources effectively.

Key point: the Pupil Premium is a valuable focus for closing the attainment gap – but it is important schools consider how they can best use all their resources to improve the quality of teaching, as this will benefit all pupils, but particularly the most disadvantaged.

Regional variations in pupil attainment

Looking at the attainment gap on a regional basis, it is the performance of pupils in London which stands out.

The table below[xvii] shows that a majority (51%) of London's FSM-eligible pupils achieved A*-C grades in GCSE English and maths in 2016. In the neighbouring South East barely one-third of FSM-eligible pupils did so. London's attainment gap was 19 percentage points; the South East's was 34 percentage points. FSM-eligible pupils in London were 52% more likely to get 5 or more good GCSEs in 2015 than FSM-eligible pupils in other parts of the country.[xviii]

	% FSM CHILDREN ACHIEVING A*–C GRADES IN GCSE ENGLISH AND MATHS	% NON-FSM CHILDREN ACHIEVING A*–C GRADES IN GCSE ENGLISH AND MATHS	ATTAINMENT GAP % PT
London	51.1%	70.1%	19.0
West Midlands	38.2%	64.5%	26.3
North East	37.6%	66.5%	28.9
Yorkshire and the Humber	35.8%	65.2%	29.4
East Midlands	35.3%	65.1%	29.8
North West	36.3%	66.2%	29.9
East of England	35.6%	67.0%	31.4
South West	35.4%	67.3%	31.9
South East	34.9%	68.8%	33.9

The reasons for the transformational improvements in pupils' outcomes in London in the past 15 years have been much debated. It is not possible to identify for sure why it happened – the causal mechanisms – as the reforms introduced were not robustly evaluated. Researchers have proposed a number of plausible explanations for what has been termed 'the London effect', notably: improvements at primary schools from the late 1990s; the London Challenge and other initiatives within secondary schools; and a significant influx of pupils from high-attaining immigrant families.

In the other eight regions of England, the proportion of FSM-eligible pupils achieving A*-C in English and maths is in a narrow range between 35% and 38%. In only two non-London areas – Rutland and Slough – did FSM-eligible pupils achieve above the London average; Windsor and Maidenhead (51%), Birmingham, Calderdale, and East Riding (all 45%) were the next closest.

xvi. Source: 'Pupil premium 2016 to 2017: school-level allocations', Department for Education (March 2017)
xvii. 'Revised GCSE and equivalent results in England: 2015 to 2016', Department for Education (January 2017)
xviii. 'State of the nation 2016: social mobility in Great Britain', Social Mobility Commission (November 2016)

Averages, however, can conceal as much as they reveal. For example, while London has boroughs such as Westminster (63%) and Tower Hamlets (58%) where large numbers of FSM-eligible pupils attain well, there are other boroughs where performance is markedly lower, such as Havering (34%) and Bexley (41%) in the east of the city.

Key point: one region, London, stands out for its success in improving attainment for disadvantaged pupils and closing the gap.

