Department for Education

Post-16 education: outcomes for disadvantaged students

England

November 2018

About this report

This report presents experimental analysis to describe the number of disadvantaged students who follow distinct routes through post-16 education, and how many progress to high earning employment by age 26. The research focuses on the cohort of individuals who undertook GCSEs in 2005; it follows the cohort through post-16 learning and into the labour market using the Longitudinal Education Outcomes (LEO) Study. Educational achievement is measured at age 15 (GCSEs) and age 25, and labour market outcomes are observed in the 2016-17 tax year.

Feedback

We welcome feedback on any aspect of this document at jay.khamis@education.gov.uk

Contents

Summary of findings

Disadvantaged students[1] are over-represented in further education (FE).

- The most common qualification route for disadvantaged students was achievement at level 2 or 3 in FE. By age 25, 46 per cent achieved level 2 or 3 in FE, 8 per cent achieved level 2 or 3 in school, 28 per cent remained at below level 2 (including no qualifications), and 17 per cent achieved qualifications at level 4 or higher.

- Overall, 19 percent of the cohort were disadvantaged; this compares with 31 per cent of males who achieved a level 2 in adult FE as their highest qualification, and 32 per cent of females who achieved the same qualification route (Table 1 and Figure 1).

There is a social gradient within FE where disadvantaged students tend to achieve lower level qualifications and have lower rates of progression to high earning than non-disadvantaged students.

- Students who achieved level 2 or below in FE as their highest qualification were more likely to be disadvantaged than students who achieved apprenticeships or other classroom qualifications at level 3+ (Figures 5 and 6).

- Comparing the same qualification routes, the rate of progression to high earning employment was lower for disadvantaged students than for non-disadvantaged students (Figure 4).

There is a tension observed in the data between high-level qualification routes, which show good earnings progression but include low numbers of disadvantaged students, and lower level routes, which include high numbers of disadvantaged students but show poor earning progression.

- Students who achieved their highest qualifications at level 6 or higher had the highest rates of progression to high earning; however, these routes also included the smallest proportions of disadvantaged students (Figures 1, 2, 3).

- The tension is not observed for non-disadvantaged students. Qualification routes with the highest progression rates also included the highest proportions of non-disadvantaged students (Figure 4).

[1] Students who were eligible for Free School Meals (FSM) at any point between age 11 and age 15.

For men, large numbers of disadvantaged students achieve level 2 or 3 FE courses that can result in progression up the earnings distribution – particularly so for those achieving at level 3.

- Disadvantaged male students who achieved FE qualification routes had progression rates ranging from 14 per cent for level 2 adult FE to 28 per cent for level 3 adult FE (Figures 1 and 2).

- The largest volume of disadvantaged male students who progressed to high earning achieved their highest qualification at level 2 or 3 in FE – 5,200 progressed via FE, 2,700 via level 6+, and 1,100 via school (see Table 6).

For women, large numbers of disadvantaged students achieve level 2 or 3 courses in FE, but earnings progression is much less substantial.

- Female FE qualification routes had progression rates ranging from 3 per cent for level 2 adult FE to 6 per cent for level 3 adult FE (Figures 1 and 3).

- The largest volume of disadvantaged female students who progressed to high earning achieved their highest qualification at level 6+. This was due to lower level 2 and 3 progression rates for females compared to males – 1,400 progressed via level 2 or 3 FE and 3,000 progressed via level 6+ qualifications (Table 6).

- The differences in progression rates for men and women are discussed in section 4 and will partly reflect patterns of childbirth and part time working, and the types of FE courses achieved by female students.

1. Introduction

This report presents experimental analysis that describes the number of disadvantaged students who follow different routes through post-16 education, and how many of these students progress to high earning employment by age 26. Particular attention is given to further education (FE) qualification routes in order to understand how FE helps disadvantaged students progress up the income distribution. Disadvantage is defined by eligibility for free school meals (FSM) at any point between ages 11 and 15.

The aims of the research were to:

1. Identify the routes through post-16 education that disadvantaged students follow in the greatest numbers.
2. Identify post-16 education that helps the greatest numbers of disadvantaged students progress to high earning employment.

The research is based on the Longitudinal Education Outcomes (LEO) Study. The privacy statement explaining how personal data in this project is shared and used is published at: https://www.gov.uk/government/publications/longitudinal-education-outcomes-study-how-we-use-and-share-data

The LEO study links information about individuals, including:

- Personal characteristics such as age, gender and ethnicity.
- Education, including schools, further education colleges and higher education institutions attended, courses taken, and qualifications achieved.
- Benefits claimed.
- Employment and income.

