EXTRA TIME

Private tuition and out-of-school study, new international evidence

John Jerrim
– September 2017

UCL Institute of Education

THE SUTTON TRUST

Contents

Foreword

Private tuition is the hidden secret of British education. Within an educational 'arms race' that entrenches advantage for those who can afford private school fees or homes close to good comprehensives and grammars, it has remained largely in the shadows. Since 2005, the Sutton Trust has polled young people through Ipsos MORI on their experiences of private tuition, helping lift the veil on its prevalence. In this new report, we present our latest polling, along with new evidence from the international PISA survey.

'Shadow education' is the academic term for private tuition. Our *Shadow Schooling* report last year estimated an industry worth up to £2 billion per year, but the lack of transparency means that it is difficult to get an accurate picture of the UK market.

Extra Time, this new report, combines our long-running polling series of 11-16 year olds with new information available for the first time from PISA. This shows how private tuition and out-of-school instruction compare internationally. Talented young people from less well-off backgrounds receive substantially less extra help than those from more advantaged backgrounds. Also stark is the inequality in access to parental help with homework. This shows how much more needs to be done to support parental engagement for those from less well-off backgrounds.

Our polling also illustrates the scale of the problem, with almost one in three 11-16 year old state school students in England and Wales having had private tuition at some point in their life. In London, the proportion is now almost half of young people.

There are important social mobility issues here. Students who receive private tuition disproportionately are those who are already advantaged and our past research has shown that about twice as many attend private schools as in the national population as a whole. Our new report demonstrates that for students of similar ability, the gaps between disadvantaged and advantaged groups are also stark. So, private tuition is exacerbating existing educational inequalities.

If we are to create a level playing field, we must ensure that private tuition doesn't make this inequality worse. A state-funded voucher scheme is the most effective way to deal with the problem. Agencies that don't charge commission or provide some free tuition to disadvantaged students also help. No one wants to limit parents doing their best for their children, or supporting them academically outside of school hours. But, we need to make sure that these advantages are available as widely as possible: to narrow, rather than widen the attainment gap. Otherwise we make it harder still for those who are already at a disadvantage.

I am very grateful to Dr John Jerrim for this important new research, which so ably complements Ipsos MORI's continued polling work for the Trust.

Sir Peter Lampl

Founder and Chairman of the Sutton Trust and Chairman of the Education Endowment Foundation

Executive summary

- On average, Year 11 pupils in England spend 9.5 hours per week in additional instruction – extra tuition outside the normal school timetable which may either be provided by the school, the family or by private tutors. Out of the 22 countries included in our study, 15-year-olds in six countries spent significantly less time on additional instruction than in England, while there were 12 countries where 15-year-olds spent significantly more time.

- There are big gaps between socio-economic and achievement groups in England in time spent on additional instruction. For pupils of the same levels of achievement, well-off pupils receive 2.5 hours more additional instruction than less well-off pupils.

- Better-off families create a 'glass floor' for children in danger of low achievement, a barrier to social mobility. High-achieving Year 11s from poorer backgrounds spend, on average, just 7 hours per week on additional lessons outside of school, compared to 15 hours for low-achieving pupils from the most advantaged backgrounds.

- In England, there are notable differences in how additional instruction hours are distributed between socio-economic groups. Year 11 pupils from disadvantaged backgrounds spend around 30 to 45 minutes more in science, mathematics and English than the most advantaged socio-economic group. On the other hand, socio-economically advantaged pupils spend more additional instruction time in subjects that are likely to build their cultural capital, such as music, sports and foreign languages.

- The PISA data shows that around one-in-six Year 11 pupils in England receive private one-to-one tuition in science and mathematics. This is notably more than some other countries such as Australia, Denmark and South Korea, with England also little different from places like China. Ipsos-MORI polling for the Sutton Trust shows that 30% of 11-16 year-olds say they have received private tuition in any subject at some stage, rising to 48% in London, and 11% did so in the last year (see box on next page).

- Bright but poor pupils receive much less support than their better-off peers. There are again substantial differences in the use of one-to-one tuition by socio-economic and achievement groups in England. Whereas around a third (32%) of low-achieving pupils from advantaged backgrounds receive one-to-one tuition in science or mathematics, this falls to around one-in-twelve (7%) of high-achieving young people from disadvantaged backgrounds.

- Only around 7% of high-achieving disadvantaged pupils in Year 11 receive one-to-one instruction in science. This compares to 14% of high-achieving Year 11 pupils from the most advantaged socio-economic backgrounds.

- England does not typically stand out internationally in terms of the proportion of 15-year-olds who receive private tuition, or in the socio-economic gap in the use of private tutors. The same holds true for the total amount of additional instruction young people receive outside of school – England is little different from most other participating countries.

- Poorer pupils get less help at home with their homework. Only half of 15-year-olds from disadvantaged social backgrounds in England regularly receive help with their homework from

their parents, compared to more than two-thirds of those from the most advantaged backgrounds. This socio-economic gap of 18 percentage points is significantly bigger than in most of the other countries that completed the survey.

- 15-year-old pupils in Scotland (17.8 hours) and Northern Ireland (17.2 hours) spend more time on non-compulsory study per week than their peers in England (15.6 hours). This difference is most pronounced in mathematics and English, with pupils in England spending around half an hour less studying these subjects outside of core school hours than 15-year-olds in Northern Ireland and Scotland.

- Disadvantaged pupils across the UK complete less additional school work (outside of their core timetable) than their more advantaged peers. However, the gap is almost twice as big in Scotland (2.9 hours) and Wales (2.9 hours) than in England (1.3 hours).

- Low-achieving pupils from advantaged backgrounds in Scotland complete 17.6 hours additional study per week, compared to just 13.1 hours for their equally low-achieving but disadvantaged peers. This difference of 4.5 hours is greater than in England (3.7 hours) and Wales (1.8 hours) but less than in Northern Ireland (5.3 hours).

- In England and Wales, academically able Year 11s from poor backgrounds are doing around 5 hours less work outside of their core school timetable per week than young people from more advantaged backgrounds struggling to pass their GCSEs. In Scotland, there is no statistically significant difference in the total time spent studying outside of school between high-achieving disadvantaged pupils and low-achieving advantaged pupils.

Sutton Trust-Ipsos MORI Polling 2017 Key Findings

- Almost one third of young people (30%) aged 11-16 say they have received private or home tuition at some stage, substantially up from 25% last year and 18% in 2005.
- Young people from more advantaged households (35%) are twice as likely as less well-off households (18%) to have ever received private tuition.
- Young people from minority ethnic backgrounds have a much higher rate of private tuition, with 56% of Asian pupils and 42% of Black pupils compared to 25% of White pupils. Those from two parent families are also more likely than those from single parent households (31% compared to 24%)
- Almost half of pupils in London (48%) have had private tuition. Young people in the capital are more likely to have had private tuition at some point ahead of any other part of England and Wales.
- Just over one in ten (11%) of pupils have received private tuition in the past year, rising to 24% in London.
- The most common reason given for receiving private tuition is 'help with school work in general' at 44%. One in three (38%) say that it is to help with specific GCSEs, and there has been a significant rise this year in the number of those who mention a school entrance exam (28% up from 18%).

Note: Ipsos MORI interviewed 2,612 school children aged 11-16 in schools in England and Wales. Pupils were selected from a random sample of schools, and self-completion questionnaires were completed at school between 6th February and 17th May 2017. Data are weighted by school year, gender and region to match the profile of school children across England and Wales.

Recommendations

1. Implement a means-tested voucher scheme for tuition

The government should introduce a means-tested voucher system, funded through the Pupil Premium, enabling lower income families to purchase additional educational support. Limited trials of such voucher schemes have shown them to be successful. Evidence from the Education Endowment Foundation shows that good teaching skills are crucial in improving the attainment of disadvantaged students, so it is vital that the quality of provision is high. Tutors should be experienced and well-qualified.

2. Expand non-profit and state tuition programmes

Charities, such as the Tutor Trust, supported by the Education Endowment Foundation, connect tutors directly with disadvantaged schools. Such schemes have the potential to offer the advantages of tutoring to more disadvantaged students.

3. Encourage best practice for private tuition agencies

Some private tuition agencies provide a certain proportion of their tuition to disadvantaged students *pro bono*, in an effort to make tuition widely accessible – such best practice should be encouraged as widely as possible in order to combat the role of tutoring in increasing educational inequalities.

4. Schools should establish 'homework clubs'

Disadvantaged students should have additional encouragement and support to enable them to engage in self-directed study and do sufficient homework, activities that provide extra academic dividends. Schools should provide such opportunities where they are unlikely to be available at home, such as through the provision of homework clubs. Such schemes could also be funded through the Pupil Premium.

5. Schools should support parental engagement in their child's education

To support the home learning environment, schools should take a 'whole school' approach to communicating with and involving parents actively through partnership. In particular, this should be supported by a key member of staff, and involve use of innovations in digital technology where possible.

6. Establish a 'highly able fund' to support high attainers who can't afford extra tuition

High attaining pupils from disadvantaged backgrounds receive less support than those from well-off backgrounds in danger of slipping back. The government should establish a dedicated fund to trial the most effective support for high achieving but less well-off pupils to reach their full potential. Different approaches to extra tuition for the highly able are an important area for potential support.

7. Ensure grammar school tests do not disadvantage low-income students by providing a minimum ten hours test preparation for all pupils

28% of private tuition is for grammar school tests (although only 5% of all pupils go to grammars). So long as those who can afford private tutors are paying to ensure their children do well in grammar school tests, it is vital that there are opportunities for all applicants. There should be a minimum of ten hours test preparation support provided on a free or subsidised basis to all potential grammar school applicants to help level the playing field.