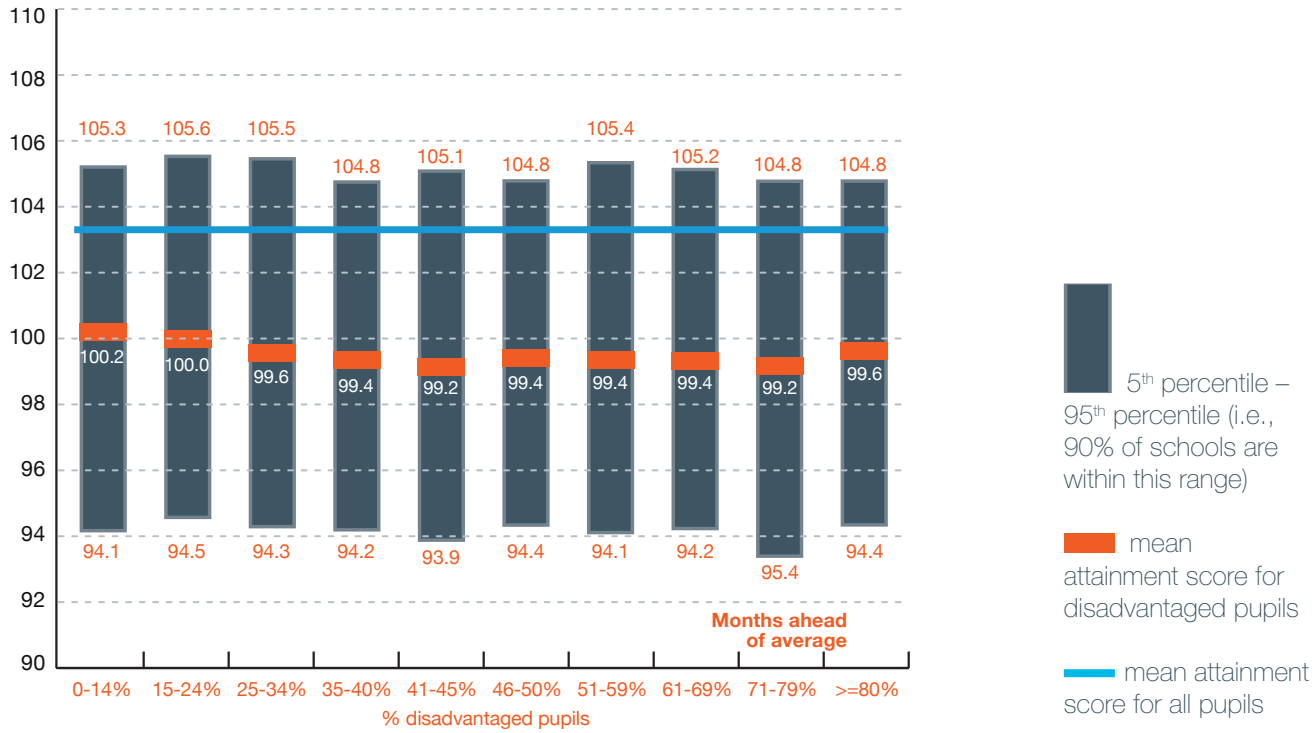
The schools where disadvantaged pupils are bucking the trend

Analysis of the attainment gap through the lens of geography can only take us so far. The reality is that, within each area, there are schools where FSM-eligible pupils are doing well and others where they are doing less well. This simple point highlights one of the main challenges in tackling the attainment gap: the big variation in the performance of similar schools with equivalent resources and intakes.

The following two graphs analyse the attainment gap according to the level of disadvantage in state-funded schools in England.

At primary school…

There are 1,726 primary schools in England – 10% of all primaries – where disadvantaged pupils at Key Stage 2 attain above the national average scaled score for all 11 year-olds.[xixi] As the graph shows, these schools are spread across the spectrum of disadvantage, with 72% of them having an above-average proportion of disadvantaged pupils. More than 70% are outside London.



xix. Bespoke analysis by FFT for the Education Endowment Foundation.

