

GOING FURTHER

Further education, disadvantage and social mobility

Elena Lisauskaite, Steven McIntosh, Stefan Speckesser
and Héctor Espinoza

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Contents

Executive Summary	3
Education Progression and family disadvantage in published statistics	3
Post-16 choices, differences observed in the FE sector and long-term outcomes	3
Multivariate Analysis	4
1. Introduction	5
2. Literature review: the role of FE providers in social mobility	7
2.1 Social Background and Access to Further Education	7
2.2 The Labour Market Outcomes of FE	8
2.3 Wider Benefits of FE.....	10
3. Education progression and family disadvantage in published statistics.....	11
3.1 Recent trends in post-16 education	11
3.2 Type of programmes, institutions and levels of education observed for the 16-18-year-olds.....	14
3.3 Destinations after KS4.....	17
3.4 Destinations after KS5.....	20
4. Post-16 choices, differences observed in the FE sector and long-term outcomes.....	25
4.1 Aims and objectives.....	25
4.2 Data	25
4.3 Description of individual post-16 choices: Levels taken in different post-16 settings and differences in long-term outcomes	26
4.4 Descriptive statistics: provider level	38
4.5 Multivariate Analysis of Education Outcomes.....	40
Appendix Tables to Chapter 4	54
5. Conclusions.....	59
References	61

Executive Summary

Education Progression and family disadvantage in published statistics

- Participation in full-time education by 16-18 year olds has continued to rise since 2000, increasing by 16 percentage points before the pandemic in 2019, to stand at 73%. This has been particularly at the expense of young people moving into employment.
- Of 16-18 year olds in full-time education in 2019, around 47% are studying in schools or sixth form colleges (most of which are within the state sector), with around 37% at general FE or other specialist colleges. Most are studying for Level 3 qualifications (A levels or vocational), though around 30% of males and 20% of females are studying for qualifications at Level 2 or below.
- Young people from a more disadvantaged background (eligible for Free School Meals - FSM) are less likely to attend a Sixth Form School/College than those from a more advantaged background (37% versus 56%) and more likely to attend an FE College (43% versus 32%).
- Young people from a disadvantaged background are more likely to move into employment and less likely to move into higher education (HE) after Key Stage 5, compared to those from a more advantaged background. However, the gap between advantaged and disadvantaged students' progression to HE is smaller amongst those studying in FE Colleges at KS5, compared to those studying in Sixth Forms.

Post-16 choices, differences observed in the FE sector and long-term outcomes

- We undertook our own empirical analysis of the 2002/03 GCSE cohort, looking at HE destinations and annual earnings outcomes by age 28 in 2015, and examining the influence of type of institution attended and by family background. Results were also checked with a more recent GCSE cohort (2010/11).
- A majority of young people studying at a low level (Levels 1 or 2 in 2003/04) after GCSEs had not reached a higher level more than 10 years later. Similarly for those studying a vocational Level 3 qualification. By contrast, young people studying for academic qualifications at Level 3 (A levels) were more likely than not to have attained a degree by 2015.
- Those who achieved 5 or more GCSEs are most likely to progress via the academic route to A levels and then to a degree. For those who did not, even if they still take A levels post-KS4, only a small minority ultimately acquire a degree. Students who did not achieve 5+ GCSEs at KS4 are more likely to be taking Level 1 or Level 2 qualifications afterwards, and these qualifications will most likely represent their highest level of attainment ten years later.
- The vast majority of students attending a Sixth Form School/College post-KS4 do so to study A levels. In contrast, students studying at FE Colleges study a wider range of qualifications at more levels. Some still take A levels, though are less likely to proceed to a degree than their peers at Sixth Forms.
- Female post-KS4 students are more likely to be studying at Level 3, and less likely to be studying at Level 1, than their male counterparts, and are ultimately more likely to go on to attain a degree.

- Looking jointly at family disadvantage and educational institution, within FE Colleges young people from a more disadvantaged background (as indicated by eligibility for free school meals) are more likely to be studying for lower level qualifications at Level 1 or below, relative to the non-FSM group. Higher up the qualifications framework, those from a FSM background studying for a Level 3 qualification are also less likely to ultimately reach degree level than their non-FSM peers, both at FE Colleges and Sixth Form.
- For those who do achieve good GCSEs, they are most likely to study for A levels post-GCSE, irrespective of FSM status. Of these, the FSM group are, however, less likely to proceed beyond A level to degree level, particularly when looking at A level students within Sixth Form Schools/Colleges.

Multivariate Analysis

- When we compare FE Colleges and Sixth Form Schools, holding constant the characteristics of their intake (prior attainment, social background) and the level of qualification ultimately achieved, then there are no differences in the average earnings of their graduates at age 28. Thus all of the observed difference in earnings between students from the two types of institutions is accounted for by the characteristics of the students.
- However, holding constant characteristics of institutions and students, young people from a more disadvantaged background earn less in annual earnings at 28 than those who were less disadvantaged, by around 11%, amongst students whose post-KS4 education was in a Sixth Form School/College. Amongst those who attended an FE College, this earnings gap increases to 15%.
- Young people who attend an FE College are less likely to proceed to HE than their counterparts in Sixth Forms (even with the same prior attainment). This institutional gap in HE attainment is smaller for those students from a disadvantaged background. Furthermore, when FE Colleges are compared to Sixth Form Schools facing similarly challenging institutional characteristics, young people from a disadvantaged background are more likely to reach HE having attended an FE College than such similar Sixth Form Schools.
- Similarly for progressing to a Russell Group university specifically, young people from a disadvantaged background are just as likely to achieve this having attended an FE College than attending a Sixth Form School/College.

1. Introduction

As the UK labour market faces challenges on multiple fronts, the Further Education (FE) sector is identified as a potential source of solutions, alongside Higher Education (HE). The recent Augar Review of post-18 education and funding (DfE, 2019) highlighted the importance for the education system to provide the skills that employers need, particularly in the changing nature of work driven by automation and computerisation, and the important role that FE can play in this alongside HE. Subsequent to that report, the confirmation of Brexit has implications for the labour market in terms of reduced supply of low-skilled labour from abroad, while the Covid-19 pandemic has had even more profound effects, hastening the changes in many sectors and increasing the role played by digital and computerised aspects of work. In the face of such challenges, FE plays a key role between compulsory level schooling and HE, providing important vocational and technical skills needed of their workers by employers in the labour market, as well as providing a potential route to higher level study for those who have chosen not to go down the academic route, perhaps due to lower attainment in the compulsory phase of education. The aim of this report is to look at previous cohorts of learners, to demonstrate the extent to which the FE sector, and FE Colleges in particular, have been successful in leading to well-paid employment, and facilitating progression to HE.

In addition, the FE sector has a role to play in social mobility. Young people from a more disadvantaged background have been shown to be more likely to undertake further learning in the FE sector, rather than the traditional academic route of A levels and HE, which we provide further evidence for in this report. Whether FE Colleges can boost social mobility therefore depends on whether young people from a more disadvantaged background have better outcomes relative to their more advantaged peers in FE Colleges than in Sixth Form Schools. If this is the case, then FE Colleges, where the disadvantaged are more likely to attend, can play in key role in narrowing differentials across socio-economic backgrounds. Whether this is the case is a key part of the analysis presented here.

This report will therefore present various pieces of evidence relating to the relationship between FE participation and outcomes such as access to well-paid employment and HE progression. In particular, Section 2 provides a short literature review of the relationship between Further Education and social mobility, followed by a section where we present aggregate published statistics on trends in post-16 education, such as types of course followed and institution attended in Key Stage 5 (age 16-19) and then post Key Stage 5 outcomes. The aim of this section is to demonstrate the routes taken through FE, and some of the outcomes achieved. The main part of the report then undertakes a statistical analysis of two cohorts of young people, who took their GCSEs in 2002/03 and 2010/11. This analysis considers three outcome variables for both cohorts, observed when the cohort are aged 28. These are the level of annual earnings received, whether the individual progressed to HE, and if so whether they attended a Russell Group university. The key explanatory variables of interest are indicators of whether the individual attended an FE College as opposed to a Sixth Form School or College in the post-GCSE period, and whether or not they are from a disadvantaged background, in addition to the interaction between the two. The results will tell us the extent to which the outcomes of interest differ according to type of institution attended and social background, while the interaction term will tell us through what type of institution those from a more disadvantaged background achieve relatively better outcomes. Thus the aim of this section is to determine the extent to which the FE sector plays a role in social mobility, by improving the relative outcomes of those young people from disadvantaged backgrounds, who are more likely to follow technical and vocational routes at Key Stage 5, and so are over-represented in FE Colleges.

This analysis will add to previous work (Bursnall, et al., 2018) that has focused on individual and family circumstances affecting social mobility. In particular, this new report highlights the role of the provider,

the specific routes chosen in post-16 education and the relationship between post-16 educational choices and the long-term labour market and earnings success in the light of indicators of deprivation and disadvantaged family background. Thus, this work aims to be a comprehensive piece of research that fills the gap on social mobility issues from the perspective of the FE sector and the providers.

2. Literature review: the role of FE providers in social mobility

When studying the role of FE in social mobility, there are two issues that can determine this. First is the characteristics of individuals who access FE, in terms of social background, and second is the outcomes that such individuals secure after completing FE, and how these vary by social background (Thompson and Simmons, 2013). We looked for evidence on both of these in this brief literature review.

The role that FE plays in shaping social mobility via its effect on labour market outcomes will be affected by how we view education as determining such outcomes. Pure human capital theory (Becker, 1964) argues that education increases an individual's productivity, for which they will be paid a higher wage, individuals then investing in their education until the point where the additional benefits do not justify the costs. If however, we view education as a positional good, being one of the characteristics used to fit people into the hierarchy of jobs, then the likely impact of FE on social mobility can change. Under the human capital approach, education is seen as the process by which individuals from less well-off backgrounds can escape their upbringing, and achieve a higher position than that reached by their parents. In this scenario, educational expansion, and increased participation in HE or FE, is proposed to improve social mobility. On the other hand, if education is a positional good, where outcomes are determined by relative rather than absolute attainment, then educational expansion and increased participation by disadvantaged groups does not necessarily alter outcomes and affect social mobility, if individuals' relative position is unchanged. In this scenario, then, outcomes are determined by the structure of employment, and the structure of education, and how they match to each other. Educational attainment then determines where individuals locate on this hierarchy of matched jobs to skills. Some authors (for example Boudon, 1974) would argue that social background as well as educational attainment determines this position, and that more advantaged families use their background to maintain their position in the hierarchy, for example, through familial and societal connections, access to placements and internships in desirable jobs, and the financial means to undertake such unpaid positions. In an era of mass participation in post-compulsory education, such experiences, as well as 'soft skills' such as personality, character and social confidence, become important in securing jobs when employers cannot differentiate by qualifications alone, and those with a more advantaged upbringing begin with a head start in such traits (Brown, 2013).

2.1 Social Background and Access to Further Education

As stated at the start of the introduction to this section, the first step in determining the extent to which FE facilitates social mobility depends upon the original position of those who enter in terms of family background.

Some of the figures presented in the following section of this report (Section 3.2, Figure 3.3 and Section 3.3, Figure 3.4) answer this question. Figure 3.3 shows that young people who remain in post-compulsory education post-16 are much more likely to study within an FE college if they are from a disadvantaged background, whereas other young people are more likely to remain within the school system. Figure 3.4 shows that, beyond Key Stage 5 (after age 18, year 13), amongst those still remaining in education, the differences in type of institution across social backgrounds are smaller. Thus it is particularly between the ages of 16-18 when young people from disadvantaged and more advantaged backgrounds separate into different types of education, with FE tending to serve more the disadvantaged.

Existing literature on this issue comes to the same conclusion. A key source in this area is Bibby *et al.* (2015). This paper makes clear that FE has a key role to play in social mobility, given that it provides continued access to education for those young people from disadvantaged backgrounds who may have done less well in school.

In their empirical analysis, Bibby *et al.* use matched administrative data from the National Pupil Database (NPD) covering school attainment in Key Stages 4 and 5, the Individualised Learner Record (ILR) covering FE, and data from the Higher Education Statistics Agency (HESA) covering participation in HE. For their measure of social background, they use the variable within the NPD dataset indicating young people entitled to receive free school meals (FSM). Given that it is mostly families on benefits entitled to receive such provision, the FSM indicator represents the most disadvantaged families. However, the large majority of families are not entitled to FSM, but there are obviously still substantial differences in socio-economic status between them. Bibby *et al.* therefore further differentiate levels of advantage/disadvantage by making use of area-based characteristics of the areas where individuals live, measuring levels of income deprivation, employment deprivation, health, crime etc.

Bibby *et al.*'s figures show a continuous monotonic relationship between their measure of disadvantage and FE participation. The rate is highest amongst those young people entitled to FSM (71% participation in FE between the ages of 16 and 18, and 49% at ages 19+) and then declines continuously with each increasing level of social advantage (57% FE participation aged 16-18 and 31% aged 19+ at the most advantaged level), followed by those who attended independent schools pre-16 (25% FE participation aged 16-18 and 16% aged 19+). Conversely, the more disadvantaged are less likely to attend post-compulsory education in a state-funded school, and much less likely to ultimately reach HE.

Bibby *et al.* (2015) make the point that much of the variation in FE (and HE) participation across social groups appears to be due to prior attainment. Using the same definitions of social groups as above, they show a similar gradient across measures of disadvantage in Key Stage 4 attainment (measured by the proportion achieving 5 or more GCSEs at grade C or above or equivalent, including English and Maths), as was observed for FE participation, except in the opposite direction, with the rate of attainment *increasing* with each level of social advantage. 16% of the FSM group reach this level of KS4 attainment, compared to 64% of those in the highest socio-economic group defined by area characteristics, and 81% for those who attended an independent school. The final link is to show that there is a relationship between prior attainment and FE participation. While this relationship is not monotonic in this case, it is still strong. Thus the lowest level of KS4 attainment is associated with a low FE participation rate (though still, around half of young people who leave school with no qualifications at all participate in FE at some point between the ages of 16 and 18). The participation rate rises with attainment, reaching just below 80% for those with a strong Level 1 attainment. At higher levels of GCSE attainment, however, the FE participation falls again with each increasing level of performance.

Thus Bibby *et al.* (2015) show that those young people from a more disadvantaged background are less likely to attain highly in compulsory schooling, and more likely to participate in FE, while also showing the relationship between prior attainment and participation, which therefore mediates the relationship between social disadvantage and FE participation.

2.2 The Labour Market Outcomes of FE

There is a very large literature that has investigated the so-called returns to education, comparing the wage outcomes of individuals across education attainment groups. Much of this looks at education in general, though a significant proportion focuses on particular types of education and qualifications, including those found in FE. There is not the space to review this literature in detail here. To summarise, research using survey data such as the Labour Force Survey has found quite low wage returns to vocational qualifications, at least compared to more academic qualifications, though there is variation and some vocational provision is associated with a significant increase in wages, such as apprenticeships and BTEC qualifications, particularly at Level 3 (McIntosh and Morris, 2016). More recent research has made use of the administrative education datasets referred to above, linked to HMRC tax records to provide earnings information, and these have tended to find higher returns to vocational qualifications

(for example Bibby *et al.*, 2014). A paper by Conlon *et al.* (2017) attempted to reconcile these two sets of findings, showing that the differences in results are mostly due to different samples (the administrative data contain recent learners and so younger individuals on average) and specification adopted, and that results are broadly comparable when the two types of data are used in comparable specifications.

Of most interest here is the extent to which labour market outcomes to vocational qualifications and FE contribute to social mobility, and this will be the focus of this short review. A very useful paper in this respect is that by Bukodi (2017). She uses data from the British Cohort Study (BCS), a survey that has followed a cohort of individuals born in a particular week in 1970, from their birth until the present day. The focus of the paper is on learning and qualifications attained after the period in which full-time education was completed, so considering 'life-long learning' (between the time of labour market entry and age 38), much of which will take place in FE. Why the paper is of particular interest here is that the outcome is specifically a measure of social mobility. Bukodi uses a measure of social class, namely the 7-category version of the UK National Statistics Socio-Economic Classification (NS-SEC). This classification places occupation codes into one of the seven categories, ranging from higher managers and professionals (category 1) to routine occupations (category 7). This classification is used to determine both the individuals' starting social background (using their father's occupation when the individual was aged 10) and also their outcome status, using their own occupation code once working themselves. Bukodi can therefore determine whether individuals' class position is higher or lower than (or the same as) that of their parents.

Bukodi's results show that individuals from a higher social background are more likely to undertake academic qualifications later in life, particularly if their class is below that of their parents (presumably in an attempt to recover their position in society). This relationship is not present for vocational qualifications, however, with initial class playing little role in explaining later participation. If anything, those from the lowest class backgrounds are more likely to acquire vocational qualifications later in life (consistent with the earlier participation in FE at ages 16-18 discussed above). Turning to the crux of the analysis, looking at social mobility relative to parents' social status, Bukodi shows that the later acquisition of qualifications has a greater effect on upward class mobility than on downward mobility, as would be expected. For men, it is particularly academic qualifications that have this upward effect, with vocational qualifications having no significant effect, however. For women, an interesting pattern emerges, with the acquisition of new vocational classifications being associated with both more upward *and* downward class mobility, compared to individuals with no life-long learning qualification attainment. This somewhat surprising result was investigated further, with the additional analyses revealing that it is lower level vocational qualifications that are associated with downward mobility for women compared to their parents' class position. Many of these acquisitions follow career-breaks and re-entering the labour market in part-time jobs. In some cases, there may therefore be an element of choice here, with vocational qualifications helping women to re-integrate into the labour market at a lower level than previously, perhaps to combine with caring responsibilities.