1. Introduction

Across the UK and internationally, there is much interest in raising the academic achievement of young people from disadvantaged backgrounds. Out of the wide range of activities that have been trialled and tested, providing additional instruction to pupils from lower socio-economic households are thought to be amongst the most effective. For instance, following a review of the available evidence, the Sutton Trust-EEF Teaching and Learning Toolkit concluded that 'one-to-one tuition is very effective in helping learners catch up', with a range of promising interventions suggesting that the impact can be as large as an additional five months of schooling.[1] Relatedly, the Education Endowment Foundation has identified certain schemes already running in English schools (such as Catch-Up numeracy and literacy) that have a significant impact upon pupils' academic performance.[2]

Yet there remain concerns that access to additional instruction – particularly certain forms of such instruction like private, one-to-one tutoring – remains unequal. Despite evidence of quite substantial impacts, the Sutton Trust-EEF Toolkit also recognises that '*costs are estimated as high*', which clearly may act as a deterrent to lower income families and schools. Indeed, previous research conducted by the Sutton Trust estimates the value of the private tuition market in the United Kingdom to be around a billion pounds a year, while also concluding that '[those who are] privately-schooled are more likely to have a tutor than those who are state-schooled, and that, concomitantly, those who receive free school meals are less likely to receive private tuition than those who do not' and that 'private tuition still exacerbates the academic attainment gap between advantaged and disadvantaged pupils'.[3]

The above clearly has important implications for both educational inequality and social mobility. There are various ways in which the private tutoring market in the UK may be a mechanism by which high-income parents are able to 'buy' an advantage for their children. For instance, academic selection in the form of grammar schools remains a non-trivial issue within certain parts of the UK, with private tutors used by high-income families to maximise their children's chances on the all-important entrance test. Alternatively, when a child from an affluent family is in danger of failing an important GCSE exam (such as mathematics or English), private tutoring may be used to try and ensure that they make the grade. Yet private tuition is not purely about academic subjects alone, and can influence educational inequality and social mobility in different ways. For instance, children may be tutored how to play a musical instrument or in a sport, building their cultural capital and skills that help them to gain a place at a top university, and entry into a professional job. It is this mix of high-cost and multiple potential benefits that has led to concerns about private tuition (and additional out-of-school instruction more generally) being a key driver of educational inequality and a lack of social mobility.

At the same time, there remain important gaps in our knowledge about young people's access to additional instruction outside of their core school timetables (particularly in the form of intensive one-to-one tuition). For instance, how does the provision of additional instruction and private tuition in England compare to other countries? To what extent do academically-able pupils from disadvantaged backgrounds benefit from additional enrichment activities, or do these remain the preserve of the rich? Are there particular access issues with regards to certain forms of additional activities (like tailored one-to-one tutoring), and are these concentrated in particular subject areas?

[1] See Education Endowment Foundation (2017). One-to-one tuition. Available from https://educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit/one-to-one-tuition/
[2] Education Endowment Foundation (2016). Catch-up numeracy. Available from https://educationendowmentfoundation.org.uk/our-work/projects/catch-up-numeracy
[3] Sutton Trust (2016). Shadow schooling. Private tuition and social mobility in the UK. Available from http://www.suttontrust.com/wp-content/uploads/2016/09/Shadow-Schooling-formatted-report_FINAL.pdf

In this report, I attempt to address such issues using recently collected data from the Organisation for Economic Co-Operation and Development's (OECD) Programme for International Student Assessment (PISA). Using this nationally representative resource, I begin by documenting the amount of time Year 11 pupils in England spend in additional instruction per week, before investigating how this differs between socio-economic groups, and how this compares to other countries. I then go on to consider one-to-one tutoring as a specific example of additional instruction, illustrating stark differences in access by socio-economic status and prior achievement to this particular type of support. Of course, a significant proportion of pupils in England do not receive any additional instruction outside of their core school hours in some key subject areas. I consider the reasons why this is the case in section 5. Evidence is presented on the extent families supplement or substitute formal types of additional instruction by helping their offspring with their school work in section 6. Finally, section 7 provides evidence of how non-compulsory study hours vary across the UK, with results for England, Northern Ireland, Scotland and Wales put into a broader international context.

2. Data and measures

Overview

The data are drawn from the 2015 round of the Programme for International Student Assessment (PISA); a study of 15 year-olds' knowledge and achievement conducted every three years by the Organisation for Economic Co-Operation and Development (OECD). In 2015, PISA was conducted in November, when children were in their final year of compulsory schooling and just six months away from taking their GCSEs. The PISA consortia state that the test measures children's 'functional ability' (how well they can use the concepts examined in 'real life' situations) in three domains (reading, mathematics and science). In 2015, science was assigned as the major domain. At various points in this report, I document differences in the use of additional instruction between high and low achieving pupils. This is defined as the top and bottom 25% of performers on the PISA science test within each respective country. If readers are interested in taking sample questions from the PISA test, they can follow the link provided here: https://www.oecd.org/pisa/pisaproducts/pisa-test-questions.htm

Sample

A total of 72 countries participated in PISA 2015 (increasing up to 75 countries when separating out the four countries that form the UK). Out of these, 22 countries (including England) completed an additional 'educational career' questionnaire. Scotland, Wales and Northern Ireland did not complete this questionnaire, and so are excluded from most of the analysis. (However, some evidence on out-of-school study hours across these countries is provided in section 7). In England, a total of 5,194 pupils from 206 schools took part in PISA, and are the focus of this analysis.

Definition of 'additional instruction'

At the start of the educational career questionnaire, pupils received the following written instructions:

'The following questions ask about any additional instruction in school subjects and other domains that you attend in this school year. This instruction might take place at school or somewhere else, but is not part of your mandatory school schedule. Please consider all regularly attended, institutionalised, organised additional learning activities in which you receive some kind of instruction, guidance, or support'

Clearly, the above encompasses a range of different activities. This will include private tutoring, but also potentially after-school clubs and extra-lessons provided by schools. It is rather different to the definition used in previous Sutton Trust reports on private tuition using polling data, which have been more explicit about the use of home tutoring (with questions such as *When, if at all, have you received private or home tuition?*) Readers should keep this in mind when interpreting the results presented within this report.

In section 3, we consider the total amount of time pupils' report spending on 'additional' (non-compulsory) instructional hours per week. This will include all the various forms of provision that are encompassed within the definition outlined above. Section 4 then turns specifically to the use of one-to-one tuition, where pupils are likely to receive much more tailored and specialised support (and where there may be particular issues regarding access). Section 5 will then investigate why some pupils in England do not receive any additional instruction in science or mathematics. Section 6 considers the complementary out-of-school activities that parents may use to either supplement or substitute additional instruction, focusing upon the role of parental support with homework. Finally, section 7 presents evidence on total hours spent on non-compulsory learning across the UK, putting figures for England, Northern Ireland, Scotland and Wales within a broad international context.

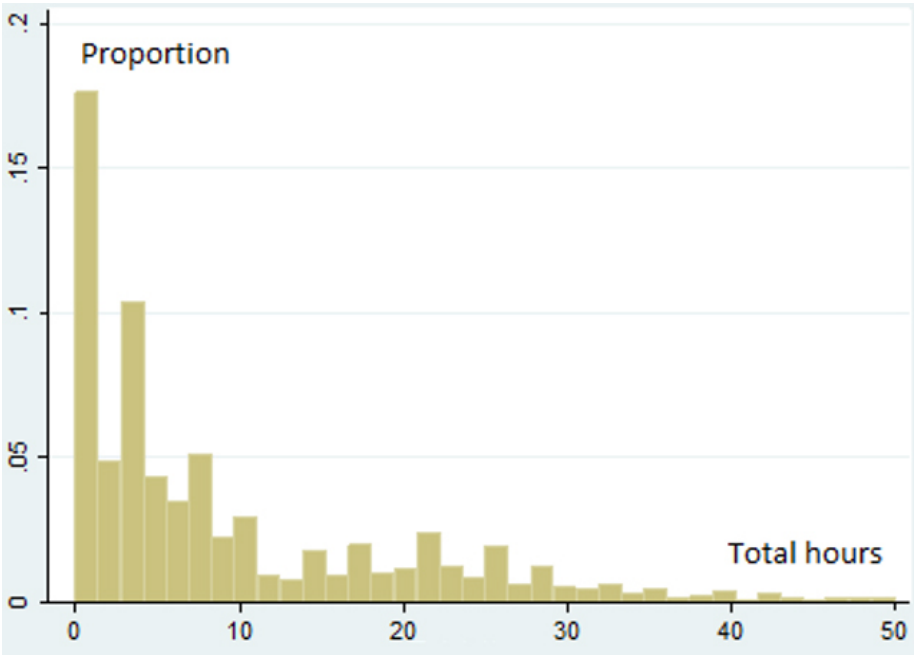
Measurement of socio-economic status

Throughout this report, I consider the 'gap' in additional instruction between Year 11 pupils from different socio-economic backgrounds. When investigating socio-economic differences, I focus upon two particular groups of children: (i) those from 'advantaged' family backgrounds (ii) those from disadvantaged family backgrounds. Family background refers to the Economic, Social and Cultural Status (ESCS) index in the PISA dataset. This is a continuous measure, which combines information on (a) parental education; (b) parental occupation; and (c) household possessions (a common proxy used in international survey to capture family wealth). Within each country, children are divided into quartiles (four equal groups, with each group containing 25% of the 15-year-old population). The propensity to receive additional instruction is then compared between the top quartile (most advantaged 25% of the population) and the bottom quartile (least advantaged 25% of the population). Put simply, results refer to differences between children who have parents with high levels of education working in occupations like managers, doctors, lawyers and engineers and those whose parents have a low level of education and work in unskilled or semi-skilled jobs such as cleaners, waiters / waitresses or labourers.

