The characteristics and post-16 transitions of GCSE 'lower attainers'

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Abbreviations

A level	General Certificate of Education Advanced Level
AS level	General Certificate of Education Advanced Subsidiary Level
DfE	Department for Education
FE	further education
FSM	free school meals
GCSE	General Certificate of Secondary Education
ILR	Individual Learner Record
NPD	National Pupil Database
SEN	special educational need

Summary

In recent years, around two in five young people did not achieve a 'good pass' (grade A*-C or 9-4) in English and maths GCSE at age 16. Since 2014, those not achieving this level have had to continue studying English and maths until age 18, further increasing the salience of the C/4 grade in English and maths as an important benchmark of educational attainment, shaping future options.

Despite the importance of the GCSE benchmark, neither the characteristics of those who do not attain it, nor their experiences and wider learning trajectories during the 16-18 phase are currently well understood. To help address this gap, this working paper examines publicly available data on young people who do not meet this benchmark, referred to here as 'lower attainers'. The research reported here is part of a wider project exploring the opportunities and constraints faced by those with lower GCSE attainment during the 16-18 phase, funded by the Nuffield Foundation. The analysis uses data on five recent cohorts of pupils completing Key Stage 4: the 2012/13 cohort (who sat their GCSE exams in the summer of 2013) up to the 2016/17 cohort (who sat their GCSE exams in the summer of 2017).

Lower attainment in English and maths is more common among boys, pupils eligible for Free School Meals (FSM), disadvantaged pupils, and young people with special educational needs. FSM-eligible students and those with special educational needs (SEN) in particular are overrepresented among lower attainers. More than half of lower attainers either have special educational needs or are eligible for Free School Meals, with 12 per cent both having SEN and being FSM-eligible. On the other hand, in terms of ethnicity and having English as a first language, lower attainers mirror the general Key Stage 4 population quite closely.

Just over half of lower attainers did not attain a C in both English and maths GCSE, with just over a fifth achieving a D or below in maths only, and a similar proportion achieving a D or below in English only. Around a quarter of lower attainers had achieved 5 or more 'good' GCSEs despite not achieving a C in English and/or maths. On the other hand, just under nine per cent of all 16 year olds (equating to just over 20 per cent of lower attainers) achieved fewer than five passes (A*-G/9-1) at GCSE including English and maths.

Recent reforms to GCSEs and the introduction of a new grading scale have not had a major impact on who attains the expected standard in English and maths, and thus have not greatly altered the characteristics of lower attainers.

Lower attainers are less likely to go to a school sixth form or sixth form college after completing Key Stage 4 than other young people, and much more commonly go to a further education college. Lower attainers are also more likely to start an apprenticeship or enter into employment and/or training than young people who did achieve A*-C in English and maths. About ten per cent of lower attainers in the 2014/15 cohort did not make a sustained transition to education, training or employment after completing Key Stage 4, compared to 2 per cent of those who met the English and maths benchmark.

By age 19, just under a quarter of lower attainers had achieved a Level 3 qualification or higher, and just under two-fifths had achieved a Level 2 qualification. This means that more than a third of lower attainers had failed to progress beyond a Level 1 qualification or lower. Educational outcomes for lower attainers are considerably poorer than those of young people who did achieve a C or above in English and maths, 78 per cent of which achieved a Level 3 qualification or higher by 19.

While most young people who achieve Level 2 and Level 3 qualifications do so by age 18, a small but not insignificant number of young people continue to work towards Level 2 and, especially, Level 3 qualifications between the ages of 18 and 19. This suggests that evaluating educational outcomes for lower attainers at age 18 may underestimate the eventual educational attainment they achieve by the time they leave education and/or training to some degree.

During the 16-18 phase, more young people failed to make progress in English and maths than made positive progress in their attainment. Only 22 per cent of those with a below C/4 grade in English, and 18 per cent of those with a below C/4 grade in maths, had achieved a C or above at the end of their 16-18 phase in the latest available data. Over the last few years, however, there has been an improvement in the number of lower attainers who achieve a C or above in their English and maths GCSEs during the 16-18 phase.

At the end of the 16-18 phase, a little over two-fifths of lower attainers were still in education, with 8 per cent of lower attainers having made it to a Higher Education institution by this stage. Just over a quarter (28 per cent) were in sustained employment. Worryingly, just over a fifth were in a non-sustained destination, which means that they were not recorded as being continuously in education, employment or training during the two terms following the end of their 16-18 phase. These differences in outcomes are suggestive of the variety of pathways taken by lower attainers during the 16-18 phase.

Introduction

GCSE attainment continues to have important implications for young people's further educational progress. Attainment in English and maths in particular is considered to be a key indicator of young people's educational development and further potential. To reflect this, attainment in English and maths has, since 2006, been included in each successive headline school performance measure from the '5+ GCSEs at A*-C including English and maths' measure to Attainment 8. Since 2011, the Department for Education (DfE) has additionally reported on the proportion of pupils achieving an A*-C in English and maths at the end of key stage 4 as part of its annual attainment statistics. In 2013, the DfE announced that, from 2014 onward, all those who do not achieve a 'good pass' – a grade C or better – in English and maths at the end of Key Stage 4 would have to continue studying these subjects until age 18 (DfE, 2013a)[1]. This requirement remains in place after the introduction of reformed GCSEs, with a grade 4 now being the level below which young people are made to continue studying English and maths[2]. This policy underscores the importance of achieving a C/4 or above in English and maths as a benchmark of attainment. Failure to do so has significant practical consequences for young people between 16 and 18.

Yet, despite the importance of the GCSE benchmark, neither the characteristics of those who do not attain it, nor their experiences and wider learning trajectories during the 16-18 phase are currently well understood. This working paper begins to fill this gap in knowledge by examining available evidence and statistics on those who do not attain a grade A*-C/9-4 in English and maths – referred to in this paper as 'lower attainers'. This is part of a wider Nuffield Foundation-funded project into the opportunities and constraints faced by lower attainers during the 16-18 phase, entitled 'Choice and Progression in the Transition from Secondary Education: The Experience of GCSE Lower Attainers and the Potential for Change at the City-Region Level'. A subsequent stage of the project will involve analysis of data from the National Pupil Database (NPD) and Individualised Learner Record (ILR) and qualitative research with lower attaining young people in two case study areas. Here, however, findings from existing literature and data published by the DfE are analysed in order to provide an initial overview of the characteristics of lower attainers, their post-16 destinations, and educational outcomes at the end of the16-18 phase. The analysis uses data on the most recent five cohorts of pupils completing Key Stage 4 for which final, revised figures are currently available: the 2012/13 cohort (who sat their GCSE exams in the summer of 2013) up to the 2016/17 cohort (who sat their GCSE exams in the summer of 2017)[3].

The paper is divided into two main parts. Part one explores what proportion of 16 year olds did not meet the A*-C/9-4 English and maths benchmark in recent years, and what the characteristics are of this group of young people as compared to those who did. The extent to which the overall group of lower attainers is composed of young people with different

[1] The proposal that those without a grade A*-C in English and maths should be required to continue studying towards these qualifications originates from the Wolf Report, a review of vocational education commissioned by the Department for Education (Wolf 2011).
[2] Although a grade 4 is used as the criterion for who is required to retake English and maths during the 16-18 phase, a grade 5 – described as a 'strong pass' – is also used as a benchmark of attainment and the percentage of pupils achieving a grade 5 or above in English and maths is reported in school league tables.
[3] So far for the 2017/18 cohort only provisional attainment data has been published.

attainment profiles is also explored. Part two analyses what happens to these lower attaining young people after they complete Key Stage 4, both with regards to the types of education or training they access, and how they progress in terms of their educational attainment during the 16-18 phase.

Defining 'lower attainers'

Since the advent of comprehensive education, understandings of what constitutes a 'good' level of attainment have been subject to change, and, consequently, so have understandings of what is *not* a good level of attainment. The C grade has been used as a marker of academic ability since the introduction of GCSEs in 1989, but with the introduction of national targets for educational attainment and school league tables in the 1990s, the C grade was increasingly used in official measures of both attainment and school quality – for instance, in the headline school performance measure of at least five A*-C grades at GCSE. School performance measures have recently moved towards a focus on progress instead of attainment alone (with the introduction of 'Progress 8' alongside 'Attainment 8'). Nonetheless, obtaining a C – or, since the introduction of reformed GCSEs in 2017, a grade 4 – in the key subjects of English and maths is still considered to be an important benchmark of educational attainment. This is evidenced by the requirement, since 2014, for students not achieving this grade at the end of Key Stage 4 to continue studying English and maths during the 16-18 phase. Attainment of at least a C/4 in English and maths is also often used as an entry requirement to study A levels, as well as some Level 3 vocational courses and some advanced apprenticeships. As such, it has important implications for the options that are open to young people at age 16.

For this reason, we have chosen in this paper to focus on the group of young people who do not achieve this benchmark. We use the term 'lower attainers' as a shorthand to refer to this group, although we recognise that levels of attainment vary quite substantially within this segment of young people, and that what may be 'low' attainment for some people may be good attainment for others. A wider discussion of the concept of lower attainment is the subject of a further paper by the project team, currently under development.

Part One Who are 'lower attainers'?

1.1 Recent trends in low attainment

In this section, we explore how many young people fall within our definition of 'lower attainer' and the extent to which this has changed in recent years. As shown in figure 1, the proportion of pupils who did not achieve an A*-C or 9-4 in English and maths has remained fairly stable in recent years. While the proportion has fluctuated over time, for the most part increases and decreases have coincided with policy reforms and changes in the way the English and maths attainment measure is defined.

The two main sets of policy changes which occurred during the period covered by this research took place in 2013/14 and in 2015/16. The most important change that occurred in 2013/14, at least with regards to the impact on the English and maths attainment measure, was related to the practice of entering pupils for exams before they had reached the end of Key Stage 4 ('early entry'). Whereas up to 2012/13 the best exam result achieved by each student counted towards official attainment measures, from 2013/14 onward, only a pupil's first exam result was counted. This change was made to remove the incentive for schools to submit students for early entry, which had increased in the years leading up to 2013.[4]

This reform decreased GCSE attainment in English and maths (as well as in other subjects). As shown in figure 1, the proportion of 16 year olds achieving a grade C or above in English and maths fell from 60 per cent in 2012/13 to 55.5 per cent in 2013/14. To isolate as best as possible the effect of the reform from real changes in attainment, the DfE published attainment statistics for 2013/14 using both the old methodology (where pupils best result was counted) and the new methodology (where only the first result was counted). The difference between measured attainment in 2013/14 under the old measure (58 per cent) and under the new measure (55.5 per cent) provides an indication of the impact of the policy change.[5] The difference between the proportion of pupils achieving A*-C in English and maths in 2012/13 and the proportion of pupils who would have been counted as having achieved an A*-C in English and maths in 2013/14 under the under the old 'best result' measure is intended to show 'real' change in attainment. Comparing these two figures indicates a two percentage-point drop in attainment between 2012/13 and 2013/14, suggesting that there was a slight decline in attainment aside from the effect of the reform. However, as the DfE points out (DfE, 2015a), simply calculating attainment for 2013/14 using the old methodology does not take account of possible behaviour changes by schools in response to the new methodology. For instance, schools may have stopped entering p for multiple exams, thus decreasing attainment even when using the old methodology.

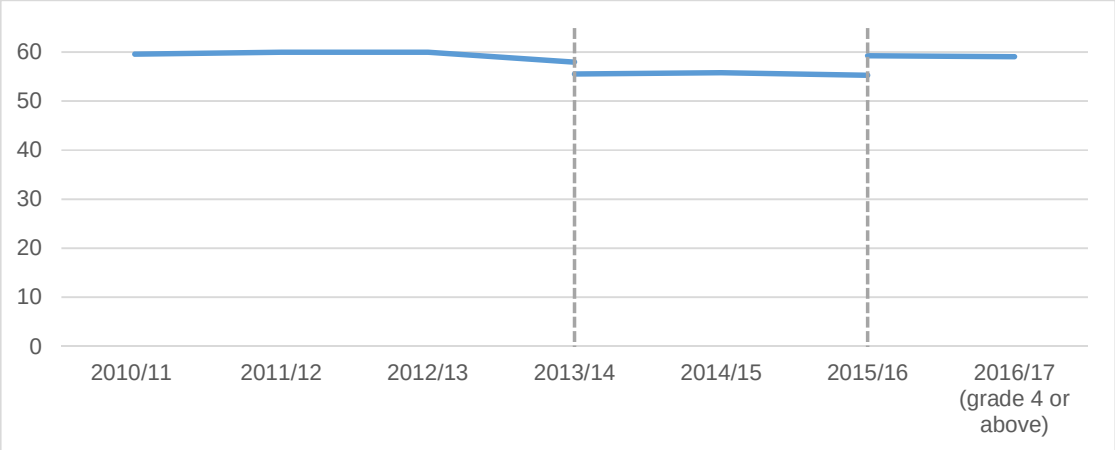
Two further changes implemented from 2014 were the move from modular to linear assessment in all GCSEs, including English, English Language and maths, and the decision to stop 'speaking and listening' assessment from counting towards pupils' overall grade in GCSE English. While estimates by Ofqual suggested that this latter change had the potential to decrease attainment in English, a 'comparable outcomes approach' was used to ensure that the proportion of students achieving each grade remained more or less stable compared to the previous year (Ofqual, 2013a). This means that these reforms should not have had an

[4] In 2012/2013, 23 per cent of maths entries and 10 per cent of English entries were by pupils who were not yet at the end of Key Stage 4.

effect on the overall proportion of young people achieving a C or above in English and maths, although it is possible that certain groups of students will have been affected adversely by the changes if they tended to do better in speaking and listening in reading and writing, or if they struggled particularly with the pressure of a final high stakes exam compared to multiple modular assessments.

The second important change impacting on the proportion of young people achieving an A*-C in English and maths took place in 2015/16 and relates to how English attainment is defined. Before 2015/16, pupils who took both the English Language and English Literature GCSE had to sit exams in both and achieve a C or above in English Language in order to count towards the English and maths A*-C attainment measure. From 2015/16 onwards, either a C or above in English Language *or* English Literature counted towards the measure. Again, 2015/16 attainment statistics were published using both the old rules and the new rules, and a comparison of the two percentages indicates that the change in methodology had a significant impact on the number of pupils counted as having achieved an A*-C in English and maths. Under the old measure, 55.3 per cent of pupils would have been recorded as having met the attainment standard in 2015/16, while under the new measure, this increased to 59.3 per cent of pupils.

Figure 1: Percentage of pupils achieving A*-C or 9-4 in English and maths, 2010/11 to 2016/17



Source: SFR01/2018: GCSE and equivalent results in England: 2016 to 2017 (revised). Vertical dotted lines indicate changes in the definition of the English and maths attainment measure (see main text for details).

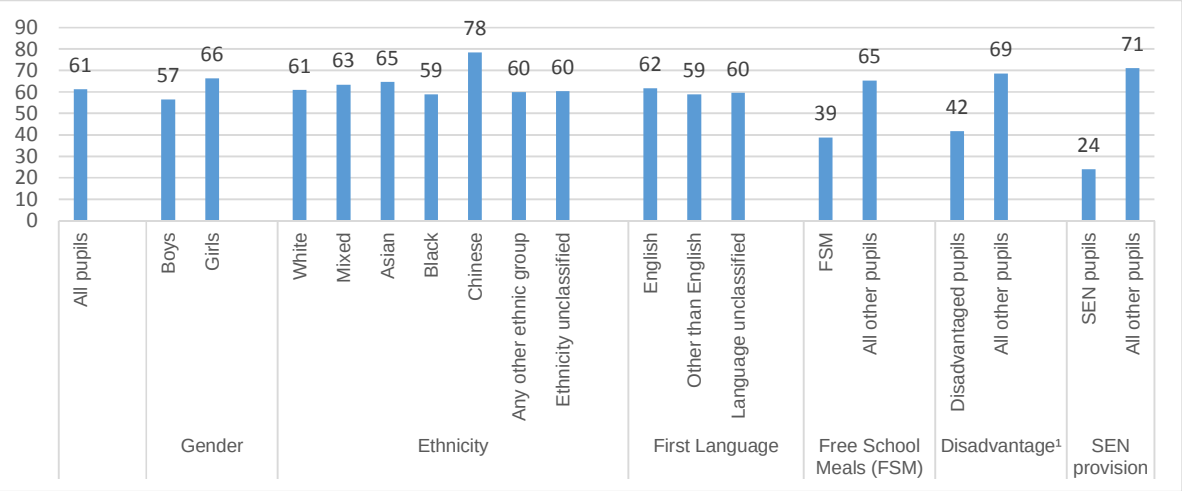
The result of these two policy changes is a slight dip in the proportion of pupils achieving an A*-C in English and maths between 2012/13 and 2013/14, with the percentage remaining fairly low in 2014/15 before climbing back up to nearly 60 per cent in 2015/16 and 2016/17. As a consequence, the share of 16 year olds falling under the definition of 'lower attainer' increased from 40 per cent in 2012/13 to 44.5 per cent 2013/14, before decreasing again in 2015/16 to just over two in five. Given that the slight decline in attainment in 2013/14 can be linked to the definitional changes described above, the overall trend over this period is therefore of relative stability. Provisional figures for 2017/18 suggest that, again, there has been very little change in the proportion achieving the 9-4 English and maths benchmark.[6]

[6] See Department for Education (2018) GCSE and equivalent results: 2017 to 2018 (provisional). These figures suggest that 59.1 per cent of all pupils achieved a 9-4 pass in both English and maths, meaning 40.9 per cent did not.