A related analysis, looking into the effects of participation in life-long learning after having left full-time education on occupational progression, was undertaken by Gloster *et al.* (2015). They use data from the British Household Panel Survey (BHPS), which tracks a nationally representative panel of individuals each year over time, so that adult acquisition of qualifications and change in labour market outcomes can be observed. In terms of original socio-economic status, Gloster *et al.* first show that individuals with lower-educated fathers are less likely to participate in life-long learning. This seems to be due to the fact that the children have lower attainment themselves in full-time education, which in turn reduces their involvement in lifelong learning, since inclusion of an own attainment variable knocks out the parental education effect. Next, they demonstrate the presence of intergenerational immobility, with parental education also being strongly related to the children's own occupational group once the latter are in

work. A father educated to degree level is significantly and positively related to the probability of being in a senior (professional, managerial or technical occupation). For our purposes, however, the key question is whether this relationship is mediated by involvement in life-long learning (i.e. does such learning improve social mobility). Particularly when considering occupation five years after the incidence of learning, it seems that the answer is yes - participation in learning is associated with occupational progression, with the influence of parental education on the latter being much weakened.

Turning to the wage rather than occupation outcomes, and whether these vary by social background, these were discussed by the Bibby *et al.* (2015) paper referred to above. To undertake this analysis, they match ILR data with HMRC tax records, with social background indicated by FSM receipt for the most disadvantaged, and then above this, seven categories defined by the Index of Multiple Deprivation (IMD) score for the individuals' locality. The sample studied is the population of FE learners whose highest qualification aim was undertaken between the ages of 16 and 18 in the years 2004/5-2012/13.

The results provide a clear picture of the benefits of FE to those from lower social backgrounds. Qualifications attained below Level 2 are associated with 5.6% higher earnings for those from high disadvantaged backgrounds in the first year after learning, compared to statistically insignificant returns of 3.2% and 2.5% for middle- and low-disadvantaged groups respectively. A similar pattern of results is observed when the authors consider wage returns 3-5 years after learning rather than just in the first year. Similarly, at Level 2 and 3, larger wage returns are observed for the most disadvantaged group than for the less disadvantaged groups, demonstrating the importance of FE provision for such groups. It should be noted that there is an exception in terms of Level 2 (Intermediate) Apprenticeships, which benefit the wages of the *least* disadvantaged more. The authors speculate that this may be due to variation in quality of apprenticeships at this level as the programme has broadened, with the least well-off taking lower value apprenticeships in service sector areas. At Level 3, there is less variation in quality of apprenticeships, and indeed the authors show little variation in wage returns across social groups to apprenticeships at this level.

2.3 Wider Benefits of FE

Most of the discussion above has been in terms of measuring social mobility through labour market outcomes such as occupation and wages. It is important to acknowledge, however, that participation in FE can also affect other outcomes that can improve social mobility. Although the evidence here is limited, Gloster *et al.* (2015) provide some discussion. For example, participation in adult learning can have benefits on child-raising, particularly for young children, with for example a positive correlation observed between adult participation and children's cognitive ability. Furthermore, adult participation in learning can have strong effects on individual well-being measures such as confidence and self-esteem, and more limited effects on measures of self-efficacy. Physical health is also found to be positively related. There is certainly more work that can be done to investigate such relationships, in particular determining the mechanisms at work and establishing whether the relationships are true causal effects of further learning.

In summary, this brief review has shown the potential importance of FE to issues of social mobility. It is certainly the case that FE is a route more likely to be followed by individuals from a more disadvantaged background. Whether it is beneficial to them in terms of improving their position in society, and hence whether it produces social mobility, is less conclusive, with mixed evidence in the review above, though with clear benefits observed by some researchers in certain circumstances. Our work in the main part of this project will add to this literature, in particular by analysing the role of institution type in terms of producing social mobility benefits.

3. Education progression and family disadvantage in published statistics

In this section, we describe findings from official publications about young people's education, looking at education progression and provider types during their time of upper secondary education (between the ages of 16 and 18). We first describe some general trends in education participation in England over the last fifteen years. Then, we review official statistics for recent years, which show both education and labour market outcomes of young people after completing Key Stage 4 (KS4) and Key Stage 5 (KS5). These statistics on destinations of students leaving education include detail about both the type of education institution attended and whether students had a disadvantaged family background. Destinations after KS4 include the main types of education for young people, including apprenticeships, while KS5 destinations also provide some detail about the type of Higher Education Institutions (HEI) attended.

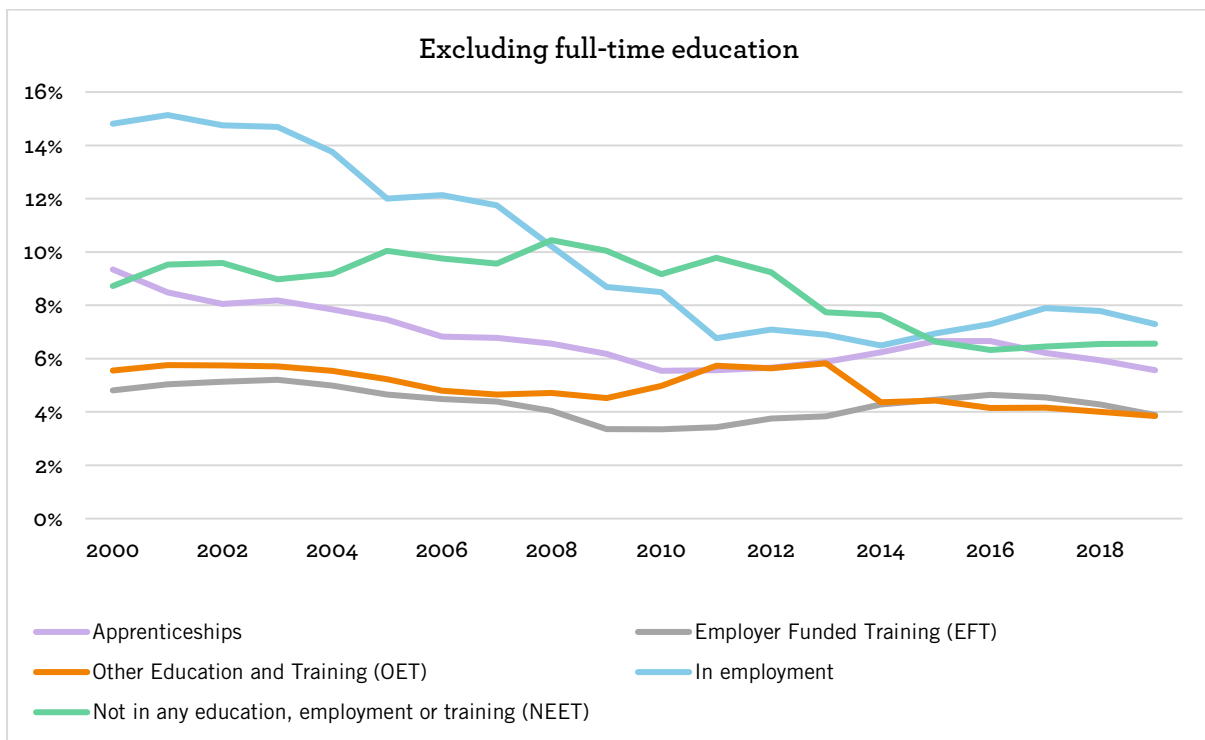
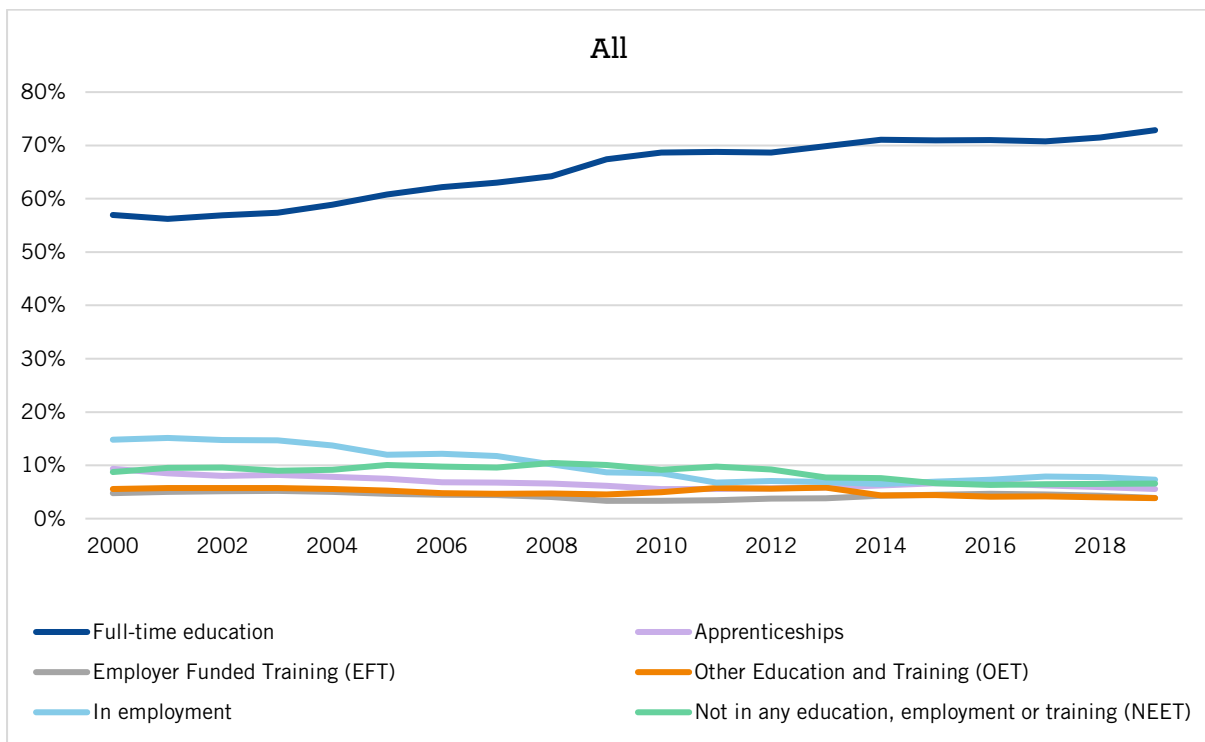
The description of the differences by family disadvantage shows some important differences in education progression when attending particular settings, and especially lower levels of transition to HEIs of high quality for children from poor families.

3.1 Recent trends in post-16 education

Participation in full-time education has increased during the last 20 years.¹ This growth has been a trend long before an extension of mandatory (part-time) education participation until age 17 came into effect in 2013 (extended to age 18 in 2015). The increase in full-time education is large, with the share of people taking part increasing by more than 16 percentage points between 2000 and 2019, standing at 73%. As can be seen from the lower panel of Figure 3.1 below, we observe small reductions in the rate of young people Not in Education, Employment or Training (NEET) from 9% to 7% and a substantial decline for young people in employment, which fell from 15% to 7% of the cohorts of 16–18-year-olds during the same time period.

¹ In the context that the population of 16-18-year-olds was 1,912,800 in 2003, 2,009,200 in 2010, and 1,867,300 in 2017.

Figure 3.1: Participation of 16-18-year-olds in education and training, since 2000



Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

Table 3.1 shows the development of pupil destinations after Key Stage 4 in state-funded mainstream schools. While the total number of young people making transitions after secondary school went down slightly (from 551,584 in 2012/13 to 513,362 in 2018/19), the percentage of students remaining in

education increased slightly during this period, for both FE and sixth form college education, which increased by one percentage point. A decrease was observed primarily for the group of KS4 leavers without a sustained destination, which has gone down by 3 percentage points to 5% compared to 8% in 2012 (9%).

Table 3.1: Pupil destinations after KS4. Destination years: 2012/13 - 2018/19

	Mainstream schools (state-funded)						
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Number of pupils at the end of Key Stage 4	551,584	561,114	548,278	543,289	530,547	517,634	513,362
Any sustained education or employment (%)	91	92	94	94	94	94	94
Any sustained education (%)	85	87	87	87	86	87	87
Further education (%)	34	34	34	34	34	35	35
School sixth form (%)	38	39	39	39	39	38	38
Sixth form college (%)	12	13	13	13	13	13	13
Other education (%)	1	1	1	1	1	1	1
Sustained apprenticeships (%)	4	4	4	5	5	4	4
Intermediate (Level 2) (%)	3	3	3	4	4	3	3
Advanced and Higher (Level 3 and above) (%)	1	1	1	1	1	1	1
Sustained employment (%)	2	1	3	3	3	3	3
Non-sustained (%)	8	6	5	5	5	5	5
Unknown	2	1	1	1	1	1	1

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

Student destinations after Key Stage 5 (A-Levels or other Level 3 qualifications) were also affected by changes as shown in Table 3.2. Student numbers increased from 345,785 students enrolled in state schools and colleges in 2012/13 to 388,128 in the most recently available year 2018/19. While overall percentage figures in sustained destinations remained high at 87% to 90%, the increasing share of young people opting for university education increasing the destinations to higher education by 5 percentage points, while the share starting a vocational education at an FE College dropped by 4 percentage points. We also see an increase in the share of destinations towards advanced and higher apprenticeships in recent years.

The share of young people leaving KS5 to employment has not changed much and remained around 22%. Unsustained destinations were down slightly from 10 to 8%, but at the same time, destinations not captured in the data increased from 2% to 5%.

Table 3.2: Student destinations after KS5 (A-Levels or other Level 3 qualifications)

	Total state-funded mainstream schools and colleges						
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Number of students (A-Levels or other Level 3)	345,785	358,965	362,930	366,145	372,255	418,665	388,128
Any sustained education or employment %	88	89	88	90	89	87	88
Sustained education %	60	61	61	62	61	58	59
Further education (Level 3 and below)	9	10	10	9	7	6	5
Higher education (Level 4 and above)	47	48	48	51	50	50	52
Other education destinations	3	3	3	3	3	3	3
Sustained apprenticeships	5	6	6	6	6	7	6
Intermediate apprenticeships (Level 2)	3	3	3	3	3	3	2
Advanced apprenticeships (Level 3)	2	2	2	3	3	4	4
Sustained employment destination %	23	22	21	22	22	22	22
Not recorded as sustained	10	8	8	7	8	8	8
No activity captured in data	2	2	3	3	4	4	5

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

3.2 Type of programmes, institutions and levels of education observed for the 16-18-year-olds

Statistics on the education participation of 16-18-year-olds² are regularly published by the Department for Education drawing on a range of statistical resources (Labour Force Survey, School Census and Longitudinal Education Outcomes). They show an overall education participation rate of around 86%, with participation consistently higher for girls than boys (Table 3.3) and an overwhelming majority continuing full-time education. There are small percentages (around 4% of female and 7% of the male students) involved in apprenticeships by the end of the 2019 calendar year and around 7%-8% of the age group Not in Education, Employment or Training (NEET). We do not observe substantive changes over the period 2017-2019.

² This refers to the 'academic age', i.e., the age at the start of an academic year.

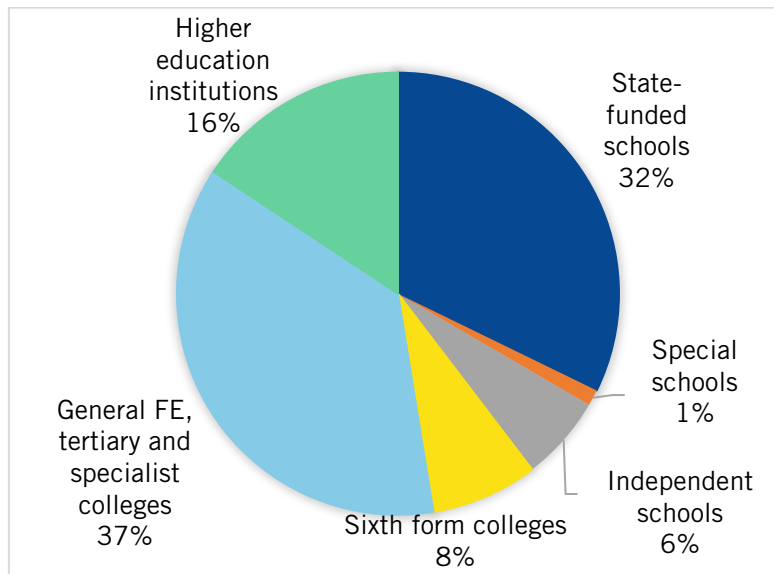
Table 3.3: Participation in education, training and employment in England (2017-2019)

End of calendar year	Males (%)			Females (%)			All (%)		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Aged 16-18									
Full-time education	67.7	68.3	69.4	74.0	74.9	76.5	70.8	71.5	72.9
Apprenticeships	7.6	7.3	6.9	4.8	4.5	4.2	6.2	5.9	5.6
<i>Overlap between apprenticeships and full-time</i>	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employer Funded Training (EFT)	4.8	4.6	4.3	4.2	3.9	3.4	4.5	4.3	3.9
Other Education and Training (OET)	4.7	4.3	4.1	3.6	3.7	3.6	4.2	4.0	3.8
Total education and training	84.8	84.5	84.7	86.6	86.9	87.7	85.7	85.7	86.1
Not in any education or training - in employment	8.3	7.6	7.5	7.4	8.0	7.1	7.9	7.8	7.3
Not in any education, employment or training (NEET)	6.9	8.0	7.8	6.0	5.0	5.2	6.4	6.5	6.6
Total not in any education or training (NET)	15.2	15.5	15.3	13.4	13.1	12.3	14.3	14.3	13.9
All	100	100	100	100	100	100	100	100	100
	962,30	943,90	942,60	912,40	894,00	892,30	1,874,70	1,837,90	1,834,90
Total number of students	0	0	0	0	0	0	0	0	0

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

A breakdown of 16 to 18-year-old students in education by institution type shows the importance of the Further Education sector, where about 37% of the students are found (Figure 3.2). The majority of this group of young people are aiming for Level 1-3 vocational qualifications, i.e., technical education outside the academic track. 47% of the people in this age range are in general education, the majority in state-funded schools and Sixth Form colleges, 6% of all young people are enrolled in independent schools and 1% in special schools. Note that the data referring to the end of the stated year capture some 18-year-olds, who had already started university education.

