

Education in England: Annual Report 2018

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Research Area:
Vulnerable Learners
and Social Mobility



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About the Education Policy Institute

The Education Policy Institute is an independent, impartial, and evidence-based research institute that promotes high quality education outcomes, regardless of social background. We achieve this through data-led analysis, innovative research and high-profile events.

Education can have a transformative effect on the life chances of young people, enabling them to fulfil their potential, have successful careers, and grasp opportunities. As well as having a positive impact on the individual, good quality education and child wellbeing also promotes economic productivity and a cohesive society.

Through our research, we provide insight, commentary, and a constructive critique of education policy in England – shedding light on what is working and where further progress needs to be made. Our research and analysis spans a young person's journey from the early years through to entry to the labour market.

Our core research areas include:

- Benchmarking English Education
- School Performance, Admissions, and Capacity
- Early Years Development
- Vulnerable Learners and Social Mobility
- Accountability, Assessment, and Inspection
- Curriculum and Qualifications
- Teacher Supply and Quality
- Education Funding
- Higher Education, Further Education, and Skills

Our experienced and dedicated team works closely with academics, think tanks, and other research foundations and charities to shape the policy agenda.

This publication includes analysis of the National Pupil Database (NPD)

<https://www.gov.uk/government/collections/national-pupil-database>

The Department for Education is responsible for the collation and management of the NPD and is the Data Controller of NPD data. Any inferences or conclusions derived from the NPD in this publication are the responsibility of the Education Policy Institute and not the Department for Education.

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Foreword

The Education Policy Institute is an independent, impartial and evidence-based research institute which aims to promote high quality education outcomes for all, through analysis that both informs and influences the policy debate in England and internationally.

Our 2018 Annual Report assesses recent progress in raising attainment throughout the phases of education in England. It also looks to carefully assess recent trends in the attainment gap between advantaged and disadvantaged children. If the debate about improving English education is to be productive, then it needs to be based on an objective assessment of the country's strengths and weaknesses – shifts in the qualifications regime and in accountability measures can make this objective assessment more difficult to complete than might be expected.

EPI is particularly committed to research which will improve outcomes for our most disadvantaged children and our most vulnerable students – this long tail of “under-achievement” currently holds back our overall education performance and impairs social mobility. It is important to understand how the disadvantaged gaps vary over time, vary geographically, and differ between groups of disadvantaged students.

It is also crucial to understand what the trends are in closing the disadvantaged gap – an objective shared by almost all policymakers and education commentators. Over recent years, and contrary to the perceptions of some, there has been a closing of the gap on most measures. This closure has taken place over a period of 20 years during which education and social policy has had a strong focus on improving opportunities and reducing the inequalities in social outcomes. A concern from this year's report is the apparent significant slowdown in the rate of gap closure, against a background of rising child poverty and financial pressures on many of the services which vulnerable children access. It is important that policymakers continue to prioritise measures to close gaps – without this, we may see a return to an era of stagnating or even worsening social mobility.

As ever, we welcome comments on this report.



David Laws

Executive Chairman

Education Policy Institute.

Introduction

Each year, the Department for Education (DfE) publishes a range of data showing how well schools and other education providers have met attainment benchmarks at different Key Stages. It also publishes data on the socio-economic gap in attainment in the early years, at the end of Key Stage 2 (primary) and at the end of Key Stage 4 (secondary). While this information is helpful, it can be complex to navigate and it doesn't always give a comprehensive picture of the state of education in England.

This Education Policy Institute's Annual Report is intended to fill that gap by providing a detailed analysis of published and unpublished data to show the true extent of education standards in England, across the age-range and across the country. While we are interested in how well pupils and schools are performing overall, we are particularly interested in the disadvantage gap (that is, the gap between children from typically low-income families and their peers).

We also present our findings in a wall-chart so that those interested in education can see, at a glance, where we (as a nation) have made progress and where there is still work to do. The Summary of Findings that follows gives further details of our findings and subsequent recommendations.

Alongside this paper and the wall-chart, we are also publishing a review of the evidence of the determinants of the disadvantage gap, a technical appendix that sets out the methodology behind our analysis in more detail and a list of attainment and disadvantage gap measures, broken down at local authority level.

Summary of Findings

Unless otherwise stated, the data presented in this report relates to attainment in the summer of 2017. This is the latest year for which we have pupil-level data from the National Pupil Database.

1. Overall pupil attainment is rising in primary and secondary schools

We start by looking at national trends of overall attainment at age 5, by the end of primary school and by the end of secondary school.

The early years

To measure performance in the early years, we look at the total point score of children as measured by the Early Years Foundation Stage Profile (EYFSP). We use the total point score, as opposed to the proportion of children achieving the Government's benchmark of "a Good Level of Development". Measuring performance using a binary benchmark can lead practitioners to, consciously or otherwise, push pupils over the line. Our use of the total point score reduces the effect of this – thereby giving a more reliable picture of the trend in attainment.