1.2 Characteristics of lower attainers

Having reviewed recent trends in lower attainment, we now move on to analysing the characteristics of those who did not meet the expected standard of attainment in English and maths. Building up a picture of this group is important for thinking about ways in which these learners can be better supported in the 16-18 phase. To begin with, figure 2 shows how English and maths attainment varies between pupils with different characteristics[7]. The percentage of pupils who get an A*-C in both subjects clearly differs between groups of learners. In 2012/13, almost two-thirds of girls (66.3 per cent) achieved an A*-C, but only 56.3 per cent of boys. Out of all major ethnic groups, Chinese pupils had the highest proportion achieving an A*-C in English and maths at 78.3 per cent. This compares with 61 per cent for white pupils and 58.9 per cent for black pupils. However, although there are differences in attainment between boys and girls and young people of different ethnicities, the starkest differences are found between FSM-eligible pupils and those who aren't, pupils categorised as disadvantaged[8] and those who aren't, and SEN pupils and those without SEN. Fewer than two-fifths of FSM-eligible pupils (38.7 per cent) attain the expected A*-C benchmark in English and maths. The proportion is similar for pupils who are disadvantaged at 41.8 per cent. Among pupils with SEN, less than a quarter achieve the C benchmark, compared to more than 70 per cent of pupils without SEN. This means that around three quarters of SEN pupils can be described as lower attainers.

Figure 2: Percentage of pupils who achieved A*-C in English and maths for pupils with different characteristics, 2012/13 cohort



Source: SFR05/2014: GCSE and equivalent results in England 2012/13 (Revised) - National and Local Authority tables.

[7] We examine the 2012/13 cohort here because it is the first of the five cohorts we will be examining in this working paper, although we will compare this cohort against later cohorts in section 4. An advantage of including this earlier cohort in the analysis is that data for this cohort is available up to the age of 19, at which point their attainment of level 2 and level 3 qualifications is measured as well as their destinations after completing the 16-18 phase.

[8] Pupils are classed as disadvantaged if they are known to have been FSM-eligible at any point between year 6 and year 11, if they were looked after for at least one day, or if they were adopted from care. As such, it is a broader measure of disadvantage than those who are FSM-eligible currently.

From the published attainment statistics, it is possible to calculate the composition of those young people who do not achieve an A*-C in English and maths. Table 1 provides an overview of the characteristics of low attaining pupils in the 2012/13 cohort. To provide a comparison between lower attaining pupils and young people who met the expected standard, the first column of data shows the composition of pupils who did not achieve a C or above in English and/or maths, and the second column details the composition of those who did attain a C or above in both subjects.

Table 1: Characteristics of pupils not achieving A*-C in English and maths GCSEs at the end of Key Stage 4, 2012/13 cohort

		Composition of pupils who did not achieve A*-C	Composition of pupils who achieved A*-C
Gender	Boys	57.3	46.9
	Girls	42.7	53.1
	All pupils	100	100
Ethnicity	White	81.2	80.2
	Mixed	3.6	3.9
	Asian	7.5	8.6
	Black	5.1	4.6
	Chinese	0.2	0.5
	Any other ethnic group	1.3	1.2
	Unclassified[1]	1.0	0.9
	All pupils	100	100
First Language	English	86.2	87.7
	Other than English	13.5	12.2
	Unclassified[1]	0.1	0.1
	All pupils	100	100
Free school meals	FSM	23.6	9.4
	All other pupils	76.3	90.6
	All pupils	100	100
Disadvantage	Disadvantaged pupils	40.6	18.4
	All other pupils	59.4	81.6
	All pupils	100	100
Special Educational Needs	All SEN pupils	40.9	8.2
	No identified SEN	59.1	91.8
	All pupils	100	100

Source: SFR05/2014: GCSE and equivalent results in England 2012/13 (Revised) - National and Local Authority tables. [1]Includes pupils for whom ethnicity was not obtained, refused or could not be determined.

As shown in table 1, boys are overrepresented in the group of lower attainers, making up more than 57 per cent. It is well-known that boys tend to be more commonly found among lower-attaining segments of pupils, and as such this finding is in line with existing literature (e.g. Cassen et al. 2007; Howieson and Iannelli 2008). In terms of ethnicity, lower attainers do not differ very strongly from those who did achieve a 'good' pass in English and maths, although Asian pupils are slightly underrepresented among lower attainers and black pupils are slightly overrepresented. The proportion of pupils whose first language is not English is more or less the same among lower attainers as among those who achieved a C or above in English and maths.

Strikingly, more than a fifth of lower attainers (23.6 per cent) are FSM-eligible, a much higher share than the 9.4 per cent of non-lower achieving pupils who are FSM-eligible. A similar disparity can be seen in the share of pupils who are classed as disadvantaged. About 18 per cent of pupils who achieved a C or above in English and maths are deemed to be disadvantaged, but among lower attainers this rises to almost 41 per cent.

Lastly, SEN learners make up a much higher proportion of lower attainers (40.9 per cent) than of pupils who met the expected standard (8.2 per cent). This overrepresentation of SEN pupils among lower attainers reflects their generally much lower levels of attainment, as reported in figure 1.

A closer look at pupils with different types of SEN reveals that some of them make up a much larger proportion of lower attaining learners than others. As shown in table 2, those with behavioural, emotional and social difficulties (BESD) make up the largest group among both lower attainers, at around 30 per cent. Pupils with behavioural, emotional and social difficulties are those who display behaviours, such as hyperactivity, disruption, lack of concentration or uncommunicativeness, that present a barrier to their own learning and/or that of others[9]. The level of attainment in English and maths for pupils with BESD is very similar to that of SEN pupils in general, which means that behavioural, emotional and social difficulties are neither over- nor underrepresented among lower attaining SEN pupils. Those with specific learning difficulties are another substantial group of low attaining SEN pupils, at 12.4 per cent. Specific learning difficulties refer to conditions such as dyslexia or dyspraxia which tend to affect a young person's ability to learn in particular skill or subject areas, such as reading and writing. Again, as the level of attainment in English and maths among pupils with specific learning difficulties is similar to English and maths attainment among SEN pupils in general, pupils with specific learning difficulties are roughly evenly split between lower attaining SEN pupils and non-lower attaining SEN pupils.

The second-largest group among lower attainers with SEN are pupils with moderate learning difficulties, at 24 per cent. Unlike pupils with BESD, those with moderate learning difficulties are strongly overrepresented among lower attaining SEN pupils (those with moderate learning difficulties only represent 6.1 per cent of SEN pupils who did meet the C benchmark in English and maths). This overrepresentation reflects the fact that the proportion of pupils with moderate learning difficulties who attain a grade C or above in English and maths is very low, at only 5 per cent, which is much lower than among SEN pupils in general. This is perhaps not surprising as pupils identified as having moderate learning difficulties "have much greater difficulty than their peers in acquiring basic literacy and numeracy skills and in

[9] The SEN category Behavioural, emotional and social difficulties (BESD) was superceded by the category Social, emotional and mental health difficulties (SEMH) in the Children and Families Act 2014 and the associated 0 to 25 SEN Code of Practice, although the latter is not intended to be a direct replacement of the former.

understanding concepts" (DfES, 2003, p. 3)[10]. The proportion of young people who attain an A*-C in English and maths is even lower among those with severe learning difficulties, but as these pupils only represent a small proportion of the overall cohort[11], learners with these types of needs nonetheless make up a relatively small share of lower attaining SEN pupils.

Table 2: Pupils with SEN[1] not achieving A*-C in English and maths GCSEs at the end of Key Stage 4, by type of need, 2012/13 cohort

		Composition of SEN pupils who did not achieve A*-C	Composition of SEN pupils who achieved A*-C
Type of need			
	specific learning difficulty	12.4	13.3
	moderate learning difficulty	24.2	6.1
	severe learning difficulty	5.0	0.2
	behaviour, emotional and social difficulties	29.7	32.5
	speech, language and communications needs	7.4	5.5
	hearing impairment	1.7	6.0
	visual impairment	0.9	3.3
	multi-sensory impairment	0.0	0.0
	physical disability	3.0	6.9
	autistic spectrum disorder	9.5	15.6
	other difficulty/disability	4.2	8.9
	SEN support but no specialist assessment of type	0.0	0.0
	All SEN primary need pupils	100.0	100.0

Source: SFR05/2014: GCSE and equivalent results in England 2012/13 (Revised) - National and Local Authority tables. Includes pupils completing Key Stage 4 at state-funded schools, including academies and city technology colleges.

[1]Includes pupils at school action plus and pupils with a statement of SEN only, and excludes pupils at school action as a primary need was not collected from these. This means that these figures refer to a smaller group of young people than the SEN pupils included in table 1.

[10] There is a debate about the extent to which the label 'moderate learning difficulties' is sometimes treated as synonymous with (very) low attainment. Although the criteria used to determine whether a young person has moderate learning difficulties tend to vary between schools, a 2014 study found that some schools simply use low attainment as the basis for identifying such learning difficulties, rather than also considering other indicators suggestive of low cognitive ability or forms of intellectual disability (Norwich et al., 2014). This was a concern also mentioned in a 2010 Ofsted review into special educational needs (Ofsted, 2010). The paradox between pupils with learning difficulties being defined in government codes of practice as those having a "significantly greater difficulty in learning than the majority of children" (DfE, 2015b, p. 16; DfES, 2001) while at the same time raising concerns over the relatively poor educational attainment of young people with learning difficulties has additionally been commented on (Ellis and Tod, 2012).

[11] Although the data in table 2 does not cover pupils completing Key Stage 4 in independent special schools, non-maintained special schools, and hospital schools. Some learners with severe learning difficulties and profound and multiple learning difficulties may be completing Key Stage 4 in these schools.

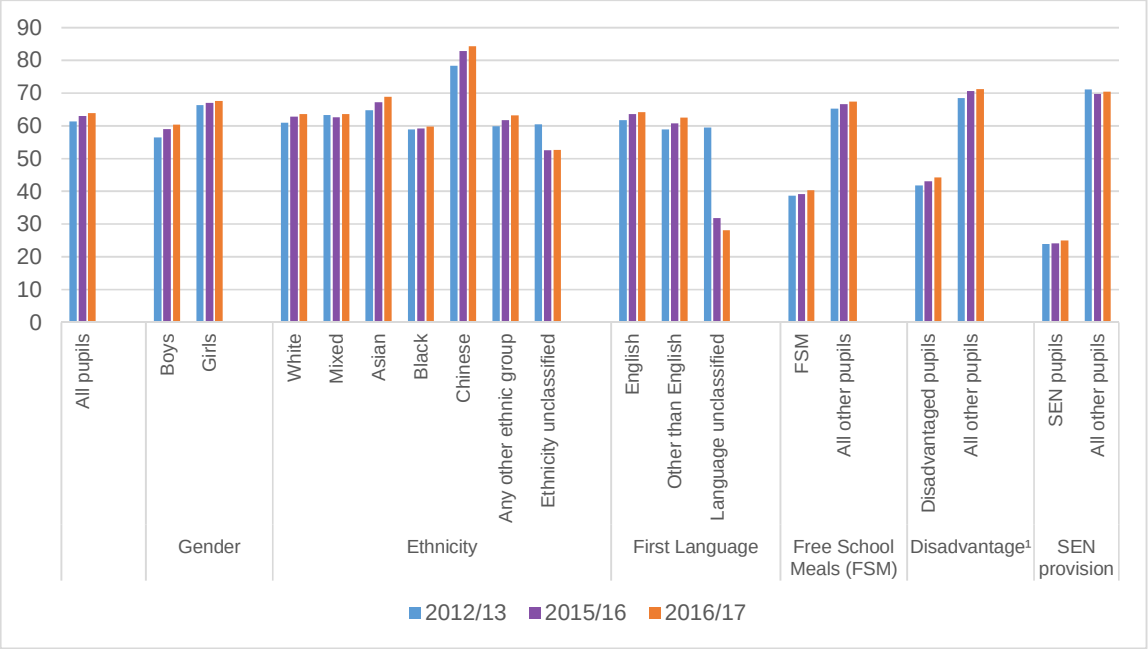
1.3 Effect of GCSE reforms

So far we have looked at the characteristics of low attaining young people among the 2012/13 cohort. In 2015 reformed English and maths GCSEs were introduced, which may have had an impact on the composition of pupils who fall below the expected standard in English and maths. The new GCSEs differ from the old GCSEs on a number of dimensions. Firstly, the DfE has stated that the curriculum of the new GCSEs is more "demanding and fulfilling" (DfE, 2013b). Secondly, exams in English are no longer tiered, meaning all pupils now sit the same exam rather than pupils being entered for a less demanding Foundation tier or a more demanding higher tier exam depending on their expected performance (Ofqual, 2013b). Thirdly, the grading scale was altered from an alphabetical scale ranging from G to A* (plus an additional 'fail' grade, U), to a nine-point numerical grading scale ranging from 1, the lowest grade, to 9, the highest grade (plus a U grade, as before). A grade 4 was designed to be equivalent to a grade C under the old grading scheme, and a roughly equal proportion of pupils achieve this grade compared to those who achieved a C in the old GCSEs. Nonetheless, due to the changes in content and assessment, there might be a difference in the types of learners who do well, or less well, in the new GCSEs compared to the old GCSEs. In 2013, the DfE conducted an 'equality analysis' of the content of the reformed English and maths GCSEs, including a consultation (DfE, 2013c). Despite some of the consultation responses expressing concern over the effect of the more academic subject content on lower ability pupils, dyslexic students, EAL students, those with SEN and those FSM-eligible, the overall conclusion by the DfE was that there would be no adverse effects on any category of pupil with all pupils expected to benefit from the reforms[12]. However, the actual effect of the reforms, following the completion of Key Stage 4 by the first cohort affected, has not yet been assessed. If the new subject content or assessment methods have affected the attainment of some groups of learners compared to others, the characteristics of those who fall below the expected standard may have changed as a result of the reforms.

Comparing attainment of the 2012/13 cohort, the 2015/16 cohort (the last cohort to have studied the old English and maths GCSEs) and the 2016/17 cohort (the first cohort who completed the new English and maths GCSEs for whom data has been published) indicates that the percentage of pupils achieving a 9-4 in the new English and maths GCSEs was about the same, or even a little higher, than the percentage achieving an A*-C in the old GCSEs across all groups of pupils (see figure 3). This was to be expected since Ofqual sets grade boundaries using a 'comparable outcomes approach', which means that, at national level, results in each subject remain similar to the previous year, provided that students are of a similar ability to the previous cohort. As well as the overall attainment rate of the English and maths measure, the gaps between pupils with different characteristics – for instance, pupils with and without SEN – has remained very similar. This indicates that the new GCSEs have so far had little effect on the relative attainment of different groups of pupils, at least when considering the characteristics included here.

[12] Although the report recognised that the increased weighting given to spelling, punctuation and grammar in English could have an impact on some groups with protected characteristics.

Figure 3: Percentage of pupils achieving A*-C or 9-4 in English and maths, 2012/13, 2015/16 and 2016/17



Source: SFR05/2014: GCSE and equivalent results in England 2012/13 (Revised) - National and Local Authority tables, SFR03/2017: GCSE and equivalent results in England 2015/16 (Revised) – Characteristic national tables, and SFR01/2018: GCSE and equivalent results in England 2016/17 (Revised) - Characteristic national tables. Coverage is pupils in state-funded schools only.

As a result, there has been relatively little change in the characteristics of lower attainers between the years before the introduction of the new GCSEs and after. Table 3 illustrates this by showing the composition of those who did not achieve an A*-C in 2012/13 against the composition of those who did not achieve a 9-4 in 2016/17. In the later cohort, boys are still more likely to be in the low attaining group than girls (although the gap between boys and girls has narrowed slightly[13]), those who are FSM-eligible still make up more than a fifth of lower attainers, and disadvantaged students more than two-fifths. Two characteristics on which there does appear to have been relatively substantial changes are ethnicity and special educational needs. Pupils from non-white ethnic backgrounds made up a larger share of lower attainers in 2016/17 than in 2012/13. However, this is due to the overall increase in ethnic minority pupils as a share of young people in secondary education, and not the result of a change in the proportion of ethnic minority pupils who achieve the expected standard in English and maths. On the other hand, young people with identified SEN made up a substantially smaller proportion of low attaining pupils in 2016/17 than in 2012/13. However, this appears to largely be the result of a gradual decline in the overall number of identified SEN pupils, as well as a consequence of SEND reforms in 2014 which may have affected who is counted as having SEN (DfE, 2015c). Similarly, the proportion of lower attainers (and pupils in general) who are FSM eligible has gradually declined over the last five years, which is likely to be at least partly due to benefit reforms.

[13] It is possible that this may have had to do with the fact that in the new English GCSE, coursework is no longer included as part of assessment. Research has suggested that girls tend to do better where coursework counts towards final grades (Machin and McNally, 2005; Powney, 1996).

Table 3: Characteristics of pupils not achieving A*-C or 9-4 in English and maths GCSEs at the end of Key Stage 4, 2012/13 and 2016/17 cohorts

		Composition of pupils who did not achieve A*-C, 2012/13	Composition of pupils who did not achieve 9-4, 2016/17
Gender	Boys	57.3	55.9
	Girls	42.7	44.1
	All pupils	100	100
Ethnicity	White	81.2	77.6
	Mixed	3.6	4.5
	Asian	7.5	8.6
	Black	5.1	5.9
	Chinese	0.2	0.2
	Any other ethnic group	1.3	1.6
	Unclassified[1]	1.0	1.7
	All pupils	100	100
First Language	English	86.2	83.1
	Other than English	13.5	16.5
	Unclassified[1]	0.1	0.7
	All pupils	100	100
Free school meals	FSM	23.6	21.7
	All other pupils	76.3	78.5
	All pupils	100	100
Disadvantage	Disadvantaged pupils	40.6	42.0
	All other pupils	59.4	58.1
	All pupils	100	100
Special Educational Needs	All SEN pupils	40.9	29.3
	No identified SEN	59.1	70.2
	All pupils	100	100

Source: SFR05/2014: GCSE and equivalent results in England 2012/13 (Revised) - National and Local Authority tables and SFR01/2018: GCSE and equivalent results in England 2016/17 (Revised) - Characteristic national tables. Coverage is pupils in state-funded schools only.