3. Additional instruction outside of compulsory school hours

Figure 3.1 begins by illustrating the distribution of additional instruction hours per week in England, as reported by Year 11 pupils.[4] This highlights how there are many children who receive under 5 hours of additional instruction per week, with a few reporting an extremely high number (more than 20 hours). This consequently illustrates how there is large inequality in additional instruction hours that pupils' experience. Around a fifth of Year 11 pupils in England report spending no additional instruction in any subject, with a similar proportion saying that they receive around 20 hours per week or more. The average amount of time spent on additional instruction in England is 9.5 hours (median of 5 hours), though with 10% of pupils suggesting that they receive 25 hours per week or more.

Figure 3.1. The distribution of weekly additional study hours in England

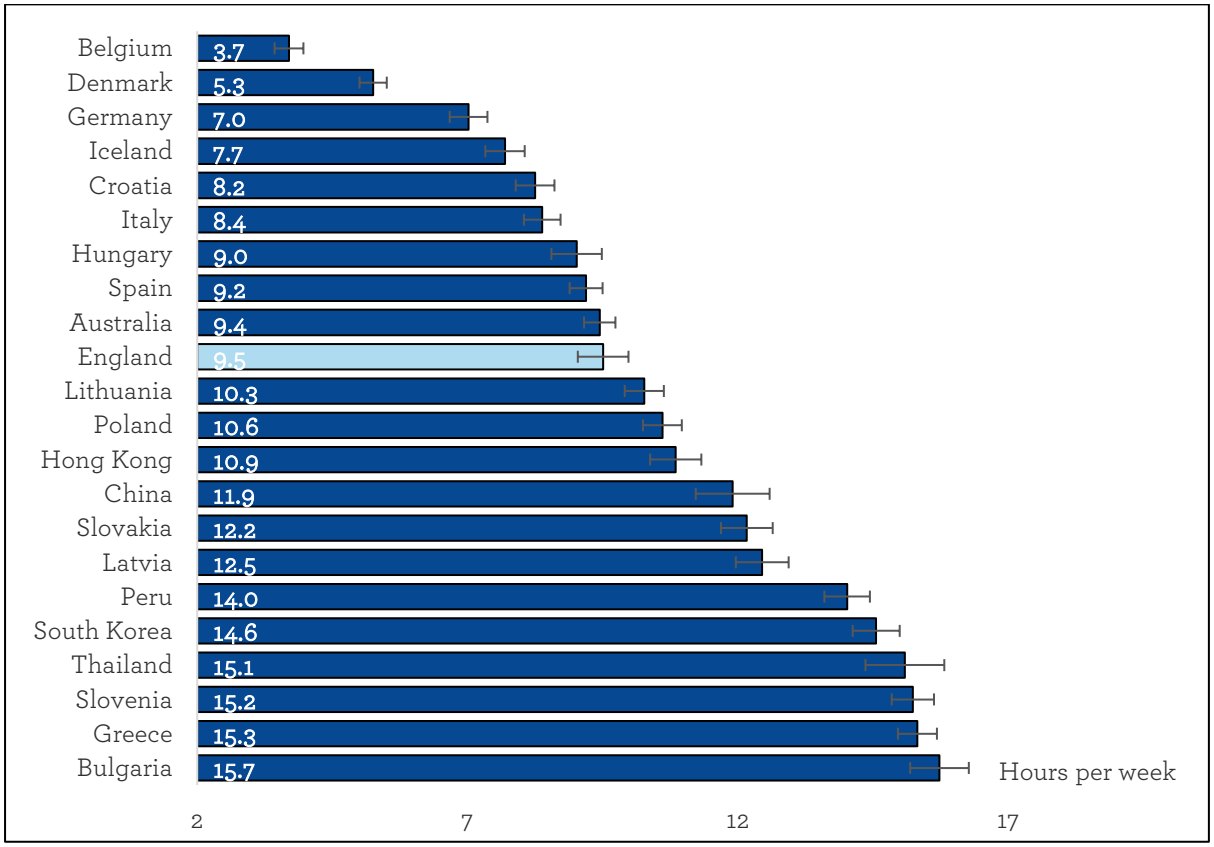


Notes: Figures refer to the total number of hours per week that Year 11 pupils in England spend on additional instruction.

Figure 3.2 compares the amount of time 15-year-olds spend per week on additional instruction. In England, the average pupil spends 9.5 hours a week on additional instruction, which is comparable to the average across the 22 participating countries. Nevertheless, it is notable how average instruction time is higher in some other countries, including the high-performing East Asian nations of Hong Kong (approximately 11 hours), China (≈ 12 hours) and South Korea (14.5 hours). On the other hand, pupils in England spend more time on additional instruction than several other European nations, such as Belgium (≈ 3.5 hours), Denmark (≈5 hours) and Germany (≈7 hours). In total, there are 12 countries where significantly more time is spent on additional instruction per week than in England, and six countries where there is significantly less.

[4] Pupils who did not respond to the question are treated as having zero additional hours in a given subject, as long as they engaged in the educational career questionnaire to some extent (they provided a valid response to at least one of the questions in the questionnaire).

Figure 3.2. Average number of hours of additional instruction pupils receive per week



Notes: Author's calculations using the PISA 2015 database. Thin line running through the centre of each bar refers to the estimated 95% confidence interval.

In Table 3.1, we consider whether there are differences in additional study hours between 15-year-olds from advantaged and disadvantaged socio-economic backgrounds. Interestingly, there does not appear to be a significant difference in England – low socio-economic status pupils receive 9.5 hours per week, compared to 10.2 hours for high socio-economic status pupils. This is similar to the situation in most other countries, with differences in additional instruction by socio-economic status being under 1 hour per week. There are still some notable exceptions to this pattern, however, such as Hong Kong and South Korea, where advantaged pupils receive around 4 hours more additional instruction per week than disadvantaged pupils. Conversely, in China, disadvantaged pupils receive around 2.5 hours more additional instruction per week than their high socio-economic status peers. Nevertheless, differences between socio-economic groups in total additional instruction hours per week are perhaps not quite as marked as may be anticipated. This finding is consistent with some recent data gathered for the Sutton Trust in Ipsos MORI's Young People Omnibus Survey, where differences in the use of private tutors between Free School Meals (FSM) and non-FSM pupils was relatively small (25% of FSM pupils reported using private tutors at some point compared to 30% of the non-FSM group).

Table 3.1. Socio-economic differences in the average number of hours of additional instruction pupils receive per week

Country	Disadvantaged	Advantaged	Gap
Slovenia	13.4	17.9	4.5
South Korea	12.4	16.9	4.5
Bulgaria	13.8	17.8	3.9
Greece	13.1	17.0	3.9
Hong Kong	9.1	12.8	3.7
Latvia	11.5	13.1	1.6
Iceland	7.6	8.7	1.1
Spain	8.7	9.6	0.8
Denmark	4.8	5.6	0.8
England	9.5	10.2	0.7
Croatia	7.8	8.5	0.7
Hungary	8.7	9.4	0.6
Italy	8.2	8.7	0.5
Lithuania	10.2	10.6	0.4
Slovakia	11.9	12.1	0.3
Australia	9.6	9.6	0.0
Thailand	15.3	15.2	-0.1
Belgium	3.8	3.6	-0.2
Poland	10.9	10.7	-0.2
Germany	8.0	7.7	-0.3
Peru	15.2	13.4	-1.8
China	13.1	10.4	-2.7

Notes: Figures refer to the average number of hours pupils spend in additional instruction per week. Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index.

The fact that rich and poor pupils in England receive similar amounts of additional instruction time per week may, at first sight, be a surprising finding. How can we explain this result? Table 3.2 provides further details, where we compare the *amount* of additional instruction pupils receive, stratified by both their socio-economic status and academic achievement group. This helps to illustrate three important findings.

First, additional instruction time for Year 11 pupils in England is *concentrated amongst low-achieving pupils*; those who are struggling to pass their GCSEs receive significantly more additional support than their peers who are doing well in school, regardless of their socio-economic background. Second, within each achievement group, low socio-economic status pupils receive fewer additional instruction hours than their more advantaged socio-economic peers. In other words, conditional upon existing achievement, we do see quite pronounced differences in the amount of time spent on additional instruction between socio-economic groups. Finally, it is notable how high-achieving pupils from disadvantaged backgrounds receive around half the additional support of low-achieving pupils from affluent backgrounds (7 versus 15 hours). Hence, for pupils of equal levels of achievement, disadvantaged pupils in England get significantly less support than children from the most advantaged backgrounds. Clearly, this is likely to have important implications for the amount of progress young people make between when they sit the PISA test (November/December of Year 11) and when they take their GCSEs (May/June of Year 11).