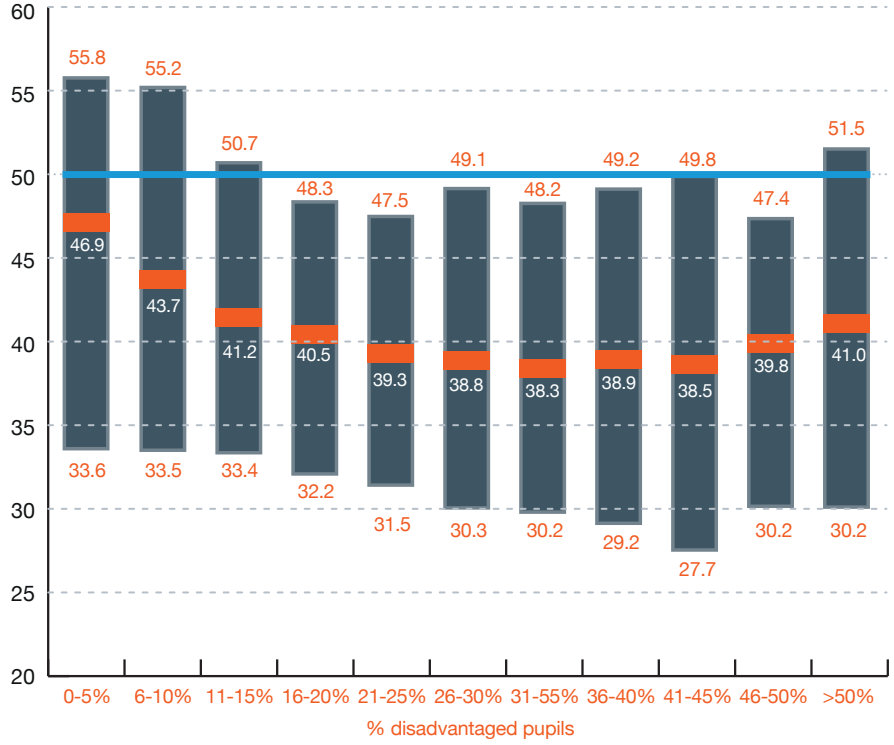
At secondary school…

Looking at the performance of disadvantaged pupils in secondary schools at GCSE, we see once again that schools with similar levels of disadvantaged pupils achieve very different Attainment 8 results.

For example, there are schools with 41-45% of disadvantaged pupils where those pupils achieve an Attainment 8 score of 27.7 (equivalent to 5 D-grades at GCSE, including English and Maths); and schools with similar levels of disadvantaged pupils where they achieve a score of 49.8 (equivalent to 8 C-grades at GCSE, including English and Maths).

There are 272 secondary schools in England – 8% of all secondaries – where disadvantaged pupils at GCSE perform above the national Attainment 8 score for all 16 year-olds. Of these 272, 108 (40%) are schools with an above average proportion of disadvantaged pupils, most of which (78) are in London.

It is interesting to note that higher average attainment for disadvantaged pupils is located in schools at either ends of the disadvantaged spectrum. A plausible hypothesis is that disadvantaged pupils in the schools with fewest disadvantaged pupils benefit from a 'peer effect'. For schools with high levels of disadvantaged pupils, the biggest single driver of improved attainment appears to be the significant proportion of minority ethnic pupils; the data for white pupils only shows no upturn in average attainment for the two groups of schools with the highest proportions of disadvantaged pupils.



5th percentile – 95th percentile (i.e., 90% of schools are within this range)

mean attainment score for disadvantaged pupils

mean attainment score for all pupils

EEF support: Applying evidence in the classroom remains a real challenge. No-one is better-placed to support schools in doing this than teachers themselves. That is why the EEF has launched our **Research Schools Network** in collaboration with the Institute for Effective Education. Now 22-strong, including 11 schools in the government-designated Opportunity Areas, it is intended this Network will lead the way in bringing education research and everyday classroom practice closer together, using their expertise to support more than 2,000 schools across the country. In addition, the EEF is funding two major **campaigns to promote the effective use of evidence**, focusing on: (1) primary-age literacy in the North East in a major £10 million initiative co-funded with Northern Rock Foundation; and (2) better use by schools of teaching assistants in up to 1,000 schools in Yorkshire. As with all work we fund, these will be independently evaluated so we can assess the potential of such campaigns.

Families of Schools

The data presented above is a simplification intended to highlight the variability in outcomes for disadvantaged pupils for schools with similar levels of disadvantage. It is important to note that the data presented here does not control for prior attainment, nor for English as an Additional Language, both potentially important explanatory factors for variance at the school level.

It is for this reason the EEF has developed our Families of Schools database, freely available online. This controls for those variables, enabling a much fairer comparison between similar schools at the individual school level. If all schools are to produce great results for all their pupils it is vital that we learn from the successes of the best-performing schools and enable this to be shared in a supportive and constructive way with those schools which need more help.

Key point: there is huge variability in outcomes for disadvantaged pupils between schools with similar levels of disadvantaged pupils. There are, however, a significant number of primary and secondary schools across the country where disadvantaged pupils are doing better than the all-pupil national average. This suggests it is possible to close the attainment gap – if we can find effective ways to learn from the successes of the best-performing schools, and achieve greater consistency between similar schools. The EEF's Families of Schools database is one practical tool designed to enable individual schools to do just that.

EEF support: The EEF's **Families of Schools database** groups similar schools together based on factors including prior attainment, percentage of pupils eligible for free school meals, and the number of children with English as an additional language. The attainment of pupils on a range of measures can then be compared with similar schools, allowing teachers, school-leaders and governors to understand the size and nature of their attainment gap in relation to other similar institutions. The database provides a wealth of information to help schools learn from the best-performing institution in each family.