[1]Includes pupils for whom ethnicity was not obtained, refused or could not be determined, including pupils in the 2016/17 cohort who completed their GCSEs in FE colleges catering to 14-16 year olds for whom ethnicity and first language data were not collected.

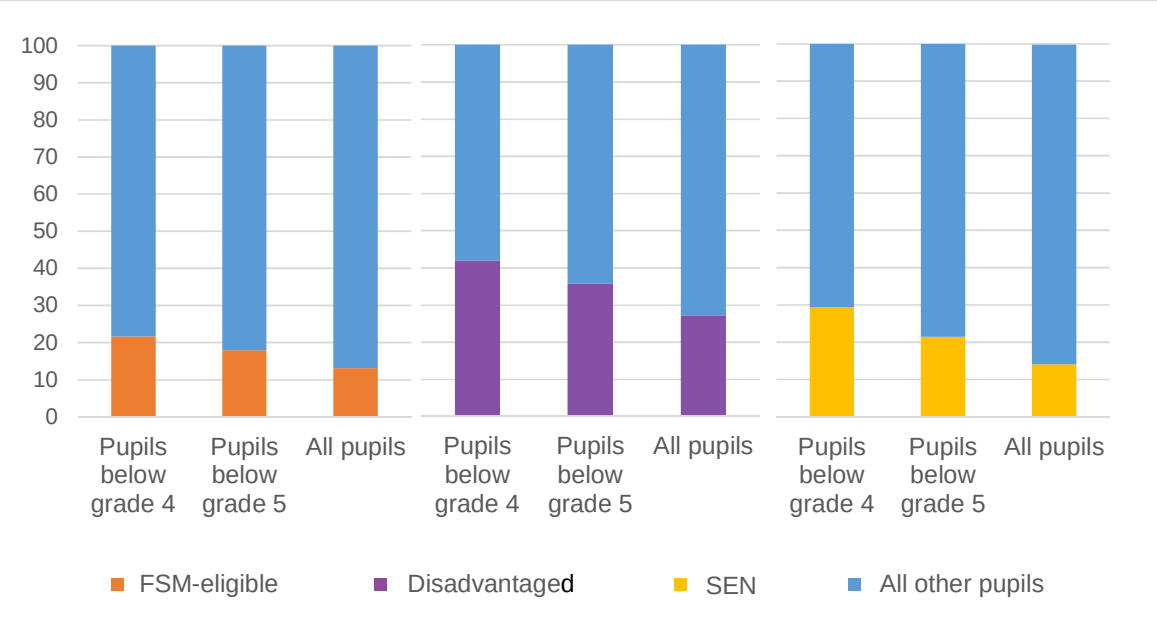
1.4 Those with attainment below grade 5

As well as reporting on the proportion of pupils achieving grade 4 or above, the government has since 2016 reported the proportion of pupils achieving a grade 5 or above, which has been labelled a 'strong pass'. Although the DfE has indicated that a grade 4 will remain the benchmark used to identify which learners are required to continue to study English and maths during the 16-18 phase, the DfE has outlined its ambition to increase the proportion of pupils achieving at least a grade 5. As such, this new, more stringent benchmark is now included among the measures used to judge the performance of schools (Greening 2017). Should this new measure, over time, become seen as a new expected standard by schools, sixth form colleges, employers and universities, what would be the impact on the characteristics of those who are deemed to fall short of this standard?

By comparing the characteristics of those who achieved a grade below 4 and those who achieved a grade below 5 in the 2016/17 cohort it is possible to get an idea of what the effect might be. Such a comparison reveals that, on the whole, the profile of pupils whose attainment is below a grade 5 is not too dissimilar to that of students with attainment below grade 4 (see figure 4). However, because a greater proportion of pupils do not achieve the more demanding grade 5 benchmark, and because the proportion of disadvantaged, FSM and SEN pupils decreases the further you move up the attainment spectrum, defining low attainment with reference to a grade 5 results in a lower concentration of FSM, SEN and disadvantaged pupils among those with low attainment. In other words, since learners falling below the level 5 benchmark make up a larger proportion of all pupils (with 60.4 per cent not meeting this standard compared to 40.9 per cent who do not achieve a level 4 or above), their characteristics are more similar to the characteristics of the entire cohort.

Of course, a change in the characteristics of those failing to meet the benchmark of expected attainment would not be the only consequence if the DfE decided that a grade 5 should become the new 'expected standard' for young people to aspire to at age 16. If it did so, presumably fewer young people would meet the expected standard, potentially restricting access to sixth forms, better quality advanced apprenticeships, and better jobs to a smaller, and higher-attaining, segment of young people.

Figure 4: FSM pupils, disadvantaged pupils and SEN pupils as a percentage of those with attainment below grade 4 and attainment below grade 5, 2016/17 cohort



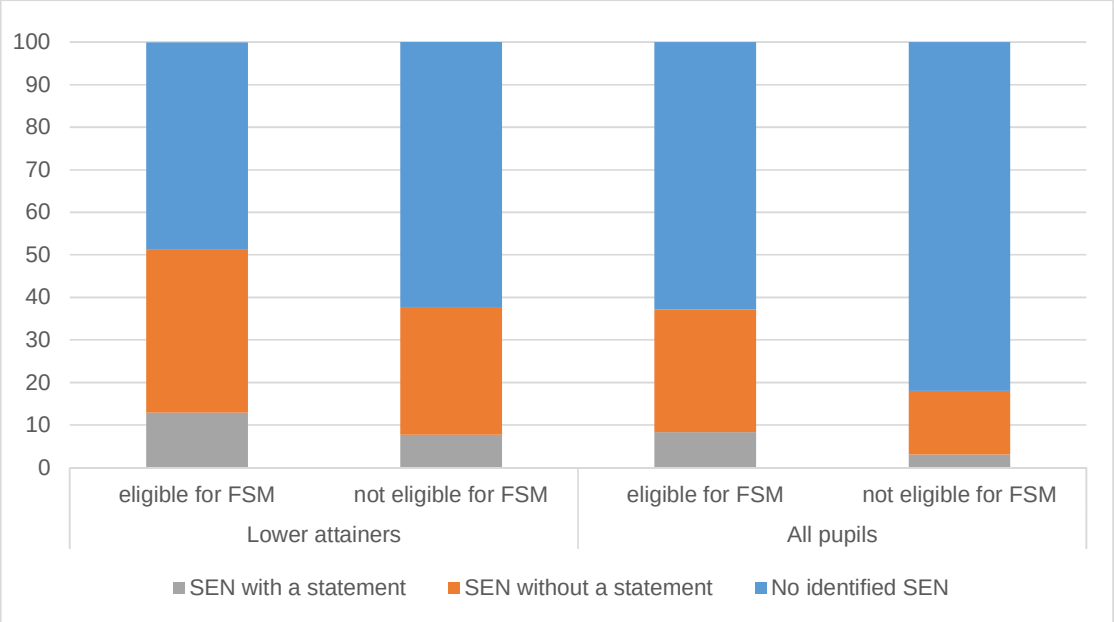
Source: SFR01/2018: GCSE and equivalent results, 2016 to 2017. National characteristics tables. Coverage is pupils in state-funded schools only.

1.5 Intersections between ethnicity, Free School Meal eligibility and special educational needs

When considering the profile of lower attainers, we have thus far looked at characteristics such as gender, ethnicity and disadvantage in isolation, but of course in reality pupils have a combination of characteristics. It is therefore important to consider the extent to which particular characteristics intersect among the overall group of lower attainers.

One intersection that is likely to be important when it comes to low attainment is the degree of overlap between pupils with SEN and FSM status. The link between FSM, as an indicator of disadvantage, and SEN has been documented in the literature, with Gorard (2012) showing that SEN pupils are considerably more prevalent among those who are FSM eligible. The reasons for this are complex. Material disadvantage can be both a cause and a result of SEN and disability. Additionally, SEN and disadvantage are sometimes conflated, with some pupils being identified as having SEN not so much because they have an underlying disorder or learning difficulty but as a result of factors associated with living in poverty, such as problems in their home or family environment or higher levels of household stress due to constrained financial circumstances, which can cause problems with behaviour and learning (Shaw et al., 2016). The higher prevalence of SEN among disadvantaged pupils can clearly be observed in the data for the 2012/13 cohort. While among the entire cohort, 20.8 per cent of pupils had some type of special educational need, this rose to 37.1 per cent among those eligible for FSM. Because pupils who are FSM-eligible and those with SEN both tend to have lower attainment than average, the proportion of FSM-eligible pupils who are also SEN is even higher among lower attainers, as can be seen in figure 5. In total, 51.4 per cent of lower attainers who are FSM-eligible had some type of identified SEN, with 38.5 per cent having SEN without a statement, and 12.9 per cent having a SEN statement.

Figure 5: Percentage of lower attainers and all pupils who have special educational needs, by whether they are eligible for free school meals, 2012/13 cohort



Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2b. Coverage is pupils in state-funded schools only.

To get a sense of what this means for the overall composition of lower attainers, table 4 breaks down the entire group of low-attaining young people in the 2012/13 cohort by whether or not they were FSM-eligible, had identified SEN, or both. From this we can see that just under half of low attaining young people (47.6 per cent) had neither SEN nor eligibility for FSM. This means that 52.4 per cent of low attaining pupils were either SEN or FSM-eligible, or both. As has already been reported in table 2, a total of 23.6 per cent of lower attainers in 2012/13 were eligible for FSM. Table 4 shows that more than half of these (12.1 per cent of the total number of lower attainers in the cohort) also had SEN status. This indicates a substantial overlap between FSM eligibility and SEN status among lower-attaining pupils, much more so than among pupils who did achieve the expected standard, among whom only 1.4 per cent of pupils were both eligible for FSM and had SEN (see table 5). Pupils who both have SEN and FSM status are likely to be a group who face particular challenges when it comes to meeting the expected level of attainment, making it important to understand more about this group of lower attainers. At the same time, it is important to recognise that while FSM eligibility might be correlated with SEN, these two characteristics refer to two very different things, and the nature of the barriers faced by both groups of young people when it comes to achieving a good level of attainment are likely to be quite different. This is especially important considering that, while there is overlap between FSM eligibility and SEN, around half of disadvantaged lower attainers are not SEN, and more than two-thirds of lower attainers with SEN are not FSM-eligible.

Table 4: Composition of lower attainers according to FSM eligibility and special educational needs, 2012/13 cohort

		FSM		
		Yes	No	Total
SEN	Yes	12.1	28.8	40.9
	No	11.5	47.6	59.1
	Total	23.6	76.4	100

Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2b. Coverage is pupils in state-funded schools only.

Table 5: Composition of non-lower attainers according to FSM eligibility and special educational needs, 2012/13 cohort

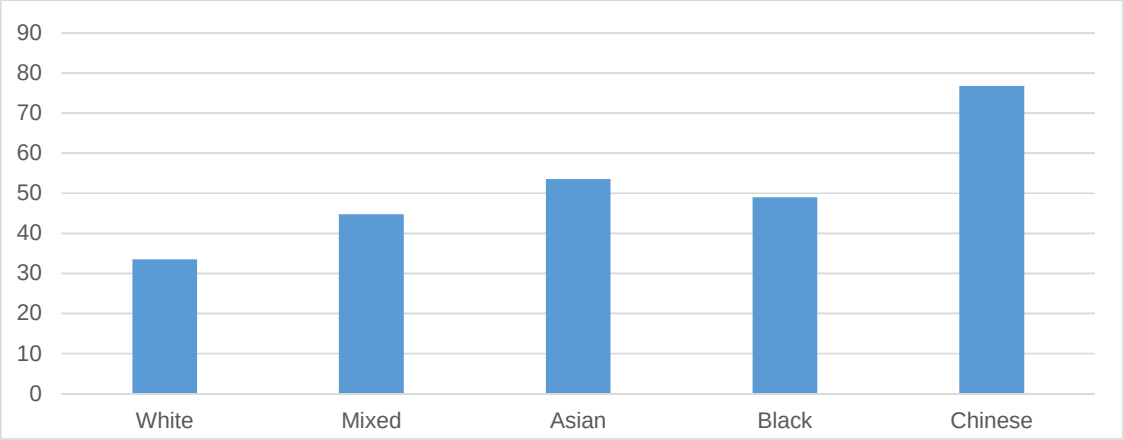
		FSM		
		Yes	No	Total
SEN	Yes	1.4	6.8	8.2
	No	8.1	83.7	91.8
	Total	9.4	90.5	100

Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2b. Coverage is pupils in state-funded schools only.

A second intersection of relevance is that between ethnicity and FSM eligibility. As pointed out by various authors (Kingdon and Cassen, 2010; Strand, 2014), the attainment of white pupils appears to be affected more strongly by disadvantage than that of pupils from other ethnicities[14]. This is confirmed when looking at the data for the 2012/13 cohort, with only 34 per cent of FSM-eligible white pupils attaining a C or above in both English and maths, compared to 45 per cent of FSM-eligible pupils of mixed ethnicity, 54 per cent of FSM-eligible Asian pupils, and 49 per cent of FSM-eligible black pupils (see figure 6).

[14] Although it is of course possible that, rather than pointing to a difference in the 'effect' of disadvantage, the relatively lower attainment of FSM-eligible white pupils is a consequence of a difference in the precise socio-economic make-up of white FSM pupils compared to non-white FSM pupils. The socio-economic heterogeneity of the white population is also greater than that of other major ethnic groups, mostly due to a relatively larger proportion of high-income households (Department for Work and Pensions, 2018). This could explain why the difference between the attainment of FSM and non-FSM pupils is greater within the white ethnic group than in other ethnic groups.

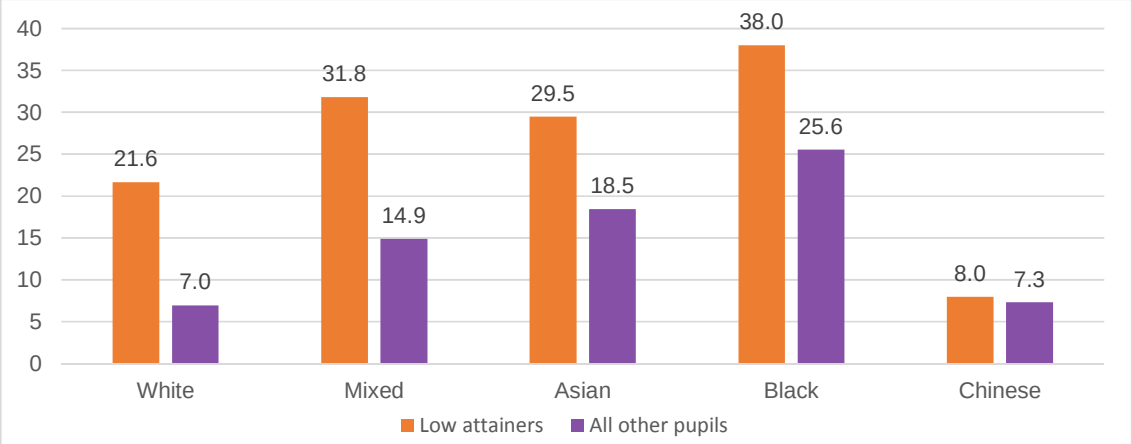
Figure 6: Percentage of FSM eligible pupils achieving A*-C in English & maths GCSEs, by ethnic group, 2012/13 cohort



Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2a. Coverage is pupils in state-funded schools only.

This means that, while overall levels of FSM eligibility are relatively low among young people who are white (13 per cent), among lower attainers nonetheless a substantial proportion of white pupils are FSM-eligible (22 per cent). It also means that, among lower attainers, the difference in FSM eligibility between white pupils and non-white pupils is lower than among those who have the expected attainment (see figure 7). Among those who met the A*-C/9-4 English and maths benchmark, FSM eligibility is two-and-a-half times higher for black pupils than for white pupils (25.6 per cent vs. 7 per cent). But among those who did not achieve a C or above in English and maths, eligibility for FSM is only 75 per cent higher for black pupils than for white pupils (38 per cent vs. 21.6 per cent). Despite this, the proportion of black and other ethnic minority pupils who are FSM-eligible is still substantially higher than the proportion of white pupils eligible for FSM, even among lower attainers. FSM eligibility is particularly high among low-attaining black pupils and those of mixed ethnicity.

Figure 7: FSM eligibility (%) among lower attainers and all other pupils, by ethnic group, 2012/13 cohort

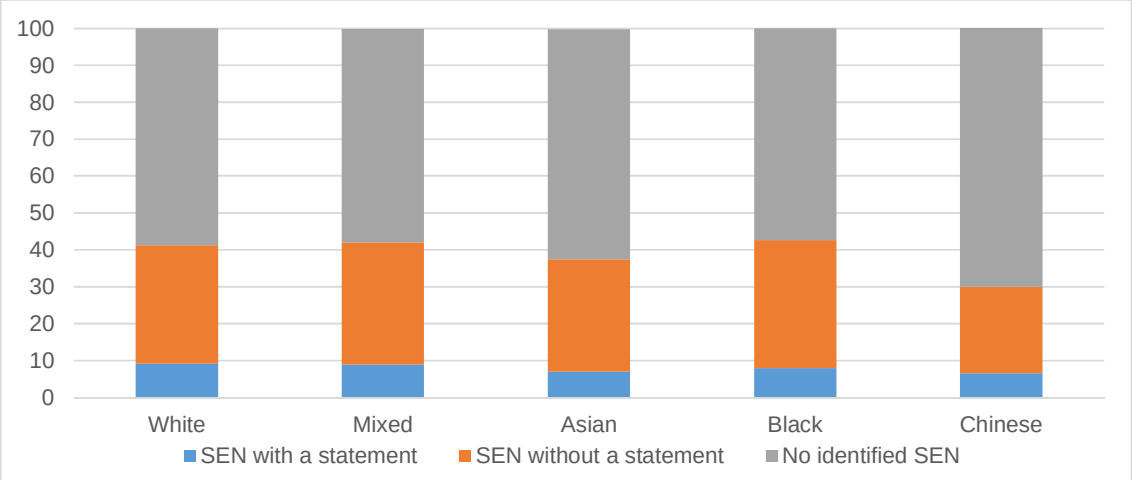


Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2a. Coverage is pupils in state-funded schools only.