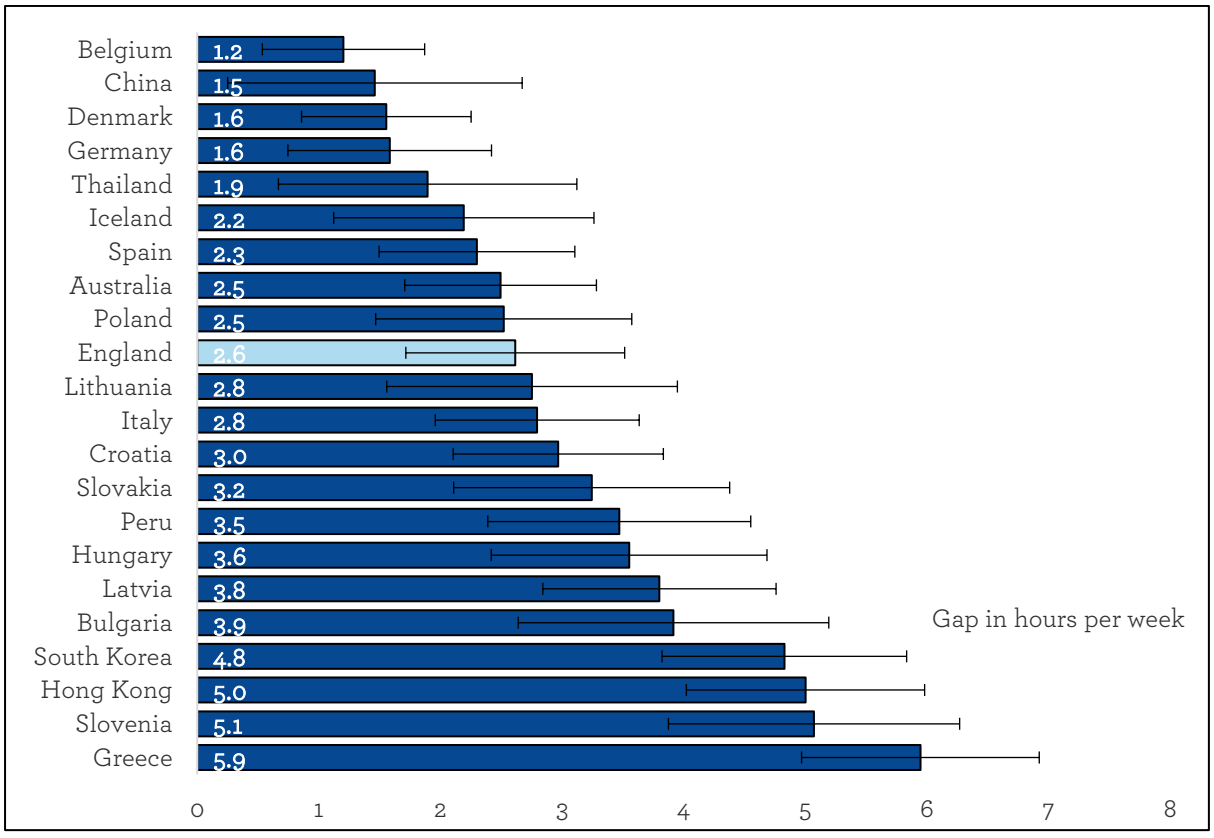
Table 3.2. Average number of hours of additional instruction received per week in England, by socio-economic status and achievement group

	Disadvantaged	Advantaged
Low achievement	12.4 hours	15.1 hours
Q2	9.1 hours	12.8 hours
Q3	7.3 hours	10.0 hours
High achievement	7.0 hours	8.3 hours

Notes: Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index.

Figure 3.3 drives this point home by comparing across countries the average number of additional hours' instruction high socio-economic status pupils receive relative to their poorer peers, conditional upon how they performed on the PISA test. Year 11s with affluent parents receive 2.5 hours more additional instruction per week than their poorer peers who have equal levels of achievement. This places England around the middle of the 22-country average, with a similar difference observed in Spain, Australia, Poland and Italy. Although there are relatively few countries with a significantly smaller gap, the (conditional) socio-economic gradient is significantly stronger in four other countries, including Hong Kong and South Korea (a difference of around 5 hours).

Figure 3.3. Socio-economic differences in the average number of hours of additional instruction pupils receive per week, conditional upon achievement



Notes: Figures refer to the difference between pupils in the top and bottom quarter of the PISA socio-economic status index. Results based upon a linear probability model, controlling for pupils scores in the PISA science, mathematics and reading test. The thin line through the centre of each bar refers to the estimated 95% confidence interval.

To conclude this section, we consider the breakdown of additional instruction time across different subject areas in England. Table 3.3 illustrates how there are important differences between socio-economic groups in how Year 11 pupils spend their additional instruction time. In particular, less

advantaged pupils spend significantly more time on traditional academic subjects such as English, science and mathematics. They typically spend 30 to 45 minutes more on additional instruction per week in these subjects than the most advantaged pupils. This is likely to reflect the fact that poorer pupils are also lower achieving in these subjects, and hence require this additional support in order to try and catch up, in a final push to try and gain a C grade at GCSE. Data from the Sutton Trust polling is consistent with this finding, with FSM and lower-achieving pupils who are receiving private tuition more likely to say that this is to help them do well in a specific GCSE exam.

In contrast, the most advantaged socio-economic group are spending more additional instruction time than their lower socio-economic status peers in music, sport and foreign languages. This is likely to reflect the fact that (a) more advantaged pupils are typically already doing much better than less advantaged pupils in the core academic subjects at school (and hence are less in need of additional support) and (b) these 'additional' subjects are thought to be an important indicator of cultural capital, which are often attractive to universities and future employers. In other words, given high socio-economic status pupils are already doing well in their core academic subjects in school, they can spend their additional study time building supplementary skills which employers and universities look for.

Table 3.3. Weekly additional instruction in England by subject

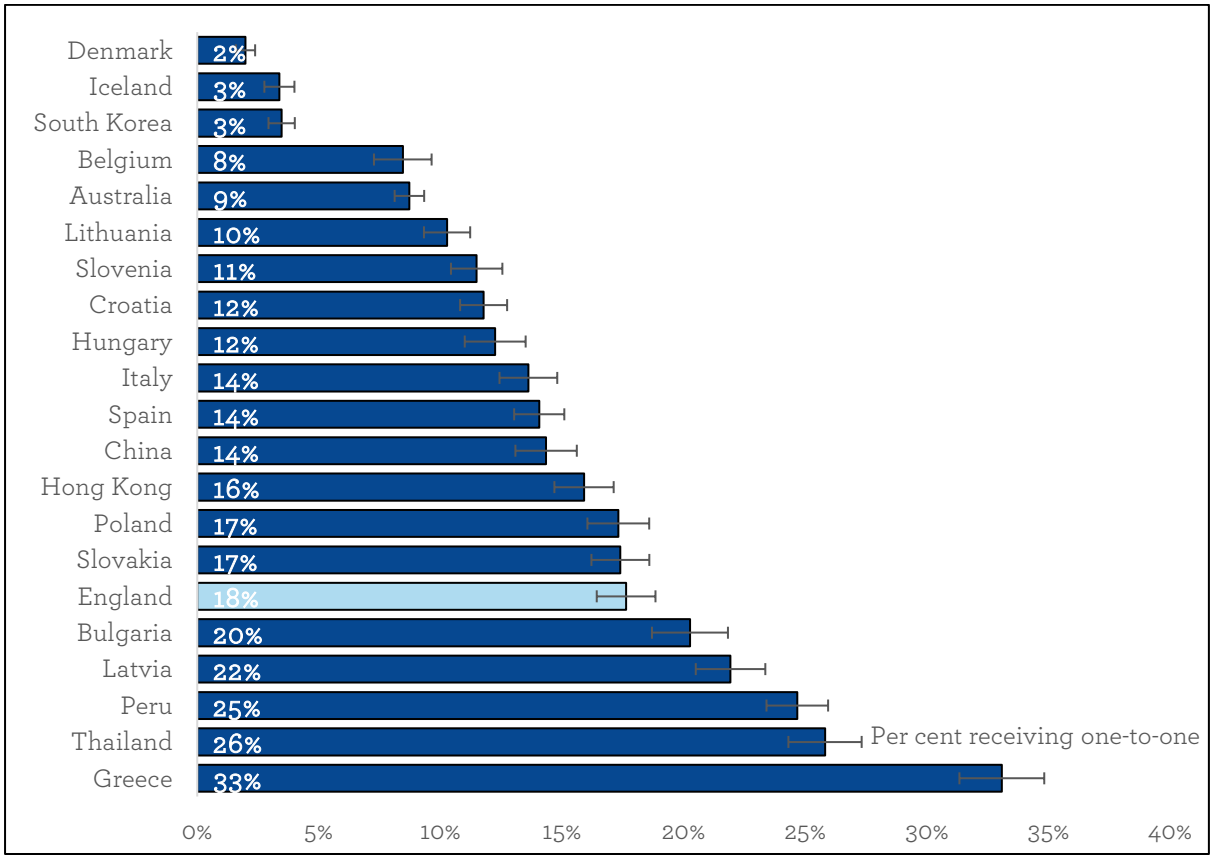
	Disadvantaged	Advantaged	Socio-economic gap
Science	2.6 hours	2.1 hours	**-0.5 hours ***
Mathematics	2.5 hours	1.9 hours	**-0.7 hours ***
English	2.4 hours	1.6 hours	**-0.8 hours ***
Foreign languages	0.7 hours	1.1 hours	**0.3 hours ***
Social sciences	1.3 hours	1.1 hours	-0.2 hours
Music	0.6 hours	1.0 hours	**0.4 hours ***
Sports	1.6 hours	2.3 hours	**0.7 hours ***
Performing arts	0.7 hours	0.9 hours	0.2 hours
Visual arts	0.8 hours	0.9 hours	0.1 hours
Other	1.7 hours	1.4 hours	-0.3 hours

Notes: Bold font with star indicates that the socio-economic gap is statistically significant at the 5% level.