A realistic goal for school improvement to start closing the attainment gap

Closing the attainment gap will be hard work. However, as the analysis above shows it is possible, and, indeed, is already happening in some schools.

The challenge is to mobilise the effective practice in a minority of schools: to reduce the variability in pupil outcomes we currently see and to increase consistency across the schools system. Put simply, it is about more good teaching for all pupils, as this will especially benefit the most disadvantaged.

Though it might be tempting to expect all schools to be as good as the best performing, there is a more realistic initial goal to work towards. That is for schools with below-average outcomes for their disadvantaged pupils to reach at least the average attainment levels for schools with similar levels of disadvantage to them. In secondary schools with 26%-30% disadvantaged pupils, for instance, this would mean moving from an Attainment 8 score of 30.2 to the average of 38.8. Doing so, would boost an individual student's GCSEs by around one grade in most of their Attainment 8 subjects.

Key point: Schools where disadvantaged pupils are currently attaining below the average of disadvantaged pupils in schools with similar levels of disadvantage should consider how they can help them to at least reach that average level of attainment as an initial goal.

Below we look at the impact nationally on the attainment gap if this goal were reached.

Closing the gap: an illustration

*Q: What would happen to the attainment gap nationally **IF** schools where disadvantaged pupils are currently achieving below-average attainment outcomes were able to reach the average for schools with with similar proportions of disadvantaged pupils?*

The table below illustrates the difference that 'lifting the tail' could make to attainment levels, using the latest available data (2016)[xx]:

	ACTUAL NATIONAL OUTCOME FOR DISADVANTAGED PUPILS	ACTUAL NATIONAL ATTAINMENT GAP	PROJECTED NATIONAL OUTCOME IF…	PROJECTED NATIONAL GAP IF…	CHANGE – INCREASE IN ATTAINMENT AS % OF GAP BETWEEN PUPIL PREMIUM-ELIGIBLE PUPILS AND ALL OTHER PUPILS
Key Stage 2	99.5 (average points score)	-4.0	100.8	-2.8	+32%
	98.9 (reading)	-4.3	100.2	-3.1	+31%
	100.2 (maths)	-3.6	101.6	-2.3	+37%
	-0.6 (value added)	-0.8	0.4	-0.2	+122%
GCSE	42.4 (Attainment 8)	-11.0	44.2	-9.0	+16%
	4.4 (average no. of subject entries – maximum 10)	-1.0	4.6	-0.8	+17%
	9.2 (average grade per entry)	-0.5	9.4	-0.3	+42%
	-0.32 (Progress 8)	-0.5	-0.17	-0.3	+34%

xx. Bespoke analysis by FFT for the Education Endowment Foundation.

Key point: if schools where disadvantaged pupils' outcomes are currently below average are able to help those pupils reach at least the average of those in schools with similar levels of disadvantage, this would make a big difference – both in improving their attainment and in closing the overall gap.

EEF support: As we build the evidence of a programme or approach's impact, we want to make sure that those with evidence of promise can reach more children and young people. The EEF's grant-funding for **Promising Projects** allows us to grow them further, while testing that there is a sustainable and successful model which will work at scale. So far, we have committed £10.7 million to support the continuing evaluation of these high-potential projects as they expand. They will involve some 1,900 schools and early years settings and reach 108,000 children and young people. However, we continue to recommend teachers conduct their own evaluations of new programmes and approaches to check if they are having a positive impact in their own context. Our **DIY Evaluation Guide** supports teachers to conduct their own evaluations of new programmes and approaches to monitor if they are having a positive impact in their own context.

Closing the attainment gap: key lessons learned in the EEF's first six years

1. **Early Years education has huge promise in preventing the attainment gap becoming entrenched before children start school.** However, it has not – yet – yielded as much as it should. Professional support and training for early years workers is key. Areas with potential include communication and language approaches; self-regulation strategies; and parental involvement.

2. **What happens in the classroom makes the biggest difference:** improving teaching quality generally leads to greater improvements at lower cost than structural changes. There is particularly good evidence around the potential impact of teacher professional development; but the supply of high-quality training is limited.