It is likely that these patterns vary geographically. For instance, economic disadvantage, and therefore FSM eligibility, tends to be more concentrated in urban settings. The proportion of FSM-eligible pupils therefore may be higher, across all ethnicities, in urban areas.

In figure 8 a further intersection is explored: that between ethnicity and SEN. In contrast to the relationship between ethnicity and FSM eligibility, there are no large differences in the proportion of lower attainers with special educational needs across the major ethnic groups. In most ethnic groups, around two-fifths of low attaining pupils have some form of identified SEN, although for Chinese lower attainers the proportion is slightly lower at just over 30 per cent. The breakdown between those with SEN statements and without statements is also fairly similar across ethnicities, with around 20 per cent of all lower attaining SEN pupils having a statement across all ethnic groups.

Figure 8: Proportion of lower attainers with SEN statement, identified SEN but no statement, and no identified SEN, by ethnic group



Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013. National and local authority tables, table 2c. Coverage is pupils in state-funded schools only.

Finally, we look at the intersection between gender and ethnicity. As shown in table 6, the gender attainment gap is present in all ethnic groups, although it is somewhat larger for some ethnicities than for others. For instance, among black Caribbean pupils the gap between boys and girls is 12.3 percentage points, but for Bangladeshi pupils it is only 7.7 percentage points. The lower gender attainment gap for black Caribbean pupils is consistent with a similar finding by Kingdon and Cassen (2010), but the smaller gap between Bangladeshi boys and girls contrasts with the identification of a larger gender gap among the Bangladeshi group compared to white pupils by these same authors. This may be an indication that the gender attainment gap has narrowed for Bangladeshi pupils, or it may simply be due to slight variations in attainment from year to year. Nonetheless, the gender attainment gap does not differ very strongly between ethnicities. As a result, boys account for around 55 to 60 per cent of lower attainers across all ethnic groups[15].

[15] The exception is lower attainers belonging to the Gypsy/Roma ethnic group, of whom only 48 per cent were boys in the 2012/13 cohort. But this is due to the fact that the overall number of Gypsy/Roma boys in this cohort was much smaller than the number of girls. This appears to be a feature of this cohort specifically rather than reflecting a systematic tendency for Gypsy/Roma boys to be underrepresented among Key Stage 4 pupils – although some research suggests that Gypsy and

Table 6: Attainment of A*-C in English and math by gender and ethnicity, for 2012/13 cohort

	Percentage of boys who achieved A*-C in English and maths	Percentage of girls who achieved A*-C in English and maths	Attainment gap boys versus girls
White	56.1	66	-9.9
white British	56.4	66.3	-9.9
Irish	65.6	74.6	-9.0
traveller of Irish heritage	15.9	22.1	-6.2
Gypsy / Roma	11.9	16.0	-4.1
any other white background	51.6	60.7	-9.1
Mixed	58.8	67.8	-9.0
white and black Caribbean	50.7	60.6	-9.9
white and black African	58.6	69.7	-11.1
white and Asian	66.3	74.7	-8.4
any other mixed background	62.0	70.6	-8.6
Asian	60.1	69.6	-9.5
Indian	71.1	81.5	-10.4
Pakistani	51.9	60.6	-8.7
Bangladeshi	60.8	68.5	-7.7
any other Asian background	59.4	70.4	-11.0
Black	53.8	63.9	-10.1
black Caribbean	48.0	60.7	-12.7
black African	57.4	66.3	-8.9
any other black background	50.3	60.1	-9.8
Chinese	74.2	82.5	-8.3
any other ethnic group	56.2	63.9	-7.7
unclassified	56.6	64.7	-8.1
All pupils	56.5	66.3	-9.8

Source: SFR05/2014: GCSE and equivalent attainment by pupil characteristics: 2013 - National and Local Authority tables (table 1). Coverage is pupils in state-funded schools only.

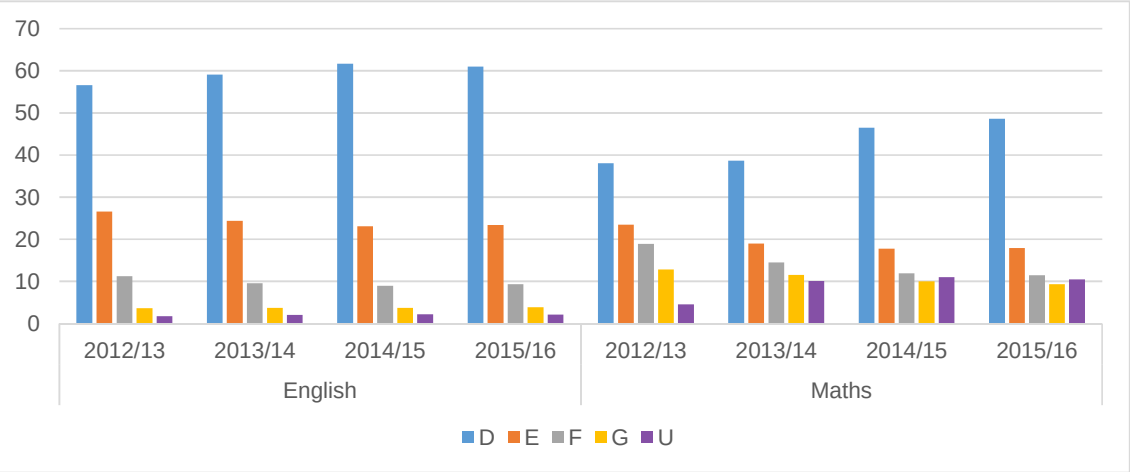
1.6 Variations in attainment among lower attainers

As we have seen in figure 1, in recent years roughly two-fifths of young people had attainment below a C or 4 in either English or maths, or both. But within this group of young people there are of course important variations in attainment, not only when it comes to their exact attainment in English and maths, but also with regards to their attainment in other subjects. The first aspect we can examine in the data is how far short of the C benchmark students tended to fall in English versus maths. Figure 9 plots, for English and maths separately, the proportion of below C pupils who achieved a D, an E, an F, or a G. The graph shows there is a clear difference between English and maths when it comes to the attainment of those who fall below the expected standard. Those with attainment below a grade C in English seem to be clustered relatively close to the C benchmark, with about 60

Roma boys are particularly vulnerable to dropping out of school before the age of 16 (Wilkin et al., 2010).

per cent young people with below expected attainment in English achieving a D at GCSE. Those falling below a C in maths, however, are more broadly spread out across the attainment spectrum, with a higher proportion of pupils achieving very low grades. In the years since 2013/14, around 10 per cent of low attaining maths pupils even received a 'fail' grade. This suggests that, for lower attainers, maths may be a harder subject. It also means that young people who did not meet the expected standard in maths at Key Stage 4 have, on average, further to climb in order to subsequently obtain a C or above.

Figure 9: Attainment of students who did not achieve A*-C in English and maths GCSEs, for 2012/13 to 2015/16 cohorts



Source: SFR01/2014: GCSE and equivalent results: 2012 to 2013 (revised) - Subject and LA tables (table 11), SFR02/2015: GCSE and equivalent results: 2013 to 2014 (revised) - Subject and LA tables (table 11), SFR01/2016: GCSE and equivalent results: 2014 to 2015 (revised) - Subject tables (table S5), and SFR03/2017: GCSE and equivalent results: 2015 to 2016 (revised) - Subject tables (table S3).

A further question which the publicly available data is able to shed light on is: of all young people who did not achieve a C/4 in English and/or maths, what proportion failed to achieve an A*-C in English only, while meeting the expected standard in maths? And vice versa, how many of these young people achieved a C or above in maths, but did not achieve an A*-C in English? In table 7, data is presented to answer this question, based on the 2012/13 and 2013/14 cohorts. These two cohorts have been combined to even out fluctuations over time in the number of pupils who achieve the expected benchmark in English but not maths, and vice versa. We start of by examining, in table 7, all young people in the 2012/13 and 2013/14 cohorts, and breaking down these young people based on their attainment across both English and maths.

Table 7 shows that, out of a total of around 441,000 pupils in the two cohorts who did not achieve a C or above in English and/or maths, just under 92,000 young people achieved a C or above in English but not in maths. Conversely, roughly 102,000 pupils achieved a C or above in maths but not English. And just over 247,000 young people failed to obtain a grade C or higher in both English and maths[16].

[16] Because these figures are derived from data on English and maths progress at the point where young people turned 19, the overall number of lower attainers is not directly comparable to data presented elsewhere on those falling below the expected standard in this cohort.

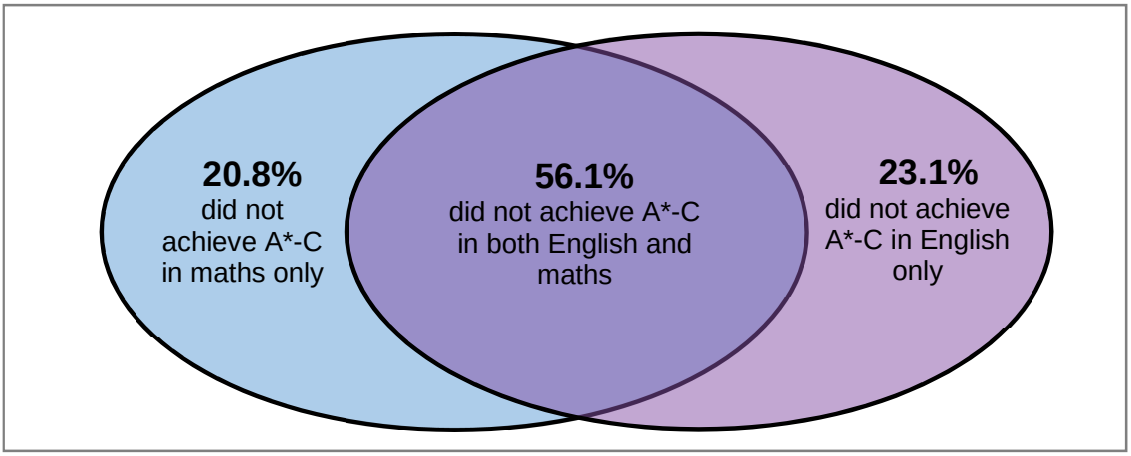
Table 7: Attainment below C in English, maths and both English and maths at age 16, 2012/13 and 2013/14 cohorts combined

Attainment at 16	Number of young people at 16	Percentage of young people at 16
Total number of young people who did not achieve a C or above in both English and maths at age 16	440,606	38.9
Of which:		
Achieved a C in English but not maths	91,603	8.1
Achieved a C in maths but not English	101,846	9.0
Did not achieve a C or above in both English and maths	247,157	21.8
Achieved a C or above in both English and maths	692,870	61.1
Total	1,133,476	100

Sources: Department for Education (2017) Level 2 and 3 attainment in England: Attainment by age 19 in 2016, table 14a, and Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 14a.

In figure 10, we focus on those who did not achieve A*-C in English and/or maths, to show the composition of this group in terms of their attainment across both subjects. Just over half of lower attainers in the 2012/13 and 2013/14 cohorts (56 per cent) had attainment below a C in both English and maths, with just over a fifth (21 per cent) falling below the expected benchmark in maths, but not English, and a roughly similar proportion (23 per cent) only failing to achieve a C in English, but not maths.

Figure 10: Proportion of lower attainers not achieving expected standard in English, maths, and both English and maths, average for 2012/13 and 2013/14 cohorts



Sources: Department for Education (2017) Level 2 and 3 attainment in England: Attainment by age 19 in 2016, table 14a, and Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 14a. Note: data refers to those in state schools only.

Figure 10 implies that, within the overall segment of lower attainers, differentiations can be made between more specific attainment profiles. Considering young people's attainment in English and maths alone, it shows that lower attainers can be divided into three separate groups: a) a majority who fall below the expected benchmark in both English and maths; and b) two more or less equally-sized but smaller groups of young people who either do reasonably well in English, but not maths, or do reasonably well in maths, but not English. This fits with findings from a latent class analysis of GCSE attainment by Playford and Gayle (2016). This study identified a group of pupils who achieved high grades (A-C)[17] in the majority of subjects and a group which performed poorly in most subjects, but also two smaller groups of young people with middling-levels of overall attainment. The first group included a reasonably high proportion of pupils achieving A-C in science and maths and the second group included a reasonably high share of pupils achieving A-C in English and arts and humanities. Although the data published by the DfE is not able to shed light on how well those not attaining a C or above in English and maths perform in other GCSE subjects, it may well be that the two smaller groups identified in figure 9 have different patterns of attainment across the range of GCSE subjects. Those who achieve a C or above in English but not in maths may, on the whole, do better in humanities subjects or modern languages, whereas those who achieve an A*-C in maths, but not English, may have good attainment in science, but do less well in humanities and modern languages. This is something that will be explored further in the next stages of the project through analysing subject-level attainment data in the NPD.

As well as the balance between lower attaining students' attainment in English versus maths (which may or may not be indicative of a wider divide between those more adept at arts and humanities and those more adept at science), a further aspect that can be used to differentiate lower attainers is the number of A*-C grades they obtain in subjects other than English and maths. The data for 2013/14 and 2014/15 show that a substantial minority of young people who did not achieve an A*-C in English and/or maths nonetheless managed to obtain 5 or more GCSEs at grades A*-C. Of all those with below C attainment in English

[17] The study uses data for the cohort completing GCSEs in 1992, before the A* grade was introduced.

and/or maths in the two cohorts, about a quarter – 23.4 per cent and 25.1 per cent, respectively – achieved 5 or more A*-C grades at GCSEs or equivalent Level 2 qualifications[18]. This suggests that these young people had a good level of attainment overall but for some reason did less well in either English or maths (or both) meaning they missed out on a C in one or both of these subjects. This group of young people could be considered to possess a further distinct attainment profile, and the characteristics and trajectories of these learners are likely to differ in certain respects from those who achieved few C grades across the board. Unfortunately the published statistics do now allow us to compare the characteristics of lower attainers with different attainment profiles across English and maths, but this is something which we will be able to explore during the next phase of the project through the analysis of the NPD/ILR data. A further important question in this regard is the extent to which not having a C or above in either English and/or maths, despite otherwise having a good level of attainment, is a hindrance to young people's educational progression during the 16-18 phase. Findings by Machin et al. (2018) suggest that narrowly missing out on a C in English – aside from any differences in ability – reduces the probability of enrolling in, and completing, Level 3 qualifications. However, to date, we do not know whether this effect differs between those with overall lower levels of attainment and those with good attainment in most subjects but less good attainment in English.

As well as lower attainers who have relatively good grades across their other subjects, there are some lower attainers whose achievement is particularly poor across the range of GCSE subjects. One measure of such overall poor academic performance is the proportion of lower attainers who do not achieve 5 or more passes (A*-G or 9-1 grades), including in English and maths. Overall, in the 2013/14 and 2014/15 cohorts combined, 8.8 per cent of all pupils failed to achieve five or more passes including English and maths, which equates to 21.4 per cent of lower attainers[19]. These young people may have achieved some passes in certain subjects, but either only managed to achieve a maximum of four passes, or if they did achieve five passes, they did not pass English and/or maths.

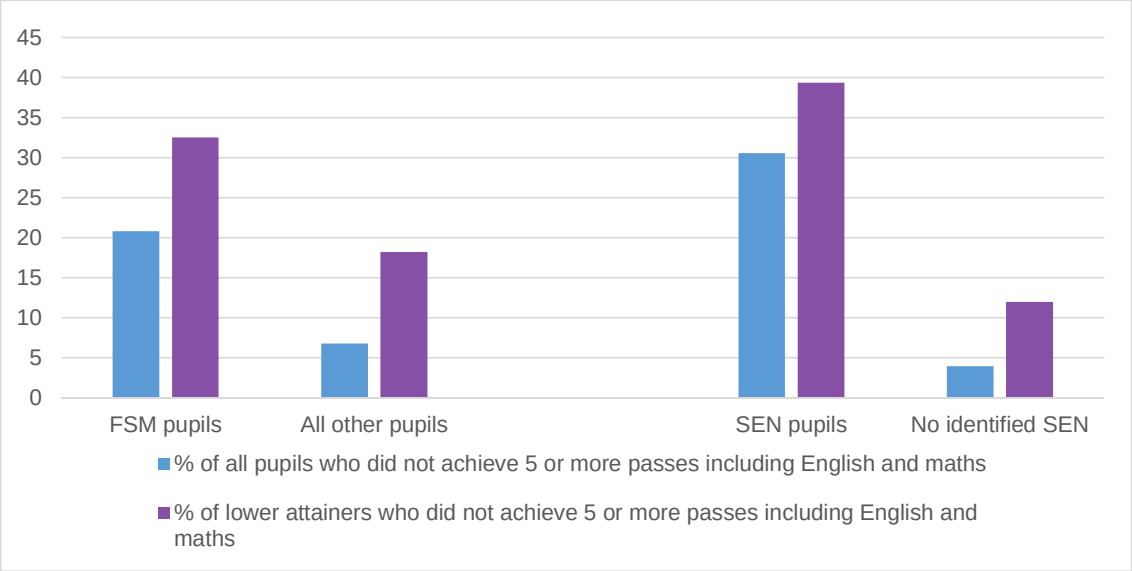
Unlike the characteristics of those who achieved a C in English but not in maths, and vice versa, which cannot be analysed using publicly available data, we *are* able to say something about the characteristics of those who did not achieve five or more passes including English and maths. The share of lower attainers who fell below this benchmark – referred to hereafter as the 'five passes benchmark' – varies between pupils with different characteristics. In general, characteristics associated with larger shares of lower attainment also tend to be associated with larger shares of young people who did not meet the five passes benchmark. Among FSM eligible pupils, for instance, a total of 20.8 per cent did not achieve 5 or more passes including English and maths (equating to 32.5 per cent of lower attainers), compared to 6.8 per cent among all pupils not eligible for Free School Meals (18.2

[18] In the 2012/13 cohort the percentage of lower attainers in English and maths who nonetheless achieved 5 or more A*-Cs was even higher, at 56.5 per cent. This is most likely because up to this point pupils could be entered in a wide range of non-GCSE qualifications which were counted as equivalent to GCSEs, with some non-GCSE qualifications even counted as equivalent to four GCSEs. This was used by some schools to increase the number of pupils who met the 5+ A*-C measure. Following the introduction of the Wolf reforms in 2013/14, this practice was curbed by limiting the number of non-GCSE qualifications that were counted towards school performance measures to a maximum of two, and counting each non-GCSE qualification as equivalent to one GCSE only.