Figure 3.2: 16- to 18-year-olds in education by institution type 2019

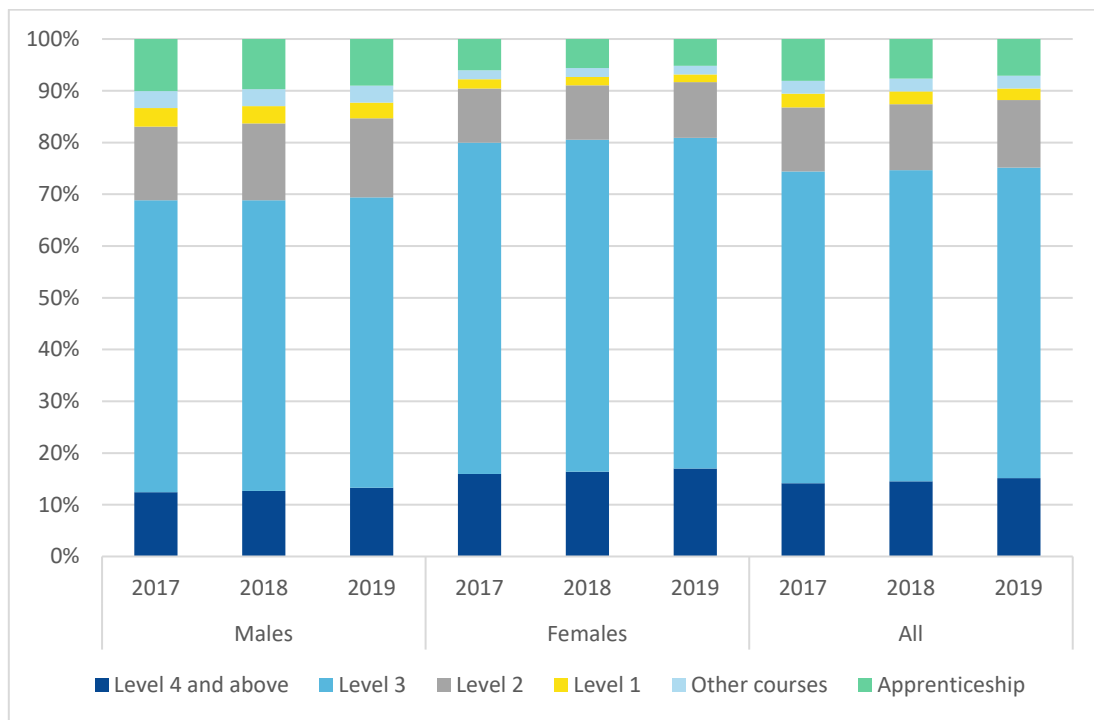


Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

Figure 3.3 shows that most young people enrolled in full-time education over the years 2017-2019 aim for Level 3 qualifications (A-Level or vocational). By nature of the data referring to the end of the calendar year, a fraction of the 18-year-olds are already involved in education at university, though the percentage share of Level 4 and above is small for both male and female students, around 10-12%, again with more female adolescents aiming for higher level qualifications. Substantial groups of students can also be found to study for qualifications at Level 2 or below and to aim for apprenticeships. About 30% of all male and 20% of all female students are observed here. Generally, both participation rates and levels of learning aimed for are slightly higher for the females of this age group, following on from the higher attainment of female pupils in secondary school in GCSEs.³ No change is observed for this pattern in recent years.

³ Table 8 in GCSE results, published here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/748503/2018_KS4_statistical_release.pdf

Figure 3.3: 16- to 18-year-olds in full-time education by highest qualification aim 2017-2019



Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

3.3 Destinations after KS4

We now focus on the transition from secondary schools to subsequent education and labour market activity based on the destinations reported in official data (Table 3.4). These data show the percentage of students staying in education or starting employment and apprenticeships after completing Key Stage 4 (KS4) in the 2017/18 academic year and by school type. A sustained destination indicates that the activity lasted for at least six months during the 2018/19 academic year. Sustained destinations after KS4 include School Sixth Forms, Further Education, Sixth-Form Colleges, other education, apprenticeships, and employment.

Destination data show some important patterns: First, almost all the students attending selective schools in year 2017/18 continue in education in the following year (98%). Non-selective schools and Local Authority maintained schools also show high proportions of young people in sustained education destinations (around 87%). Markedly lower percentages were found for University Technical Colleges (UTC, 79%), Studio Schools and Further Education colleges with provision for 14 to 16-year-olds (68%), but the latter group represents only a very small fraction of all pupils in KS4 (around 1,200 students). UTCs and Studio Schools have the highest percentage of young people making a transition to apprenticeships (between 8-9%). Pupils leaving alternative provision show the highest proportion of destinations, which are not sustained.

We now describe the destinations after KS4 by the type of post-KS4 institution (Figure 3.4) and whether pupils have a disadvantaged family background, which results from the information about Free School

Meal eligibility in the last year of secondary school (FSM).⁴ A disadvantaged family background was found to affect just over a quarter of all pupils leaving secondary education by the end of the 2016/17 academic year (26.3%). As can be seen in Figure 3.4, there is a substantial difference in unsustainable destinations, with young people from disadvantaged families more than three times more likely to be found in this category (10% compared to 3%).

When continuing education, young people from disadvantaged families are less often found in School Sixth Forms: 25% of the FSM group make the transition to KS5 in such institutions, compared to 43% of their better-off peers. A lower share of students with FSM eligibility was also found for those moving to Sixth Form Colleges (11% compared to 14%). There is a correspondingly higher share of young people with a disadvantaged family background moving into the FE sector after KS4. 43% of the FSM students make this transition, compared to 32% of the better-off group. Some of the differences in the transition from KS4 to the FE sector result from lower attainment of the FSM group, which itself is an outcome of family disadvantage. The figure clearly evidences the high importance of education in the FE sector for the group of students coming from poor families.

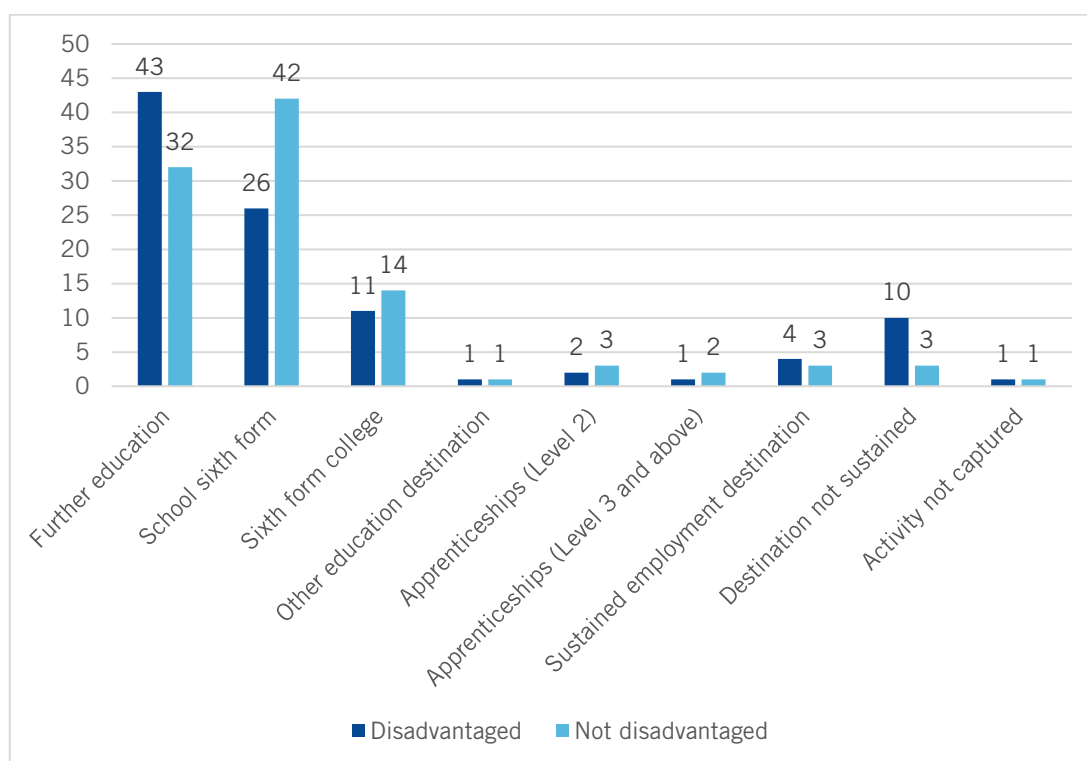
⁴ Disadvantaged pupils include pupils known to be eligible for free school meals (FSM) in any spring, autumn, summer, alternative provision or pupil referral unit census from year 6 to year 11 or that are looked after children for at least one day or are adopted from care. These are the pupils who would have attracted the pupil premium at the end of the 2015-16 academic year.

Table 3.4: Pupil destinations after completing Key Stage 4 by school type. Year: 2018/19 destinations for the 2017/18 cohort

	Number of schools	Number of pupils at the end of KS4 in 2017-18	Any sustained education destination (%)	Sustained apprenticeships (%)	Sustained employment (%)	Destination not sustained (%)	Activity not captured the (%)	not in data
All state-funded mainstream schools	3,175	533,839	86	4	3	6	1	
Selective schools	163	23,192	98	1	~	1	~	
Non-selective schools in highly selective areas	218	33,235	85	5	4	6	1	
Non-selective schools in all other areas	2,794	456,935	86	4	3	5	1	
Local authority-maintained mainstream schools	930	151,240	87	4	3	5	1	
Academies and free schools	2,223	360,353	87	4	3	5	1	
Sponsored academies	643	92,201	83	4	4	7	1	
Converter academies	1,431	258,096	88	4	3	4	1	
Free schools	77	6,037	89	3	2	4	1	
University technical colleges (UTCs)	44	2,957	79	9	5	6	1	
Studio schools	28	1,062	76	8	7	8	1	
FE colleges with provision for 14- to 16-year-olds	19	1,209	68	6	8	15	4	
Special schools	810	10,700	87	~	2	9	2	
All state-funded schools	3,985	513,362	87	4	3	5	1	
Alternative provision	436	9,777	47	2	10	34	7	
Total state-funded sector	4,421	533,839	86	4	3	6	1	

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

Figure 3.4: Destinations after KS4 by institution type and disadvantage, 2018/19



Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

3.4 Destinations after KS5

As for KS4 destinations, official statistics also exist for destinations after Key Stage 5 (KS5), which refers to the two final years of upper secondary education, either on the general track (A-Levels) or in vocational education at Level 3. While students with a lower-level FE college education have been added to these destination statistics lately, showing much lower shares of sustained destinations, our description is restricted to KS5 students, who are the main group aiming for subsequent education progression.

KS5 participation takes place in schools or the FE sector, and runs for two years. For the group described here, destinations apply to students after enrolling in A-Levels or other Level 3 vocational qualifications typically taken between the age of 16 and 18 in 2017/18. In the “destination year”, 2018/19, these students are mostly 18 or 19 years old (although a few may be 17). As before, sustained destinations after KS5 include Further Education, other education, sustained apprenticeships, employment, and UK Higher Education Institutions.

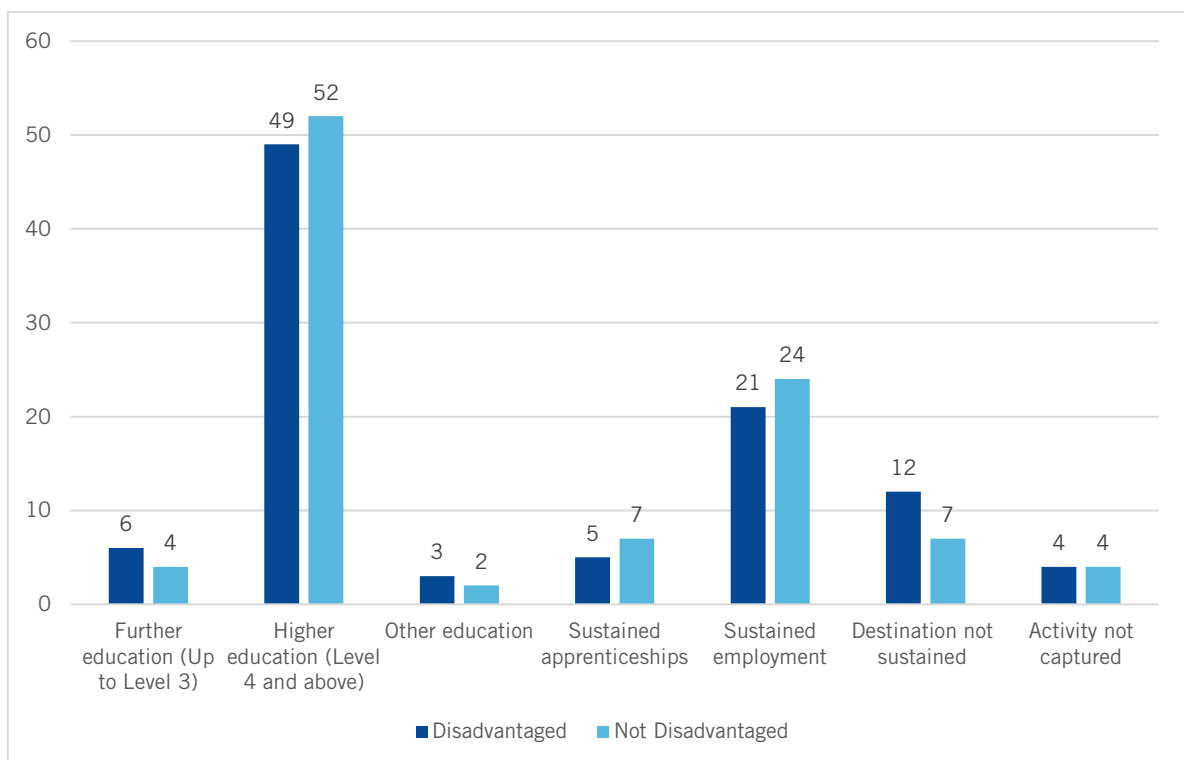
Table 3.5: Student destinations after Key Stage 5 (A-Levels or other Level 3 qualifications, 2018-19) by institution type

		Number of students	Sustained education	Sustained apprenticeship	Sustained employment	Not sustained	Not captured
State-funded mainstream schools	Academy 16-19 Converter	11,252	60	7	23	8	3
	Academy 16-19 Sponsor Led	192	52	11	26	8	4
	Converter academy	125,294	64	6	20	6	3
	Free	1,107	69	5	14	7	6
	Free 16-19	2,237	67	4	18	8	4
	LA maintained	44,201	65	6	18	7	4
	Non-selective school in highly selective area	12,626	53	8	26	8	4
State-funded mainstream colleges	Other FE sector colleges	96,812	46	8	31	11	4
State-funded mainstream schools	Other non-selective school	161,657	63	7	20	7	4
	Selective school	24,184	74	3	14	5	3
State-funded mainstream colleges	Sixth form colleges	54,857	60	6	23	8	3
State-funded mainstream schools	Sponsored academy	22,058	60	7	20	8	4
	Studio	626	48	7	26	14	6
All schools		236,310	64	5	19	7	5
Independent mainstream schools		37,729	67	1	13	7	13
Mainstream schools and colleges		388,014	59	6	22	8	5
Special schools		114	70	3	11	12	4
State-funded mainstream colleges		151,669	51	8	28	10	4
State-funded mainstream schools		198,467	63	6	20	7	4
State-funded mainstream schools & colleges		350,136	58	7	23	8	4
Total		388,128	59	6	22	8	5
State-funded mainstream schools	Total academies & free	153,485	63	6	20	7	4
State-funded mainstream colleges	Total FE sector	151,669	51	8	28	10	4
State-funded mainstream schools	University Technical College	2,163	45	22	22	7	3

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

As expected, destinations after KS5 show more heterogeneity than those after KS4 (see Table 3.5). The total number of students observed with destinations after KS5 in 2017-18 is 388,128, of which 59% continue in an education destination (mostly aiming for qualifications at Level 4 and above), and 22% of the same number go into employment. Breaking down the data by disadvantaged status (see Figure 3.5) unveils that disadvantaged students are more likely to continue in Further Education, Other Education Destinations, or in a Destination Not Sustained. Students without a disadvantaged background also have a higher probability of moving into higher level (university) education.

Figure 3.5: Student destinations after completing Key Stage 5 (A-Levels or other Level 3 qualifications) by disadvantaged status, state-funded mainstream schools, 2018-19



Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

Table 3.6: Destinations after KS5 (A-Levels or other Level 3, 2015-16) by student characteristics, state-funded mainstream schools, 2018/19

	Number of students	Any sustained (%)	FE (<= L3, %)	HE (> L3, %)	Other education (%)	Sustained apprenticeship (%)	Sustained employment (%)	Destination not sustained (%)	Not captured (%)
Selective (grammar) schools									
Disadvantaged students	1,668	89	2	67	3	3	14	7	4
Other students	22,516	92	2	70	2	3	14	5	3
All students	24,184	92	2	70	2	3	14	5	3
Non-selective schools in highly selective areas									
Disadvantaged students	2,090	84	5	45	4	7	24	12	4
Other students	10,536	88	4	47	3	8	26	7	5
All students	12,626	87	4	47	3	8	26	8	4
Other non-selective schools									
Disadvantaged students	27,288	87	4	57	4	5	17	10	4
Other students	134,369	90	3	56	3	7	21	6	4
All students	161,657	89	3	57	3	7	20	7	4
Sixth-form colleges									
Disadvantaged students	9,974	87	3	55	4	5	20	10	3
Other students	44,883	90	3	53	3	7	23	7	3
All students	54,857	89	3	54	4	6	23	8	3
FE colleges									
Disadvantaged students	21,868	81	12	35	~	6	28	15	3
Other students	74,944	86	9	36	~	9	31	10	4
All students	96,812	85	10	36	~	8	31	11	4
All state-funded mainstream schools and colleges									
Disadvantaged students	62,888	85	6	49	3	5	21	12	4
Other students	287,248	89	4	52	2	7	24	7	4
All students	350,136	88	5	51	2	7	23	8	4

Source: Official statistics available in <https://explore-education-statistics.service.gov.uk/data-tables>, accessed 17/05/2021

A more detailed analysis is presented in Table 3.6, which describes students leaving KS5 in 2017/18 by provider type and key destinations. This table shows marked differences between education progression based on school types and disadvantage. Students in selective schools, i.e., remaining grammar schools, have the largest proportions of leavers to higher education immediately after KS5 (70%). Generally, rates of disadvantaged young people making the transition to HEIs are slightly below the rates of other students (67% compared to 70%) across all settings, with FE Colleges showing the smallest gap, albeit students leaving these institutions also show the smallest transition to higher education generally (along with leavers from non-selective schools in highly selective areas). Likewise, the transition into the labour market is highest for students leaving FE Colleges and non-selective schools in highly selective areas. Here, students of a disadvantaged background show sustained employment outcomes less often (a gap around 2-3%), while being slightly overrepresented in destinations not recorded as sustained.