Assessment of young children's development and attainment is particularly challenging, and because it requires some degree of teacher mediation, this introduces risks of inconsistent measurement. The EYFSP is assessed against criteria known as the Early Learning Goals, but it is based entirely on observational assessment by the teacher and does not make use of any standardised tasks. The current funding arrangements mean that there is an inherent incentive for schools to deflate their results in order to secure more funding through the Low Prior Attainment factor (there is no evidence that schools do this, but the incentive exists nonetheless). The DfE plans to introduce a new Reception Baseline assessment, which will include teacher-mediated standardised tasks, and, as this develops, we will consider whether this provides a better, more reliable, measure to assess both attainment in the early years and progress from the beginning to the end of primary school.

We find that, in 2017, the average total point score was 34.5 (on a scale of 17 to 51). This represents no change from 2016, but prior to 2016, attainment was increasing.

Key Stage 2

For Key Stage 2, we measure performance by taking the average of the scaled scores in reading and maths. Scaled scores in each subject range from 80 to 120 with a score of 100 representing the expected standard.¹ **In 2017, the average score was 104, up by one per cent since 2016.**

New tests based on a more stretching curriculum were introduced for the first time in 2016. As a result of this change, it is not possible to make a consistent assessment of whether attainment levels are now higher or lower than in 2015 and earlier years. However, we do know that attainment in the old KS2 tests prior to 2016 was rising, and that it has risen modestly from 2016 to 2017.

¹ Pupils who are below the level required to sit the test have scaled scores ranging from 59 to 79 imputed on the basis of teacher assessments.

Key Stage 4

In measuring attainment at Key Stage 4, we use the average GCSE grade per subject across all GCSE entries.²

Recent reforms to GCSEs make it difficult to compare performance over time. By using an average point score (as opposed to total points), it makes this comparison more consistent when we come to assess the disadvantage gap, because it is not affected by the number of GCSEs taken, but takes into account GCSE subjects across the curriculum. Holding constant the qualification types included in the measure by restricting this to GCSEs is helpful for assessing changes in the gap before and after 2014, when major reductions were made to the range of qualifications schools could use to meet performance floor standards.

In 2017, the average GCSE grade per subject was 4.3 on the new 9 to 1 scale (with 9 being the highest grade).³ This is an increase of 3.6 per cent compared with 2016.

However, as 2017 is the first year in which English and maths moved to the 9 to 1 scale, results are not strictly comparable with 2016.

2. Overall, there is little change in the disadvantage gap

We now look at the trend of the gap between disadvantaged pupils and their peers. We use the same definition of disadvantage as the DfE, i.e. pupils who are eligible for the Pupil Premium (those who have been eligible for Free School Meals at least once in the previous six years). As with our previous reports, we present the gap in terms of months of progress – i.e. if the gap is five months, that means disadvantaged pupils are, on average, five months of development behind their peers.

In the early years and primary phases, the gap was 4.3 and 9.4 months respectively. As our wall-chart shows, there is little change to the overall size of the gap and the rate at which it is closing compared with previous years.

The secondary gap in the average GCSE grade per subject appears to have closed more significantly. In 2017, the gap was 18.4 months, compared with 19.3 months in 2016. This decrease, of around a month, is the largest in a single year since 2013. **However, as we explain in the following sections, the size of this decrease is affected by an increase in entry rates to GCSE English literature. If we consider outcomes in English (language) and maths alone, the gap trend is largely unchanged.**

On any measure, overall the gap in primary attainment has been closing proportionally faster than the secondary gap. Since 2011 the primary and secondary gaps have closed by 10.9 per cent and 8.0 per cent, respectively. This is shown in Figure 1.1 below.

² This excludes non-GCSE Level 1 and 2 qualifications. AS level qualifications also count towards this measure (though few are taken at age 16).

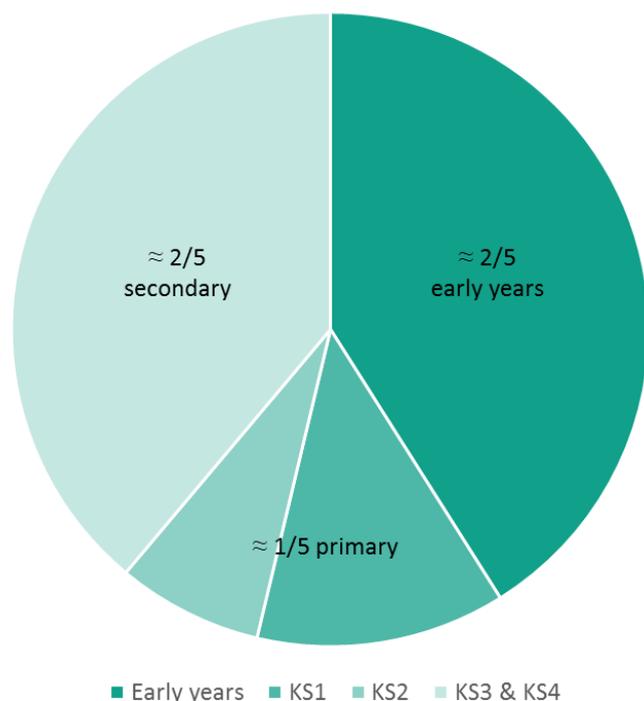
³ The 9 to 1 scale applied only to GCSE Maths and English in 2017. All other GCSEs are graded 8.5 to 1.