[19] This assumes that all those who did not achieve five passes including English and maths also failed to achieve a C or above in either English or maths (or both) and therefore fall under the definition of 'lower attainer'. It is technically possible for someone to not achieve the '5 or more passes including English and maths' benchmark but still have achieved A*-C in both English and maths, although it is probably not common.

per cent of non FSM-eligible lower attainers). Although among all young people with no identified SEN, only 4 per cent did not achieve the five passes benchmark (equating to 12 per cent of lower attainers without SEN), among those with SEN, a total of 30.5 per cent (or 39.3 per cent of lower attaining SEN pupils) were not able to achieve this benchmark (see figure 11). In other words, as well as lower attainment (defined as attainment below a grade C/4 in English and maths) being more concentrated among those who are FSM-eligible and those with SEN, non-achievement of the five passes benchmark is also particularly prevalent among these groups of young people, especially among those with SEN. In fact, SEN pupils make up 62.3 per cent of young people who did not achieve five or more passes including English and maths.

Figure 11: Young people who did not achieve five or more passes including English and maths, as a percentage of all pupils and as a percentage of lower attainers, 2013/14 and 2014/15 cohorts



Sources: SFR06/2015 - GCSE and equivalent attainment by pupil characteristics: 2013/14: national and local authority tables (table 1) and SFR01/2016 - Revised GCSE and equivalent results in England: 2014 to 2015: characteristics national tables (table 1).

Part Two What happens to lower attainers during Key Stage 5?

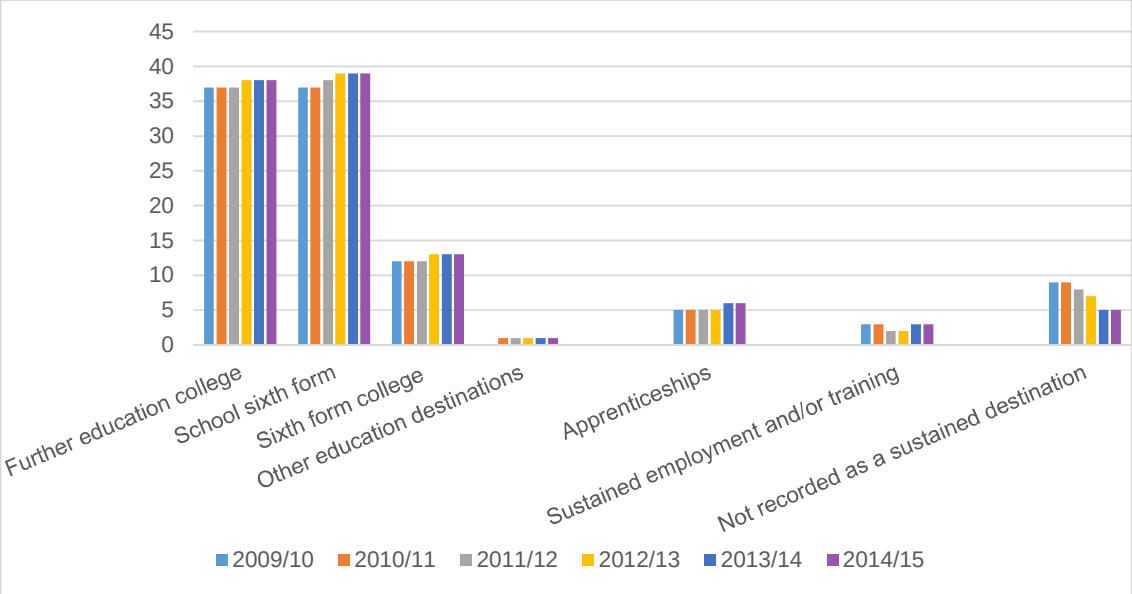
2.1 Transitions after Key Stage 4

Up to this point, we have focused on young people's educational attainment at the end of Key Stage 4 and examined the characteristics of those with lower attainment compared to other young people – as well as exploring differences in attainment *within* this lower-attaining group. We now examine what happens to lower attainers after they sit their GCSE exams at age 16. To provide some context for this, we first look at the post-16 destinations for all learners using data published by the DfE on the destination of young people in the academic year after completing Key Stage 4[20]. These show that, from 2010 to 2015, the pathways taken by young people at age 16 have been fairly stable (see figure 12). The two dominant destinations are: a) school sixth form – accounting for 37-39% of young people; and b) general further education colleges – accounting for 37-38% of young people. A much smaller proportion (12-13%) go to sixth form colleges, and around 5-6% take up an apprenticeship. It has to be noted, however, that the dataset from which the destination statistics are derived does not always allow sixth form colleges to be differentiated from general further education colleges. This is especially a problem where sixth form colleges are part of a larger FE provider offering mostly vocational qualifications. This means that students who are attending a sixth form college that forms part of a larger FE consortium are often classified as being at a general FE college, inflating the proportion of learners in FE colleges, and underestimating the proportion in sixth form colleges to some unknown degree.

Over the six years from the 2009/10 to the 2014/15 cohort, the proportion of young people recorded as not being in sustained education, employment or training (NEET) during the months October to March of the year following the end of Key Stage 4 has fallen from 9% to 5%. This decrease seems to be accounted for mainly by an increase in the number of young people continuing in some form of education, as over the same period the proportion going to school sixth forms, FE colleges, or sixth form colleges has increased. There also seems to have been a slight increase in the share of young people starting an apprenticeship after completing Key Stage 4. This is likely to be at least partly due to the phased introduction in 2013 and 2015 of the Raising of the Participation Age legislation. Whereas pupils who completed Key Stage 4 in 2013 had to stay in learning until 17, those completing Key Stage 4 in 2014 were the first cohort to have to continue in some form of education or training until 18.

[20] For instance, for pupils completing Key Stage 4 (and taking their GCSEs) in the academic year 2009/10, DfE reports destinations in the academic year 2010/11.

Figure 12: Destinations in the academic year after completing Key Stage 4, for cohorts completing Key Stage 4 in 2009/10 to 2014/15



Source: Department for Education (2017) Destinations of key stage 4 and key stage 5 students, England, 2015/16. SFR 56/2017, 12 October 2017 (Table 1: Sustained destinations after key stage 4. England, 2010/11 - 2015/16 state-funded mainstream schools. Sustained participation is defined as in education/employment during the period from October to March of the academic year following Key Stage 4.

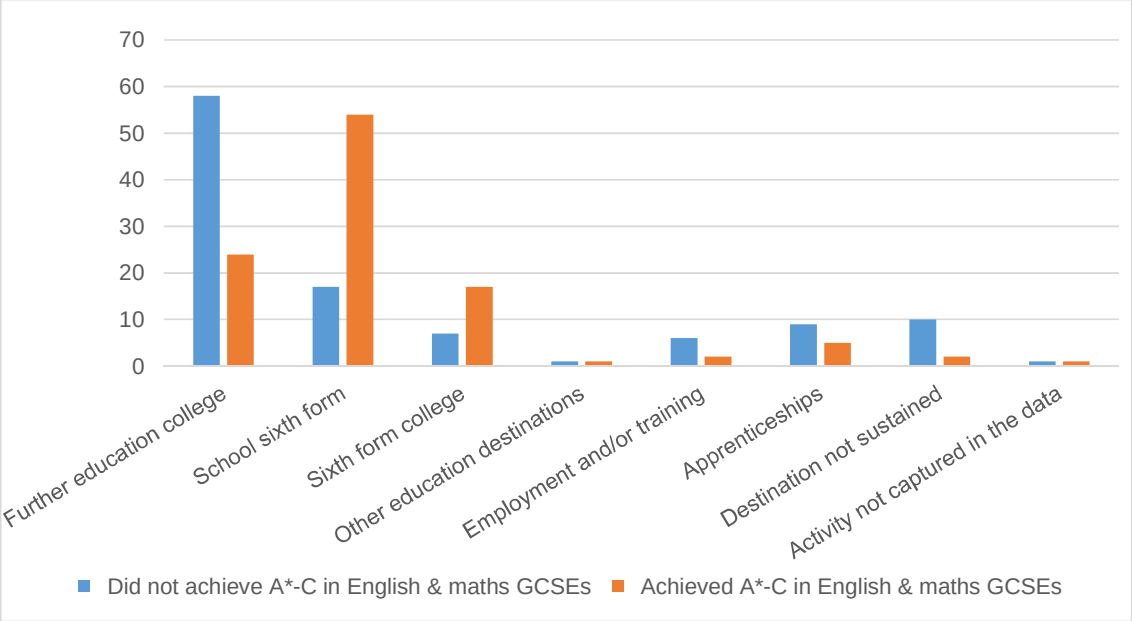
The above data refer to all young people who completed Key Stage 4. So how do the destinations of young people who did not attain an A*-C in English and maths differ from those who did? In 2017, the DfE published experimental statistics about the destinations of young people following their completion of Key Stage 4 in 2014/15[21]. An advantage of these statistics is that the destinations of lower attainers are provided alongside the destinations of young people who did meet the expected standard in English and maths. Comparing the two groups in figure 13 shows that lower attainers were more likely to enter employment or training (6 per cent versus 2 per cent for those who had achieved the expected standard), and to start an apprenticeship (9 per cent versus 5 per cent). Worryingly, young people who did not achieve at least a grade C in English and maths were also much more likely to not be in sustained education or employment following Key Stage 4, with 10 per cent of this group falling into this category compared to only 2 per cent of those who did attain a C or above. The 10 per cent figure for low attaining young people is surprisingly high, especially considering that the definition of a 'sustained' education or employment destination is not very strict. To be considered to have be in a sustained destination a young person only has to be observed in education, employment or training for the first six months of the academic year following Key Stage 4. This means that this definition leaves out those young people

[21] Equivalent destination statistics for earlier and later cohorts are unfortunately not available, although it is possible to derive destinations for those who did not achieve a C or above in English and those who did not achieve a C or above in maths from statistics on progress in English and maths at the end of the 16-18 phase, at least for the 2012/13 and 2011/12 cohorts (SFR15/2016. Level 1 and 2 attainment in English and mathematics by students aged 16-18: academic year 2014/15, and SFR35/2015 Level 1 and 2 English and maths: 16 to 18 students, 2013 to 2014). However, in these statistical tables educational institutions are categorised slightly differently than in the destination tables from which the data in figure 15 are taken, and since separate statistics are presented for those with below C attainment in English and those with below C attainment in maths, the figures from these statistical tables are not directly comparable to those in figure 15.

who study at school or college or are in an apprenticeship for six months but then leave before completion. A recent report about learners who enrol on Level 1 and Entry Level courses after Key Stage 4 suggests that those who move into NEET status mostly do so within the first year, but there are some who complete a full year of education or training and subsequently have a spell of being NEET (de Coulon et al., 2017).

Furthermore, figure 13 shows that lower attainers are much more likely to attend a general further education college than other learners, and less likely to attend either a school sixth form or a sixth form college (although the proportions reported in figure 13 are subject to the same caveat regarding the potential misreporting of students in FE colleges and sixth form colleges discussed above).

Figure 13: Destinations in the academic year after completing Key Stage 4, by GCSE English and math attainment, for cohort completing Key Stage 4 in 2014/15



Source: Department for Education (2017) SFR 56/2017: Key stage 4 destination measures 2015/16 - National table NA22a: Pupil destinations after completing key stage 4 by disadvantage status and prior attainment group, state-funded mainstream schools. Values don't add up to 100 per cent because a small number of pupils appear in more than one of the categories.

2.2 Attainment at the end of the 16-18 phase

In the previous section we looked at the types of providers that young people attend after completing Key Stage 4, and how destinations differ for lower attainers compared to other young people. We now focus on the educational outcomes young people achieve at the end of the 16-18 phase. To start with, it is useful to consider the attainment of all young people on completion of the 16-18 phase, to get a sense of the overall proportions of young people who achieve Level 3 attainment, Level 2 attainment, or who finish the 16-18 phase having achieved Level 1 attainment or below. For an explanation of the different attainment levels see the box below.

Attainment levels

In published national attainment statistics, post-16 attainment is divided into levels, with 'attainment at age 19' statistics focusing specifically on Level 2 attainment and Level 3 attainment. Learners are able to reach Level 2 and Level 3 attainment in a variety of ways.

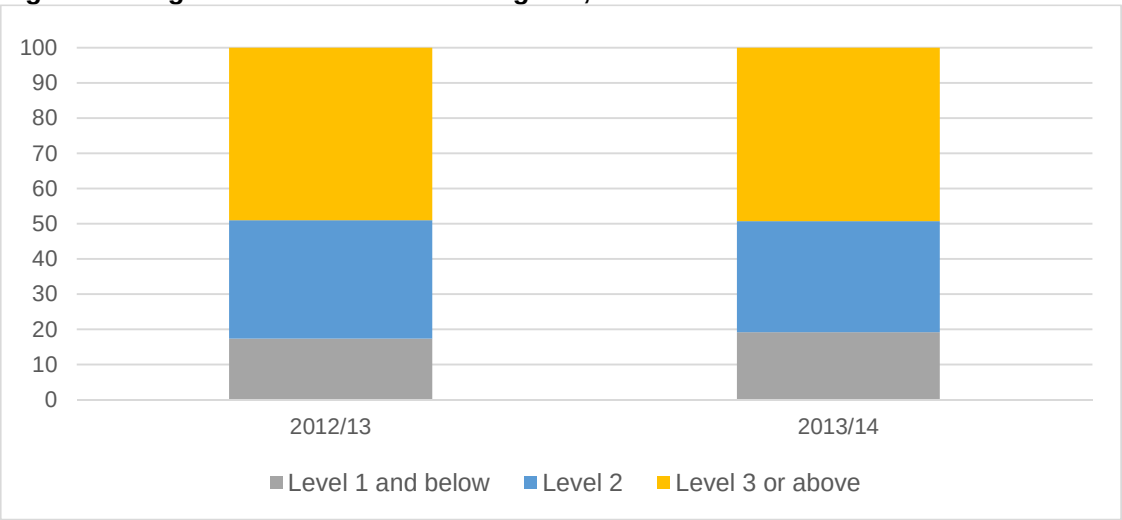
Level 2 The most common way to achieve Level 2 attainment is through obtaining five or more GCSEs at grades 9- 4 or A*-C. Alternatively, Level 2 can be achieved through achieving a pass in a Level 2 NVQ, a pass in a Level 2 vocationally-related qualification with a minimum 595 guided learning hours, or a pass in an intermediate apprenticeship. Other qualifications, such as GNVQs and vocational qualifications with fewer than 595 guided learning hours, count towards attainment at Level 2 but need to be supplemented with other qualifications for a young person to achieve full Level 2 attainment.

Level 3 The most common way to achieve Level 3 attainment is through obtaining two or more A levels at grades A-E. Alternatively, Level 3 attainment can be achieved through obtaining at least four AS levels at grades A-E, a pass in the International Baccalaureate, a pass in a Level 3 NVQ, a pass in a Level 3 vocational qualification with at least 595 guided learning hours, or a pass in an advanced apprenticeship.

Those who did not achieve any of these qualifications failed to meet the criteria for Level 2 attainment and therefore have an attainment level of, at best, Level 1.

Figure 14 shows the proportions of young people having achieved each level of attainment by the end of the academic year in which they turn 18 (so two years after completing Key Stage 4). As shown, almost half of young people have achieved Level 3 attainment by age 18, with around a third having achieved Level 2 attainment, and the remainder (just under a fifth) having achieved at most Level 1 attainment.

Figure 14: Highest attainment level at age 18, for 2012/13 and 2013/14 cohorts



Source: Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 6.