While, by nature of provision, FE College leavers more often aim for a transition to employment, FE Colleges also show the lowest gap when comparing disadvantaged students and better off peers. Along with the data shown in Figure 3.4, which shows that a relatively higher proportion of students with a disadvantaged family background start FE after KS4, this indicates a crucial role of FE Colleges to help education progression to higher education for this group of young people.

4. Post-16 choices, differences observed in the FE sector and long-term outcomes

4.1 Aims and objectives

The analysis presented in the following is based on empirical data collected for one cohort of Key Stage 4 (KS4) leavers in academic year 2002/2003. It examines the aims and destinations at age 28 in 2015 of those who continue education after KS4. We explore this in terms of individuals' KS4 characteristics, such as gender, FSM eligibility and GCSE attainment. We further construct provider characteristics based on our analysed cohort data and we explore these in more detail.

This section extends the previous analysis, which was based on the aggregated destination data available from the Department for Education. Based on the previous analysis, we have some indications as to how post-compulsory education trajectories and outcomes differ in the post-compulsory stage for young people, depending on providers characteristics.

In the analysis presented here based on individual-level data, we investigate the destinations of these students in more detail. We focus on the education providers attended by young people in their first academic year after the end of secondary education (i.e. KS5 providers) and describe both the qualifications aimed for in that period and the long-term attainment as far as can be established from linked data (final outcomes observed by age 28 for 2002/03 KS4 leavers). These descriptions show the different patterns by type of KS5/post-16 education institution and individual characteristics.

4.2 Data

This analysis is based on the data of a cohort of pupils finishing secondary education (at age 16) in academic year 2002/03, with a more recent cohort who completed in 2010/11 used as a comparison. The full data set comprises individual-level linked records from the National Pupil Database (NPD), the Individualised Learner Record data (ILR) covering post-16 education outside of schools and universities, data from the Higher Education Statistics Agency (HESA) and employment and earnings information provided by Her Majesty's Revenue and Customs (HMRC). Together, these data sets comprise the Longitudinal Education Outcomes (LEO) dataset.

The NPD contains administrative data for all students attending English schools. From this data set, we extract the characteristics of pupils (gender, ethnicity, Free School Meal (FSM) eligibility) and GCSE attainment as well as provider information for their KS5 institution. We use the latter to determine the type of provider KS4 leavers subsequently attend, and to derive further provider-level characteristics (gender distribution, proportion FSM, size etc.). Data on post-16 education outside KS5 schools are obtained from the ILR, which again provides data on provider characteristics as well as the level of education that individual students aim for in their first year after KS4 and whether they achieve it. Thus, provider characteristics are measured by aggregating the data from the 2002/03 cohort to institution level, which is valid due to the large overall sample size (over 600,000) and assuming that these characteristics of main types of providers do not vary much over time.

Finally, to analyse longer-term education success for students, we merge the KS4/KS5-ILR linked data to all further ILR outcomes (i.e. achievement in the FE sector) and data from HESA. This merged data set allows us to track each individual until the end of their education, and so observe their final highest education outcomes, including whether they reached university and if so, the characteristics of the type of university attended.

Social mobility issues are identified using the FSM eligibility indicator, which identifies young people from the most deprived families. Clearly, there is spectrum of family income/background above the cut-off for FSM entitlement, that will not be picked up by this indicator. As the only individual-level indicator of social background available in the data set, then options are limited, but in any case, the binary indicator has certain advantages too, for example allowing us to interact it with other variables and characteristics in the analysis. In addition, the FSM indicator represents those young people with the greatest level of need, and so the primary group on which to focus any policy implications. Certain specifications also control for provider-level (proportion of FSM eligible students) and locality-level characteristics (Index of Multiple Deprivation (IMD), and crime rate at Local Authority level).

4.3 Description of individual post-16 choices: Levels taken in different post-16 settings and differences in long-term outcomes

There are 622,022 individuals in the linked data set who completed their compulsory schooling in 2002/03. Of those, 427,190, are observed in KS5 in schools or Further Education institutions during the 2003/04 academic year. 417,932 individuals were successfully matched with their providers. Table 4.1 summarises the variables of interest. Two-thirds of the cohort are studying for a Level 3 qualification, with the academic A levels being the modal category within these. An additional 20% of the cohort are aiming for a Level 2 qualification, while the remainder are studying at Level 1 or an unspecified level. The lowest rows of Table 4.1 show the final highest qualification achieved by age 28 in 2015, for the whole population of 622,022 individuals, i.e. whether or not they were learners in the immediate year post-GCSE (2003/04).

Table 4.1: Descriptive Statistics for Population of KS5 Learners

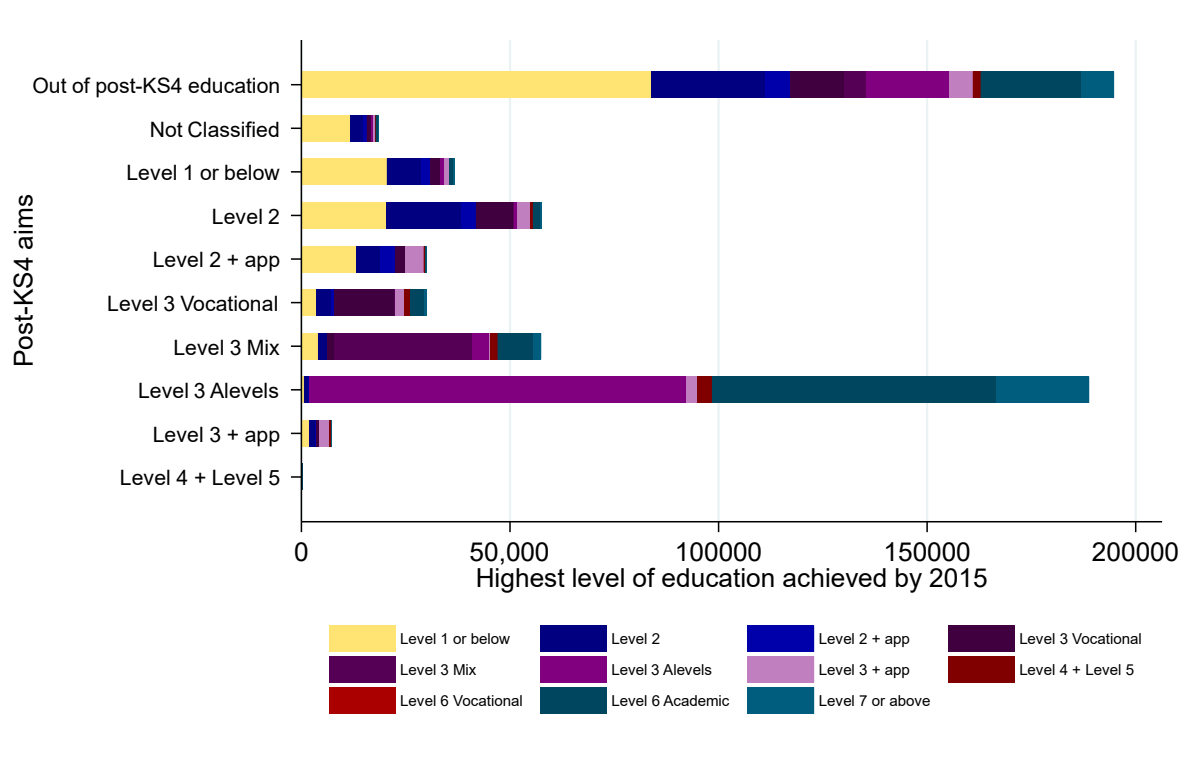
	Freq.	Percent
Aimed level in 2004: first year after compulsory schooling		
Not Specified	18,693	4.38
Level 1 or below	36,754	8.60
Level 2	57,503	13.46
Level 2 + apprenticeship	30,117	7.05
Level 3 Vocational	30,106	7.05
Level 3 Mix	57,493	13.46
Level 3 A levels	188,870	44.21
Level 3 + apprenticeship	7,340	1.72
Level 4 Vocational	259	0.06
Level 5 Academic	24	0.01
Level 5 Vocational	31	0.01
Gender		
Female	217,821	50.99
Male	209,369	49.01
GCSE Attainment (5+ A*-C)		
Not achieved	172,021	40.27
Achieved	255,160	59.73
FSM eligibility		
No	349,960	87.39
Yes	50,476	12.61
Highest Qual Achieved by Age 28 (full cohort whether or not initial learners)		
Level 1 or below	159,805	25.69
Level 2	70,624	11.35
Level 2 +app	17,106	2.75
Level 3 vocational	44,449	7.15
Level 3 mix	38,977	6.27
Level 3 A levels	116,985	18.81
Level 3 +app	21,961	3.53
Level 4 + Level 5	10,316	1.66
Level 6 vocational	23	0
Level 6 academic	108,230	17.40
Level 7 or above	33,546	5.39

Source: NPD-ILR-LEO linked data.

Figure 4.1 shows, for each qualification category being studied among the continuing students in 2003/04 (i.e. within each post-KS4 aim category), the number achieving each possible qualification as their highest qualification by 2015, so demonstrating the extent of educational progression achieved by this cohort over

a decade.⁵ To read this and following figures, the post-KS4 qualification being studied is listed on the vertical axis. The length of the horizontal bar for each category shows the number of students studying for that qualification in 2003/4. The horizontal bar is sub-divided by colour, to show the highest qualification ultimately achieved by age 28 in 2015. Different shades of the same colour represent different types of qualification at the same level. Thus, the yellow parts of the bars shows the number of students whose ultimate highest qualification achieved is at Level 1. The blue-shaded areas show those who ultimately reach Level 2, and so on. The figure shows that 57% of individuals who were not studying in 2003/04, still had their KS4 level of education as their highest by 2015, the remaining 43% gaining a higher level of education in subsequent years. We exclude this group from further statistical analysis and look in more detail into those who continued in the immediate academic year post-GCSE.

Figure 4.1: Post-16 education, full sample, 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. Figure shows the highest education level achieved by age 28, according to the post-KS4 qualification aim, i.e. the qualification being studied in the 2003/4 academic year, the year immediately after KS4 and the completion of GCSEs.

Figure 4.1 shows that learners studying at the lowest levels post-16 (Level 1 or below) more often than not do not make any progress, with 56% having a highest qualification still at Level 1 or below in 2015. Nevertheless 23% do achieve a Level 2 qualification and so reach the level that is expected of school leavers at age 16. Only very few such learners have achieved beyond Level 2 by 2015.

A significant yellow-shaded area in the next bar, for those studying at Level 2 in 2003/04, shows that qualifications being studied for are not always achieved, with 35% having a highest qualification at just

⁵ The percentage of learners within each learning aim category represented by each segment of the horizontal bars is reported in Appendix Table A4.1.

Level 1 or below in 2015. A further 32% have achieved Level 2 by 2015. Of those from this group of learners who go higher, this is most likely via a Level 3 vocational qualification.

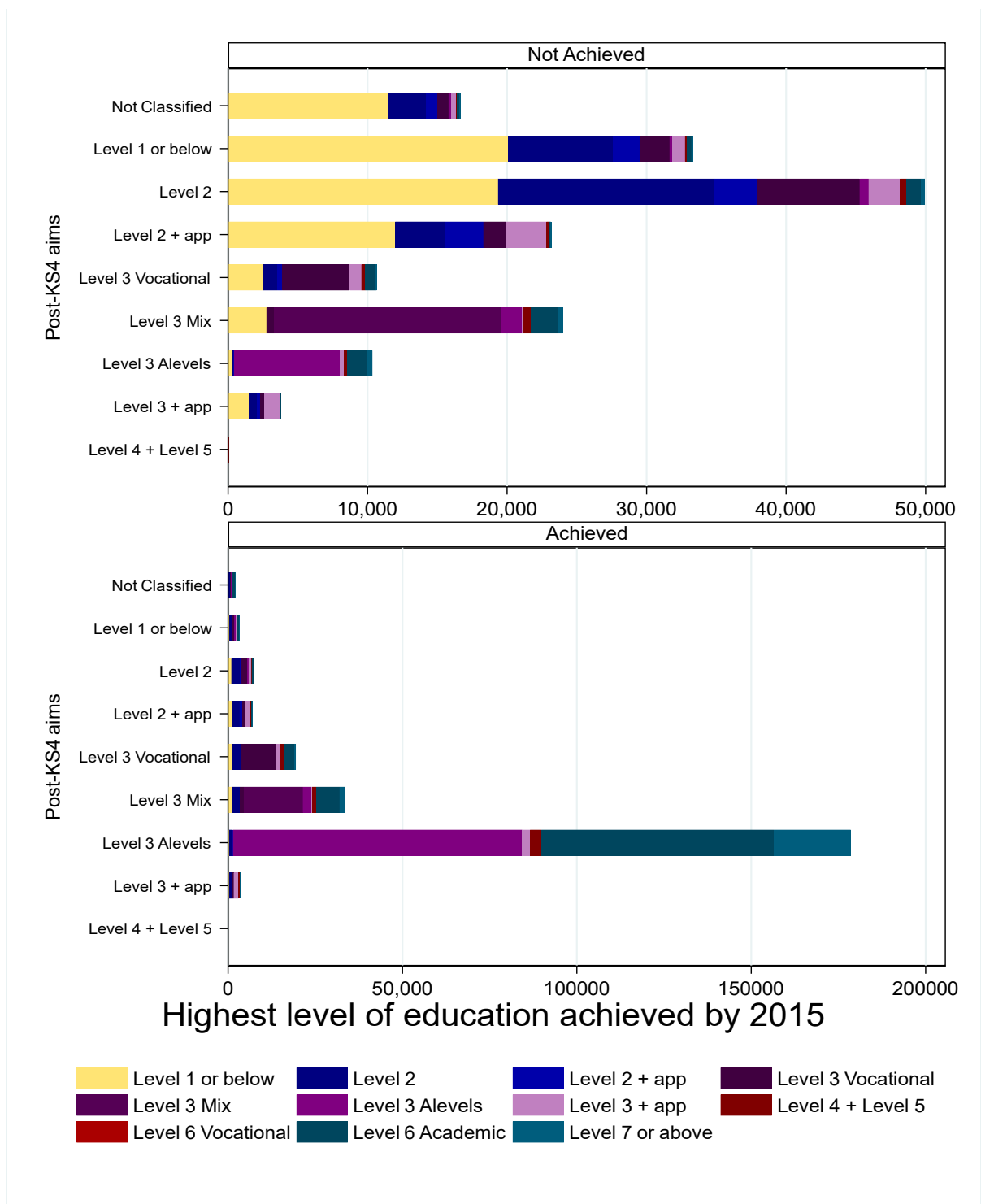
Turning to those already studying at Level 3 in 2003/04, Figure 4.1 shows that those doing so via a vocational qualification (or a mix including vocational qualifications) are most likely to have attained at Level 3, but no higher by 2015 (only 18% having achieved higher than Level 3 by 2015). On the other hand, academic Level 3 learners in 2003/04 (i.e. A level students) are as likely to have reached Level 6 or above (i.e. degree level qualifications) as having peaked at Level 3 (50% being qualified to Level 4 or higher by 2015).

Figure 4.2 repeats the analysis of Figure 4.1, separately according to whether individuals have or have not achieved the benchmark 5+ GCSE passes at grade C or above.⁶ Not surprisingly, high achievers in KS4 (the lower half of Figure 4.2) mostly continue with a more academic route, and of these, over one half (52%) will go on to achieve a degree level qualification.

In contrast, only a small proportion of those with low GCSE achievement gain a university degree in the longer term. Even among those from this group who have A levels as their 2003/04 learning aim, only 17% go on to achieve a degree. Furthermore, there is far greater diversity in learning aims amongst the low GCSE-achievers than amongst the more successful at GCSE. The former group are more likely to continue learning at Level 2 than any other qualification category, and if they have progressed to Level 3, this is most likely to be a mixed combination of A levels and vocational qualifications. A smaller proportion (9%) of the latter group go on to achieve a degree, compared to those who take A levels only (17% as reported above). In terms of the highest qualification achievements by 2015, most of the low GCSE achievers' highest level of attainment is the same level they were studying in 2003/4 (those with a Level 2 learning aim as their learning aim in 2003/4 being most likely to still be at Level 2 in 2015, etc.). For example, just 24% of those low-GCSE achievers studying for a Level 2 qualification in 2003/04 reached Level 3 or higher by 2015, with a figure of 21% for low-GCSE achievers studying at Level 2 including an apprenticeship in 2003/04. Students who achieved 5+ GCSEs but were nevertheless still studying at Level 2 post-GCSE were more likely to progress higher by 2015 (49% and 40% reaching at least Level 3 by 2015 for those studying Level 2 and Level 2 with apprenticeship respectively in 2003/04).

⁶ The percentage of learners within each learning aim category represented by each segment of the horizontal bars is reported in Appendix Table A4.2.

Figure 4.2: Post-16 education by GCSE attainment (5+ A*- C GCSEs), 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. See also notes to Figure 4.1.