Figure 1.1: The trend of the gap since 2011⁴

	Early Years gap in months	Key Stage 2 gap in months	Key Stage 4 gap in months	
	total point score	scaled score in reading and maths	GCSE average grade	GCSE English and maths
2011	-	10.6	20.0	19.1
2012	-	10.1	20.0	18.9
2013	4.5	9.9	19.6	18.6
2014	4.5	9.9	19.6	18.2
2015	4.4	9.6	19.4	18.1
2016	4.4	9.6	19.3	18.1
2017	4.3	9.4	18.4	18.0
2016-2017 change (%)	-0.1 (-1.6%)	-0.2 (-1.9%)	-0.9 (-4.9%)	-0.2 (-0.8%)
2011-2017 change (%)	-	-1.1 (-10.9%)	-1.6 (-8.0%)	-1.2 (-6.0%)

When we track a single cohort to look at how the gap grows over a disadvantaged pupil’s journey through school, we find that around 40 per cent of the gap at the end of Key Stage 4 is already apparent by age 5. The gap then grows by a further 20 per cent by the end of Key Stage 2, and the final 40 per cent emerges throughout secondary school. This is shown in the chart below.

Figure 1.2: The composition of the gap in a single cohort



⁴ In our Closing the Gap? Report (August 2017), we showed the gap based on estimated Attainment 8 results going back to 2007. That method is not comparable with our current gap measure as we now use average GCSE grade per subject and include special schools. For these reasons, our time series starts at 2011.

We return to the significance of the gap in the early years in our recommendations.

3. Based on current trends, the gap at the end of secondary school would take over 100 years to close

When projecting historical gap trends forward to assess when the disadvantage gap is expected to close, it is critical to base this on a measure that is not affected by subject entry changes. We therefore calculate our Key Stage 4 gap projections based on the difference in attainment between disadvantaged and non-disadvantaged pupils in English (language) and mathematics. This is a similar measure to that used by the DfE, but not identical.⁵

Although it is a narrower measure than the average grade in all GCSE subjects, restricting to English and maths is a more reliable indicator of the trend in the gap over recent years and a more robust basis on which to estimate how long it will take for the gap to close. As we describe in the following section, the average GCSE grade has been affected by one-off subject entry effects (that is, more pupils being entered into traditional GCSE subjects that exhibit relatively small disadvantage gaps).

This entry effect means that there is a temporary distortion to the results. In particular, following a large increase in entries in 2017, English literature is now approaching its ceiling as almost all pupils in this cohort were entered, and so the change in the average GCSE grade gap in 2017 affected by this increase in entries is unlikely to persist over future years. Projecting forward a trend based on a temporary disruption to the curriculum would not provide credible or useful information about likely future trends in the gap.

In 2017, the gap in English and maths was 18.0 months, compared to 18.1 months in 2016.

In order to assess whether the gap is now closing faster or slower than previously, we have created a projection of how long it will take the GCSE English and maths gap to close based on the most recent five years of data, and updated the rolling projection for each five-year period ending in 2015, 2016 and 2017. Each successive outturn of the projection therefore drops the earliest year and adds one later year compared with the previous data point, but maintains a data window of five years in order to smooth out volatility from temporary fluctuations. This is explained in further detail in the technical annex.

To put the latest year's reduction in the GCSE English and maths gap into context using our projections, if the gap had continued to close at the same rate as it did in the five years to 2016, we would have expected it to close entirely by 2103. **But the slowing down in the five years to 2017 means that we would now expect it to close in 2155 – setting us back over fifty years. Based on current trends, it would take well over 100 years for the disadvantage gap in English and maths to close.**

The same trend can be seen in DfE's disadvantaged pupils attainment gap index statistics. These report that the gap in GCSE English and maths has closed by 10 per cent since 2011, or 2 per cent per

⁵ We do not include English literature within the GCSE English component of English and maths in any year of our time series because this results in subject entry changes affecting the size of the gap from year to year.

year, which equates to 60 years until the gap closes.⁶ However, we believe this timeframe is too optimistic because the rate of gap closure has slowed over this interval. DfE's statistics show that over the most recent five-year period from 2013 to 2017 the gap has been closing at only half of this rate, at 1 per cent per year, and on this basis, would not be expected to close for over 100 years. Ostensibly small changes to the rate of gap closure make a big difference to the number of years until the gap is expected to close because the rate of closure itself was small to begin with.

4. Changes in entry patterns to GCSEs have resulted in an improvement in the average GCSE grade per subject, and therefore a decrease in the gap measured across all subjects

Since the reforms to qualifications in 2012, the introduction of the E-Bacc and Progress 8, we find that both disadvantaged and non-disadvantaged pupils are being entered into more traditional GCSE subjects than in previous years (particularly English literature in 2017). There is a direct incentive on schools to enter these pupils into GCSE subjects that count in Progress 8 and the E-Bacc, because these are now taken into account in the performance tables. The Pupil Premium accountability measures also incentivise schools to enter disadvantaged pupils into the subjects that count the most under accountability measures.

