Edition 5: June 2015

Research Brief

Missing Talent

Every year there are high achievers at primary school, pupils scoring in the top 10% nationally in their Key Stage 2 (KS2) tests, yet who five years later receive a set of GCSE results that place them outside the top 25% of pupils. There are about 7,000 such pupils each year, 15% of all those we term as highly able.[1] We call these pupils our 'missing talent' and in this research brief we explore who they are, their routes of study at secondary school and how we might best raise their aspirations and achievements by the age of 16.

Key findings:

- 15% of highly able pupils who score in the top 10% nationally at age 11 fail to achieve in the top 25% at GCSE
- Boys, and particularly pupil premium eligible boys, are most likely to be in this missing talent group
- Highly able pupil premium pupils achieve half a grade less than other highly able pupils, on average, with a very long tail to underachievement
- Highly able pupil premium pupils are less likely to be taking GCSEs in history, geography, triple sciences or a language

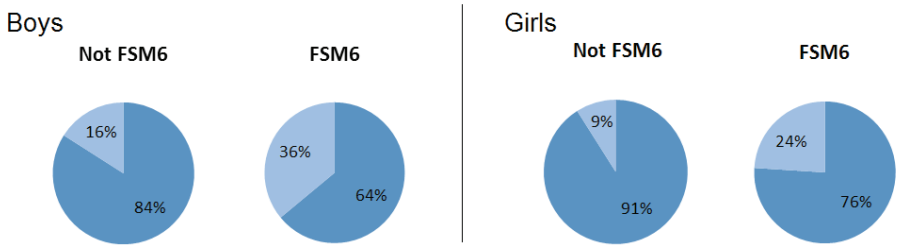
Progress through school is not always smooth and predictable. Of course some children do well at primary school but are overtaken by peers who thrive at secondary school. But our missing talent includes a set of children who achieve seriously below our expectations of them because they are nowhere in the top quartile of the age 16 attainment distribution.

These highly able pupils who fall behind look different to those who succeed at GCSEs. They are a little more likely to be from the White British, Black Caribbean, Pakistani and Bangladeshi communities, with low prevalence amongst the Chinese, Indian and African communities. In Figure 1 the light blue slices show how the missing talent emerges by FSM6 status (those who are eligible for the pupil premium because they have received free school meals in any of the previous six years) and gender. Highly able boys are almost twice as likely to fall off track than girls, and for both boys and girls FSM6 status more than doubles the risk of falling into our missing talent group. A staggering 36% of highly able FSM6 boys fail to achieve a good set of GCSEs.

How and why do highly able pupil premium pupils fall behind at secondary school?

Our highly able FSM6 pupils are far more likely to fall behind during secondary school, particularly measured against the higher academic expectations for GCSEs today and on the sort of subjects that make it more likely they will take the A-levels that will stand them in good stead for good university courses. So, here we try to understand the extent to which this happens and the role of curriculum choices in low performance on the Government's preferred measure of GCSE Attainment 8. This judges pupil performance in maths, English, any three of the sciences, computer science, history, geography or a language, and in any three remaining GCSEs. The table below shows that whilst some highly able FSM6 pupils do indeed achieve an A* across all their eight subjects (those that do so get a score of 8.0 in our table), the median highly able FSM6 pupil achieves just 6.7 (a mixture of A and B grades), which is half a grade per subject below the median highly able pupil not eligible for free school meals. Another way to look at it is that they score 4As and 4Bs when their equally able classmates from better off backgrounds get straight As. But the problem is much more pronounced for some students as FSM6 highly able pupils have a long tail of underachievement. One in ten of the poor but clever pupils are barely achieving C grades (or doing much worse) and at this end of the distribution they are lagging their non-FSM6 peers by almost a whole GCSE grade per subject. These figures lay bare the extent of the

Figure 1: Highly able pupils split into missing talent (light blue) and on-track (dark blue)



[1]This includes 943 boys and 614 girls who are disadvantaged based on FSM over the previous six years.

missing talent.

Table 2 below shows that in all their core subjects FSM6 highly able pupils lag behind others in achieving the top grades. They are less likely to be taking history or geography – essential subjects in the English Baccalaureate measure intended to show academic success - and almost a quarter will not be taking a language at GCSE. What we do not know here is the extent to which the school has supported them in making these very different curriculum choices.

The majority of pupils with high KS2 scores go on to pursue a triple sciences GCSE curriculum – where they study Physics, Chemistry and Biology as separate subjects, but here again there are differences in take-up between the disadvantaged pupils and their peers. Just 53% of the highly able FSM6 pupils take triple sciences, compared to 69% of those not in the FSM6 category. This may be through choice or because they are in one of the 20% of schools that does not offer the curriculum. Here again the differences are stark: 20% of highly able FSM6 pupils are in a school not offering triple sciences, compared to just 12% of the highly able not-FSM6 pupils

Where is the missing talent?