4. One-to-one tuition

Whereas the previous section focused upon additional instruction time in total (across all different types of provision) this section turns to the different types of support that 15-year-olds receive. Figure 4.1 begins by comparing across countries the proportion of pupils who reported receiving one-to-one tuition at some point during the current school year. Panel (a) refers to one-to-one tuition in science, and panel (b) to mathematics.

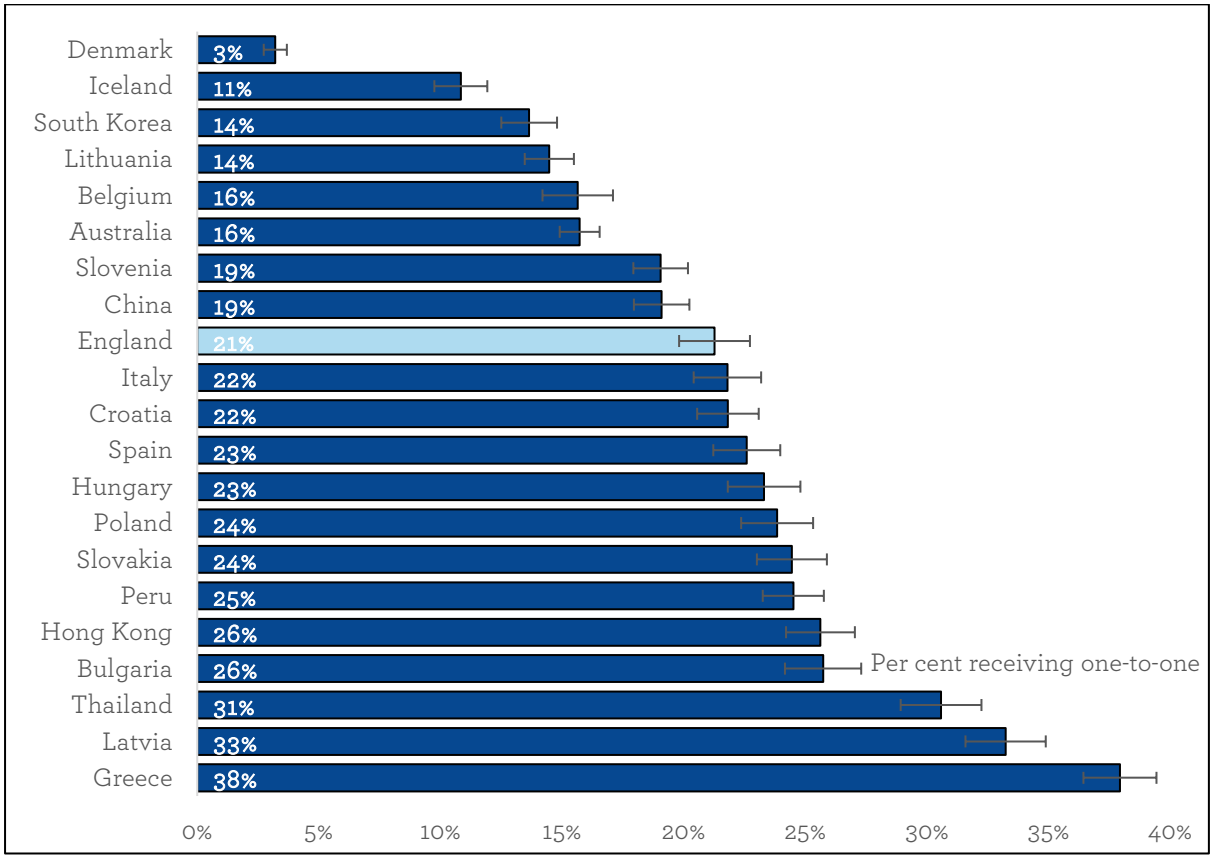
Figure 4.1a. Per cent receiving one-to-one tuition in science (PISA)



Notes: Figures refer to the percentage of pupils in England who reported receiving additional one-to-one tuition. Thin line through the centre of each bar refers to the estimated 95% confidence interval.

Around one-in-five (18%) Year 11 pupils in England reported receiving one-to-one tuition in science, with this being slightly above the 22-country average (14%). There is substantial variation across countries in these figures, however, with significantly fewer pupils reporting the use of one-to-one tuition in countries like Denmark (2%), Iceland (3%), Belgium (8%) and Australia (9%), but with over a quarter of pupils receiving such support in Thailand (26%) and Greece (33%). Figure 4.1 panel (b) reveals that slightly more pupils in England receive one-to-one support in mathematics (21%) than is the case for science (18%), with England very similar to the 22-country average (22%). It is interesting to note that a similar pattern can also be observed in several other countries – including the high-performing East Asian nations of China, South Korea and Hong Kong. For instance, whereas only 16% of 15-year-olds in Hong Kong report receiving additional instruction in science, this increases up to 26% in mathematics. It is nevertheless striking that a fifth of Year 11 pupils in England are receiving this costly, labour intensive form of support in the run up to their GCSE examinations.

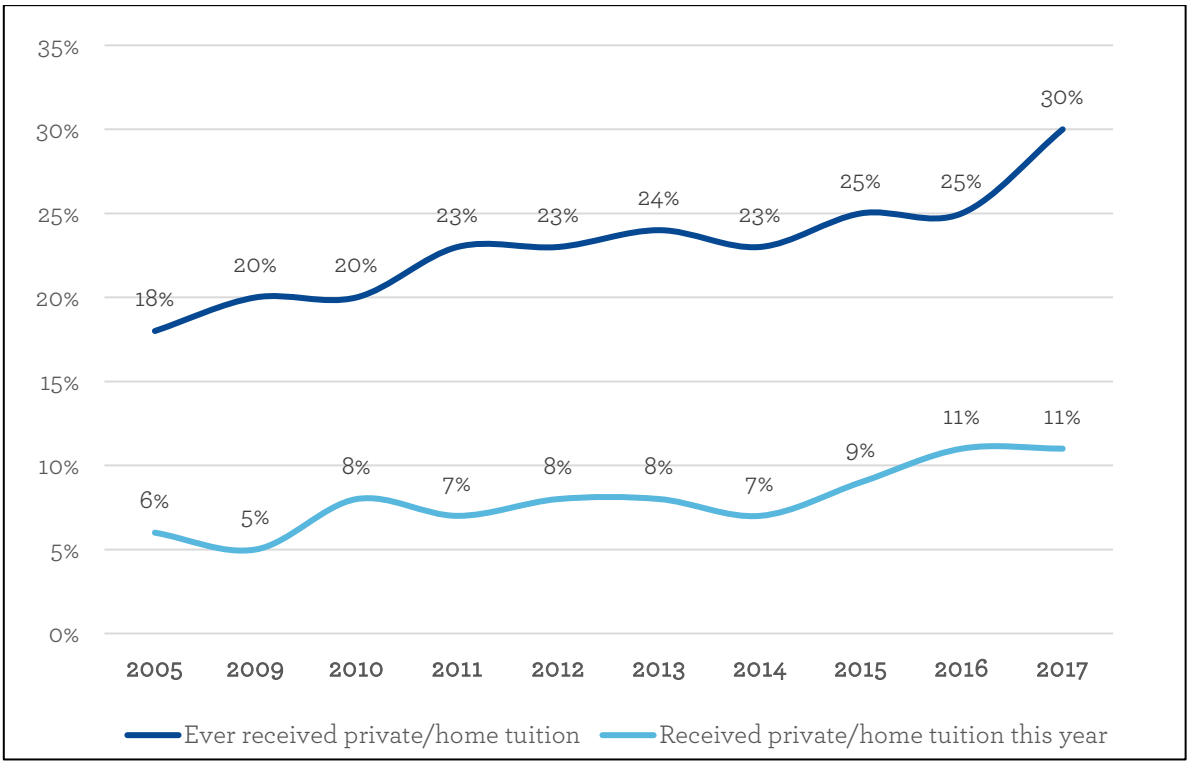
Figure 4.1b. Per cent receiving one-to-one tuition in mathematics (PISA)



Notes: Figures refer to the percentage of pupils in England who reported receiving additional one-to-one tuition. Thin line through the centre of each bar refers to the estimated 95% confidence interval.

How do these figures compare to evidence from Sutton Trust polling data? Data from the 2017 release suggests that around 22% of Year 11 pupils in England reported receiving private or home tuition within the last academic year. This is broadly consistent with the figures reported in Figure 4.1, which suggests around a fifth of pupils received one-to-one tuition in either science or mathematics. However, what the Sutton Trust polling data also tells us is that an even greater proportion of children in England have received private tuition at some stage during their schooling, and that the use of private tutors may be increasing over time. For instance, in 2017 almost a third (30%) of children surveyed by the Sutton Trust said that they had received home or private tuition at some point in their life. This figure is notably higher than in 2005 (when the polling began) which put the figure at approximately one-in-six (18%). See Figure 4.2 for further details.

Figure 4.2. The use of private home tutoring of secondary school pupils over time. Sutton Trust polling data.



Notes: Includes 11-to-16 year olds. Source is the Sutton Trust/Ipsos MORI Private Tuition Polling 2017.