This gives current cohorts of disadvantaged pupils a comparative advantage over previous cohorts. The additional subjects increasingly entered by disadvantaged and other pupils have historically had smaller disadvantage gaps than those subjects – primarily English and maths – which the majority of pupils entered since the mid-2000s.

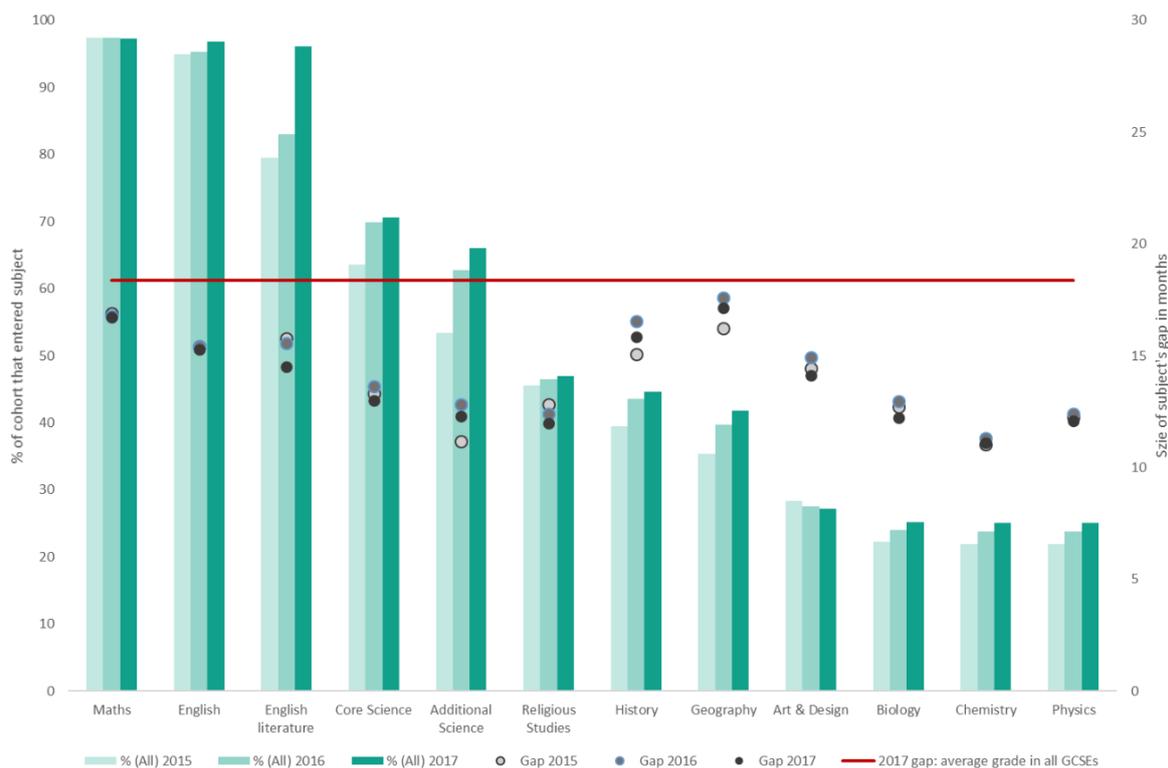
If we look at this measure alone, we find that the gap has closed by around one month in 2017, compared to 2016 (from 19.3 to 18.4 months). **However, this decrease is caused primarily by more pupils (including disadvantaged pupils) switching to traditional subjects that qualify for the E-Bacc and are prioritised in the Progress 8 measure – not by better grades. It is, however, a sign that the curriculum offer is becoming more equal between disadvantaged pupils and their peers.**

The fact that the rate of closure is slowing down rather than increasing in GCSE English and maths, supports our finding that the pace of gap reduction across all GCSE subjects is primarily driven by changes to subject entry and not necessarily an overall increase in school standards.

The graph below shows the changes in take up of the most popular GCSE subjects in the past three years. It also shows the trend in the gap in each of those subjects. English Literature is the most prominent subject here – it has a significant increase in take up in 2017 and a relatively low gap (compared with the gap in average grade).

⁶ Note that our measure is based on English language GCSE only whereas, since 2015/16, the DfE measure has included the highest point score of English language and English literature. The DfE measure shows a higher fall in the gap in 2017 than we identify, however the inclusion of English literature makes the DfE measure vulnerable to short-term changes in entry patterns as set out above.

Figure 1.3: GCSE entry patterns and trends in the disadvantage gap



While we should not interpret the reduction in the average GCSE grade gap as a demonstration of improved standards in a given set of subjects, it does suggest that more ‘academic’ subjects (beyond English and maths) are not disproportionately more difficult for disadvantaged pupils. It also indicates that a broader GCSE curriculum is not incompatible with greater equality of outcomes for disadvantaged children.