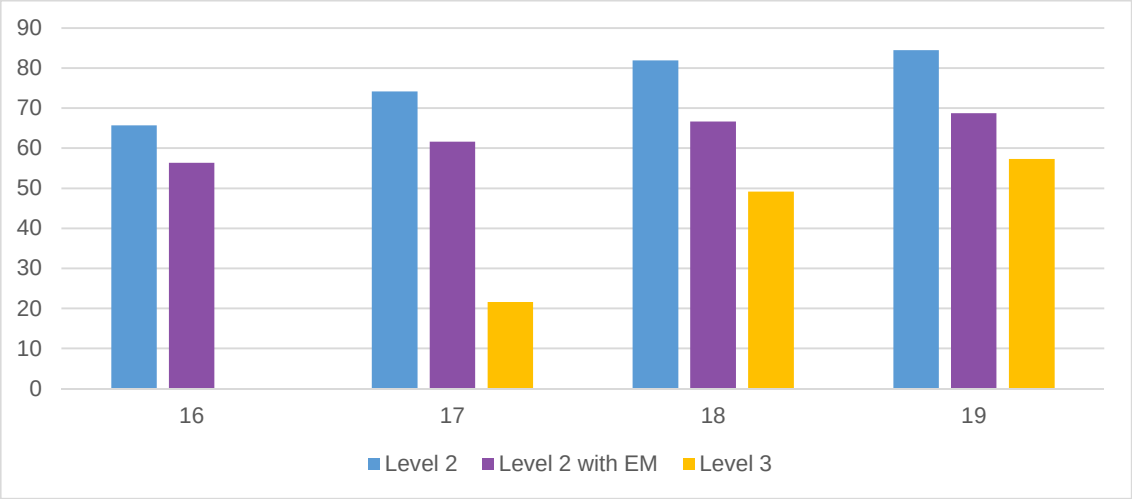
Many young people continue to study beyond 18. This means that the overall attainment of each cohort continues to increase after age 18. Figure 15 illustrates this by showing the proportion of young people who had achieved a particular level of educational attainment by age 16, 17. 18 and 19. These figures are based on the 2012/13 and 2013/14 cohorts. At the end of Key Stage 4, when young people are typically 16, around two-thirds of learners had already achieved the Level 2 attainment measure (through obtaining 5 or more GCSEs at A*-C). A slightly smaller proportion (56 per cent) had achieved 5 A*-Cs including English and maths. This relates back to the fact that there is a small share of young people who achieve 5 A*-Cs at GCSE but do not get a C in either English and/or maths, as discussed in section 1.6. At the end of the following academic year, in which learners turn 17, almost three-quarters had achieved Level 2 attainment or above, with the proportion of those who had also achieved a Level 2 qualification in English and maths increasing to just over three-fifths by this stage. By age 18, around 82 per cent had achieved at least Level 2 attainment. For a small proportion of learners, however, it can take until age 19 to achieve attainment at Level 2, as judged by the fact that Level 2 attainment increases by another 2.6 percentage points between age 18 and 19 to just under 85 per cent. The proportion of young people who had achieved at least Level 2 attainment including English and maths similarly continues to increase slightly beyond age 18 suggesting that a small number of learners continue to pursue Level 2 English and maths qualifications between the ages of 18 and 19.

By age 16 no learners had achieved Level 3 attainment, which is not surprising as Level 3 qualifications such as A levels tend to be studied from Key Stage 5 onwards, but by age 17 just over a fifth of young people had achieved Level 3 attainment[22]. The proportion of learners with Level 3 attainment increases to 49 per cent by age 18, and then continues to increase by a further 18 percentage points to 57 per cent by age 19. This suggests that for a

[22] It is worth noting that, while A levels generally take two years to complete, there is greater variation in the length of vocational Level 3 courses, with some taking two years but others taking less than two years.

substantial number of young people, achieving Level 3 attainment takes more than two years.

Figure 15: Percentage of young people who achieved at least Level 2, Level 2 with English and maths, and Level 3 at age 16, 17, and 18 (average for 2012/13 and 2013/14 cohorts)



Source: Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 6.

Now that we have a sense of the general levels of attainment of young people at age 18 and 19, we can have a look at how this differs between those who achieved an A*-C in maths and English at the end of Key Stage 4, and those who did not achieve this benchmark. In figure 16 we report attainment at age 19 for lower attainers and all other young people. The difference between the two groups can be clearly seen. Virtually all (97.5 per cent) of those who met the expected standard in English and maths had achieved at least Level 2 attainment by 19[23], with 19.2 per cent having achieved Level 2 as their highest level of attainment, and 78.4 per cent having achieved Level 3 attainment or higher[24]. In contrast, only 63.8 per cent of those with below A*-C attainment in English and maths had achieved Level 2 attainment or higher by age 19, with about two-fifths having achieved Level 2 as their highest attainment and just under a quarter having achieved Level 3 attainment or above.

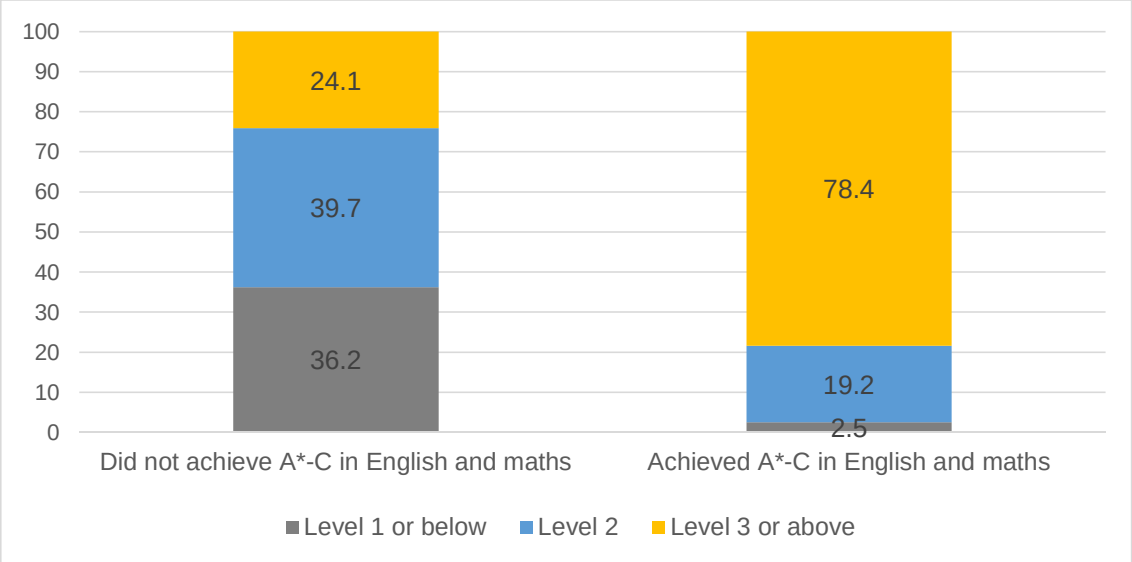
The remainder (36 per cent) of lower attaining young people had achieved, at best, attainment at Level 1. These group is likely to include learners who achieved very few A*-C grades at GCSE. de Coulon et al. (2017) report that, in the 2011 cohort, almost 70 per cent of young people on 'below Level 2' courses did not have a single GCSE at A*-C. That lower attainers are less likely to achieve Level 3 attainment is perhaps not surprising, as having a range of good GCSEs including English and maths is often an entry requirement for being

[23] A small proportion (about 2.4 per cent, although the actual figure may be slightly higher or lower due to rounding in the tables from which this figure was derived) did not achieve Level 2 attainment despite achieving A*-C in both English and maths at the end of Key Stage 4. Presumably this means that these young people were not able to achieve three further A*-C grades at GCSE.

[24] These figures have been derived by combining and transforming published statistics and may not be entirely accurate due to rounding. The proportion of 19 year olds with Level 1 attainment or below is calculated by subtracting the number of people with Level 2 and Level 3 attainment from the total number of young people in each cohort.

accepted onto Level 3 courses such as A-levels, AS-levels and some Level 3 vocational courses. But the relatively high proportion of lower attainers who reach age 19 without having progressed beyond Level 1 is a cause for some concern. For some young people, for instance those with certain types of special educational needs, a Level 1 qualification is perhaps all that can realistically be expected and may represent a good educational outcome given their prior attainment. For instance, only 42 per cent young people with moderate learning difficulties achieved Level 2 attainment or higher by age 19, which means the remaining 58 per cent achieved at best Level 1 attainment[25]. However, around half of 19 year olds with Level 1 attainment or below do not have special educational needs of any kind. Some of these young people might go on to find good jobs and have rewarding careers, but for others this relatively low level of educational attainment could form an obstacle to finding (good quality) employment, especially in cases where employers place more importance on formal qualifications than on wider considerations of job suitability. Developing a better understanding of what prevented these young people from achieving more than Level 1 attainment will therefore be important to identifying ways in which the 14-19 education system could better serve this group of lower attaining learners.

Figure 16: Highest qualification level at age 19, for lower attainers and all other learners, average for 2012/13 and 2013/14 cohorts.



Sources: Department for Education (2017) Level 2 and 3 attainment in England: Attainment by age 19 in 2016, tables 14c and 14d, and Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, tables 14c and 14d. These figures are derived from data about English and maths attainment at age 19 for learners with different Levels of attainment at age 16 and age 19, and relate to young people in state schools at academic age 15 only.

Although a sizable proportion of lower attainers only achieved Level 1 attainment or below by age 19, the majority had achieved attainment at Level 2 or higher by this age. What types of qualifications did these young people obtain? We first look at the types of qualifications low attaining young people obtained in order to reach Level 2 attainment. As shown in table 8 and as discussed in section 6, about a quarter of lower attainers had already achieved Level 2 attainment by age 16 through obtaining 5 or more A*-C grades at GCSEs (or

[25] Based on same statistical release as that used for figure 24.

equivalent qualifications). Of those who achieved Level 2 attainment for the first time between the ages of 16 and 19, the largest group did so through obtaining vocational qualifications (22.7 per cent). About 5.4 per cent of lower attainers completed a Level 2 apprenticeship. A small proportion of lower attainers achieved Level 2 through obtaining 5 or more GCSEs at A*-C. This group probably includes young people who resat GCSEs in subjects in which they had not achieved a C during Key Stage 4 (including English and maths). Finally, 7.7 per cent of lower attainers reached Level 2 through achieving a Level 3 qualification without first having achieved separate Level 2 qualifications. These young people are likely to have had good general levels of attainment, despite not having achieved a C or above in English and/or maths, which meant they were able to enter Level 3 qualifications directly after completing Key Stage 4 and complete their Level 3 courses by age 19.

Table 8: Qualification types obtained by lower attainers who achieved at least Level 2 attainment by age 19, average for 2012/13 and 2013/14 cohorts

Total percentage of lower attainers that achieved Level 2 attainment by 19	63.8
Had already attained Level 2 at age 16	24.6
Attained Level 2 for the first time between age 16 and 19	39.2
By virtue of achieving:	
5+ GCSEs at A*-C	3.2
Apprenticeship (Level 2)	5.4
Vocational Qualification outside of Apprenticeship	22.7
Level 3 qualifications[1]	7.7
Combination of qualifications	0.3
Did not achieve Level 2 attainment	36.2
Total	100

Sources: Department for Education (2017) Level 2 and 3 attainment in England: Attainment by age 19 in 2016, table 14c, and Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 14c. Figures relate to qualifications obtained by those who did not achieve A*-C in English and maths at Key Stage 4 but who had achieved at least Level 2 attainment by age 19.
[1]Only includes young people who attained a Level 3 qualification without first attaining Level 2 attainment.

We now examine the qualifications obtained by lower attainers who achieved Level 3 attainment by age 19. These are a smaller sub-section of the group in table 8. Most of the young people who achieved Level 3 attainment first achieved Level 2 attainment, but some, as we've seen in table 8, progressed straight to Level 3 after completing Key Stage 4. In table 9 all of these young people are aggregated together and data is presented on the types of qualifications they obtained to reach Level 3. As already shown in figure 19, a total of 24.1 per cent of lower attainers achieved Level 3 attainment by age 19. Among these learners, by far the most common type of Level 3 qualifications are vocational qualifications, with 18.6 per cent of lower attainers achieving these by age 19. Four per cent of lower attainers achieved two or more A levels by age 19. Only 1.2 per cent of lower attainers achieved a Level 3 apprenticeship by age 19, which is a much smaller percentage than the

5.4 per cent of lower attainers who completed intermediate (Level 2) apprenticeships (as shown in table 8).

Overall, both among lower attainers who go on to achieve Level 2 qualifications, and lower attainers who go on to achieve Level 3 qualifications by 19, by far the most common qualification type appears to be vocational qualifications, with a smaller proportion completing apprenticeships.

Table 9: Qualification types obtained by lower attainers who achieved at least a Level 3 qualification by age 19, average for 2012/13 and 2013/14 cohorts

Total percentage of lower attainers that achieved a Level 3 qualification by 19	24.1
By virtue of achieving:	
A Levels	4.0
AS Levels	0.3
Apprenticeship (Level 3)	1.2
Vocational Qualification outside of Apprenticeships	18.6
International Baccalaureate	0.0
Other	0.0
Did not attain Level 3 qualification	75.9
Total	100

Sources: Department for Education (2017) Level 2 and 3 attainment in England: Attainment by age 19 in 2016, table 14d, and Department for Education (2018) Level 2 and 3 attainment in England: Attainment by age 19 in 2017, table 14d. Figures relate to qualifications obtained by those who did not achieve A*-C in English and maths at Key Stage 4 but who had achieved at least Level 3 by age 19. Some small percentages may appear as zero due to rounding.

Level 2 and Level 3 attainment data are also published separately for those who did not achieve a C or above in English and those who did not achieve C in maths. Perhaps because there is a substantial amount of overlap between these two groups (see figure 10), there is not a great deal of difference in the outcomes achieved by those not achieving a grade A*-C in English and those not achieving a grade A*-C in maths. For instance, 59.7 per cent of young people who failed to obtain a C or above in English at age 16 had achieved Level 2 attainment by age 19, and this percentage was 58.7 per cent for young people not achieving a C or above in maths. Similarly, the proportion of those with below C attainment in English who achieved Level 3 attainment by age 19 was almost equal to the proportion of those with below C attainment in maths who achieved Level 3 by age 19, at 19.9 per cent and 19.4 per cent, respectively.

2.3 English and maths progress during the 16-18 phase

As well as studying towards Level 1, Level 2 or Level 3 qualifications in their chosen subject area, young people who did not achieve at least a C/4 in English and maths GCSEs at the end of Key Stage 4 have since 2014 had to continue these subjects during the 16-18 phase. The DfE publishes statistics on the progress made by these learners at the end of the 16-18

phase. These statistics only include those studying at FE colleges, sixth form colleges and schools (including independent schools, university technical colleges and studio schools), as apprenticeships and traineeships are not subject to the same conditions of funding related to English and maths. To measure the performance of 16-18 institutions in terms of enabling progress in English and maths, a point-score, ranging from 0 to 8, is given to each young person to quantify their attainment at Key Stage 4, and again at the end of the 16-18 phase. The points awarded for each level of attainment are shown in figure 17.

Figure 17: Point scores awarded for each qualification type, for the purposes of calculating progress English and maths measures

Points awarded	Grade achieved					
	Reformed GCSEs (9-1)	Legacy GCSEs (A*-G)	Functional skills	Free standing maths	ESOL	AQA use of maths
8	Grade 9	A*				
7.7	Grade 8					
7	Grade 7	A				
6.3	Grade 6					
6		B				
5.7	Grade 5					
5	Grade 4	C				
4	Grade 3	D	L2	L2 (all grades)	L2 (all grades)	A*/A/B/C
3	Grade 2	E				
2.5			L1	L1 (A-C)	L1 (D/M)	D/E
2		F				
1.7				L1 (D)		
1.5					L1 (pass)	
1	Grade 1	G				G
0.8				L1 (E)		
0.4			Entry Level	Entry Level	Entry Level	
0	Fail	Fail	Fail	Fail	Fail	Fail

Source: Department for Education (2018) SFR03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables.

The difference between these point scores is used as a measure of how much progress young people have made during the 16-18 phase. If young people do not enter any approved exams in English or maths during the 16-18 phase, they are given an automatic score of -1 at the end of this phase for the calculation of these institution-level progress measures. To enable analysis of the progress made by young people who did take at least one approved exam, those who did not enter any examinations are separated out from the rest in the figures below.

Starting with progress in English, figure 18 shows the proportion of students whose point score increased (meaning they improved on their attainment at age 16), those whose point score remained the same, and those whose point score decreased during the 16-18 phase. The first set of columns on the left of the graph summarises progress for all young people who did not meet the expected standard in English, and the remaining sets of columns show

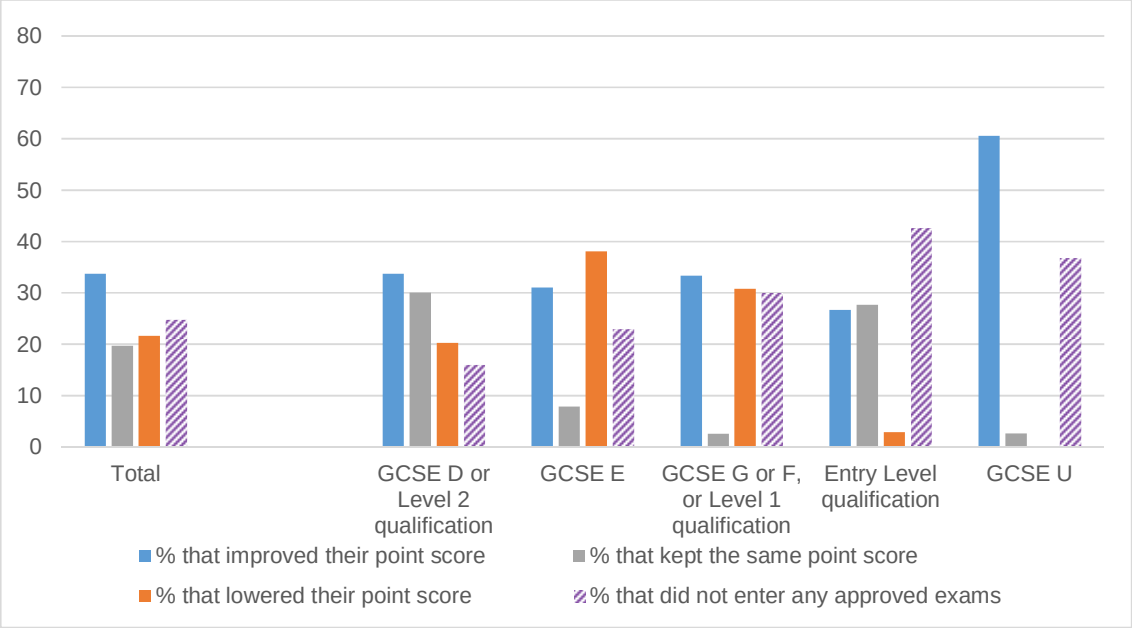
the progress made by those with different levels of attainment at Key Stage 4[26]. We can see that, overall, there are more young people who achieved either a lower result during the 16-18 phase, or the same result as at age 16, than young people who made positive progress in English. Although 33.7 per cent of all lower attainers in English made some positive progress during the 16-18 phase, 21.7 per cent saw their point score decline between the end of Key Stage 4 and the end of the 16-18 phase despite sitting at least one exam during that time, and 19.7 per cent remained at the same level. This means that around two-fifths of lower attainers made no progress or even negative progress during the 16-18 phase, despite retaking exams in English and/or maths.