In Table 4.1, I turn to the situation within England, and how the use of one-to-one tuition differs between socio-economic status and achievement groups. For low SES pupils, only 7% of those who are achieving highly in Year 11 receive additional one-to-one instruction in science. This is notably less than low-achieving pupils from disadvantaged socio-economic backgrounds (those pupils who are struggling to get a C grade in their GCSE science) where almost a quarter are receiving some kind of additional one-to-one support. There are also stark differences by achievement for Year 11s from the most advantaged socio-economic backgrounds. Specifically, if young people with affluent parents are in danger of failing their GCSEs, they are particularly likely to receive additional one-to-one tuition. Around one-third of this group in England (32%) reported receiving one-to-one tuition in science, compared to 23% of equally low-achieving disadvantaged children and just 7% of high-achieving pupils from poor backgrounds. Together this helps to highlight an important point– affluent families are particularly likely to use one-to-one tuition as a kind of safety net to ensure that, if their offspring are struggling in school, they are given the best possible chance to pass their GCSE examinations.

Table 4.1. The per cent of pupils in England receiving one-to-one tuition, by socio-economic status and achievement group

	Disadvantaged	Advantaged
Low achievement	23%	32%
Q2	14%	19%
Q3	12%	27%
High achievement	7%	14%

Notes: Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index.

Of course, there are many other kinds of support young people may receive besides one-to-one tuition. These range from small group tuition to computer-based applications. Moreover, these can be offered by different providers –such as regular school teachers versus private tutoring business who provide such services for profit. To what extent are these different forms of tuition used by Year 11 pupils in England?

Table 4.2 illustrates the percentage of pupils who reported each of the different forms of tuition in England.[5] The most common responses of pupils were small group study (around 20%), larger group study (around 20%) and one-to-one tuition (as discussed above). The use of computer-based tuition services, such as internet tuition by a person or programme, or recorded video instruction, was less common – typically used by less than ten per cent of Year 11 pupils. Interestingly, for most categories (with the exception of one-to-one tuition), there is little evidence of differential use by socio-economic status. Indeed, disadvantaged Year 11 pupils are more likely to use internet tutoring and small group study in mathematics than their more advantaged peers. This is consistent with the findings of section 3, which found that 15-year-olds from disadvantaged backgrounds report receiving around 40 minutes more additional instruction time in mathematics per week than the most advantaged group.

Table 4.2. What other forms of private tuition are used in England?

(a) Science

Type	Disadvantaged	Advantaged
One-to-one	16%	20%
Internet tutoring with person	6%	4%
Internet tutoring with programme	8%	9%
Live instruction by person	11%	13%
Video recorded instruction	5%	5%
Small group study (2 to 7 people)	21%	21%
Large group study (> 8 people)	20%	21%
Other	10%	10%

(b) Mathematics

Type	Disadvantaged	Advantaged
One-to-one	20%	24%
Internet tutoring with person	5%	3%
Internet tutoring with programme	8%	5%
Live instruction by person	9%	9%
Video recorded instruction	5%	5%
Small group study (2 to 7 people)	22%	18%
Large group study (> 8 people)	17%	16%
Other	8%	6%

Notes: Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index.

[5] Note that these groups are not mutually exclusive, and hence the percentages do not sum to 100%.

5. What are the barriers to young people in England receiving additional instruction during Year 11?

Although many Year 11 pupils in England report that they receive some form of additional instruction outside of their core timetable in school, many also do not. For instance, around 40% of 15-year-olds in England do not receive any additional instruction in science, with a similar proportion not receiving any additional support in mathematics. In this section, we investigate the reasons why some Year 11 pupils do not receive any additional tuition in these subjects, and how this differs between socio-economic groups. Table 5.1 presents the results – panel (a) for science and panel (b) for mathematics.

The most common reasons pupils gave for not receiving any additional instruction is that they do not feel that they need it. Although this holds true for both socio-economic groups, it is particularly relevant for Year 11s from the most advantaged homes. For instance, whereas 33% of disadvantaged pupils say that they do not need any additional instruction in mathematics, this increases to 58% for the most advantaged group (a difference of 25 percentage points). This is consistent with the conclusions drawn in section 3; as advantaged pupils are already generally performing well in academic subjects in school, they do not feel that they need additional support, and are hence more likely to seek additional instruction in other areas (like music, sports or languages).

The other notable point of Table 5.1 is that socio-economically advantaged pupils are generally able to offer more reasons why they do not receive additional instruction in a subject (almost all the figures in the 'difference' column are positive). This could perhaps suggest that additional instruction may not be considered a viable option for some 15-year-olds from disadvantaged background (this possibility may not even be on their radar), and hence they are less able to provide concrete explanations as to why they do not receive any.

Table 5.1. The reasons why some pupils do not receive any additional instruction

(a) Science

	Disadvantaged	Advantaged	Difference
% who do not receive any additional instruction	42%	45%	3%
I don't need any additional science instruction.	38%	57%	19%
None of the available offerings seem to suit my needs.	21%	22%	1%
Not many of my friends are doing it.	21%	29%	8%
I don't have time.	37%	50%	13%
I don't have the money.	9%	10%	0%
My school teachers are knowledgeable enough.	19%	34%	16%
My parents don't want me to do it.	3%	1%	-2%
It doesn't seem worth the money.	8%	14%	6%
My teachers say it is not useful.	2%	3%	1%
Never considered it	28%	39%	11%
Additional science instruction is not available where I live.	8%	11%	3%
My family helps me instead.	15%	32%	17%
My peers and friends help me instead.	23%	38%	15%

6. To what extent do family members substitute or supplement formal additional instruction?

Parents and pupils do, of course, have alternative options to additional instruction which they can use to support their children's learning. Indeed, one of the ways that many parents assist their offspring is in providing regular assistance with their homework. This may act as either a supplement or a substitute to any additional instruction that they may receive. In this concluding section, we therefore consider the extent to which parents provide this form of support to their children's learning.

Table 6.1. Socio-economic differences in the extent to which parents help regularly with homework

	Disadvantaged	Advantaged	Socio-economic gap
Hong Kong	19%	47%	28%*
South Korea	26%	51%	26%*
Italy	25%	50%	24%*
Spain	39%	60%	21%
Greece	35%	55%	19%
England	50%	68%	18%
Australia	48%	64%	16%
Iceland	63%	79%	16%
Denmark	72%	88%	16%
Latvia	59%	73%	13%
Slovakia	46%	58%	12%*
Poland	53%	64%	11%*
Bulgaria	48%	60%	11%*
Germany	65%	76%	11%*
Peru	43%	55%	11%*
Hungary	56%	66%	10%*
Belgium	52%	62%	10%*
Slovenia	43%	53%	10%*
Lithuania	67%	76%	9%*
Croatia	44%	52%	7%*
China	40%	45%	5%*
Thailand	79%	82%	3%*

Notes: * indicates that the socio-economic gap is significantly different to England at the 5% level.

Table 6.1 begins by documenting the proportion of 15-year-olds who report that their parent regularly helps them with their homework, and how this varies between advantaged and disadvantaged pupils. There are marked differences by socio-economic status in England; whereas two-thirds of the most advantaged pupils regularly receive help with their school work from either their mother or their father, this falls to around half of the most disadvantaged group. This difference of 18 percentage points is significantly bigger than in 12 of the other 21 participating countries, including China (5 percentage point difference), Belgium (10 percentage point difference) and Germany (11 percentage point difference). Only two East Asian nations (Hong Kong and South Korea) and Italy have a significantly bigger gap. Table 6.1 therefore indicates that additional instruction for low socio-economic status pupils in England may be substituting to some extent for a lack of parental assistance with school work. Moreover, a significant advantage for pupils with highly-educated, professional parents is the fact that they can often draw upon immediate family help to support their school work.

(b) Mathematics

	Disadvantaged	Advantaged	Difference
% who do not receive any additional instruction	39%	47%	7%
I don't need any additional maths instruction.	33%	58%	25%
None of the available offerings seem to suit my needs.	13%	19%	5%
Not many of my friends are doing it.	15%	20%	5%
I don't have time.	28%	38%	10%
I don't have the money.	9%	7%	-2%
My school teachers are knowledgeable enough.	18%	29%	12%
My parents don't want me to do it.	2%	2%	0%
It doesn't seem worth the money.	4%	10%	6%
My teachers say it is not useful.	3%	3%	0%
Never considered it	21%	28%	7%
Additional maths instruction is not available where I live.	8%	8%	1%
My family helps me instead.	13%	31%	18%
My peers and friends help me instead.	22%	30%	8%

Notes: Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index. Differences refers to the percentage point difference between the two.

However, a number of other factors also had an impact upon young people's decisions not to receive additional instruction. This includes a lack of available time, the perception that their school teachers can provide them with all the help that they need, and a lack of suitable options to fit with their particular needs. Interestingly, finance is not highlighted as a particular issue (even for disadvantaged groups), with less than 10% saying that they 'don't have the money'. This suggests that some provision is available, including for disadvantaged groups, it is just that they choose not to take it up. However, this could be due to young people from disadvantaged backgrounds and their families not even considering private tuition to be an option, and hence they don't report cost to be a particular barrier to access. Consequently, the impact of cost as a factor might be underestimated in Table 5.1.

There is also evidence that friends and families may be providing pupils with help in lieu of additional instruction – though with notable differences between young people from advantaged and disadvantaged backgrounds. For instance, whereas 32% of the most advantaged group report that their family provides them with help in their school science subjects instead of more formal support, this falls to just 15% for their lower socio-economic status peers. A similar pattern occurs in mathematics.

This final point highlights how informal alternatives to additional instruction are an important source of support for Year 11 pupils in England, particularly for young people with highly-educated professional parents. We therefore further investigate this issue of parental support in section 6.