5. The gap for persistently disadvantaged pupils has remained broadly unchanged

Persistently disadvantaged pupils are those who have been eligible for Free School Meals for 80 per cent or longer of their school lives, and who have lived in households with little or no employment income, not just temporarily, but long-term.

For these pupils, we find that the gap at Key Stage 4 is even wider than for disadvantaged pupils generally (at 23.4 months), and that it is essentially unchanged since 2011.

There was an apparent decrease of 0.7 months in 2017 in the gap for the average GCSE grade per subject, but as for all disadvantaged children, this is likely to be an effect of changing subject entry patterns as no decrease occurred in the gap in GCSE English and maths grades. This group therefore represents a hidden layer of disadvantage that is not reducing over time, and a group of children that have yet to benefit in their GCSE English and maths attainment from policies directed at the broader Pupil Premium group.

Figure 1.4: The trend of the persistent disadvantage gap since 2011

	Key Stage 2 gap in months	Key Stage 4 gap in months	
	Scaled score in reading and maths	GCSE average grade	GCSE English and maths
2011	13.0	23.9	23.2
2012	12.5	24.0	23.0
2013	12.7	24.4	23.4
2014	13.0	24.4	23.0
2015	12.7	24.0	23.1
2016	12.4	24.1	23.0
2017	12.5	23.4	23.2
2016-2017 change (%)	0.0 (+0.3%)	-0.7 (-3.0%)	+0.2 (+0.9%)
2011-2017 change (%)	-0.5 (-3.9%)	-0.5 (-2.1%)	0.0 (+0.1%)

6. Certain groups of pupils are still much further behind their peers

The national data masks significant differences amongst pupils from different backgrounds. While Chinese and Indian pupils continue to be well ahead of White British pupils (who make up the vast majority of pupils) by the end of secondary school, by between 1-2 years, travellers of Irish heritage and Gypsy / Roma pupils are well over two years behind. In addition, pupils for whom English is an Additional Language who arrive late into secondary school are, on average, over a year behind White British pupils.

Pupils with Special Educational Needs and Disabilities (SEND) have significantly lower attainment than their peers, and this is particularly the case for those with an Education and Health Care Plan (EHCP) or statement. At age 5, pupils with an EHCP or statement begin school an average of 15 months behind those without SEND and, rather than reducing over the course of schooling, by the end of secondary school this gap currently stands at over three years.

7. Low performance is clustered in the North and the East – it is sometimes correlated with levels of persistent disadvantage, but not always

A full breakdown of attainment, the disadvantage gap, and levels of disadvantage by region and local authority area is published in a geographical analysis pack alongside this report.

Performance in the early years and primary school

There is a **band of low primary outcomes spanning from Merseyside through Yorkshire**, with large gaps by age five in the Wirral (6.3 months) and Wakefield (6.2 months), and low attainment in the early years and Key Stage 2 in Oldham, Halton and Rochdale.

However, within this band, **areas south of Manchester experience better primary school outcomes**. Trafford, in particular, has a relatively low growth in its disadvantage gap during primary school (from 5.1 months at age five to 6.9 months at KS2) as well as higher primary attainment than

neighbouring areas. These better outcomes coincide with a lower share of FSM and persistently disadvantaged pupils (7.4 per cent of primary pupils are persistently disadvantaged in Trafford compared with 12.7 per cent in Oldham, 14.1 per cent in Rochdale and 23.0 per cent in Halton).

In addition to the northern band from Merseyside into Yorkshire, there are other scattered areas across the country with large gaps in the early years, in Nottinghamshire (6.5 months), West Sussex (6.0 months), Bristol (6.1 months), and Plymouth (6.4 months).

The fastest growth in the disadvantage gap between the early years and Key Stage 2 is found in several Eastern areas, from North Lincolnshire (from 4.2 to 12.9 months), Peterborough (2.9 to 12.6 months) and Bedford (4.5 to 14.4 months), down to East Sussex (1.1 to 11.7 months).

The South East also holds a cluster of areas that rank poorly for attainment progress from early years to Key Stage 2, including East Sussex, Medway, Poole and Bracknell Forest.