Figure 4.3 shows how those who continued to study post KS4 differ in terms of their provider characteristics. The figure is organised in the same way as the two previous figures, except now separately for Further

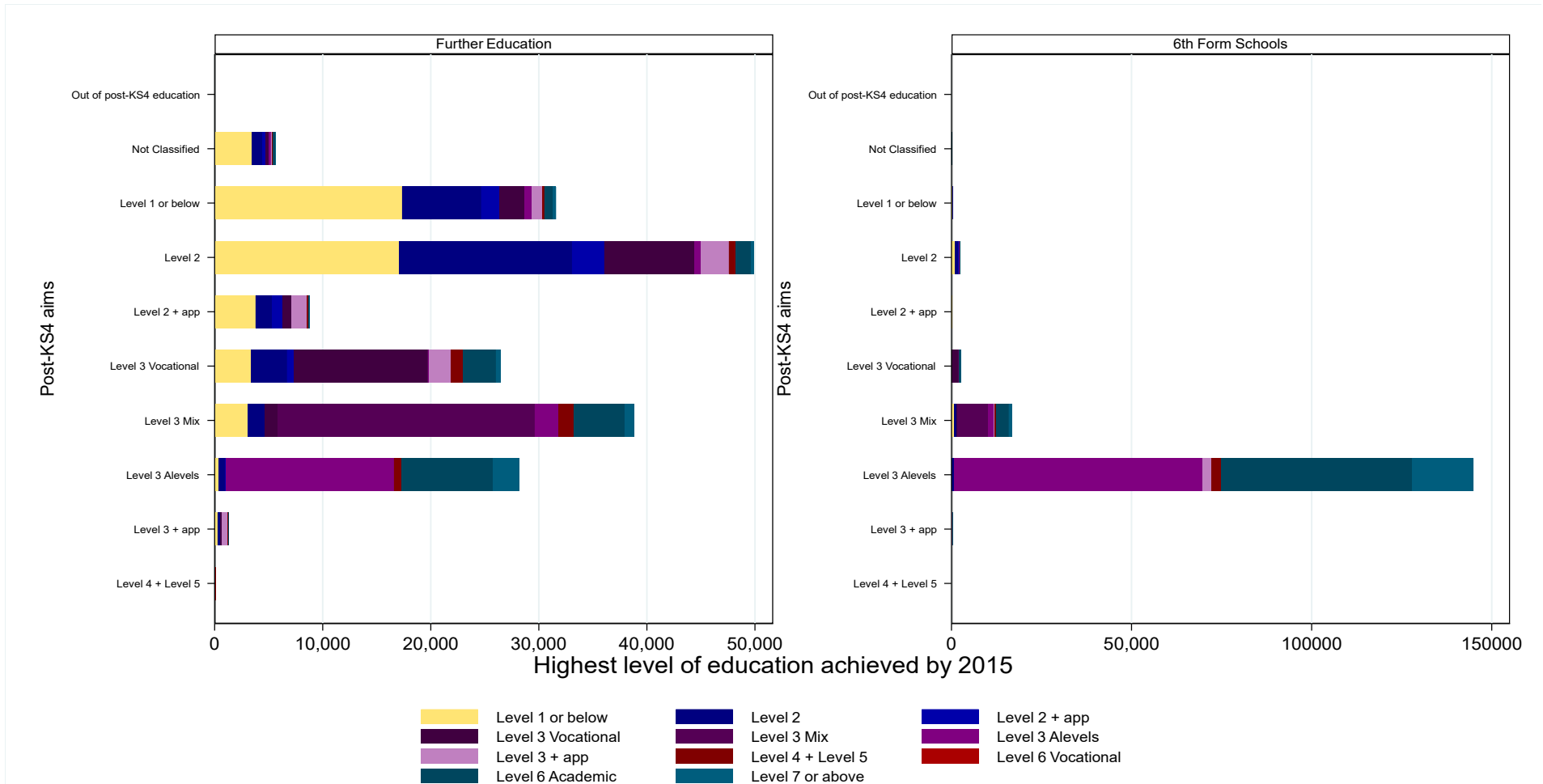
Education Colleges and School Sixth Forms/Sixth Form Colleges.⁷ The results make clear that in the latter institutions, the vast majority of learners are pursuing A levels only, with around half of those ultimately achieving a degree level qualification. We observe similar patterns of long-term attainment for those who went to general Sixth Form Schools and those who went to independent schools.

For those students who attended Further Education institutions post-GCSE, the left hand chart in Figure 4.3 shows the wide variety of qualifications being studied by students in FE colleges, as well as the variety of highest qualifications that they ultimately achieved. Of those studying A levels at such colleges, such qualifications are more likely to ultimately constitute their highest qualification attained, compared to their peers in School Sixth Forms (55% having A levels as their highest qualification in 2015 for FE College students, compared to 48% for School Sixth Form Colleges). Similarly, those who take A levels at an FE College are less likely to ultimately complete a degree (39% compared to 48% of those who take A levels at Sixth Form Schools/Colleges).

Figure 4.4 splits the sample according to the above-mentioned types of providers and by gender. The patterns within provider groups are broadly similar, though with some important small differences. For example, there are clearly larger numbers of males than females studying for a qualification at Level 1 or below in 2003/04, and remaining there in terms of highest qualification by 2015 (the yellow parts of the horizontal bars). On the other hand, there are clearly more females than males taking Level 3 qualifications, by a small number for vocational qualifications and by a large number for A levels. The latter is the case in both FE colleges and Sixth Form schools. Finally the proportion of A level learners who ultimately acquire a degree level qualification by 2015 is also higher for females than for males, again amongst those who attend both types of educational institution.

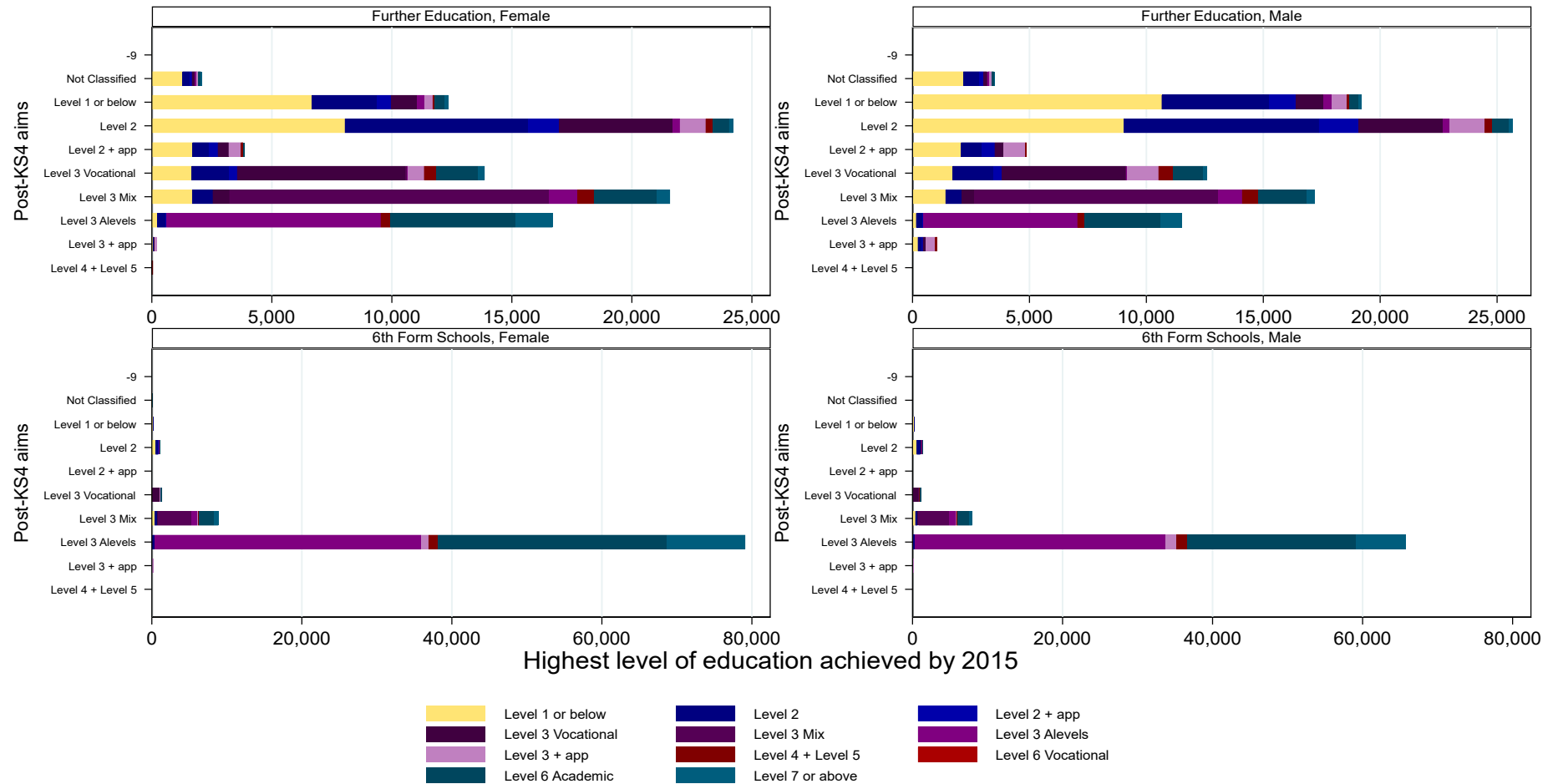
⁷ The percentage of learners within each learning aim category represented by each segment of the horizontal bars is reported in Appendix Table A4.3.

Figure 4.3: Post-16 education by type of provider, 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. See also notes to Figure 4.1.

Figure 4.4: Post-16 education by type of provider and gender, 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. See also notes to Figure 4.1.

Figure 4.5 begins to look at the intersection between family disadvantage and type of educational institution, in order to obtain a first indication of whether those from more disadvantaged backgrounds have lower educational aims and outcomes than their more advantaged counterparts within each type of institution, or whether the former's lower indicators are due to them being more likely to attend FE Colleges. Looking within FE colleges, cohort members from a more disadvantaged background (entitled to free school meals) are much more likely to be studying for a lower level qualification than non-FSM students, with the difference at Level 1 particularly noticeable. The former group are also more likely to have attained no higher than Level 1, by 2015. Looking further up the hierarchy, those from poorer families who aimed for Level 3 education, are less likely to gain HE degree, and this is the case in both Sixth Form schools and FE colleges. Consistent with previous results, those in Sixth Form colleges still mainly go down the academic route, but only 50% achieve HE degrees in comparison to 61% of those in Sixth Form colleges and not eligible for FSM. These results therefore confirm that social mobility issues do exist such that those who come from more disadvantaged backgrounds are less likely to achieve higher qualification, and that this result is not dependent on type of institution attended.

Figure 4.6 further splits the sample by provider type, FSM eligibility and GCSE attainment. This is to investigate whether the lower outcomes of those young people from the FSM group are related to their lower GCSE performance, and so whether they do no worse than non-FSM students with the same prior GCSE performance. In all subgroups, we observe similar patterns as before, but there are a number of interesting points that emerge from the figures, where some differences occur:

(i) looking at the FSM panels on the right hand side of Figure 4.6, it can be seen that those in FE colleges are more likely not to have achieved 5+ good GCSEs, with most FSM learners in such institutions falling into this category (compare the total number observed in panels 3 and 4 on the top row of Figure 4.6). As expected, this group are much more likely to be taking course at Levels 1 and 2, compared to those who did achieve good GCSEs, who are more likely to be taking Level 3 courses. The non-FSM learners in FE colleges are more evenly divided between those who have and have not achieved 5+ good GCSEs (panels 1 and 2 on the top row).

(ii) The FSM low-GCSEs achievers in FE colleges have a modal category of Level 1 or below for learning aims (panel 3 on the top row) whereas the non-FSM low GCSE-achievers are much more likely to be studying at Level 2 than at Level 1 or below (panel 1 on the top row). The relative final highest qualification attainment rates are however similar across the two FSM groups within initial learning aim categories.

(iii) Looking at those with Level 3 learning aims in FE colleges, the patterns for those eligible for FSM are similar to those not – for both groups, achieving 5+ good GCSEs means being most likely to study for A levels at college, while those who do not reach that level of GCSE performance in school are more likely to take a mixture of vocational qualifications and A levels, again irrespective of FSM status.

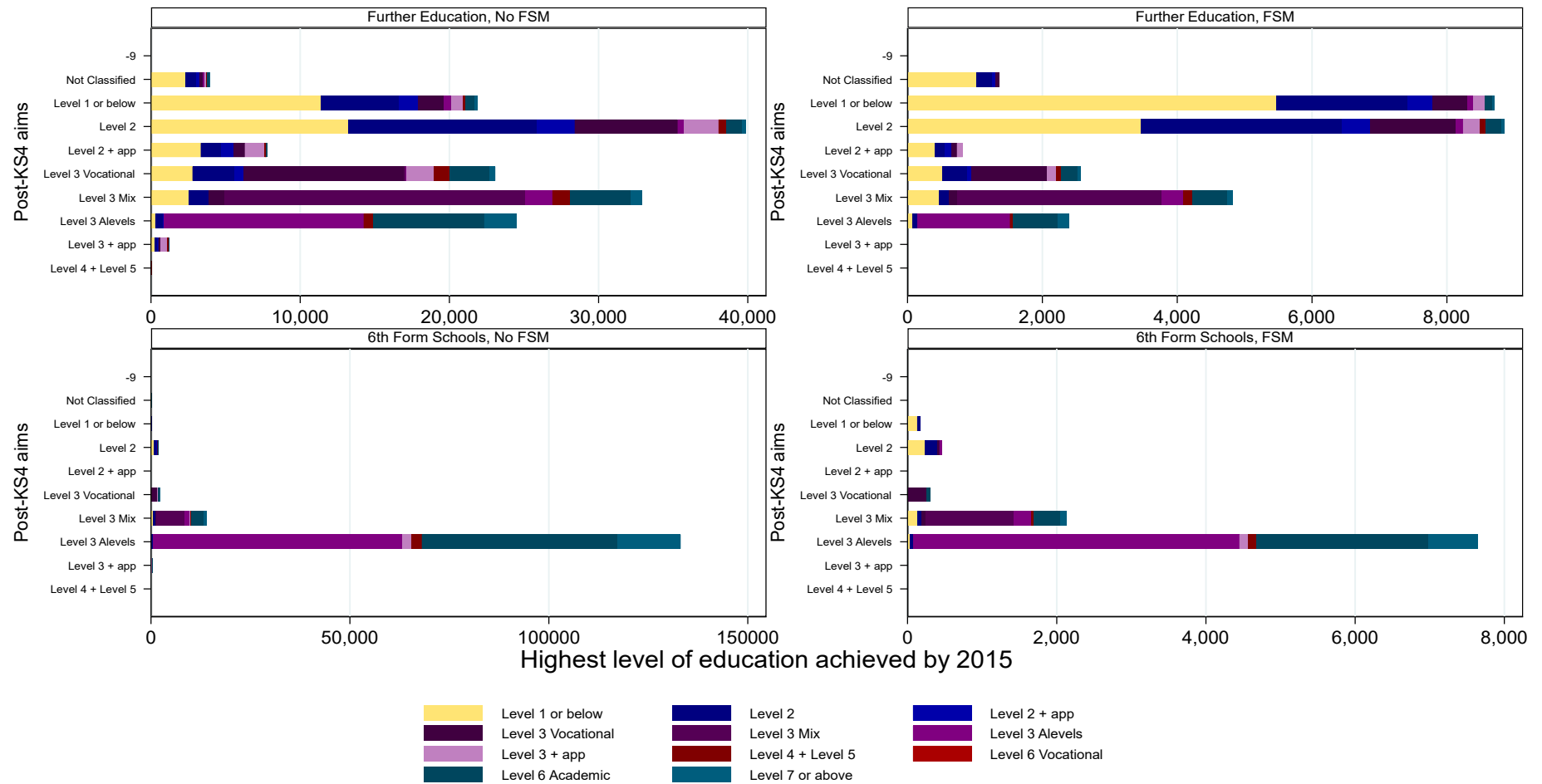
(iv) Turning to learners in Sixth Form schools in the lower row of Table 4.6, most with 5+ good GCSEs take A levels in school sixth forms, whether or not they are from a FSM-eligible household or not. However, of these, those entitled to FSM are more likely to go no further than A levels and are less likely to attain an HE qualification (panels 2 and 4 in lower row).

(v) A key difference between family background types is that amongst low GCSE-achievers who remain in Sixth Form schools, those from more advantaged backgrounds are more likely to stay on an academic track with A levels, while similarly qualified young people in schools from a more disadvantaged background are more likely to take a vocational/A level mix than straight A levels.