Table 6.2. Socio-economic differences where the pupil reports that *nobody* helps regularly with their homework

Country	Disadvantaged	Advantaged	Socio-economic gap
Australia	45%	33%	-12%
Iceland	24%	12%	-11%
England	45%	34%	-11%
Italy	54%	44%	-10%
Hong Kong	43%	33%	-10%
Greece	50%	43%	-7%
South Korea	44%	37%	-7%
Latvia	42%	35%	-6%
Lithuania	31%	25%	-6%
Denmark	24%	18%	-6%
Thailand	26%	21%	-5%
Slovakia	43%	38%	-5%
Poland	42%	37%	-4%
Bulgaria	43%	40%	-3%
Peru	39%	38%	-1%*
Hungary	30%	30%	0%*
Croatia	33%	33%	0%*
Spain	45%	45%	0%*
Belgium	26%	27%	2%*
Slovenia	36%	38%	2%*
Germany	43%	49%	6%*
China	40%	50%	10%*

Notes: * indicates that the socio-economic gap is significantly different to England at the 5% level.

Table 6.2 helps to reinforce this message by illustrating the percentage of pupils who report that no-one regularly assists them with their homework. Almost half of low socio-economic status Year 11s in England receive no help from anybody with their homework, compared to one-in-three pupils from the most advantaged backgrounds. There is no country with a significantly bigger gap between socio-economic groups, but eight countries where the gap is significantly smaller. Indeed in some nations, such as Germany and China, socio-economically disadvantaged pupils are more likely to report that someone regularly helps them with their homework than the most advantaged group. Together, Tables 6.1 and 6.2 highlight how more could be done in England to encourage informal support for disadvantaged pupils, including greater engagement amongst parents in their children's homework.

7. Non-compulsory hours spent studying across the UK: Results for England, Scotland, Northern Ireland and Wales

Although pupils in Scotland, Northern Ireland and Wales did not complete the educational career questionnaire in PISA, some information about the amount of time spent studying outside of core school hours has been collected within the main pupil background questionnaire. Specifically, pupils across all parts of the UK were asked the following question:

"This school year, approximately how many hours per week do you spend learning in addition to your required school schedule in the following subjects? (Please include the total hours for homework, additional instruction, and private study)."

With separate responses provided for science, mathematics, English/Welsh, foreign languages and 'other' subject areas.[6]

Clearly, what is included in this definition is quite broad. It not only encompasses the various forms of additional instruction covered elsewhere in this report (such as one-to-one tuition and small group study) but also the amount of time pupils choose to spend on homework. Nevertheless, pupils' responses to this question provide us with some information on the amount of time young people across all parts of the UK are spending on school work outside of their core timetable per week, and how this varies across socio-economic groups.

Table 7.1 begins by documenting the average number of hours reported in each subject by country. The international median for the total number of additional study hours is 16.5 per week. Scotland (17.8 hours) and Northern Ireland (17.2 hours) are slightly above the international average, while Wales (16.0 hours) and England (15.6 hours) are slightly below. Pupils in Northern Ireland, Scotland and Wales spend around 30 minutes more per week studying English and mathematics outside of school then their peers in England, while there is little difference across the home nations in science and foreign languages. From an international comparative perspective, it is interesting to note how 15-year-olds in some high-performing East Asian nations spend up to an hour more per day studying outside of school than young people in the UK, particularly in mathematics, such as China (26.4 hours per week), Singapore (21.7 hours) and South Korea (19.0 hours). There are, however, also exceptions to this rule, such as Macao (15.7 hours), Hong Kong (16.5 hours) and Taiwan (15.5 hours).

[6] In the analysis, I treat pupils who did not respond to the question as reporting zero hours in the subject. Any person who reported more than 70 additional hours across all subjects has been excluded as having illogical/unrealistic values. The maximum number of hours allowed in any given subject is 30 hours per week.

Table 7.1. Average weekly non-compulsory schooling hours by country

Country	Science	Maths	English	Foreign language	Other	Total
UAE	6.4	6.5	5.1	4.5	5.4	27.8
China	4.3	6.5	5.4	5.1	5.1	26.4
Tunisia	4.0	5.3	4.7	4.4	5.3	23.7
Turkey	4.4	5.5	4.2	3.7	5.5	23.4
Qatar	5.4	5.7	3.7	4.1	4.4	23.3
Dominican Republic	4.9	5.2	5.0	3.9	4.1	23.2
Singapore	5.4	6.1	3.7	1.8	4.6	21.7
Montenegro	4.4	4.4	4.0	3.5	5.3	21.5
Russia	4.5	5.3	3.8	2.7	5.0	21.4
Thailand	4.7	4.3	3.4	4.1	4.7	21.2
Italy	3.8	3.9	4.1	3.8	4.4	20.0
Peru	3.7	4.9	4.4	2.9	3.9	19.8
Greece	4.4	4.5	3.4	3.1	4.3	19.7
Mexico	4.3	4.5	4.1	3.4	3.3	19.6
Denmark	4.7	3.7	4.7	3.7	2.5	19.3
South Korea	2.4	6.1	2.8	4.8	3.0	19.0
Croatia	5.4	3.8	3.1	2.8	3.6	18.7
Colombia	3.5	4.0	3.8	3.2	4.1	18.5
USA	3.8	4.2	3.9	2.6	4.0	18.5
Poland	3.0	3.3	3.0	4.8	3.9	18.0
Scotland	3.6	3.7	3.6	1.4	5.5	17.8
Spain	3.3	3.8	3.3	3.1	4.1	17.4
Northern Ireland	3.6	3.7	3.3	1.7	4.9	17.2
Slovakia	2.8	3.2	3.2	3.8	4.0	17.0
Hungary	2.8	3.0	3.1	4.3	3.5	16.7
Lithuania	3.0	3.3	3.3	3.4	3.7	16.7
Estonia	3.2	3.8	2.7	3.4	3.5	16.6
Costa Rica	3.6	3.8	3.0	3.2	2.9	16.6
Bulgaria	3.3	3.1	3.0	4.1	3.1	16.5
Hong Kong	2.8	3.8	2.8	4.1	3.0	16.5
Israel	2.6	4.5	2.3	3.0	3.9	16.3
Portugal	3.0	4.0	3.2	2.6	3.4	16.2
Norway	2.6	3.4	3.1	2.1	4.7	16.0
Canada	3.5	3.9	3.2	1.5	3.9	16.0
Wales	3.5	3.6	3.2	1.2	4.6	16.0
Latvia	2.9	3.6	2.5	3.2	3.8	15.9
Macao	2.7	3.8	2.9	2.6	3.6	15.7
England	3.5	3.2	2.8	1.4	4.6	15.6
Chile	3.0	3.8	3.4	2.5	2.9	15.6
Brazil	2.9	3.8	3.6	2.2	3.1	15.5
Slovenia	2.3	3.7	2.6	2.6	4.3	15.5
Taiwan	2.9	3.4	2.9	2.7	3.5	15.5
Czech Republic	2.5	2.8	2.6	3.2	4.0	15.2
New Zealand	3.0	3.1	3.1	0.6	5.2	15.0
Ireland	2.6	3.3	2.9	2.2	3.8	14.9
Austria	3.3	3.0	1.8	2.9	3.8	14.9
Australia	2.7	3.6	3.3	0.9	4.2	14.7
Luxembourg	2.7	3.4	2.3	3.5	2.5	14.4
France	2.3	3.0	2.8	2.8	3.2	14.1
Belgium	2.3	3.2	2.2	2.8	3.6	14.0
Iceland	1.7	3.2	2.9	2.9	2.9	13.6

Netherlands	1.7	2.5	2.2	2.6	4.7	13.6
Uruguay	2.2	3.1	2.7	2.3	3.0	13.3
Sweden	2.3	2.4	2.1	2.0	3.7	12.5
Switzerland	1.7	2.7	2.3	2.8	2.4	11.9
Japan	1.5	3.3	1.7	2.9	1.8	11.2
Finland	1.9	2.0	1.8	2.2	3.2	11.0
Germany	1.5	2.4	1.6	2.2	2.1	9.7

Notes: Figures differ slightly from Jerrim and Shure (2016) due to minor changes in how non-response and zero hours are treated.

Table 7.2 turns to the magnitude of the socio-economic gap in additional study hours. Across all parts of the UK, there is a non-trivial and statistically significant difference, with disadvantaged pupils completing less additional work than their more advantaged peers. However, the magnitude of the gap is almost twice the size in Scotland (2.9 hours) and Wales (2.9 hours) than in England (1.3 hours). Indeed, Scotland and Wales are towards the top of Table 7.2, signalling that the socio-economic gap is bigger in these parts of the UK than in most other countries, and quite some distance above the international median of 1.4 hours. Again, the position of the high-performing East Asian nations at the very top of Table 7.2 is also interesting (South Korea, Taiwan, Japan, Macao, Hong Kong, Singapore). In particular, it highlights how in these countries, additional study time outside of core school hours is particularly concentrated amongst the most advantaged.