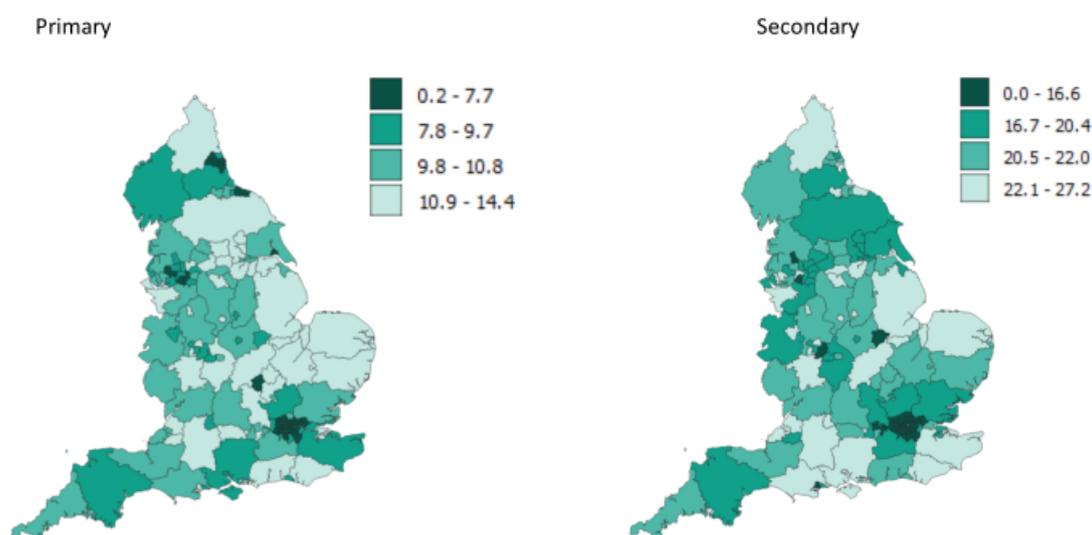
Performance in secondary school

In addition to the band of areas across northern England with poor primary outcomes, Sandwell and Walsall in the West Midlands have relatively low levels of attainment on entry to school and in both primary and secondary school. **Blackpool, Coventry and Derby in the North West and Midlands all have low attainment levels in both Key Stage 2 and Key Stage 4.**

Areas with the fastest growth in the gap between Key Stage 2 and Key Stage 4 are clustered in the North East, in Northumberland (from 11.3 to 26.1 months), Sunderland (7.1 to 23.6 months), Hartlepool (8.3 to 24.1 months), Redcar and Cleveland (5.5 to 23.4 months), and Kingston upon Hull (6.7 to 23.0 months); and those with large absolute gaps at Key Stage 4 are clustered in the East, in Norfolk (23.5 months), Lincolnshire (23.3 months) and Northamptonshire (22.1 months).

Some areas with very high shares of persistently disadvantaged pupils, such as Tower Hamlets, Islington and Hackney have similar Key Stage 4 attainment to areas with a very low share of persistently disadvantaged pupils, such as Surrey and West Sussex.

Figure 1.5: The disadvantage gap (in months) in primary and secondary schools in England



Changes in the gap since 2012

We have also analysed changes in local gaps between 2012 and 2017, comparing each authority with others that had a similar sized gap at the starting point in 2012. Relative to authorities with similar initial gaps, the gaps that have worsened most at Key Stage 2 were in Bedford (+4.9 months), which also had a large increase in the gap between the Early Years and Key Stage 2, St Helens (+4.5 months), and Halton (+4.3 months), where primary attainment was also low. **Four out of six authorities with the largest relative increases in the size of the Key Stage 2 gap since 2012 are in the North West.**

At the other end of the scale, authorities with the biggest relative decreases in the Key Stage 2 gap are clustered in London and the North East. The gap reduced by 5.6 months relative to other authorities with a similar starting point in Bromley, by more than 4 months in Redcar and Cleveland, Newham and Kingston-upon-Hull, and by more than 3 months in Waltham Forest, Hounslow and Havering.

At Key Stage 4, authorities with the biggest increases in the gap and those with the biggest decreases in the gap are both clustered towards the South of England. The Isle of Wight, Luton, Greenwich and Dorset all saw increases of over 4 months in the gap relative to other authorities with similar starting points, whereas in Slough and Wokingham there were relative reductions of more than 5 months, and in Barking and Dagenham and Southend-on-Sea the gap decreased by more than 4 months compared with 2012.

Other large changes to the Key Stage 4 gap occurred in Derby (which also had low attainment levels), and Telford and Wrekin in the Midlands, where the gap increased by 5.1 months and 4.8 months respectively, and in Rutland and Oldham where there were large decreases in the gap relative to other authorities with similar starting points. **In general, areas with high growth in the gap between Key Stages had often also experienced worsening of these gaps over time since 2012.**

8. Post-16 education is becoming more segregated

We have developed a new indicator to measure the extent to which disadvantaged students enter into the same post-16 destinations as non-disadvantaged students. The destinations we look at are:

- Further education college or other FE
- 6th form: college or secondary school
- Other education destination (e.g. includes special schools, independent schools, alternative provision, higher education institutions, and post-16 specialist institutions)
- Sustained employment and/or training destination⁷
- Destination not sustained (e.g. those who participated in education or employment for less than two terms, or who had no participation and claimed out-of-work benefits).

In a fully equitable system, we would expect disadvantaged students to enter into the destinations listed above at the same rate as their peers. If this were the case, our segregation index would be 0 per cent. This is not a judgement about the quality of the different destinations, but rather about the effect of disadvantage on post-16 choices. The influence of disadvantage on destinations matters because there is evidence that despite the frequent availability of A-level study options in FE colleges, the structure of the local provider landscape (in particular the absence of school sixth forms in some parts of England) nevertheless influences the qualification choices that young people make in terms of the volume and level of qualifications studied.⁸

In 2016 (the latest year for which we have data), the segregation index stood at 21.2 per cent. This means that around 21.2 per cent of disadvantaged pupils would need to switch their post-16 destination to match the destinations of non-disadvantaged students. In recent years the proportion of both disadvantaged and non-disadvantaged pupils with an un-sustained destination has decreased, with more moving into education, training or employment. **However, whilst this has resulted in more disadvantaged pupils across all sustained destinations (employment, training, FE colleges and sixth forms), most of the increase for non-disadvantaged pupils was concentrated in sixth forms. This has resulted in the increased segregation observed in recent years - from 20.6 per cent in 2013 to 21.2 per cent in 2016.** We intend to undertake further research to understand the impact of this segregation.