Schools in many areas of the country make consistently good provision for highly able pupils so that almost all achieve good GCSE results. Contrary to what some might expect, such provision can be good - both in areas with grammar schools and those where all the schools are comprehensive. In the latter group there are many London boroughs, some large shire counties and a few small cities.

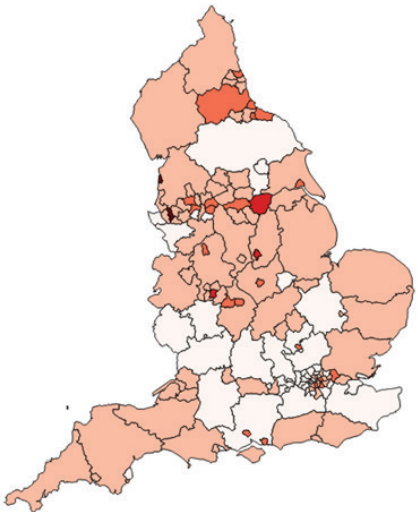
The map on the right shades local authorities according the proportion of their highly able pupils who become missing talent. The red areas with a very high proportion of missing talent are those of most concern. Many of these are local authorities where pupils across the ability spectrum are not achieving good progress at secondary school – such as Oldham, Middlesbrough, Stoke-on-Trent, Barnsley, Hull, Salford, Doncaster, Nottingham, Blackpool and Knowsley. But for others – Coventry, Lambeth, Leicester and Tower Hamlets – overall secondary school achievement is good, despite highly able children falling behind.

Local authorities such as Coventry, Middlesbrough, Lambeth, Hull, Salford, Sandwell and Knowsley have relatively few pupils achieving very high KS2 results. For these areas is easy to understand why their focus might lie elsewhere. However, a parent must be secure that their highly able child can receive an appropriate curriculum and achieve at the highest level, regardless of where they live.

Table 1: The distribution of Attainment 8 achievement differs for FSM6 versus not FSM6 highly able pupils

	Percentile								
	1st	5th	10th	25th	50th	75th	90th	95th	99th
Highly able FSM6	2.7	4.7	5.3	6.0	6.7	7.3	7.7	7.9	8.0
Highly able not FSM6	4.4	5.6	6.0	6.6	7.2	7.6	8.0	8.0	8.0
Not highly able	0.3	1.9	2.6	3.7	5.0	5.9	6.6	7.0	7.6

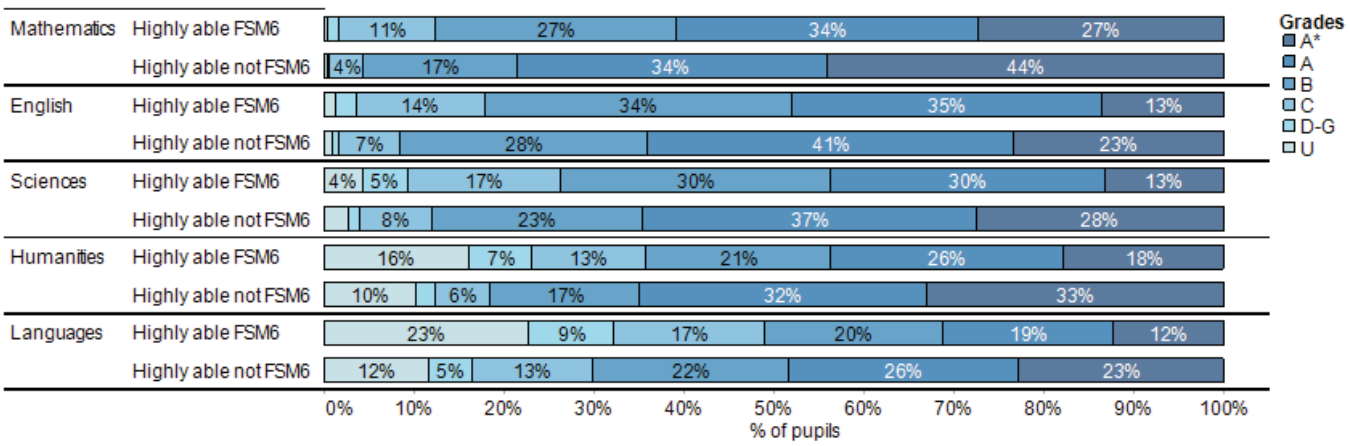
Figure 2: Local authorities according the proportion of their highly able pupils who become missing talent



How can we support this missing talent?