3. **Targeted small group and one-to-one interventions have the potential for the largest immediate impact on attainment.** Some whole-class and whole-school interventions have shown promise but may take longer to show results.

4. **The transition between phases of education – notably early years to primary, and primary to secondary – is a risk-point for vulnerable learners.** Schools need to diagnose pupils' needs as soon as possible in order to put in place effective support to help those falling behind to catch up.

5. **The challenge of improving post-16 attainment is a particular issue for students from disadvantaged backgrounds.** A majority of students eligible for free school meals have not achieved a good standard in English and mathematics by age 19. More evidence is needed to identify the best ways to improve outcomes for these learners.

6. **Pupil Premium funding is a valuable focus to support senior leaders in raising the attainment of disadvantaged young people.** But it is vital that schools (as well as early years and post-16 settings) consider how *all* their resources can be used to achieve this goal. Good teaching for all pupils has a particular benefit for disadvantaged pupils.

7. **There is a strong appetite for educators to engage with and use evidence.** Up to two-thirds of senior leaders use our Teaching and Learning Toolkit to make decisions, while more than 10,000 schools in England have signed up to take part in one of the EEF's trials so far.

8. **Robust and independent evaluation of high-potential programmes is not only possible, but essential.** Evidence is a crucial tool to inform senior leaders' decision-making and help them identify 'best bets' for spending. Time and money is too scarce to stick with approaches and programmes which do not make a real difference. The effective use of evidence means strategically abandoning ineffective approaches, as well as implementing new ones with positive evidence behind them.

9. **We know enough in key areas of teaching and learning to start making a positive difference now.** While generating new evidence remains essential, in areas such as literacy there is no excuse for not deploying the existing, extensive evidence to support teaching practice – as we are doing, for example, through our £10 million campaign to boost the literacy of primary-age pupils in the North East. Our growing bank of EEF guidance reports gives teachers the best available evidence in a range of key areas.

10. **The £5 billion per year asset of teaching assistants can be deployed more effectively.** Though previous research had suggested that teaching assistants can have a negative impact on children's learning, EEF trials have shown how, when properly trained and supported, teaching assistants working in structured ways with small groups can boost pupils' progress.

11. **How a project is implemented is vital and arguably as important as its content.** Successful projects have clarity around their structure, objectives and target group, with high-quality training and materials that allow for adaptation and strong implementation. The EEF's forthcoming guidance report, *A School's Guide to Implementation*, draws out what we have learnt over the last six years.

12. **Most programmes are no better than what schools are already doing:** around 1-in-4 EEF trials show enough promise for us to re-invest in. Teachers and decision-makers are right to be discerning about where they spend their limited funds.

13. **Catch up is difficult: we should aim to get it right first time round for all children.** The EEF evaluated over 20 catch-up programmes that aimed to support struggling readers at the transition from primary to secondary school. Though some were shown to be effective in boosting attainment, no single programme delivered enough to close the gap.

14. **Essential life skills (or 'character') are important in determining life chances and can be measured in a robust and comparable way.** Much less is known, however, about how these skills can be developed and whether they lead to increased academic attainment. This is a major focus of work for the EEF.

15. **Sharing effective practice between schools – and building capacity and effective mechanisms for doing so – is key to closing the gap.** Teachers and school leaders now have access to a significant and growing body of academic research with enormous potential to improve pupil attainment and save schools money. But we know that research on its own is not enough; applying the findings to the classroom is a real challenge. We believe no-one is better-placed to support schools in doing this than teachers themselves.

About us

The EEF was established in 2011 by The Sutton Trust as lead charity in partnership with Impetus Trust (now part of Impetus–The Private Equity Foundation)

With a £125m founding grant from the Department for Education

Department for Education

The EEF and Sutton Trust are, together, the government-designated What Works Centre for Education

What Works Network

Address

9th Floor, Millbank Tower
21-24 Millbank
London
SW1P 4QP
Phone: 0207 802 1676
info@eefoundation.org.uk

Charity registration number:

1142111

Website

www.educationendowmentfoundation.org.uk

Social Media

On Twitter @EducEndowFoundn

By liking Facebook.com/EducEndowFoundn

By subscribing to our YouTube channel

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