The analysis included in this report is exploratory. We will continue to develop the underlying data and so the methods, measures and results presented here are likely to change over time.

1.1 Coverage

The analysis in this report covers a cohort of students who:

1. Were academic age 15 in the 2004/05 academic year.
2. Undertook their GCSEs in the 2004/05 academic year.
3. Were in state-funded education between ages 11 and 15 and have a record for free school meal eligibility.
4. Have a record in the Young Persons' Matched Administrative Dataset (YPMAD).
5. Have been matched to the LEO study.

The analysis follows the same cohort of students over time between 2004/05 and 2016/17. There are 610,300 individuals in the cohort after matching to the LEO study and removing ineligible records – 95 per cent of the identified cohort in the YPMAD.

The statistics showing GCSE attainment are based on information in the YPMAD. Statistics showing qualification routes are based on Individualised Learner Record (ILR) data (FE learning) and Higher Education Statistics Agency (HESA) Student Record data (HE learning) as well as the YPMAD.

The YPMAD matches several data sources together at an individual level, using personal identifiers such as name, date of birth, gender and home postcode where available. The sources include:

- School Census database containing information on the participation and personal characteristics of pupils in state schools, collected by DfE.
- Awarding organisation data including that collected as part of the School and College Performance Tables exercise, and separately from awarding organisations as part of the Vocational Qualifications Database up until 2010/11.
- Individualised Learner Record (ILR) database covering participation and qualifications obtained in Further Education (FE) and Work-based Learning (WBL), collected by the FE Data Service from learning providers.

The earnings and employment estimates are based on information recorded through Pay As You Earn (PAYE), which is used to collect income tax and national insurance by HMRC, HMRC self-assessment returns, for those in self-employment, and P45 employment records. Estimates for the number of benefit claimants are based on DWP records of out-of-work benefit claimants. Universal Credit claims are not included in this report.

1.2 Measures

The report includes the following measures to describe qualification routes, disadvantage, and earnings and employment in the 2016-17 financial year:

1. **Disadvantaged students (age 15)**
   Disadvantaged students are defined as students who were eligible for Free School Meals (FSM) at any point between age 11 and age 15.

2. **Qualification route (age 25)**
   This describes the highest qualification level a student achieved by age 25 and whether students at level 2 or 3 achieved the qualification in FE or School. It does

not take into account whether achievements by adults at level 2 and level 3 are in "full" level qualifications (equivalent to 5 GCSEs at level 2 or 2 A-Levels at level 3).

a. Level 4 and 5 includes all students who achieved level 4 or level 5 as their highest-level qualification.
b. Level 6+ via FE includes all students who achieved an FE qualification prior to achieving a qualification at level 6 or higher.
c. Level 6+ via school includes all students who achieved a level 6+ qualification without first achieving a qualification in FE.
d. FE routes at level 2 or 3 include all students who achieved level 2 or 3 as their highest-level qualification in an FE institution, including colleges, sixth form colleges and other FE providers. The routes are presented separately for students who achieved as an adult (ages 19-25) and at ages 16-18.
e. School routes at level 2 or level 3 include all students who achieved their highest-level qualification at a school, including maintained schools, independent schools, academies and other alternative providers.

3. **Highest level of achievement (age 25)**
   This combines YPMAD, ILR and HESA data to show the highest qualification level individuals had achieved by age 25. It does not take into account whether achievements by adults at level 2 and level 3 are in "full" level qualifications (equivalent to 5 GCSEs at level 2 or 2 A-Levels at level 3).

4. **Employment in the 2016-17 tax year (age 26)**
   Individuals employed for at least one day in the tax year, based on HMRC P45 information, or individuals who have either PAYE earnings or self-assessment earnings for the tax year.

5. **High earning employment in the 2016-17 tax year (age 26)**
   Individuals in employment in the tax year with annualised earnings greater than £25,000 are **high earning** (referred to as £25k throughout the report). £25k is close to the median personal income before tax in 2015/16[2]. In the cohort under consideration, 28 per cent earned over £25k in the 2016-17 tax year. For comparison**,** a second threshold that includes individuals with annualised earnings greater than £21k is also included. This was chosen as it is close to median earnings in the 2016-17 tax year for the cohort.

6. **Progression to high earning employment (age 26)**
   This describes disadvantaged students who were:

[2] https://www.gov.uk/government/statistics/distribution-of-median-and-mean-income-and-tax-by-age-range-and-gender-2010-to-2011

a. In employment at age 26; and
b. Where the employment is defined as high earning.