As well as this relatively large share of lower attainers who made no positive progress, a substantial proportion of learners (24.8 per cent) did not enter any approved exams during the 16-18 phase. This proportion is even higher among those with lower levels of attainment at Key Stage 4. Almost a third of young people who achieved a G or F in their English GCSE at Key Stage 4 (or an equivalent level 1 qualification) were not entered for any approved English exams during the 16-18 phase. For those who received a U in their English GCSE at Key Stage 4, and for those who only achieved an Entry Level qualification, the proportions not entering any approved exams were 36.8 per cent and 42.7 per cent, respectively. Further education providers report that getting students to sit exams can sometimes be challenging as those who achieved low grades at GCSE in school often feel demotivated and have low confidence in their ability to pass English/maths exams a second time around (Higton et al., 2017), which may explain these high rates of non-exam entry among those with lower GCSE attainment[27].

As shown in figure 18, the progress made by young people in English differed quite strongly depending on their initial attainment at Key Stage 4. The proportion of young people who made positive progress was similar regardless of whether students had achieved a D at GCSE, had achieved an E, or had achieved a G or F at GCSE (or an equivalent Level 1 qualification), at about a third for each group. But while among those who achieved a D at the end of Key Stage 4 only 20.3 saw a decline in their point score, among those who gained an E the proportion that achieved a lower point score by the end of the 16-18 phase was much larger at 38.1 per cent. On the other hand, most young people who received an ungraded 'U' mark at the end of Key Stage 4 made some positive progress over the next two years.

[26] To make the graph easier to interpret, the numerical scores which are used to calculate progress have been translated back into the more familiar grading scheme used for GCSEs until 2016/17.
[27] Providers are also not obliged to enter students in exams as part of their conditions of funding, only to ensure that students who have not attained a C or above at Key Stage 4 are studying an approved qualification.

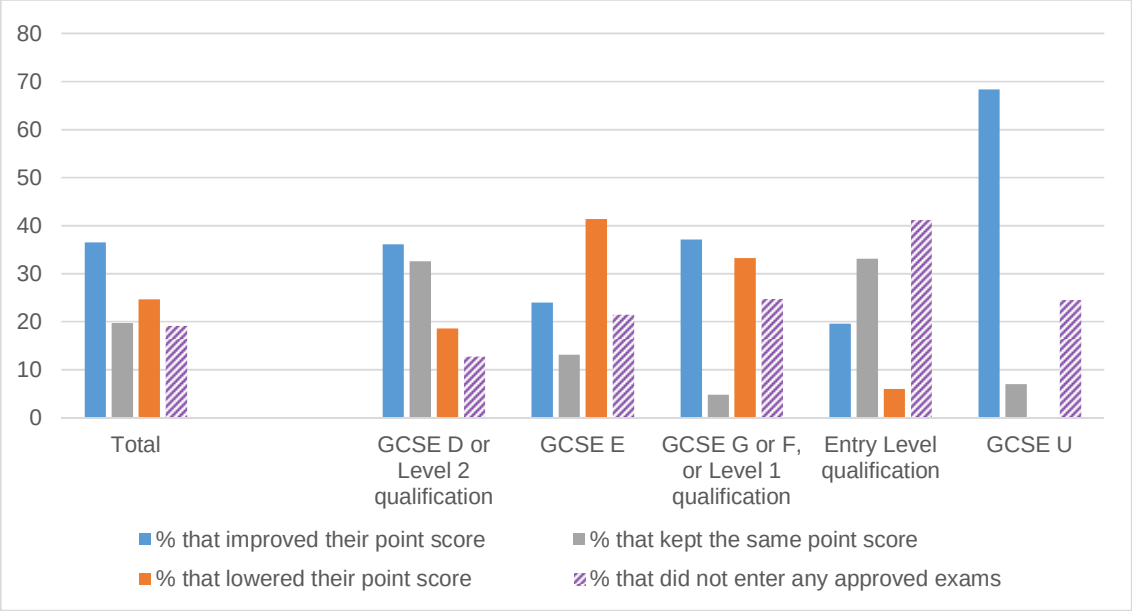
Figure 18: Proportion of young people who improved their English attainment, kept the same attainment, and lowered their attainment, by prior attainment at Key Stage 4, 2016/17 data (2014/15 cohort)



Source: SFR03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a and 13b.

The overall progress of students who did not attain a grade C in maths was similar as that of those without a C in English (see figure 19). Again, more young people have either negative or no progress during the 16-18 phase than make positive progress. Among those young people who got a D in maths at Key Stage 4, 36 per cent improved their point score during the 16-18 phase, but 32.6 per cent completed the 16-18 phase with the same attainment as when they started, and 18.6 per cent ended the 16-18 phase with a worse result than they attained at the end of Key Stage 4. Just as in English, a large share of young people who achieved an E at the end of Key Stage 4 lowered their point score, with very few making any progress. The proportion of learners improving their point score is higher among those who obtained an F or G at the end of Key Stage 4, but again there are large numbers who ended the 16-18 phase with a lower point score. And similar to what we've seen with English resits, there are substantial proportions of young people not entering any approved maths exams during the 16-18 phase, particularly among those with the lowest levels of attainment.

Figure 19: Proportion of young people who improved their maths attainment, kept the same attainment, and lowered their attainment, by prior attainment at Key Stage 4, 2016/17 data (2014/15 cohort)



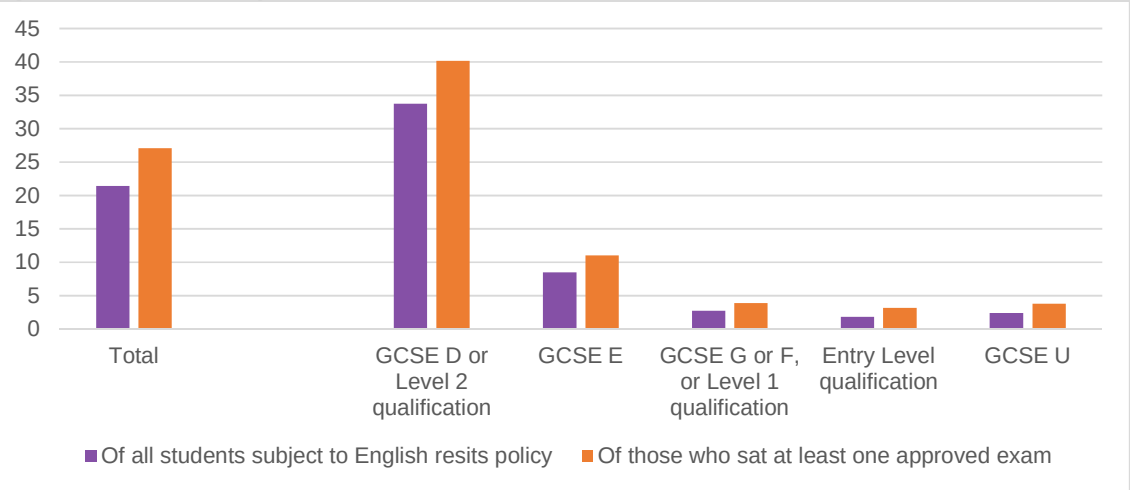
Source: SFR03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a and 13b.

We now look at what proportion of lower attainers manage to get a C or above in English and maths by the end of the 16-18 phase. Figures 20 and 21 present data on this, again breaking down the proportion of young people attaining a C or above by their initial attainment at the end of Key Stage 4, as in figures 21 and 22. These figures are derived from a matrix of point scores at the end of the 16-18 phase by prior point scores, and as some of the individual percentages in this matrix are suppressed, the numbers presented here may not be entirely accurate, but they nonetheless present a reasonable picture of how well students with different initial attainment do at achieving a C or above. Looking first of all at the columns on the far left, we can see that 21.5 per cent of all young people who were required to continue to study English during the 16-18 phase had achieved an A*-C or above by age 18. This equates to 27.1 per cent of those who had taken any approved examinations during this time. Learners who had at the end of Key Stage 4 achieved a D in their English GCSE were by far the most likely to achieve a C or above, at 34 per cent (or 40 per cent of those who had sat at least one exam). In contrast, only 8.5 per cent of those who had achieved an E at the end of Key Stage 4 managed to achieve a C or above by age 18, and among those with initial attainment below this the proportion who achieved a C during the 16-18 phase was even lower.

This pattern is very similar for young people who had not achieved a C or above in maths. Overall, 17.5 per cent of those continuing to study towards a C in maths had achieved this benchmark by age 18, and this increased to 21.7 per cent of those who had taken approved exams. Among those with prior attainment of a D, 36 per cent had achieved a C or above by the end of the 16-18 phase, while among those with lower levels of initial attainment only 1-5 per cent had achieved an A*-C by age 18. The lower proportion of young people achieving a C or above in maths compared to those achieving a C or above in English is mostly a result of the fact that among lower attaining maths learners there were relatively large numbers

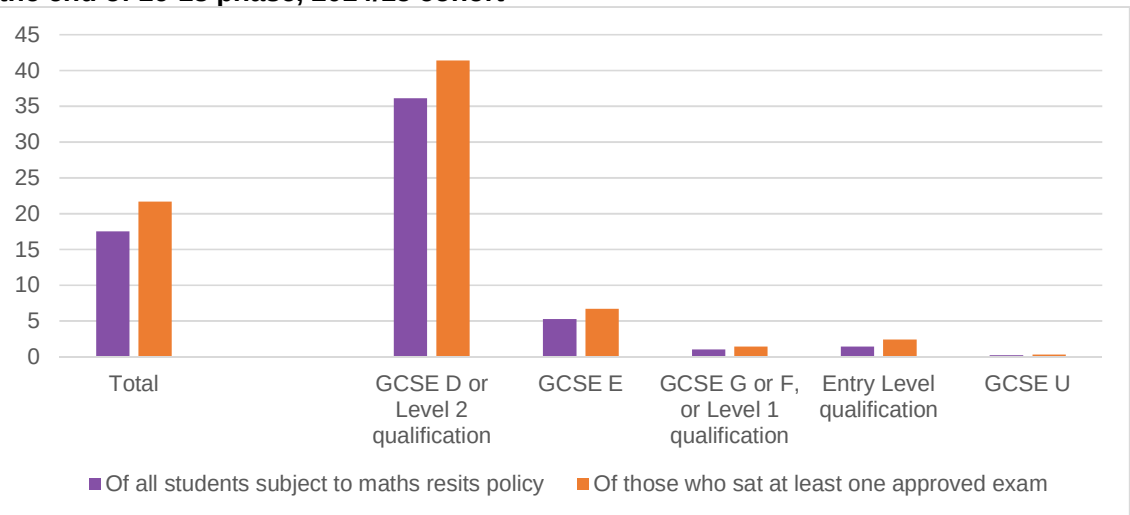
with very low attainment (a G or U at GCSE or Entry Level qualifications), whereas among English learners there was a relatively high proportion of young people with initial attainment levels that were reasonably close to a C (a D or E at GCSE). As discussed on page 19, this meant that maths lower attainers had, on average, further to climb in order to reach the C threshold, and as a result, fewer of them had managed to achieve this benchmark by the end of the 16-18 phase. Among those with prior attainment of a D who sat an approved exam during the 16-18 phase, attainment of the C benchmark by the end of the 16-18 phase was very similar in both subjects.

Figure 20: Percentage of young people who achieved a C or above in GCSE English by the end of 16-18 phase, 2014/15 cohort



Source: Department for Education. SFR 03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a.

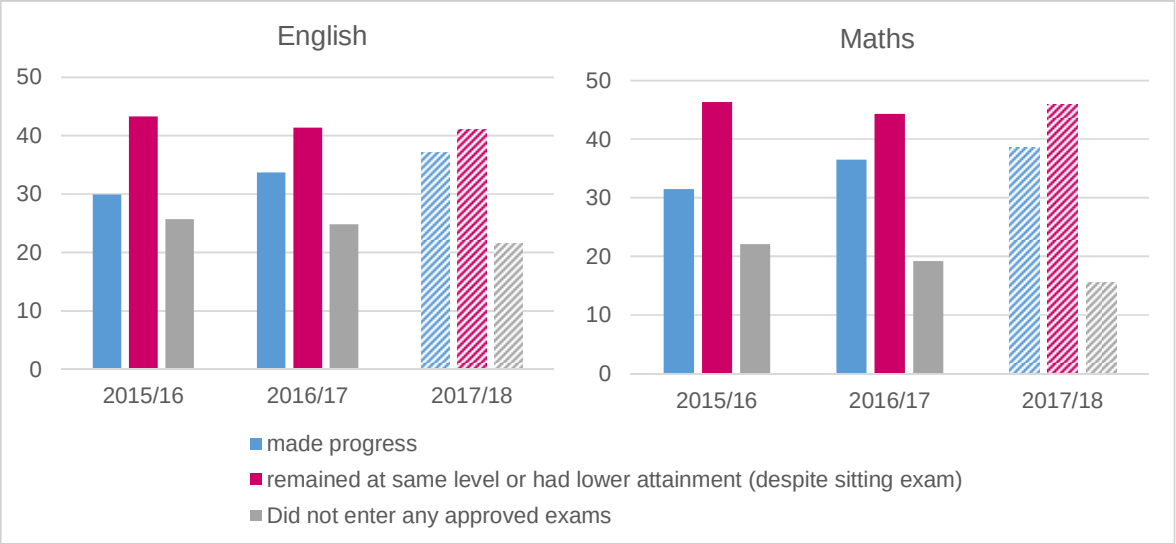
Figure 21: Percentage of young people who achieved a C or above in GCSE maths by the end of 16-18 phase, 2014/15 cohort



Source: Department for Education. SFR 03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13b.

Although progress in English and maths is low – whether measured in terms of the proportion of learners increasing their attainment level, or in terms of the proportion achieving a C/4 at the end of the 16-18 phase – there has been an improvement in recent years. This appears to be partly because more learners are being entered for approved exams in English and maths. In the 2015/16 academic year (2013/14 cohort), 25.6 per cent of those retaking English, and 22.1 per cent of those retaking maths, did not sit any approved exams during the 16/18 phase. The following year, this had fallen to 24.8 per cent and 19.2 per cent, respectively. According to provisional results for the 2017/18 academic year (2015/16 cohort), the proportion of learners not sitting exams had fallen even further (see figure 22). As a result of the increase in young people sitting exams in English and maths during the 16-18 phase, more learners have the potential to increase their attainment, which may have had an effect on the increased progress rates. But even when considering only those who entered approved exams, the proportion making positive progress seems to have increased in recent years. This could be evidence that 16-18 institutions are getting better at increasing the attainment of learners retaking English and maths, although more research is needed to unpack what has driven the increase in progress.

Figure 22: Percentage of learners making progress, not making progress, and not sitting approved exams in English and maths during 16-18 phase, 2015/16 to 2017/18

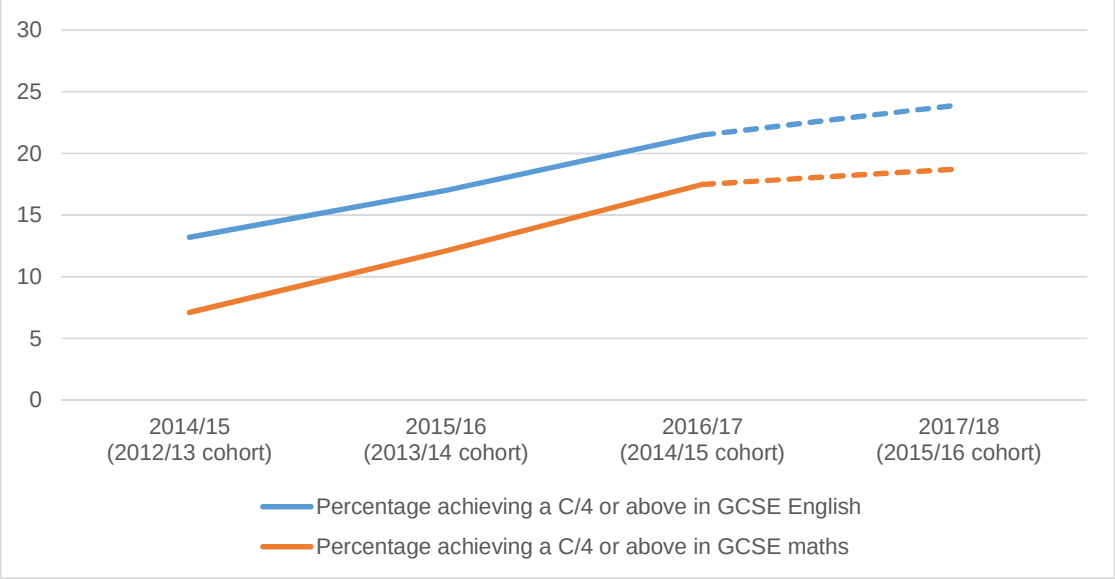


Source: Author's calculations based on Department for Education SFR05/2017: A level and other 16-18 results (revised): 2015/16 - English and maths tables: table 15a and 15b, Department for Education. SFR 03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a and 13b, and Department for Education: A level and other 16 to 18 results: 2017 to 2018 (provisional) – English and maths tables: table 13a and 13b. Please note that figures for 2018 are provisional and so may change.