We also see significant differences across the country. In London, the segregation index was 16 per cent, while in both the South East and North East it was over 25 per cent. This means that, in those latter two regions, over a quarter of all disadvantaged pupils would need to change their post-16 destination in order to achieve parity with their non-disadvantaged peers.

⁷. To count as a 'sustained' destination, the young person has to be participating for at least 'two terms' or 'six months' of the academic year after they have completed Key Stage 4.

⁸ <https://www.gov.uk/government/publications/social-and-ethnic-inequalities-in-post-16-choices>

Figure 1.6: Post-16 destinations segregation index by region

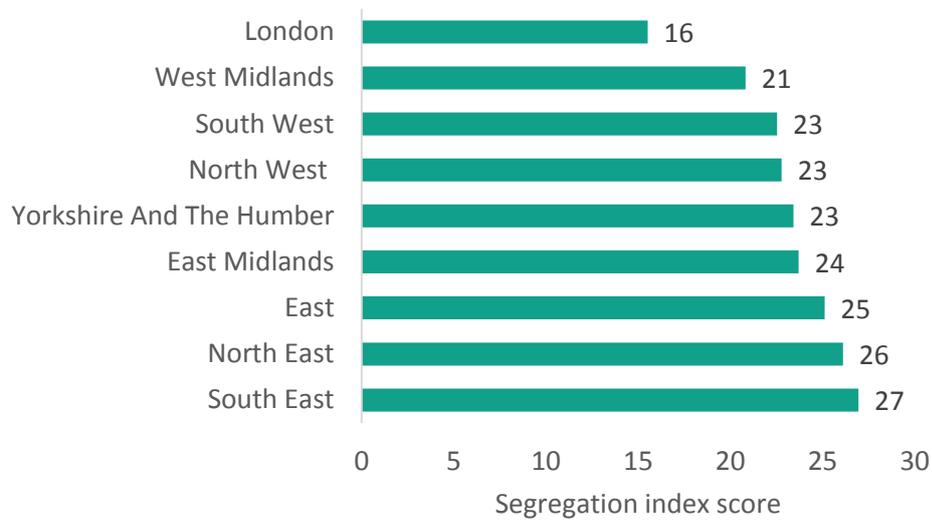


Figure 1.7 The 10 local authorities with the highest post-16 segregation index score

Local authority	Segregation index score
Trafford	37
Wokingham UA	35
Cheshire West and Chester UA	35
Sutton	35
Cambridgeshire	34
Surrey	34
Buckinghamshire	34
Bristol, City of UA	34
Gateshead	33
Southend-on-Sea UA	33

What are the drivers of the disadvantage gap and how should the government address these?

There is a wealth of research about determinants of the disadvantage gap in attainment. The accompanying literature review to this report aims to summarise the key drivers in order to give policy-makers an overview of the extent of the challenge.

The literature review looks at out-of-school factors (i.e. the home environment, health and income) as well as in-school factors. In summary, the key drivers in both of those categories are as follows:

Inequalities in child development and school preparedness, determined by:

- **Maternal health and well-being** from conception onwards
- Inequalities in the **physical and social home environment**, including the quality of **family relationships**, the **home learning environment** and **child-rearing strategies**
- Access to **high quality early years education**

Differential experiences of disadvantaged pupils in school:

- Structural differences between schools with a high intake of disadvantaged pupils, including quality of **teaching** and **classroom practices** and access to a **broad curriculum** including **careers advice** and **out-of-classroom educational programmes**
- Everyday stressors experienced by disadvantaged pupils, including lacking a **sense of belonging** and **self-esteem** in relation to academic abilities, **stereotyping** and **unconscious bias**, and **moves** between schools at non-compulsory times

Moreover, despite the range of policies implemented in the last 20 years and some progress in closing the gap, there is evidence that characteristics of the current school system, including **selective schools** and the **accountability system**, may be entrenching inequalities in outcomes.

Recommendations

As we show in the accompanying literature review, schools can play a role in countering the impacts of disadvantage, but they cannot do it in isolation. Based on the evidence reviewed, policy-makers should focus on the following areas:

In schools

1. Equalise access to high quality early years provision

The quality of pre-school depends primarily on the early years workforce. A **stable, highly trained and experienced early years workforce** will not only support the healthy development of children in a sensitive period of life, but will be able to identify and refer children with additional needs for support at an early stage.