The various breakdowns discussed above therefore suggest that those from a more disadvantaged background do not have worse final outcomes, due only to their lower prior attainment, or to the institution they attended. Rather, their final outcomes are lower along certain dimensions, as discussed above, even

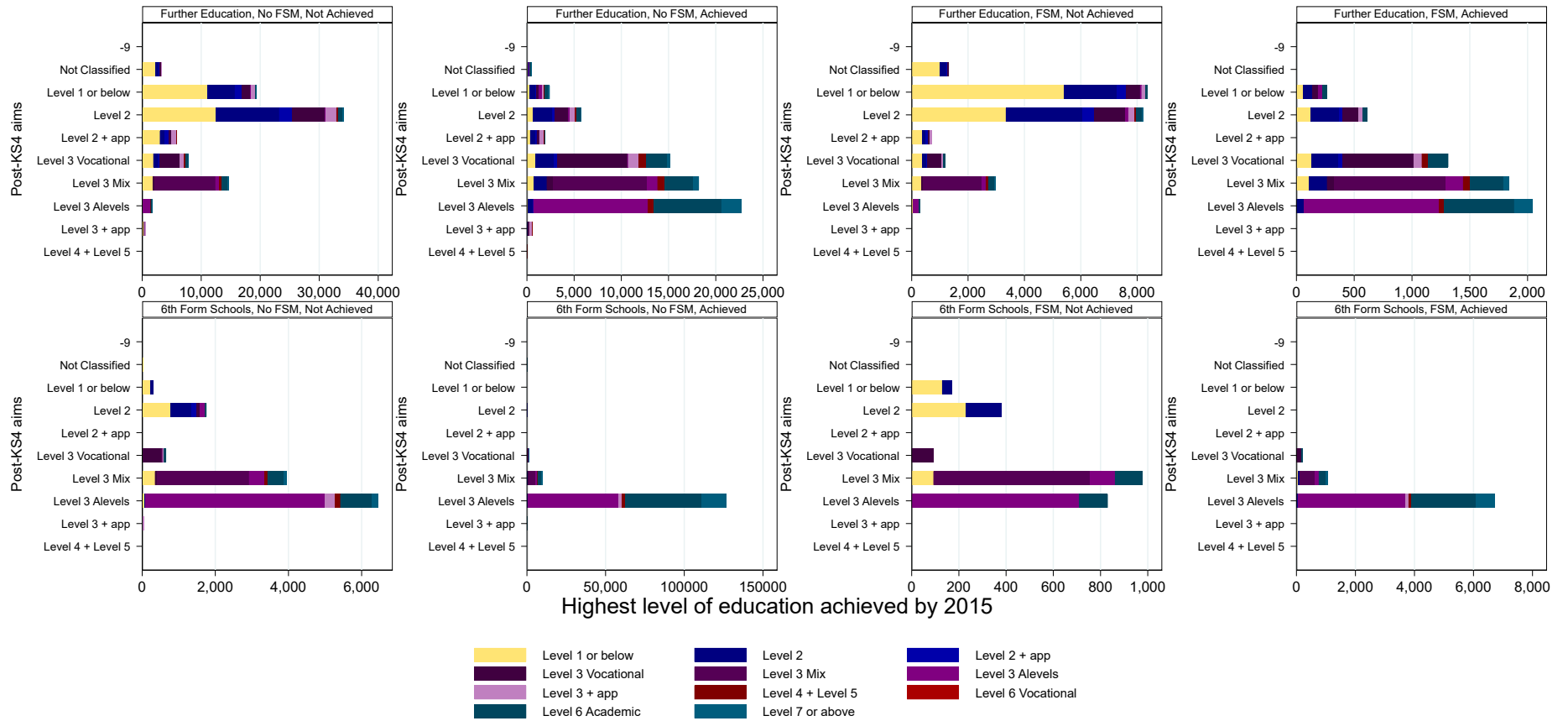
when we look within institution and prior attainment categories and thus in effect hold institution and prior attainment constant. This therefore suggests that family background has some effect on final outcomes over and above being related to institution attended and prior attainment. In Section 4.5 we look at all of the various influences on educational outcomes in a multivariate setting, to determine their relative importance. Before that, though, Section 4 provides some descriptive statistics on provider-level characteristics.

Figure 4.5: Post-16 education by type of provider and FSM eligibility, 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. See also notes to Figure 4.1

Figure 4.6: Post-16 education by type of provider, FSM eligibility and GCSE attainment (5+ A*-C), 2003/04 cohort



Notes: Source: NPD-ILR-LEO linked data. See also notes to Figure 4.1.

4.4 Descriptive statistics: provider level

In this section we explore provider level data. In the data there are six main types of provider identified, plus a category of residual types, 'Other'. In the analysis that follows, we focus on the two types that cover the vast majority of Level 3 learners, namely FE colleges; and Sixth Form colleges together with Sixth Forms within schools, hereafter labelled as 'Sixth Form schools'. Table 4.2 reports the relative size of these two types, by number of institutions and number of learners.

Table 4.2: Population by type of provider

Type of Provider	% of institutions	% of learners
Further Education	17.29	53.96
Sixth Form Schools	82.71	46.04

Notes: Source: NPD-ILR-LEO linked data.

As can be seen, FE colleges and Sixth Form schools share learners approximately equally between them, with slightly more in the latter. FE colleges only represent a small proportion of institutions however, thus illustrating their large size. This is further shown clearly in Figure 4.7, with most FE colleges in the largest size category (500+ students). In contrast, the modal size category for school sixth forms is 50-100 students.

Figure 4.7: Provider types by size

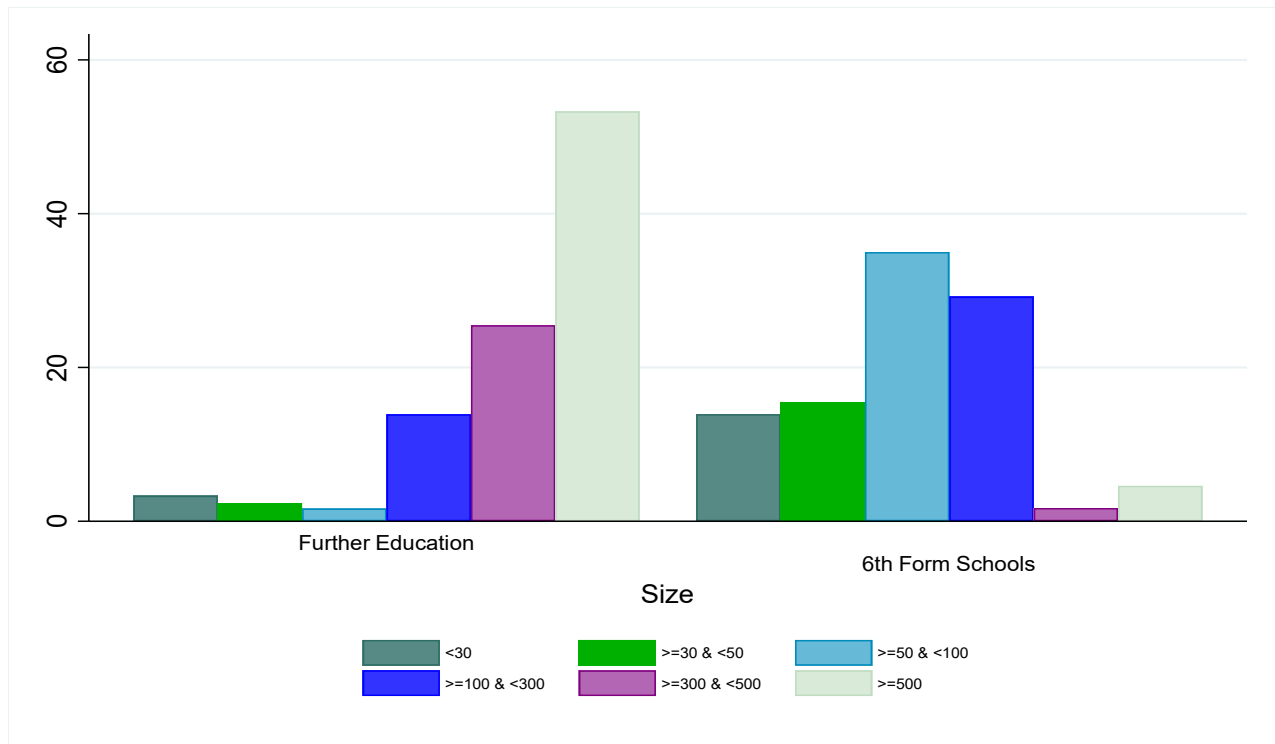
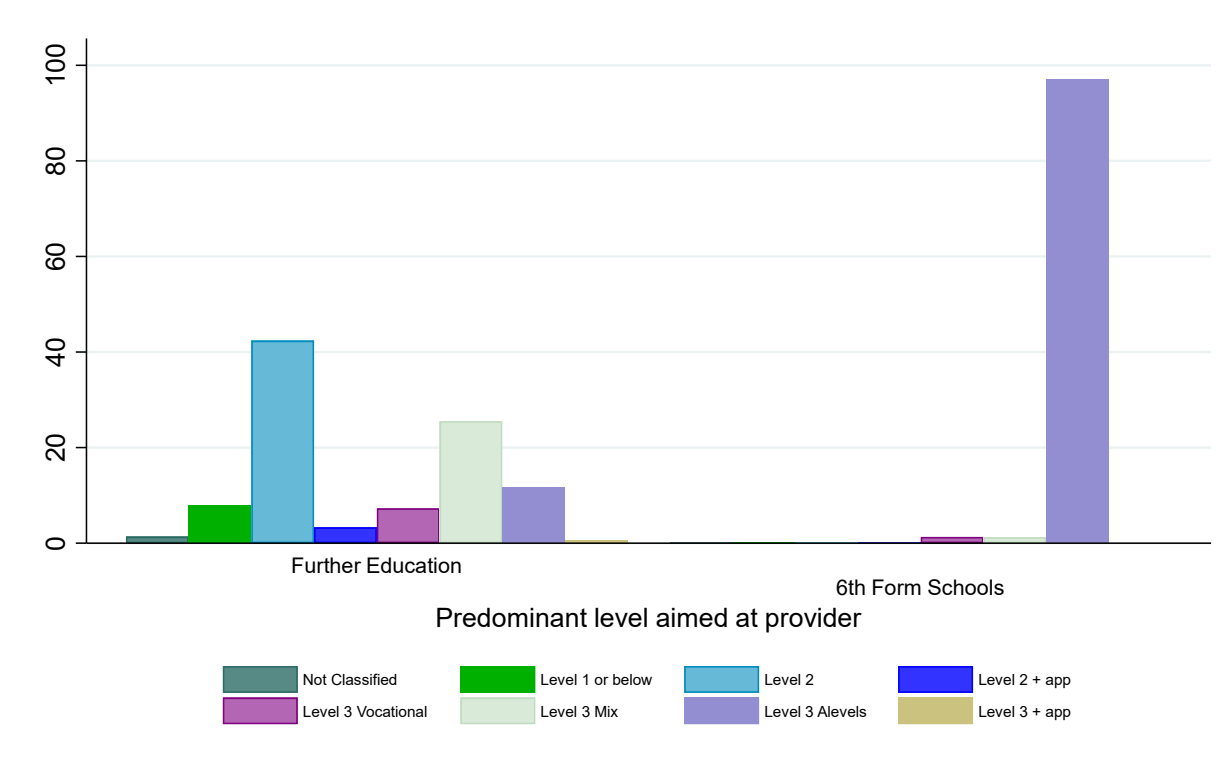


Figure 4.8 shows the predominant levels that students aim for at different types of providers. Sixth Form schools overwhelmingly educate at academic level 3, whilst FE colleges also host those who aim for level 2 and level 3 mix between academic and vocational studies.

Figure 4.8: Predominant level aimed at provider



Notes: Source: NPD-ILR-LEO linked data.

The remaining characteristics of the providers are derived from aggregating the individual level data observed in the two cohorts to the institution level, as reported in Table 4.3 below.

Table 4.3 Mean Characteristics of Educational Institutions

Provider Characteristic	Total		FE College		Sixth Forms	
	2003/04	2011/12	2003/04	2011/12	2003/04	2011/12
Size (number of students)	162.2	187.2	630.2	908.7	115.3	135.2
Competition	0.872	0.885	0.608	0.580	0.889	0.902
Level 3 share	81.1%	78%	15.5%	12.3%	91%	81.9%
HE provision	32.3%	37.1%	11.5%	9.4%	43.2%	45%
IMD decile	5.657	5.760	4.749	4.693	5.961	5.842
Proportion eligible FSM	10.7%	19.4%	16.7%	30.7%	7.2%	17.2%
Proportion with 5+ GCSEs	70%	72.6%	38.%	31.8%	89.9%	84.7%
Crime decile	5.216	5.306	4.551	4.476	5.465	5.321

Notes: Source: NPD-ILR-LEO linked data.

Table 4.3 shows that the average characteristics of the institutions attended by the members of the two cohorts remain broadly similar. The most noticeable change is the increase in the average proportion eligible for FSMs

across institutions in the more recent cohort. Comparing FE Colleges and Sixth Form Schools, the relative difference in size is again clear. Other differences between the two types of institutions are also as expected, for example Sixth Form Schools predominately catering for Level 3 learners, while only a small minority of FE College students are learning at this level, reflecting their relative prior GCSE attainment. Sixth Form Schools students also have a higher proportion progressing to HE, come from a higher IMD decile, and are less likely to be eligible for FSMs (though the proportion has increased in both types of institution).

4.5 Multivariate Analysis of Education Outcomes

The descriptive statistics presented in Section 4.3 above suggested that young people from a more disadvantaged background have lower educational aims and outcomes, and that this effect is observed independent of any influence from prior attainment and type of institution. This section examines this further, in a multivariate setting and so looking at the effect of disadvantage (as measured by eligibility for FSM) on outcomes, holding constant other individual and institution characteristics. Of particular interest will be an interaction term between FSM and the type of institution indicator. The coefficient on this interaction term will inform us as to the role that FE colleges play in social mobility – in particular, do FE colleges help to narrow the outcomes gap between those from FSM and non-FSM backgrounds, do they exacerbate the gap, or do they have no effect? The answer to this will be determined by the size and sign of the coefficient on the interaction term. To interpret the interaction coefficient, it needs to be added to the ‘base effect’ of the constituent variables’ coefficients. For example, consider the case where the coefficient on FSM status is negative, indicating that the outcome of interest is lower amongst FSM students than amongst non-FSM students. If the coefficient on the interaction term between FSM status and FE college attendance was also negative, then when added to the ‘base’ negative effect would give a larger negative effect, implying that the outcome gap between FSM and non-FSM students was larger in FE Colleges than in Sixth Form schools. On the other hand, if the interaction coefficient was positive, then this would offset the base effect, making it less negative, and so implying that the outcome gap between FSM and non-FSM students was smaller in FE Colleges than in Sixth Form schools (in principle, if the positive interaction coefficient was larger in absolute size than the negative base FSM coefficient, this would suggest that the outcome variable was actually larger for FSM students than for non-FSM students in FE colleges).

The analysis below considers three outcomes, the pay received by the cohort member (measured by the natural logarithm of annual earnings observed in 2015), whether the cohort member has achieved a degree level qualification by 2015, and if yes in the latter case, whether they attended one of the Russell Group universities. Tables 4.4-4.6 present the results for each of these outcomes in turn for the 2003/04 cohort, while Tables 4.7-4.9 repeat the analysis for the more recent 2011/12 cohort. In each table, various specifications are presented, which gradually build up the number of conditioning variables.

Table 4.4 considers the log of individuals’ annual income in 2015. The first column includes individual level controls, for gender, ethnicity, and prior attainment, the latter measured by Key Stage 3 (age 14) test results in Maths and English and by whether or not the individual achieves Level 2 in their GCSE qualifications (i.e. achieve 5 or more GCSEs at grade C or above). In addition, the specification includes the two key variables of interest: eligibility for FSM as an indicator of family disadvantage, and attendance at an FE College (the latter’s coefficient interpreted relative to the omitted category of Sixth Form Schools). The negative and statistically significant coefficients on both of these variables show that, after holding constant prior (Key Stage 3 and GCSE) attainment, students eligible for FSM earn 18%⁸ less on average in 2015, compared to those not eligible. Similarly, learners who attended an FE College for post-16 education earned 15.5% less on average, compared to those who attended a Sixth Form School or College.

Column 2 introduces an interaction term between these two key variables of interest. Its coefficient therefore measures the difference in the family background disadvantage between those learners who attended an FE

⁸ Measured as $e^{\beta} - 1$, where β is the estimated coefficient in the table.

College and those who attended a school sixth form, as described in detail above. The results in column 2 show that the coefficient on the interaction term is small and statistically insignificant, with the coefficients on the main FSM and FE College variables largely unchanged relative to Column 1.

Column 2 does not include any of the provider characteristics discussed earlier in Section 4.4. If it is the case that learner outcomes vary systematically across colleges according to the latter's characteristics, and if learners from disadvantaged backgrounds are more likely to attend colleges with particular 'worse' characteristics, then it could be that the FSM variable and its interaction are picking up some of the effects of the college characteristics on the learner outcomes. It seems that this is indeed the case, as the addition of the provider characteristic variables in Column 3 changes the FSM and the interaction term coefficients. In particular, the FSM coefficient is now smaller, while the interaction coefficient is now larger in absolute size and is statistically significant. In addition the FE College coefficient is now statistically insignificant. These results suggest that holding the 'quality' of the institution constant as measured by its characteristics and those of its intake of learners, the earnings penalty associated with attending an FE College rather than a Sixth Form School disappears for most learners – the difference in future earnings of learners who attended an FE College and learners who attended a Sixth Form School with the same provider characteristics is insignificantly different from zero, for all learners who are not eligible for FSM. However, amongst those learners who are eligible for FSM, then their earnings outcome is 7.5% lower⁹ if they attended an FE College than if they attended a Sixth Form School with similar characteristics. It therefore seems as though the learners from disadvantaged backgrounds are less able to overcome any effect from attending an FE College rather than a Sixth Form School with similar characteristics, whereas their more advantaged peers can negate any such penalty, perhaps through greater family support or connections. To put the result another way, the gap in future earnings between those from FSM and non-FSM backgrounds is larger amongst FE college students than amongst Sixth Form school students.

Table 4.4: Multivariate analysis of Determinants of Ln (Annual Earnings): 2003/4 Cohort

	(1)	(2)	(3)	(4)
Individual characteristics				
5 GCSE A*-C	0.248*** (0.00611)	0.248*** (0.00611)	0.242*** (0.00569)	0.156*** (0.00571)
FSM	-0.167*** (0.00741)	-0.150*** (0.0112)	-0.112*** (0.0121)	-0.102*** (0.0120)
Female	-0.343*** (0.00658)	-0.343*** (0.00659)	-0.340*** (0.00660)	-0.351*** (0.00658)
Ethnicity	-0.00279 (0.00702)	-0.00231 (0.00706)	0.00519 (0.00646)	0.0213*** (0.00664)
KS3 Math	0.166*** (0.00386)	0.167*** (0.00386)	0.154*** (0.00384)	0.135*** (0.00389)
KS3 English	0.0838*** (0.00446)	0.0838*** (0.00446)	0.0741*** (0.00435)	0.0530*** (0.00433)
FE College	-0.144*** (0.00860)	-0.142*** (0.00860)	-0.0172 (0.0214)	-0.00836 (0.0217)
FSM * FE College		-0.0240 (0.0149)	-0.0557*** (0.0154)	-0.0431*** (0.0152)
Provider characteristics				
Size			-2.89e-05*** (1.08e-05)	-2.95e-05*** (1.11e-05)
Competition			0.0192 (0.0207)	0.0230 (0.0208)

⁹ Calculated as the base FE College effect of -0.017 + interaction effect of -0.056, and then the exponential taken of this sum.