Any new initiatives to support highly able children at risk of falling behind must recognise the successes and failures of past 'Gifted and Talented' initiatives, particularly those of the Blair and Brown governments.

Table 2: Distribution of GCSE subject grades by pupil type



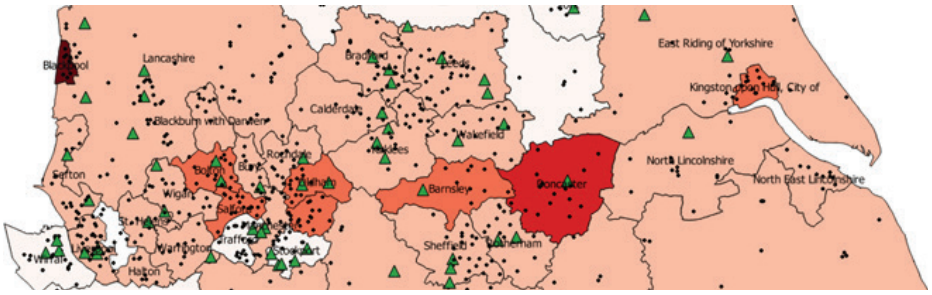
20 areas with high missing talent

- Barnsley
- Blackpool
- Coventry
- Doncaster
- Havering
- Hull
- Knowsley
- Lambeth
- Leicester
- Middlesbrough
- North Tyneside
- Nottingham
- Oldham
- Salford
- Sandwell
- Solihull
- Southampton
- Stoke-on-Trent
- Tameside
- Tower Hamlets

20 areas with little missing talent

- Barnet
- Bracknell Forest
- Bromley
- Buckinghamshire
- Cheshire West and Chester
- Ealing
- Enfield
- Hackney
- Hammersmith & Fulham
- Haringey
- Hertfordshire
- Hounslow
- Kingston upon Thames
- Reading
- Redbridge
- Slough
- Surrey
- Sutton
- Trafford
- Wiltshire

Figure 3: Missing talent in Yorkshire and Lancashire



We believe that any programme of support – whether through the curriculum or through enrichment – must support schools and children in their localities.

There are schools across the country that have low numbers of missing talent and these can act as beacons of best practice to others. To define these schools, we believe they must have a reasonable number of highly able pupils (over 7% of cohort) and have relatively low levels of missing talent in this group (fewer than one-in-ten highly able pupils significantly underperform). Since we need them act as exemplars to others, they must educate a socially mixed intake (over 10% FSM6), offer triple science and have a positive Progress 8 score overall. Using 2014 data, we think there are just over 300 schools nationally who fit these criteria.

The map gives an example of how these schools (marked as green triangles) are distributed across a slice of the country with particular high levels of missing talent. In half of the 20 local authorities with the highest levels of missing talent, there is no exemplar school and so a different policy approach may have to be taken.

How we identify our missing talent

We take the cohort of pupils completing GCSEs in 2014 and look at their mark on each KS2 test paper they sat in 2009. We use this detailed marks data to find the group of pupils who scored in the top 10% nationally at age 11. In this research brief we call these highly able pupils, following Sutton Trust's previously used notion of those 'capable of excellence in school subjects'. We use the pupil's Attainment 8 score in 2014 as a broad measure of their achievement across a traditional curriculum that is appropriate for highly able pupils. Our missing talent are those highly able pupils are not in the top 25% nationally at the age of 16.

Policy recommendations:

- The Government should implement the recommendations of Sutton Trust's Mobility Manifesto to develop an effective national programme for highly able state school pupils, with ring-fenced funding to support evidence-based activities and tracking of pupils' progress.
- All schools must be made accountable for the progress of their most able pupils. These pupils should have access to triple sciences and must study a broad traditional curriculum, including a language and humanity, that widens their future educational opportunities. The Government should report the (3-year average) Progress 8 figures for highly able pupils in performance tables.Schools where highly able pupils currently underperform should be supported through the designation of another local exemplar school. In the small number of areas where there is no exemplary good practice, a one-off centralised support mechanism needs to be set-up.
- Exemplar schools already successfully catering for highly able pupils that are located in areas of high missing talent should be invited to consider whether they are able to deliver a programme of extra-curricular support to raise horizons and aspirations for children living in the wider area.
- Highly able pupils who receive Pupil Premium funding are at high risk of underperforming at age 16. Schools should be encouraged to use the Pupil Premium funding for these pupils to improve the support they are able to give them.