We can also see improvement when it comes to the proportion of lower attainers who achieved a C/4 or above in English and maths. Of all lower attainers in the 2012/13 cohort, only 17 per cent achieved an A*-C in English, and only 12 per cent achieved an A*-C in maths by the end of the 16-18 phase (see figure 23) (DfE, 2017). For the cohort prior to this, the 2012/13 cohort (who were not subject to the English and maths resits policy), the corresponding figures were even lower: only 13 per cent achieved a C or above in English and only 7 per cent did so in maths. In the most recent cohort, provisional data suggest that

these percentages have increased to 24 per cent in English and 19 per cent in maths. There thus seems to be an upward trajectory in terms of the share of low attaining young people who manage to achieve a C/4 or above by the age of 18. However, the majority of lower attainers still reach 18 without having achieved the C/4 benchmark.

Figure 23: Percentage of those without A*-C(9-4) at Key Stage 4 who achieved A*-C(9-4) in GCSE English and maths by the end of the 16-18 phase, over last four years



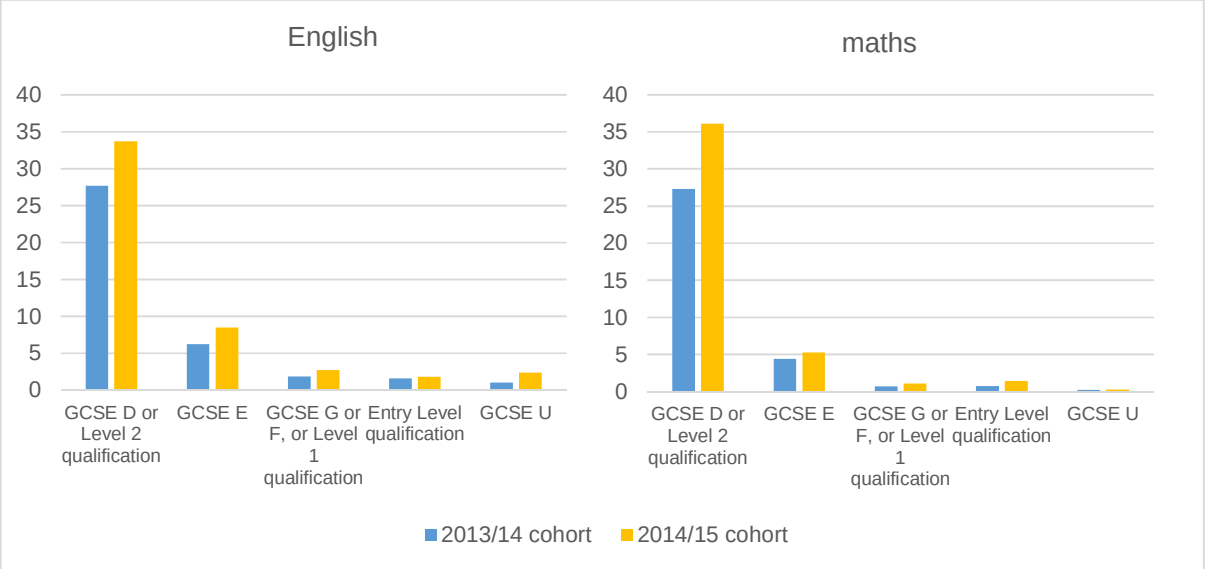
Sources: SFR15/2016: Level 1 and 2 attainment in English and mathematics by students aged 16-18: academic year 2014/15 - tables 2 and 4, SFR05/2017: A level and other 16-18 results (revised): 2015/16 - English and maths tables: table 15a, and SFR03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a and 13b, and Department for Education: A level and other 16 to 18 results: 2017 to 2018 (provisional) – English and maths tables: table 13a and 13b. Please note that figures for 2017/18 are provisional and so may change.

Figure 24 shows that the upward trend in the proportion of learners achieving a C/4 is driven mostly by an increase in the progress of learners who achieved a D in GCSE English and maths at the end of Key Stage 4. In the 2014/15 cohort, the most recent cohort for which revised data is available[28], young people who achieved a D in English and maths GCSE were markedly more likely to have attained a C or above by the end of the 16-18 phase than was the case among the previous cohort.[29] The proportion achieving a C or above also increased among those with initial attainment below a D, but as the numbers of learners here are much smaller, these increases did not contribute as much to the overall rise in the number of low attaining 16-18 year olds who achieved a C or above in English and maths.

[28] Although the provisional results for 2017/18 contain figures about progress by those with different levels of prior attainment, we have decided not to present these here because in previous years there has been a substantial amount of change between the provisional and revised results at this more fine-grained level.

[29] Since 2015, students who achieved a D at the end of Key Stage 4 have had to retake GCSE maths and/or English, rather than being able to take level 2 Functional Skills instead. It is possible that this change may have contributed to the increased proportion of D students achieving a C or above in the latest data, although an upward trend in this proportion is evident since the 2013 cohort.

Figure 24: Comparison of the percentage of lower attainers who achieved C or above in English and maths by the end of 16-18 between 2013/14 and 2014/15 cohort, by initial level of attainment at the end of Key Stage 4



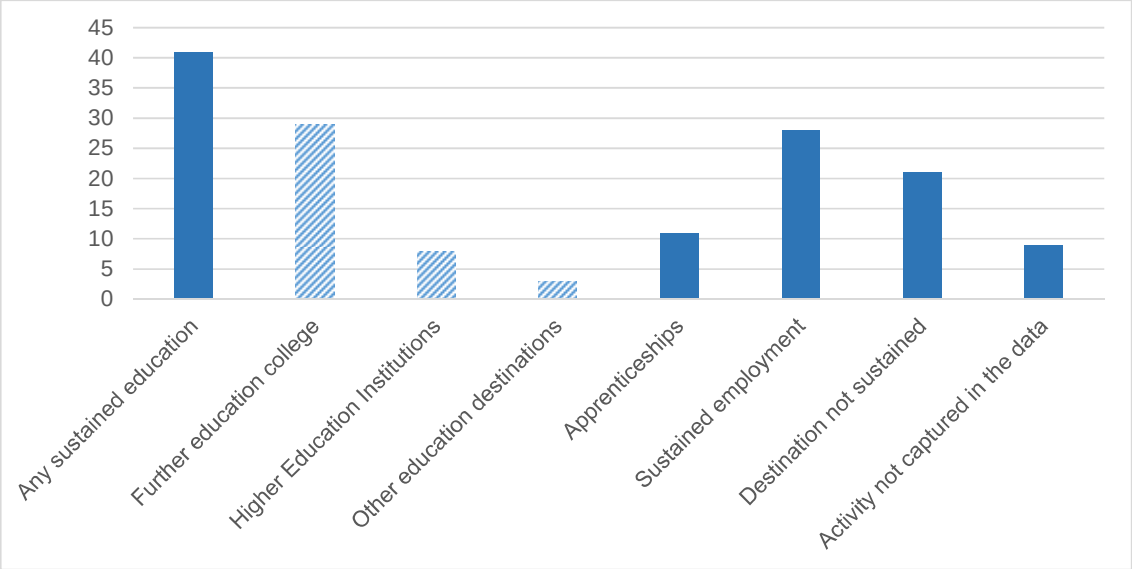
Sources: SFR15/2016: Level 1 and 2 attainment in English and mathematics by students aged 16-18: academic year 2014/15 - tables 2 and 4, SFR05/2017: A level and other 16-18 results (revised): 2015/16 - English and maths tables: table 15a, and SFR03/2018: A level and other 16-18 results (revised): 2016/17 - English and maths tables: table 13a and 13b.

2.4 Destinations after completion of the 16-18 phase

Section 2.1 provides a picture of the pathways taken by low-attaining young people immediately after they complete Key Stage 4, but it is also instructive to see what happens to this group subsequently. Unfortunately, no official published statistics are available about the learning trajectories of those who have not achieved at least a grade C in English and maths GCSEs during each year of their 16-18 education. However, in 2017, the DfE did release experimental statistics about the destinations of this group of young people in the year following the *completion* of the 16-18 phase. These statistics relate to those who completed the 16-18 phase in the 2015/16 academic year, meaning they completed Key Stage 4 in the 2012/13 academic year.

As alluded to above, the majority (70 per cent) of these young people entered qualifications below Level 3 at the start of their 16-18 phase, but some entered Level 3 qualifications as well as continuing to work towards achieving an A*-C in English and maths GCSEs (30 per cent). Figure 25 provides data on the destinations of all students who did not achieve A*-C in English and maths in the year following their completion of the 16-18 phase, and figure 24 breaks down these destinations by whether the students studied at Level 3 or below at age 17.

Figure 25: Destinations during the year following completion of the 16-18 phase, for young people who did not achieve A*-C at Key Stage 4



Source: Department for Education (2017) SFR 56/2017: Destination measures 2015/16 experimental tables - National table EXP1: Student destinations after completing 16 to 18 study by qualification type and whether required to continue studying English and maths.

As shown in figure 25, 41 per cent of lower attainers were (still) in some form of education (either at an FE college, Higher Education institution or other educational institution) in the year after completion of their 16-18 phase, emphasising the fact that a substantial proportion of learners continue to study towards qualifications past age 18. The majority of these young people were studying at college, although a small proportion (8 per cent of all lower attainers) were at Higher Education institutions, suggesting that some young people who do not achieve a C or above in English and maths nonetheless manage to progress to university. Of all lower attainers, 28 per cent were in sustained employment following completion of their 16-18 phase. More worryingly, however, around a fifth of lower attainers were in a non-sustained destination at the end of the 16-18 phase, which means that they were not in education, employment or training for at least two terms following the end of the 16-18 phase.

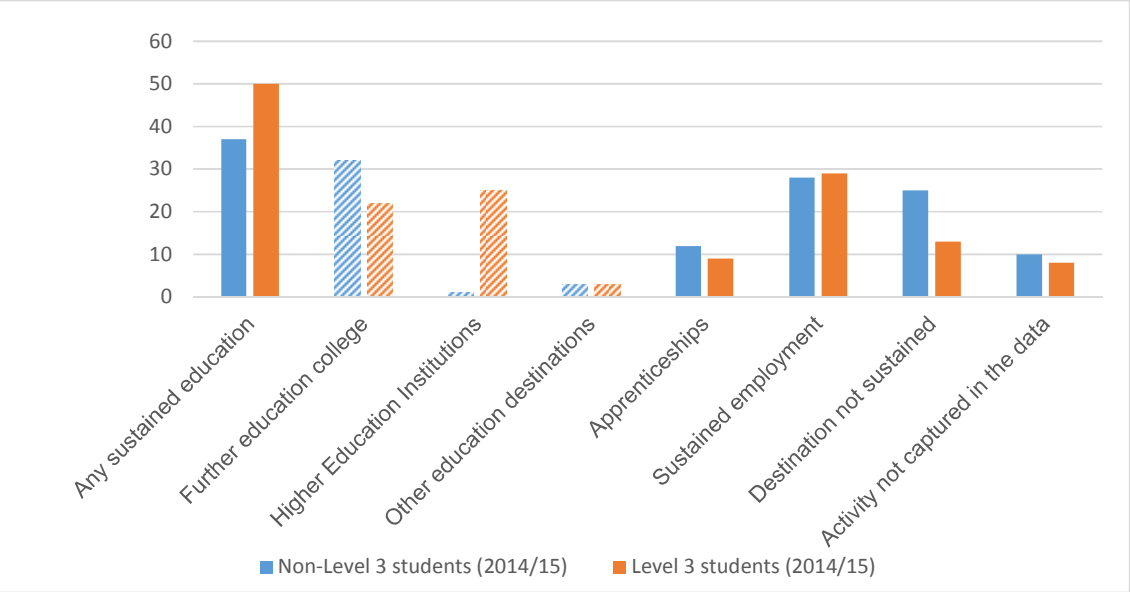
When we break down the destinations of lower attainers by whether they entered Level 3 or below Level 3 courses at age 17 (figure 26), we can see that outcomes differ quite substantially between these two groups. Among those who had entered a below Level 3 course at age 17, 37 per cent were in a sustained education destination at the end of the 16-18 phase, with almost all of these young people studying at FE colleges. Some of these young people may have progressed to a Level 3 course after first completed a lower level course, meaning they would still be studying towards their Level 3 qualification at age 18[30]. Among those who entered a Level 3 course at the start of the 16-18 phase, 50 per cent were still in education at age 18. The majority of these students were in Higher Education (25 per cent of the entire group of lower attainers entering Level 3 courses at 16), although a substantial group were at FE colleges (22 per cent of low attaining young people entering

[30] Additionally, there will be some students who start on a Level 1 course in their first year of college and progress to a Level 2 qualification in their second or third year (de Coulon et al., 2017).

Level 3 courses at 16)[31]. Whether or not lower attaining young people are able to enter Higher Education at age 18 or are (still) studying at an FE college therefore appears to depend strongly on whether they get into Level 3 courses at age 16.

About one in eight lower attainers (12 per cent) who studied at below Level 3 during the 16-18 phase were in an apprenticeship the subsequent year, with those having studied at Level 3 being slightly less likely to take this route at 9 per cent. Just under 30 per cent of lower attainers were in sustained employment in the year after finishing the 16-18 phase, and this did not differ much between Level 3 students and below Level 3 students. Those who did not enter a Level 3 qualification at age 16 were, however, substantially more likely to not be in sustained education or employment by age 18 than those who entered a Level 3 course (25 per cent versus 13 per cent). These figures suggest that there is a big difference in the outcomes of lower attainers who manage get onto a Level 3 course[32] despite not having a C in either English and/or maths compared to those who enter courses below Level 3 at age 16. However, as discussed above, some lower attainers who did not meet the criteria to enrol on a Level 3 qualification immediately after completing Key Stage 4 may progress to a Level 3 course at a later stage after first completing a Level 2 qualification. As no separate statistics are published about young people who enter Level 3 courses after age 16, we do not know whether their outcomes are similar to those who immediately enter onto Level 3 courses at age 16.

Figure 26: Destinations during the year following completion of the 16-18 phase, for young people who did not achieve A*-C at Key Stage 4



Source: Department for Education (2017) SFR 56/2017: Destination measures 2015/16 experimental tables - National table EXP1: Student destinations after completing 16-18 phase by qualification type and whether required to continue studying English and maths. Level 3 students include all those taking a qualification at least the size of one AS level.

[31] Some of these young people studying at FE colleges at age 18 may still be working towards a Level 3 qualification, as discussed in section 2.2.

[32] Of course, some young people who may have the potential to get onto a Level 3 course may choose not to apply, so both the decision to apply and the way their overall attainment profile is judged by the post-16 institution is important.

Conclusions

This paper shows the complexities involved in analysing the characteristics of so-called lower attainers in a context where there have been significant policy changes in relation to definitions of 'good' attainment and achievement between the ages of 16 and 18. At this stage of the research, we highlight the following key findings.

Despite the fact that achieving a C/4 or above in English and maths GCSE has in many ways become the 'expected standard' at age 16, a large proportion of young people – about two in five – do not attain this benchmark. The analysis presented here suggests that these 'lower attainers' are a diverse group, both in terms of their characteristics and their particular attainment profiles. For instance, about a quarter of those described here as 'lower attainers' actually have 'good' levels of overall attainment, as judged by the fact that they have obtained at least five GCSEs at A*-C/9-4, but have missed out on a C in either English or maths. On the other hand, there are young people who do less well in most subjects and consequently achieve relatively few passes. Among this latter group, a relatively large proportion of young people have SEN.

After completing Key Stage 4, the transitions made by lower attainers tend to be more disrupted than those experienced by other young people. A particularly worrying finding is that lower attainers fail to make sustained transitions to further education, employment or training much more often than other young people. For those who do stay on in education, rates of progress in English and maths are, on the whole, very low. A greater proportion of learners remain stuck at the same level, or achieve lower results than they did at the end of Key Stage 4, than make progress in their learning. This is especially the case for young people who achieved an E or lower at age 16, very few of which manage to achieve a C or above by the end of the 16-18 phase.

While these findings begin to paint a picture of who 'lower attainers' are and how they fare during the 16-18 phase, there are a number of questions still to be answered. Firstly, we still have only a limited understanding of what particular Key Stage 4 attainment profiles exist within the group of 'lower attainers', and of the way these attainment profiles intersect with student characteristics. Secondly, we don't know much about how particular attainment profiles and characteristics affect subsequent pathways. Some young people seem to progress very successfully after Key Stage 4 and reach the end of the 16-18 phase having achieved a high level of learning, despite not achieving a C in English and/or maths at the end of Key Stage 4. Finding out more about who these young people are, and what enabled them to make this progress, may reveal lessons about how to improve outcomes for others. Equally, finding out more about the characteristics and experiences of those who complete the 16-18 phase with relatively low levels of attainment will be important to identify possible barriers to learners' progress. An important question in this regard, given the low success rates in English and maths resits, is whether requiring those without at least a grade C/4 in English and maths to retake these subjects for a further two years may actually be having a negative effect on their learning during the 16-18 phase. Finally, and importantly, we know little about the extent to which making a successful transition at age 16, and achieving progress during the 16-18 phase, depends on what options are available to young people in their local area. This is something that will be explored in the rest of the project.

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