7. **Sustained employment in the 2016-17 tax year (age 26)**
   Individuals employed for a minimum of one day in 5 of the 6 months between October 2016 and March 2017.

8. **On benefits in the 2016-17 tax year (age 26)**
   Individuals not found to be in employment who claimed any out-of-work benefit for at least one day in the tax year.

The levels of education used to categorise the cohort are:

- **Below level 2** – education below GCSE level
- **Level 2** – equivalent to GCSEs
- **Level 3** – equivalent to A-Levels
- **Level 4 and 5** – sub-degree higher level education
- **Level 6** – degree level higher education
- **Level 7+** – post-graduate level higher education

The analysis groups level 4 and level 5 learning into a single category due to the small number of students at these levels.

Age is based on academic age, which is age at the start of the academic year, 31 August. For example, the cohort in this report undertook GCSEs in 2004/05 and were age 15 on 31st August 2004. For earnings and employment outcomes, age is based on academic age at the start of the tax year. The cohort were academic age 26 at the start of the 2016-17 tax year.

1.3 Earnings

The measures for earnings progression included in this report only account for age, disadvantage, qualification route, and in some instances, GCSE attainment. There is a large amount of unexplained variation in the data. Some examples of important factors not captured here are:

- Time spent in employment since achieving highest qualification
- Sector/occupation of work
- Grade achieved in qualifications attained
- Region of England
- Individual motivation and ability

In addition, these estimates only describe earnings at a single point in time. Earnings tend to increase over time, and the earnings associated with different qualification routes could have different rates of increase.

The numbers here do not attempt to describe or control for these factors; they show a descriptive picture of the number of disadvantaged students earning over £25k against different qualification routes. Further analysis would be required to establish causality between qualification routes, earnings and social mobility.

1.4 Part time employment and earnings

The employment and earnings records in LEO do not include reliable information on the hours worked so it is not possible to distinguish between students in full time and part time employment. Therefore, part time earnings are not adjusted to the full time equivalent amount. Where there are high levels of part time employment within a group of students, the proportion of students earning over £25,000 will be lower as a result. For example, women are more likely to be in part time employment than men are; this will be reflected in the earnings measure. It is important to note that the number of people in part time employment may be as much due to the preferred working pattern of the students as what is being offered by employers.

1.5 Tables and Figures: general footnotes

The percentages and volumes presented in here may not sum due to rounding. Percentages are calculated using pre-rounded volumes.

Volumes are rounded to the nearest 100 and percentages are rounded to 1 decimal place.

Volumes below 50 are represented by “-“ and percentages below 0.5 per cent are represented by “*”. Where the denominator of a percentage is below 50, the percentage is represented by “-“.

2. Headline results

2.1 Characteristics of the cohort

Table 1 shows key summary statistics for the cohort who completed their GCSEs in the 2004/05 academic year.

For both men and women, 19 per cent of students were disadvantaged (eligible for free school meals at any point between ages 11 and 15). Overall, 28 per cent of the total cohort were in the high earning employment group (earning over £25k); for disadvantaged students this falls to 14 per cent, while for non-disadvantaged students, the figure is 32 per cent. For both disadvantaged and non-disadvantaged students, males were more likely to be in the high earning group.

Table 1: Disadvantage and progression to high earning by gender

Gender	Total students	*Disadvantaged students (%)*	*% of students earning over £25k*	*% of disadvantaged students earning over £25k*	*% of non-disadvantaged students earning over £25k*
Female	296,200	*19%*	*23%*	*10%*	*26%*
Male	314,200	*19%*	*33%*	*19%*	*37%*
Total	**610,300**	***19%***	***28%***	***14%***	***32%***

Table 2 shows a summary of outcomes for the cohort based on gender and disadvantaged status. Overall, during the 2016-17 tax year, 82 per cent were either high earning or employed, and 6 per cent claimed benefits. Disadvantaged students were more likely to claim benefits and less likely to be employed (including high earning). The group with the highest proportion on benefits (19 per cent) and the smallest percentage in employment (68 per cent) were disadvantaged females.

Outcome could not be determined for 10 per cent of the cohort. There are a number of reasons that could explain this including economic inactivity without engaging with the benefits system and leaving the country for work or study.

Table 3 describes the distribution of the cohort across each of the qualification routes. The table shows that 32 per cent achieved level 6+, with the majority doing so after 16-18 education in school. Disadvantaged students were less likely to achieve their highest qualification at level 6+ than non-disadvantaged students (14 per cent versus 36 per cent).

11 per cent of the cohort achieved their highest qualification at school. This percentage is slightly lower for disadvantaged students than for non-disadvantaged students (8 per cent versus 11 per cent).