Table 7.2. Socio-economic differences in non-compulsory study hours per week

Country	Disadvantaged	Advantaged	Gap
South Korea	13.7	25.0	11.3*
Taiwan	10.4	20.8	10.3*
Japan	8.7	14.1	5.4*
Macao	13.3	18.2	4.9*
Hong Kong	14.2	18.4	4.3*
Italy	18.2	22.1	3.9*
Greece	17.7	21.4	3.7*
Bulgaria	14.9	18.4	3.5*
Croatia	17.0	20.4	3.4*
Brazil	14.9	17.9	3.1*
Singapore	20.3	23.3	3.0*
Scotland	16.0	19.0	2.9*
Wales	14.5	17.4	2.9*
Canada	14.9	17.4	2.5*
Slovenia	14.3	16.8	2.5*
China	25.2	27.6	2.4*
Australia	13.7	15.9	2.2*
Russia	20.7	22.9	2.1*
USA	17.7	19.8	2.1*
Spain	16.2	18.3	2.1*
Portugal	15.0	17.1	2.1*
Montenegro	20.9	22.8	2.0*
Northern Ireland	16.4	18.3	1.9*
Belgium	12.6	14.5	1.9*
Hungary	15.6	17.2	1.6*
Costa Rica	15.6	17.2	1.6*
Thailand	20.5	21.9	1.5*
Uruguay	13.4	14.8	1.4*
Dominican Republic	22.3	23.7	1.4
England	15.1	16.4	1.3*
Ireland	14.3	15.6	1.2*
Sweden	12.2	13.2	1.0*
Tunisia	22.7	23.6	0.9
Colombia	18.1	18.9	0.9
Latvia	15.5	16.2	0.7
Mexico	19.5	20.0	0.6
Turkey	23.0	23.5	0.5
Peru	19.6	20.1	0.4
Qatar	23.0	23.4	0.4
France	13.8	14.2	0.4
Lithuania	16.3	16.6	0.3
Germany	9.4	9.6	0.2
Netherlands	13.5	13.5	0.0
Norway	16.0	15.9	-0.1
Finland	10.9	10.8	-0.1
New Zealand	15.3	15.1	-0.2
Poland	18.3	18.0	-0.3
Iceland	14.0	13.6	-0.4
UAE	28.3	27.8	-0.6
Israel	17.4	16.8	-0.6
Austria	15.3	14.4	-0.9
Slovakia	17.3	16.3	-1.0
Switzerland	12.6	11.4	-1.2*
Estonia	17.5	15.8	-1.7*

Luxembourg	15.4	13.5	-1.9*
Chile	16.9	14.7	-2.2*
Czech Republic	16.1	13.6	-2.5*
Denmark	20.6	17.8	-2.8*

Note: A star by the estimate of the gap indicates statistical significance at the 5% level.

To conclude, Table 7.3 considers the distribution of additional study hours between high and low-achieving pupils from advantaged and disadvantaged backgrounds across the UK. For low-achieving pupils, there is always a difference between socio-economic groups. For instance, low-achieving pupils from advantaged backgrounds in Scotland complete 17.6 hours additional study per week, compared to just 13.1 hours for their equally low-achieving but disadvantaged peers. This difference of 4.5 hours is greater than in England (3.7 hours) and Wales (1.8 hours) but less than in Northern Ireland (5.3 hours). On the other hand, in some parts of the UK, socio-economic differences amongst higher-achieving pupils are less pronounced. For instance, although there is a difference in England (1.7 hours) and Wales (3.4 hours), there is essentially no gap in Northern Ireland (0.6 hours). Meanwhile, in Scotland, high-achieving disadvantaged pupils actually complete 2 hours more additional study per week than their equally high-achieving but more advantaged peers.

The final key point of Table 7.3 is the difference between high-achieving disadvantaged and low-achieving advantaged pupils (the difference between the figures in the top-right and bottom left corners of the table). In England and Wales, academically able Year 11s from poor backgrounds are doing around 5 hours less work outside of their core school timetable per week than young people from socio-economically advantaged backgrounds who are struggling to pass their GCSEs. This could, in turn, indicate that high-achieving disadvantaged pupils may be coasting towards their GCSE examinations, rather than being stretched to the maximum of their ability. In contrast, in Scotland, high-achieving disadvantaged pupils are actually studying more outside of school each week than low-achieving young people from the most advantaged backgrounds (19.6 hours versus 17.6 hours) – though this difference is not statistically significant.

Table 7.3. Differences between socio-economic and achievement groups in non-compulsory hours

ENGLAND	Disadvantaged	Advantaged
Low achievement	15.9 hours	19.6 hours
High achievement	14.4 hours	16.1 hours

NORTHERN IRELAND	Disadvantaged	Advantaged
Low achievement	14.9 hours	20.2 hours
High achievement	18.6 hours	18.0 hours

SCOTLAND	Disadvantaged	Advantaged
Low achievement	13.1 hours	17.6 hours
High achievement	19.6 hours	17.3 hours

WALES	Disadvantaged	Advantaged
Low achievement	16.0 hours	17.8 hours
High achievement	12.2 hours	15.6 hours

Notes: Low/high achievement refers to the bottom/top quartile of performance within each country on the PISA science test. Disadvantaged refers to pupils in the bottom quartile of the PISA socio-economic status index. Advantaged refers to pupils in the top quartile of the index.

8. Conclusions

There is a concern that socio-economic differences in the use of private tutors and access to additional instruction is exacerbating educational inequalities and limiting social mobility across the UK. With previous research from the Sutton Trust highlighting the average cost of private tutors to be around £25 per hour, it is easy to understand how such educational services may provide a particular advantage for the more advantaged groups. Although home tuition and additional instruction are often associated with preparation for examinations in core academic subjects (like maths and English GCSE exams), out-of-school tuition comes in many shapes and sizes. For instance, it also incorporates learning how to play a musical instrument and how to speak a foreign language – building advantaged pupils cultural capital which may help them to secure a place at a leading university and a more prestigious job. It is therefore perhaps a concern that the parental arms race in England in the form of home tuition appears to be increasing. Evidence from the Sutton Trust's annual Private Tuition Polling suggests that almost one-in-three (30%) of secondary school pupils in the 2017 cohort had ever received private tuition, up from around one-in-six (18%) in 2005.

This report has added to our knowledge of how additional instruction time, including the use of private tutors, compares in England to other countries, and also how this varies across socio-economic groups. Perhaps surprisingly, 15-year-old pupils from advantaged and disadvantaged backgrounds reported a similar number of weekly hours in additional instruction time (around 10 hours per week). England is not unusual in this respect, with young people in other countries reporting a similar amount of time devoted to additional study and with relatively modest differences between socio-economic groups. However, there are some interesting and important differences in how Year 11 pupils are spending this time, with disadvantaged pupils tending to spend more of their additional instruction time studying core academic subjects (particularly English, science and mathematics) while those from more affluent backgrounds use more of their time to build their cultural capital (spending more time receiving instruction in a sport, music or foreign languages). Moreover, I have also highlighted significant variation in additional instruction time Year 11 pupils receive by how well they are performing at school. For instance, whereas high-achieving children from well-off families receive on average 15-hours of additional instruction per week, this falls to just 7 hours for disadvantaged children who are doing well at school. There is hence some evidence of additional instruction acting as a safety net for socio-economically advantaged families, with extra time spent on their education to ensure that they do not fail.

A similar pattern can be observed in the use of private tutors. Around a fifth of Year 11 pupils use such a service in science and mathematics in the run up to their GCSEs. This is consistent with use of one-to-one tuition in other countries, with England around the international average. However, differences between socio-economic groups when stratified by achievement level again stand out. For instance, just 7% of high-achieving children from low socio-economic backgrounds receive the benefit of having a private tutor during Year 11, compared to 32% of high socio-economic status children who are struggling at school. Again, this may suggest private tutoring is acting as a kind of safety net for affluent families in Year 11, giving their children the best possible opportunity to achieve the pass mark in key GCSE exams.

However, where England does stand out from other countries is in the extent to which parents help their 15-year-old offspring with their homework (something which has the potential to act as a substitute for a private tutor). Here England has amongst the largest socio-economic gaps of all the countries that participated. Around two-thirds of pupils from the most advantaged backgrounds reported that their parents help them regularly with their homework, compared to only half of the pupils from disadvantaged backgrounds. This difference, of approximately 18 percentage points, is significantly bigger than in 12 of the 21 other participating countries. Moreover, around half of the most disadvantaged group in

England reported that nobody helped them regularly with their homework. Together, this helps to highlight how it is not only schools – but also parents – that have a critical role to play in Year 11 in addressing the socio-economic achievement gap.

Finally, what do we know about total out-of-school study time (including all types of private tuition, additional instruction and homework) in other parts of the UK? In all four countries within the UK, children from advantaged backgrounds devote more time to total non-compulsory study than low socio-economic status pupils. However, the gap is particularly pronounced in Scotland and Wales, where high socio-economic pupils put in around 3 hours more study time per week than their low socio-economic status peers. (The equivalent gap in England is 1 hour and 20 minutes). In England and Wales there is also a notable difference between (i) high-achieving disadvantaged children and (ii) low-achieving advantaged children, with the former spending around 5 hours less studying outside core timetabled hours per week than the latter.

This is why the Sutton Trust has advocated for the introduction of a means-tested voucher scheme to allow greater access to tuition amongst less well-off pupils, along with encouraging increased non-profit and *pro bono* provision for these groups, and a 'highly able fund' to support the most talented pupils from less well-off backgrounds to reach their full potential, in order to tackle the damaging effect private tuition has in reinforcing educational inequalities and holding back social mobility.

About the author

John Jerrim is a Research Associate at Education Datalab and a Reader in Educational and Social Statistics at UCL Institute of Education. John's research interests include the economics of education, access to higher education, intergenerational mobility, cross-national comparisons and educational inequalities.

The Sutton Trust
9th Floor
Millbank Tower
21-24 Millbank
London, SW1P 4QP

T: 020 7802 1660
F: 020 7802 1661
E: info@suttontrust.com
W: www.suttontrust.com

Twitter: @suttontrust