Share of A levels			0.0129 (0.0217)	-0.0278 (0.0234)
Share of HE achievers			0.484*** (0.0459)	0.387*** (0.0470)
IMD			0.00854*** (0.00175)	0.00867*** (0.00177)
FSM eligible share			-0.112** (0.0561)	-0.140** (0.0553)
Share of 5+ A*-C GCSE achievers			-0.120*** (0.0455)	-0.114** (0.0463)
Crime decile			-0.00440*** (0.00167)	-0.00461*** (0.00168)

Highest level by 2015

Level 2				0.105*** (0.00919)
Level 2 + Appren				0.220*** (0.0152)
Level 3 Vocational				0.224*** (0.00955)
Level 3 Mix				0.213*** (0.00946)
Level 3 A levels				0.253*** (0.00936)
Level 3 + Appren				0.369*** (0.0125)
Level 4 Vocational				0.465*** (0.0160)
Level 4 Academic				0.235*** (0.0498)
Level 4 + Appren				0.413*** (0.0644)
Level 5 Vocational				0.256*** (0.0171)
Level 5 Academic				0.315*** (0.0638)
Level 5 + Appren				0.514*** (0.132)
Level 6 Academic				0.415*** (0.00963)
Level 7 or above				0.415*** (0.0114)
Constant	9.871*** (0.0103)	9.870*** (0.0103)	9.734*** (0.0361)	9.562*** (0.0369)
Observations	253,830	253,830	247,940	247,940
R-squared	0.118	0.118	0.120	0.132

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Part of the reason for lower earnings outcome in 2015 of former-FE attendees could be that learners who attended a Sixth Form School subsequently attain higher level qualifications. The different outcomes may therefore be due not to something that happens while attending the post-16 upper-secondary institution, but due to further attainment subsequent to that attendance. In one sense, not controlling for any such further attainment could appear to make it an unfair comparison between FE Colleges and Sixth Form Schools, though on the other hand, if the future attainment is a function of progression made in the upper secondary institution,

then we might want to include it in the total effect of institution type on future earnings. We therefore present results with and without the controls for final highest qualification, only adding controls for the highest qualification attained by the learners by 2015 in the final column in Table 4.4. In actual fact, it makes little difference to the results. Though the highest qualification variables attract large positive and statistically significant coefficients as expected, their inclusion does not greatly affect the other coefficients in the equation. In particular, the FE College attendance coefficient is extremely small and remains statistically insignificant, while the coefficients on the FSM variable and its interaction with the FE College variable are slightly smaller in absolute value in Column 4 than in Column 3, but remain negative and statistically different from zero. Final highest qualification attainment does not therefore seem to have been driving the earlier results, and including controls for such effects does not alter the story presented above.

Briefly considering the other coefficients in Table 4.4, they are largely as expected. There is a large negative coefficient associated with being female, which is largely unchanged across the four specifications, suggesting that the gender pay gap is unrelated to any of the factors controlled for, in particular educational outcomes. The pay gap is large because the pay variable used is annual earnings, and so the results pick up the much higher likelihood of women to work part-time. The pay gap by ethnic group is very small, and actually becomes positive and statistically significant, once all controls for family background, institution attended and educational attainment are included. Prior attainment is understandably positively related to future earnings, with Key Stage 3 maths having about double the effect of Key Stage 3 English. The effect of lower secondary educational attainment is reduced in the final column once we control for final highest qualification achieved. Amongst the provider characteristics included in columns 3 and 4, size of institution is negatively correlated with future earnings (this after controlling for type of institution). The characteristics of the learner intake have varying effects, perhaps due to collinearity between the various indicators making it difficult to pick up their separate effects. Key factors shown to be related to an individual's future wage success, over and above their own attainment, are the proportion of peers who go on to achieve an HE qualification (positively), the proportion of peers eligible for FSM (negatively) and the level of local deprivation and crime (negatively).

Table 4.5 conducts a similar analysis, where the outcome of interest is now whether an individual achieves an HE qualification. There are only 3 columns in Table 4.5 compared to 4 columns in the previous table, since we cannot now include the final specification of Table 4.4, which added control variables for highest qualification attained. Clearly such variables would predict almost perfectly whether someone had achieved an HE qualification or not.

Table 4.5: Multivariate analysis of Determinants of HE Achievement: 2003/4 Cohort

	(1)	(2)	(3)
Individual characteristics			
5 GCSE A*-C	0.147*** (0.00393)	0.148*** (0.00391)	0.141*** (0.00337)
FSM	-0.0218*** (0.00287)	-0.0910*** (0.00600)	-0.0617*** (0.00509)
Female	0.0348*** (0.00199)	0.0350*** (0.00198)	0.0326*** (0.00179)
Ethnicity	-0.0736*** (0.00428)	-0.0758*** (0.00415)	-0.0514*** (0.00269)
KS3 Math	0.0724*** (0.00223)	0.0718*** (0.00223)	0.0568*** (0.00205)
KS3 English	0.0815*** (0.00250)	0.0813*** (0.00251)	0.0692*** (0.00220)
FE College	-0.168*** (0.00678)	-0.177*** (0.00683)	-0.0125*** (0.00234)
FSM * FE College		0.0972*** (0.00662)	0.0590*** (0.00541)
Provider characteristics			
Size			2.12e-06* (1.10e-06)
Competition			-0.00126 (0.00199)
Share of A levels			0.00300 (0.00341)
Share of HE achievers			0.856*** (0.00741)
IMD			-7.21e-05 (0.000224)
FSM eligible share			0.0315*** (0.00756)
Share of 5+ A*-C GCSE achievers			-0.196*** (0.00708)
Crime decile			0.000287 (0.000218)
Constant	0.156*** (0.00479)	0.330*** (0.00587)	0.110*** (0.00507)
Observations	326,686	326,686	318,555
R-squared	0.210	0.211	0.230

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

The results in Column 1 on the key variables of interest show that individuals who achieve their upper secondary qualification via an FE College are significantly less likely to have achieved an HE qualification by the age of 25, compared to those who attend a Sixth Form School/College. The effect is a 17 percentage point difference in HE achievement rates, which is clearly a very large effect. Holding constant the individual characteristics controlled for in Column 1, young people entitled to FSM are 2 percentage points less likely to achieve an HE qualification by age 25. This is compared to non-FSM individuals with similar prior attainment and so the effect is over and above their lower HE achievement due to having lower prior attainment.

Column 2 adds the interaction term between the FSM and FE College indicators. The coefficient on the interaction can be seen to be positive and statistically significant. In terms of its size, this is 10 percentage points, which fully offsets the negative coefficient on the base FSM variable. Thus the result suggests that young people from a more disadvantaged background are 9 percentage points less likely to ultimately achieve an HE qualification if they initially study in a Sixth Form School/College, compared to their more-advantaged peers with similar prior attainment. However, in an FE College setting, this difference in HE qualification achievement between the FSM and non-FSM groups is entirely eliminated. Young people from both groups with the same level of prior attainment are equally likely to ultimately achieve an HE qualification, if they initially study in an FE setting. Looking at the interaction result from a different angle, it suggests that the Sixth Form School/College premium over FE Colleges for HE achievement is significantly narrowed amongst individuals entitled to FSM, from 18 to 8 percentage points.

Column 3 adds the education institutions' characteristics to the list of control variables. The main effect of this is to greatly reduce the negative coefficient on the FE College variable, from minus 18 percentage points down to minus 1 percentage point, though it remains statistically significant. Thus when we compare FE Colleges to Sixth Form Schools with similar characteristics, then the eventual HE qualification achievement rates of the students are very similar. The coefficients on the institution characteristics show that the most important characteristics to control for, in terms of them having an effect, are institution size, and achievements of other student peers. The coefficient on the FSM-FE College interaction term is positive and statistically significant, and is larger in absolute size than the base FE College effect. This means that students entitled to FSM are actually *more* likely to ultimately achieve an HE qualification if they attend an FE College than if they attend a comparable Sixth Form School/College with similar characteristics. This finding is consistent with the results observed in the aggregate statistics in Table 3.6 above.

Putting the results from Column 2 and Column 3 together, in particular that the interaction coefficient partially offsets the FE college coefficient in Column 2 but more than fully offsets the FE college coefficient in Column 3, suggests the following: Those young people who attend FE Colleges are on average less likely to progress to HE. This is also true for disadvantaged young people, though the gap to the Sixth Form schools' HE achievement rate is smaller for them. When we hold all institution characteristics constant, those from a disadvantaged background are actually more likely to reach HE if they attended an FE College than a Sixth Form School. Hence their FE Colleges are performing well with such students. Although overall they are still less likely to reach HE than Sixth Form School pupils, if we compare only to Sixth Form School pupils in institutions with similarly challenging characteristics, then the FE Colleges are performing better. So although disadvantaged students are still better off in a 'good' Sixth Form School, it is still the case that the FE Colleges are overperforming with them overall.

Table 4.6 is similar to Table 4.5, but now considers whether the young people achieved an HE qualification from one of the Russell Group of research-intensive universities, as opposed to from any university. The pattern of the results is actually very similar to that observed in Table 4.5, though the absolute size of the effects is smaller, because there are far fewer individuals overall who go to a Russell Group university than to any HE institution, and so the differences in Russell Group outcomes between different groups of individuals are necessarily smaller. Thus in Column 2, we observe small negative, but statistically significant, coefficients on the FSM and FE College indicators, that are offset by the coefficient on the interaction term between the two.

This shows that, similar to HE achievement overall in Table 4.5, that young people from a more disadvantaged background are as likely to ultimately achieve an HE qualification from a Russell Group university if they attend an FE College than if they attend a Sixth Form School. Once we control for the characteristics of the different types of upper secondary institutions (Column 3), we again see that young people entitled to FSM have a higher Russell Group achievement rate if following upper secondary education in an FE College, compared to an upper secondary education in a Sixth Form School with similar characteristics.

Table 4.6: Multivariate analysis of Determinants of Russell Group HE Achievement: 2003/4 Cohort

	(1)	(2)	(3)
Individual characteristics			
5 GCSE A*-C	-0.0127*** (0.00122)	-0.0122*** (0.00119)	-0.0131*** (0.00107)
FSM	5.59e-05 (0.000856)	-0.0260*** (0.00252)	-0.0140*** (0.00231)
Female	-0.00199* (0.00116)	-0.00191* (0.00116)	-0.00297*** (0.00100)
Ethnicity	-0.0123*** (0.00176)	-0.0131*** (0.00174)	-0.00452*** (0.00151)
KS3 Math	0.0403*** (0.00151)	0.0401*** (0.00150)	0.0351*** (0.00133)
KS3 English	0.0392*** (0.00183)	0.0391*** (0.00183)	0.0354*** (0.00161)
FE College	-0.0335*** (0.00203)	-0.0367*** (0.00207)	0.00382 (0.00498)
FSM * FE College		0.0366*** (0.00260)	0.0225*** (0.00242)
Provider characteristics			
Size			1.77e-06 (1.67e-06)
Competition			-0.00736** (0.00345)
Share of A levels			-0.0228 (0.0144)
Share of HE achievers			0.343*** (0.0186)
IMD			0.000117 (0.000370)
FSM eligible share			-0.0272*** (0.00978)
Share of 5+ A*-C GCSE achievers			-0.108*** (0.0136)
Crime decile			-0.000141 (0.000394)
Constant	0.0510*** (0.00251)	0.0865*** (0.00307)	0.0489*** (0.00713)
Observations	326,686	326,686	318,555
R-squared	0.062	0.063	0.077

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

As described in the earlier data section, we also had data on a more recent cohort of young people, who achieved their GCSE results in 2011. Tables 4.7-4.9 repeat the analysis of Tables 4.4-4.6 for this younger cohort, to determine whether a similar pattern of results is still being obtained in a more recent cohort.

Table 4.7 looks at the analysis of the log of earnings, for the 2011 cohort. One obvious difference compared to the results for the earlier cohort in Table 4.4 is the positive coefficient on the FE College variable in Columns 1 and 2. This is due to the fact that we are observing earnings in 2015, just 4 years after the younger cohort took their GCSEs, and the fact that we cannot control for work experience. Those young people who attended FE College are likely to have left education sooner and so spent more time in work over this short interval, hence explaining their higher earnings on average. Once we control for the average achievements of students within institutions (in Column 3) and the highest actual achievement of each individual (in Column 4), and hence in effect mostly control for how long individuals remained in education, then the FE College coefficient takes its more expected negative and statistically significant coefficient. The story for the social background coefficients remains the same for the younger as for the older cohort however. Young people who are entitled to FSM earn less on average in 2015 than those not entitled, and this gap is larger amongst those who attended an FE College, even after controlling for prior attainment, subsequent achievement and other personal and institution characteristics.

Table 4.7: Multivariate analysis of Determinants of Ln (Annual Earnings): 2011/12 Cohort

	(1)	(2)	(3)	(4)
Individual characteristics				
5 GCSE A*-C	-0.0229*** (0.00801)	-0.0276*** (0.00795)	-0.00292 (0.00749)	0.0749*** (0.00665)
FSM	-0.151*** (0.00701)	0.0110 (0.0110)	0.00129 (0.0133)	-0.0412*** (0.0125)
Female	-0.0862*** (0.00584)	-0.0864*** (0.00580)	-0.0803*** (0.00628)	-0.0469*** (0.00625)
Ethnicity	0.371*** (0.0101)	0.385*** (0.00925)	0.323*** (0.0112)	0.270*** (0.0104)
KS3 Math	-0.00636 (0.00623)	-0.00394 (0.00626)	0.0107* (0.00631)	0.0374*** (0.00569)
KS3 English	-0.0496*** (0.00909)	-0.0502*** (0.00907)	-0.0317*** (0.00954)	-0.00407 (0.00847)
FE College	0.245*** (0.0151)	0.291*** (0.0161)	-0.0477 (0.0305)	-0.0710** (0.0302)
FSM * FE College		-0.253*** (0.0147)	-0.227*** (0.0170)	-0.177*** (0.0161)
Provider characteristics				
Size			-1.35e-05 (1.15e-05)	-1.19e-05 (1.13e-05)
Competition			-0.0529* (0.0272)	-0.0570** (0.0267)
Share of A levels			-0.282*** (0.0502)	-0.195*** (0.0480)
Share of HE achievers			-0.921*** (0.0884)	-0.422*** (0.0865)
IMD			0.00162	0.00143

			(0.00277)	(0.00272)
FSM eligible share			-0.186***	-0.181***
			(0.0594)	(0.0579)
Share of 5+ A*-C GCSE achievers			0.253***	0.143*
			(0.0792)	(0.0764)
Crime decile			-0.00359	-0.00316
			(0.00275)	(0.00273)
Highest level by 2015				
Level 2				0.161***
				(0.00962)
Level 2 + Appren				0.430***
				(0.0169)
Level 3 Vocational				0.163***
				(0.00961)
Level 3 Mix				0.0486**
				(0.0200)
Level 3 A levels				-0.0148
				(0.0145)
Level 3 + Appren				0.554***
				(0.0157)
Level 4 Vocational				0.105**
				(0.0489)
Level 4 Academic				-0.543*
				(0.323)
Level 4 + Appren				0.798***
				(0.0637)
Level 5 Vocational				-0.0399
				(0.0260)
Level 5 Academic				-0.551*
				(0.282)
Level 5 + Appren				0.414**
				(0.188)
Level 6 Academic				-0.515***
				(0.0153)
Level 7 or above				1.411***
				(0.0242)
Constant	8.516***	8.484***	9.017***	8.975***
	(0.0132)	(0.0134)	(0.0561)	(0.0564)
Observations	313,034	313,034	268,171	268,171
R-squared	0.038	0.040	0.045	0.089

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Similarly, when HE achievement is considered in Table 4.8, the pattern of results is similar for the later as for the earlier cohort. In particular, when the interaction term between FE College attendance and FSM status is added in Column 2, its coefficient is again positive and statistically significant. This suggests that the negative FE College effect on HE qualification achievement is significantly smaller, in absolute terms, for those entitled to FSM, relative to non-FSM students. The difference is meaningfully large, too, as well as being statistically significant, with the negative FE College effect on HE achievement being 7 percentage points smaller for those entitled to FSM (so a 14 percentage point lower achievement rate, compared to a 21 percentage point lower HE achievement rate for non-FSM students). Looked at the other way, the interaction coefficient again almost exactly offsets the negative coefficient on the FSM variable (0.072 close to offsetting the negative 0.081 coefficient on FSM status). This means that for students attending FE colleges, there is no difference in their likelihood of achieving an HE qualification between those not entitled and entitled for FSM. Although FE Colleges have a lower proportion of their students going on to achieve an HE qualification overall, they do successfully close the gap in such achievement between those from disadvantaged and those from more advantaged backgrounds. All of the overall gap in HE achievement between those entitled and not entitled to FSM is therefore due to differences between such students when attending Sixth Form Schools/Colleges. Finally, in Column 3, when the provider characteristics are controlled for, the interaction coefficient now outweighs the base FE College effect. Again, as with the earlier cohort, we can therefore again say that young people from a more disadvantaged background are more likely to ultimately achieve an HE qualification if they attend an FE College, than if they attend a comparable Sixth Form School/College with similar characteristics.