However, the outlook for equal access to high quality pre-school is concerning, as illustrated in two recent EPI reports: firstly, we found that the introduction of the 30-hour childcare entitlement, Tax-

Free Childcare, and Universal Credit will likely benefit more affluent families, and, secondly, that the level of qualifications of the early years workforce is falling.^{9,10}

2. Ensure a high quality and stable teaching workforce across the country

Teaching is the most important in-school determinant of pupil attainment, and there is evidence of significant pressures on the teaching workforce, including rising exit and falling entry rates to the profession as well as limited access to professional development.^{11,12} These pressures could negatively affect both teacher self-efficacy, or belief in their own ability, as well as the teacher-pupil relationship, both of which are important for pupil academic adjustment.¹³ **The need for a coherent, long-term strategy focusing on retention and development of the teaching workforce, particularly in schools serving disadvantaged communities, is clear.**

3. Prioritise pupil well-being alongside academic attainment

The primary importance of socio-emotional well-being for attainment is clear. Social and emotional learning has a positive impact on attitudes towards learning, relationships and attainment and has been linked to an 11 per cent boost in standardised test results.^{14,15} **The best evidence supports a whole school approach, including developing a school culture that supports well-being and emotional health, addressing bullying and discrimination, and involving pupils and parents as equal partners. Strong leadership** is also key, particularly in schools serving disadvantaged communities.

4. Ensure early and sustained additional support for those who need it

Given the importance of early attainment for performance throughout the school years and later, early, **sustained support** for those who are behind is key. **This will require a well-staffed support workforce in schools to identify and effectively support pupils with additional needs;** again, the outlook is concerning given rising cost pressures. There is growing evidence for the benefit of certain teaching practices for vulnerable learners, such as pre- and over-learning in lessons.¹⁶

5. Ensure access to a broad curriculum that includes out-of-classroom experiences

The evidence supports the benefit of **out-of-classroom learning experiences**, particularly **outdoor adventure learning**, for determinants of attainment that may particularly benefit disadvantaged

⁹ J. Hutchinson, 'Widening the gap? The impact of the 30-hour entitlement on early years education and childcare', May 2016.

¹⁰ S. Bonetti, 'The early years workforce: a fragmented picture', March 2018.

¹¹ P. Sellen, 'Teacher workload and professional development in England's secondary schools: insights from TALIS', October 2016.

¹² L. Sibieta, 'Analysis: Teacher labour market pressures', April 2018.

¹³ M. Zee & H. Koomen, Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, 86(4), 981-1015.

¹⁴ Education Endowment Foundation Toolkit Strand: Social and Emotional Learning.

<https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/social-and-emotional-learning/>

¹⁵ Public Health England, 'The link between pupil health and wellbeing and attainment: A briefing for head teachers, governors and staff in education settings', November 2015.

¹⁶ D. Sobel, 'Narrowing the attainment gap: A handbook for schools', London: Bloomsbury, 2018.

pupils, including self-esteem and self-efficacy.¹⁷ However, extra-curricular activities are more likely to be accessed by more affluent pupils, with disadvantaged pupils less able to access opportunities both in and outside of school. Additionally, **arts participation** is generally associated with modest attainment gains, and may be particularly beneficial to disadvantaged pupils; however, these pupils disproportionately lack access to a broad curriculum. Widening access to these protective experiences should be part of an in-school strategy to tackle the attainment gap.

Out of school

6. Alleviate child poverty

Children who experience persistent, inter-generational poverty are the lowest attainers in school. There is solid evidence of a strong relationship between family income and cognitive gains in early childhood, as well as with child psychological well-being.

A strategy of poverty alleviation should form the basis of a holistic programme to improve the attainment of disadvantaged pupils. Evidence suggests that increases in household income at the bottom of the income distribution are likely to have significant and measurable effects on a child's environment and development, with a positive, whole child impact.^{18,19}

7. Support maternal health and well-being throughout childhood

Given the strong, plausibly causal, association between maternal mental health and child outcomes, addressing the well-being of mothers in pregnancy and throughout childhood could be a valuable part of the strategy to tackle determinants of the attainment gap, including behavioural and socio-emotional difficulties.

According to the NHS, a strategy to support mental health among pregnant and new mothers would include the consistent provision of **high quality, well-staffed mother and baby units across the country**, sufficient **training for pregnancy care professionals** in identifying and addressing mental health issues, a **stigma reduction strategy** so that women feel comfortable discussing their mental health in and after pregnancy with health professionals, and **long-term support** for new mothers with depression.²⁰

¹⁷ Education Endowment Foundation, *'The impact of non-cognitive skills on outcomes for young people: Literature review'*, November 2013.

¹⁸ K. Cooper & K. Stewart, *'Does money affect children's outcomes?'*, Centre for Analysis of Social Exclusion, LSE, 2013.

¹⁹ K. Cooper & K. Stewart, *'Does money affect children's outcomes? An Update'* Centre for Analysis of Social Exclusion, LSE, 2017.

²⁰ NHS, *'Improving access to perinatal mental health services in England – A review,'*
<https://www.maternalmentalhealth.org.uk/wp-content/uploads/2015/09/NHSIQ-Improving-access-to-perinatal-mental-health-services-in-England-0915.pdf>