Table 4.8: Multivariate analysis of Determinants of HE Achievement: 2011/12 Cohort

	(1)	(2)	(3)
Individual characteristics			
5 GCSE A*-C	0.164*** (0.00483)	0.166*** (0.00480)	0.151*** (0.00375)
FSM	-0.0332*** (0.00223)	-0.0807*** (0.00413)	-0.0736*** (0.00418)
Female	0.0544*** (0.00197)	0.0543*** (0.00196)	0.0491*** (0.00190)
Ethnicity	-0.0998*** (0.00417)	-0.104*** (0.00400)	-0.0739*** (0.00306)
KS3 Math	0.0546*** (0.00228)	0.0540*** (0.00230)	0.0437*** (0.00205)
KS3 English	0.0640*** (0.00265)	0.0643*** (0.00264)	0.0545*** (0.00249)
FE College	-0.196*** (0.00836)	-0.210*** (0.00879)	-0.0169*** (0.00299)
FSM * FE College		0.0724*** (0.00565)	0.0593*** (0.00458)
Provider characteristics			
Size			-1.32e-06 (1.06e-06)
Competition			-0.00361 (0.00241)
Share of A levels			-0.0175*** (0.00475)
Share of HE achievers			0.894*** (0.00786)
IMD			-0.000369 (0.000226)
FSM eligible share			-0.00306 (0.00785)
Share of 5+ A*-C GCSE achievers			-0.185*** (0.00837)
Crime decile			9.52e-05 (0.000207)
Constant	0.343*** (0.00592)	0.353*** (0.00623)	0.114*** (0.00643)
Observations	384,560	384,560	329,403
R-squared	0.234	0.235	0.254

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 4.9: Multivariate analysis of Determinants of Russell Group HE Achievement: 2011/12 Cohort

	(1)	(2)	(3)
Individual characteristics			
5 GCSE A*-C	-0.00212 (0.00171)	-0.00107 (0.00166)	-0.00725*** (0.00156)
FSM	-0.00768*** (0.00102)	-0.0456*** (0.00277)	-0.0329*** (0.00271)
Female	-0.000312 (0.00120)	-0.000372 (0.00119)	-0.00206* (0.00106)
Ethnicity	-0.0124*** (0.00283)	-0.0157*** (0.00272)	-0.00580** (0.00232)
KS3 Math	0.0422*** (0.00202)	0.0417*** (0.00201)	0.0338*** (0.00185)
KS3 English	0.0602*** (0.00329)	0.0605*** (0.00329)	0.0537*** (0.00326)
FE College	-0.0555*** (0.00376)	-0.0666*** (0.00404)	0.0249*** (0.00755)
FSM * FE College		0.0577*** (0.00310)	0.0437*** (0.00306)
Provider characteristics			
Size			1.61e-06 (2.31e-06)
Competition			0.0145*** (0.00550)
Share of A levels			0.0173 (0.0122)
Share of HE achievers			0.425*** (0.0359)
IMD			0.000385 (0.000590)
FSM eligible share			-0.0801*** (0.0143)
Share of 5+ A*-C GCSE achievers			-0.146*** (0.0237)
Crime decile			0.000263 (0.000592)
Constant	0.104*** (0.00429)	0.111*** (0.00443)	0.0244** (0.0121)
Observations	384,612	384,612	329,454
R-squared	0.091	0.093	0.109

Notes: Standard errors in parentheses. *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Finally turning to Table 4.9, undertaking the Russell Group analysis for the younger age group, the results display a similar pattern to that observed in the previous table for any HE achievement, and also similar to that observed for the older cohort in Table 4.6. Thus, there are negative coefficients on the FSM and FE College variables (the latter turning positive once provider characteristics are controlled for in Column 3). The coefficient on the interaction term is positive and significant, and larger in size than both of the two base effects. We can therefore say that young people from disadvantaged backgrounds are overall less likely to proceed to a Russell Group university, even after comparing to more advantaged peers with similar prior attainment. However, amongst those who undertake their post-KS4 education an FE College, this social background gap in achievement is eliminated.

Appendix Tables to Chapter 4

Table A4.1: Highest level of education achieved, by Post-KS4 Learning Aim (percentages behind Figure 4.1)

	2003 cohort		Highest level of education achieved by 2015									Total
	Level 1 or below	Level 2	Level 2 + app	Level 3 Vocational	Level 3 Mix	Level 3 A levels	Level 3 + app	Level 4 + Level 5	Level 6 Academic	Level 7 or above		
Out of post-KS4 education	43.1	13.9	3.1	6.6	2.7	10.3	2.9	1.0	12.4	4.0	100	
Not Classified	62.7	16.4	4.6	5.1	0.9	2.7	2.3	0.6	3.4	1.2	100	
Level 1 or below	55.7	22.7	5.5	6.9	0.2	2.0	3.0	0.6	2.6	0.9	100	
Level 2	35.3	31.5	6.0	15.7	0.1	1.6	5.1	1.2	2.9	0.6	100	
Level 2 + app	44.0	18.6	11.9	8.0	0.0	0.3	14.5	1.3	0.9	0.3	100	
Level 3 Vocational	12.1	11.5	2.3	47.8	0.7	0.5	7.3	4.2	11.7	1.7	100	
Level 3 Mix	6.9	4.0	0.0	2.7	57.7	7.0	0.3	3.1	15.0	3.2	100	
Level 3 Alevels	0.3	0.6	0.1	0.0	0.0	47.9	1.4	1.9	36.1	11.8	100	
Level 3 + app	24.9	19.2	4.8	8.8	0.0	0.4	34.0	4.8	2.5	0.7	100	
Level 4 + Level 5	15.9	17.2	1.0	4.8	11.5	8.0	1.9	27.1	9.6	2.9	100	
Total	25.7	11.4	2.8	7.1	6.3	18.8	3.5	1.7	17.4	5.4	100	

Table A4.2: Highest level of education achieved, by Post-KS4 learning aim and by GCSE achievement (percentages behind Figure 4.2)

a) 5+ GCSEs not achieved

2003 cohort		Highest level of education achieved by 2015										
		Level 1 or below	Level 2	Level 2 + app	Level 3 Vocational	Level 3 Mix	Level 3 A levels	Level 3 + app	Level 4 + Level 5	Level 6 Academic	Level 7 or above	Total
Post-KS4 aims	Out of post-KS4 education	65.1	11.7	4.0	7.1	2.8	2.9	2.7	0.6	2.5	0.6	100
	Not Classified	69.1	16.3	4.9	4.7	0.6	0.7	2.1	0.4	0.9	0.4	100
	Level 1 or below	60.2	22.7	5.6	6.4	0.1	0.7	2.7	0.4	0.9	0.3	100
	Level 2	38.7	31.1	6.1	14.6	0.1	1.2	4.5	1.0	2.1	0.5	100
	Level 2 + app	51.7	15.3	11.9	7.0	0.0	0.2	12.3	0.7	0.7	0.2	100
	Level 3 Vocational	23.7	9.6	3.2	44.7	0.8	0.2	7.8	2.7	6.6	0.9	100
	Level 3 Mix	11.5	0.0	0.0	2.3	67.8	6.3	0.2	2.5	8.1	1.3	100
	Level 3 Alevels	2.9	0.8	0.4	0.	0.0	73.3	2.8	2.3	14.2	3.1	100
	Level 3 + app	40.2	14.1	6.0	7.8	0.0	0.1	29.2	1.5	0.8	0.2	100
	Level 4 + Level 5	36.8	9.6	1.8	7	7.9	0.9	1.8	28.9	3.5	1.8	100
	Total	50.8	15.4	4.8	8.9	6.8	4.7	4.1	1.0	3.0	0.7	100

b) 5+ GCSEs achieved

2003 cohort		Highest level of education achieved by 2015										
		Level 1 or below	Level 2	Level 2 + app	Level 3 Vocational	Level 3 Mix	Level 3 A levels	Level 3 + app	Level 4 + Level 5	Level 6 Academic	Level 7 or above	Total
Post-KS4 aims	Out of post-KS4 education	7.4	17.6	1.5	6.0	2.5	22.2	3.2	1.5	28.6	9.6	100
	Not Classified	11.0	17.2	2.7	8.8	3.5	18.2	4.1	2.7	23.5	8.3	100
	Level 1 or below	11.9	23.2	4.1	11.0	0.9	15.4	6.8	1.7	18.4	6.6	100
	Level 2	12.5	34.0	4.8	22.7	0.3	4.1	9.1	2.9	8.0	1.6	100
	Level 2 + app	18.2	29.5	12	11.4	0.0	0.9	21.8	3.6	1.9	0.7	100
	Level 3 Vocational	5.7	12.6	1.9	49.5	0.7	0.7	7.1	5.1	14.6	2.2	100
	Level 3 Mix	3.6	6.9	0.0	2.9	50.5	7.5	0.4	3.5	19.9	4.6	100
	Level 3 Alevels	0.2	0.6	0.1	0.0	0.0	46.4	1.3	1.8	37.4	12.3	100
	Level 3 + app	8.3	24.6	3.5	9.9	0.0	0.7	39.2	8.3	4.2	1.2	100
	Level 4 + Level 5	4.0	21.5	0.5	3.5	13.5	12.0	2.0	26.0	13.0	3.5	100
	Total	3.4	7.7	0.9	5.6	5.8	31.4	3.1	2.3	30.2	9.6	100

Table A4.3: Highest level of education achieved, by Post-KS4 learning aim and by type of institution (percentages behind Figure 4.3)

a) FE Colleges

2003 cohort		Highest level of education achieved by 2015										
		Level 1 or below	Level 2	Level 2 + app	Level 3 Vocational	Level 3 Mix	Level 3 Alevels	Level 3 + app	Level 4 + Level 5	Level 6 Academic	Level 7 or above	Total
Post-KS4 aims	Not Classified	61.2	17.2	4.8	5.0	1.0	2.8	2.3	0.7	3.7	1.2	100
	Level 1 or below	54.9	23.2	5.4	7.2	0.2	2.1	3.1	0.6	2.5	0.9	100
	Level 2	34.2	32.0	6.0	16.7	0.1	1.2	5.1	1.3	2.8	0.6	100
	Level 2 + app	43.0	17.8	10.4	9.6	0.0	0.3	16.2	1.6	0.8	0.4	100
	Level 3 Vocational	12.8	12.5	2.6	46.5	0.4	0.3	7.5	4.4	11.4	1.7	100
	Level 3 Mix	8.0	4.0	0.0	3.2	61.2	5.7	0.1	3.5	12.1	2.2	100
	Level 3 Alevels	1.3	2.2	0.3	0.0	0.0	54.9	0.0	2.6	29.9	8.6	100
	Level 3 + app	20.3	16.5	4.8	11.8	0.0	0.2	36.2	7.0	2.6	0.8	100
	Level 4 + Level 5	15.2	11.4	1.4	6.2	15.2	5.2	1.4	35.5	6.2	1.9	100
	Total	25.6	16.5	3.5	13.3	12.6	10.1	4.0	2.3	9.8	2.3	100

b) Sixth Form Schools/Colleges

2003 cohort		Highest level of education achieved by 2015										
		Level 1 or below	Level 2	Level 2 + app	Level 3 Vocational	Level 3 Mix	Level 3 Alevels	Level 3 + app	Level 4 + Level 5	Level 6 Academic	Level 7 or above	Total
Post-KS4 aims	Not Classified	30.1	6.4	1.6	13.3	4.0	14.1	0.8	1.2	21.7	6.8	100
	Level 1 or below	61.6	22.9	3.1	2.6	0.7	3.7	1.2	0.3	3.1	0.7	100
	Level 2	42.7	32.1	5.8	5.9	0.4	7.5	1.3	0.3	3.3	0.7	100
	Level 2 + app	40.7	11.0	13.2	8.8	0.0	0.0	22	2.2	2.2	0.0	100
	Level 3 Vocational	2.0	1.3	0.1	68.8	3.8	0.4	5.5	3.0	13.4	1.8	100
	Level 3 Mix	4.4	3.9	0.0	1.7	50.4	10.0	0.9	2.1	21.0	5.4	100
	Level 3 Alevels	0.1	0.3	0.0	0.0	0.0	47.6	1.7	1.9	36.6	11.7	100
	Level 3 + app	0.6	0.3	0.3	0.6	0.0	0.0	78.2	5.4	12.4	2.3	100
	Level 4 + Level 5	0.0	2.8	0.0	2.8	8.3	38.9	0.0	16.7	16.7	13.9	100
	Total	1.5	1.3	0.1	1.4	5.1	42.1	1.9	1.9	34.0	10.7	100

5. Conclusions

The twin challenges facing the UK economy of Brexit and the Covid pandemic will focus attention on the labour market and the provision of skilled labour in the coming period. Brexit of course means the end of the free movement of labour, and the removal of an available ready supply of unskilled and semi-skilled labour on which firms could rely. One response to such a situation is a change in focus amongst firms to a higher value-added model, based on a more skilled labour force, rather than relying on cheaper, lower-skilled labour. Similarly, the Covid pandemic has had its largest labour market effect in lower-skilled sectors, such as retail, hospitality and travel. While there will be some recovery of these sectors post-pandemic, the depth of the impact will mean that these sectors are unlikely to be the leaders out of the Covid-related slump. Rather, sectors such as healthcare, cybersecurity and digital provision are likely to provide more growth in jobs, which will again increase the demand for more skilled labour.

To help the country to respond to these challenges, the supply of skills from the education system is therefore of great importance. The recent Skills White Paper (DfE, 2021) makes clear the importance of developing the advanced technical and higher technical skills that will be required by the economy. The country needs to see greater progression to higher levels of achievement (Levels 4+) with fewer learners remaining at intermediate levels (Levels 2 and 3) or even lower. While progression from academic intermediate qualifications (A Levels) to higher levels of education is achieved by large numbers of young people, more focus needs to put onto progression from Further Education and vocational qualifications.

At the same time, there is national attention on social mobility and 'levelling up'. The Covid-19 pandemic has disproportionately affected young people and individuals in lower-skilled service sector jobs. If the recovery period is to offer such individuals opportunities to improve their position, then this must include the Further Education system and vocational qualifications, to which we have seen that young people from more disadvantaged backgrounds are proportionally more likely to turn.

The analysis presented in this report has considered the extent to which Further Education in FE Colleges can fulfil the twin aims of improving young people's skills and abilities leading to more productive, and hence better paid, jobs, as well as greater progression to HE. But also improving social mobility and narrowing the gap in attainment and progression between those from more and less advantaged backgrounds.

The results based on aggregated data (Section 3) reveal some interesting patterns. They show that most young people remain in full-time education post-16, with a majority studying for a Level 3 qualification. This Level 3 participation rate is higher if individuals are studying in a Sixth Form School/College than in an FE College. By our measure of social disadvantage (entitlement to Free School Meals, FSM), those young people with more disadvantaged backgrounds are proportionally more likely to attend an FE College if they remain in education. The aggregate statistics also looked at progression post-KS5, with progression to higher levels of education (Levels 4+) being more likely amongst those who had studied in a Sixth Form School/College (particularly a selective school). Young people from a more disadvantaged background are less likely to progress to higher levels of education.

Section 4 of the report then moved on to a multivariate analysis of outcomes based on individual level data, looking at annual earnings, and HE achievement. The aim of this analysis was to examine, and separate out, the relative effects of social background and Key Stage 5 institution type on young people's outcomes, also controlling for a range of other factors including prior attainment and ultimate achievement level. Most of the analysis focussed on a cohort of young people who took their GCSEs in 2003. Though this was some time ago, the advantage of using this cohort is that there is time for their final outcomes to be observed, and we measure their earnings and HE achievement by age 28 in 2015. We also looked at a more recent cohort, who took their GCSEs in 2011, and observed similar patterns in the results, in order to validate the results for the earlier cohort.

The results of the individual analysis show that those young people who undertook their KS5 education in an FE College rather than a Sixth Form School/College earn less on average by age 28, though this can be entirely explained by the characteristics of the students that they teach and the final achievement level of those students. When we compare FE Colleges and Sixth Form Schools holding constant the characteristics of their intake (prior attainment, social background) and the level of qualification ultimately achieved, then there are no differences at all in the average earnings of their graduates. Thus all of observed differences in earnings between students from the two types of institutions is accounted for by the characteristics of the students. Further controlling for highest final qualification does not change this result any further, so ultimate highest qualification does explain any of the earnings differences, over and above that accounted for by student characteristics and prior attainment.

However, looking by our measure of social background disadvantage, those young people from a more disadvantaged background earn less on average by age 28, even when holding constant their educational attainment both pre- and post-KS5. The role of institution in explaining the lower earnings of those from more disadvantaged backgrounds, is small, but FE Colleges, where such young people are more likely to go, fail to close the disadvantage gap in earnings. Indeed, this disadvantage gap in earnings is larger, by a small but significant amount, amongst those who attended an FE College for KS5, compared to those who attended a Sixth Form School/College.

In terms of progression to HE, FE Colleges are more successful in terms of improving the chances of their students from more disadvantaged backgrounds. Overall, young people are much less likely to progress to HE if they have attended an FE College Post-KS4, compared to a Sixth Form School, though much of this due to differences in the characteristics (such as prior attainment) of the students they intake. From the point of view of students from more disadvantaged backgrounds, however, the gap in HE progression between themselves and their more advantaged peers is totally eliminated amongst the group who attended FE College. Thus, controlling for prior attainment, a young person who attended an FE College and was entitled to FSM is as likely to reach HE as their FE College peers not entitled to FSM. FE Colleges are therefore egalitarian across social backgrounds in terms of who amongst their students progresses to HE. This is an important finding, given the higher likelihood that young people from less advantaged backgrounds will attend FE Colleges in the first place.

Future analysis should attempt to explore why young people from a more disadvantaged background earn less on average after leaving education. Though we control for level of qualification pre- and post-KS5 here, further analysis could look at type and subject area of qualification, to see whether these can help explain the lower earnings and hence likely lower productivity. Alternatively, the answer to the question may be found in the labour market rather than education system, with young people from more disadvantaged backgrounds perhaps making different occupational choices, or finding fewer occupational choices available to them. If this is the case, then increased career advice may be an important part of the education that FE Colleges offer. Once these answers are known, then FE Colleges (to whom a majority of more disadvantaged young people turn) may be able to advise on course choices or occupational choice as appropriate, and attempt to narrow the disadvantage gap in earnings, rather than widening it slightly as was observed in the results presented here.

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