Table 2: Student destinations and outcomes at age 26 by gender and disadvantage

Gender	Disadvantage	High earner	Employed	On benefits	In education	Not classified	Cohort size
Male	Disadvantaged	19%	55%	11%	4%	12%	**59,800**
	Non-disadvantaged	37%	48%	3%	1%	11%	**254,300**
	Total	33%	49%	5%	2%	11%	**314,200**
Female	Disadvantaged	10%	58%	19%	4%	10%	**56,900**
	Non-disadvantaged	26%	58%	5%	2%	9%	**239,300**
	Total	23%	58%	8%	2%	9%	**296,200**
Total	Disadvantaged	14%	57%	15%	4%	11%	**116,700**
	Non-disadvantaged	32%	53%	4%	2%	10%	**493,600**
Total		**28%**	**54%**	**6%**	**2%**	**10%**	**610,300**

The data in this report show that large numbers of disadvantaged students achieved their highest-level qualification at level 2 or 3 in FE. Overall, a higher proportion of disadvantaged students achieved a level 2 or 3 FE route than non-disadvantaged students (46 per cent versus 37 per cent). This is particularly striking for level 2 adult (19-25) FE, which is funded to help the unemployed, those with poor English and maths skills, and those who left school with low or no qualifications.

The data also show that disadvantaged students are over represented in FE. Disregarding below level 2, level 2 and 3 FE qualification routes include the largest proportions of disadvantaged students (see Figure 1). These points are true for both disadvantaged men and disadvantaged women.

Table 3: Distribution of students by qualification route

Qualification route	Total	Disadvantaged	Non-disadvantaged	Disadvantaged men	Disadvantaged women
Below Level 2	*14%*	*28%*	*11%*	*31%*	*26%*
Level 2 FE Adult	*10%*	*17%*	*9%*	*21%*	*13%*
Level 2 FE 16-18	*7%*	*10%*	*6%*	*10%*	*9%*
Level 2 School	*6%*	*6%*	*6%*	*5%*	*6%*
Level 3 FE Adult	*11%*	*11%*	*11%*	*9%*	*12%*
Level 3 FE 16-18	*11%*	*9%*	*11%*	*8%*	*10%*
Level 3 School	*5%*	*2%*	*5%*	*2%*	*3%*
Level 4 and 5	*4%*	*3%*	*4%*	*3%*	*3%*
Level 6+ via FE	*14%*	*9%*	*16%*	*8%*	*11%*
Level 6+ via School	*18%*	*5%*	*21%*	*4%*	*7%*
Total %	***100%***	***100%***	***100%***	***100%***	***100%***
Total volumes	**610,300**	**116,700**	**493,600**	**59,800**	**56,900**

2.2 Disadvantage, routes through education and progression to high earning employment.

This section describes how the different qualification routes students take through post-16 education compare considering:

- **Disadvantaged participation** – measured using the proportion of students identified as disadvantaged.
- **Progression to high earning employment** – measured using the proportion of disadvantaged students who progressed to high earning employment in the 2016-17 tax year.

These are considered separately for male and female students, and for students who achieved 5 GCSEs at grades A*-C and those who did not.

2.3 Disadvantaged male students

Figure 1 shows that the below level 2 qualification route had the smallest proportion of disadvantaged male students who progressed to high earning employment (9 per cent).

Compared with below level 2, FE qualification routes had higher progression rates for disadvantaged students, ranging from 14 per cent for level 2 adult FE to 28 per cent for level 3 adult FE. FE routes had relatively high disadvantaged participation, especially so for level 2 FE (see Figure 1). For these reasons, the largest volume of disadvantaged male students who progressed to high earning did so after achieving a FE qualification route – 5,200 progressed via level 2 or level 3 FE, 2,700 via level 6+ qualifications, and 1,100 via school (see Table 6).

Level 6+ qualification routes had the largest progression rates for disadvantaged male students – 35 per cent for level 6+ via FE and 43 per cent for level 6+ via School. However, these routes also had the lowest disadvantaged participation. For level 6+ via School just 5 per cent of students were disadvantaged.

2.4 Disadvantaged female students

The below level 2 qualification route also had the smallest proportion of disadvantaged female students who progressed to high earning (2 per cent) – this was the lowest proportion for all of the routes and 7 ppts lower than the male equivalent.

Compared with the results for males, female FE qualification routes had smaller progression rates – ranging from 3 per cent for level 2 adult FE to 6 per cent for level 3 adult FE. Similar to the results for males, these routes also had high disadvantaged participation.

Level 6+ qualification routes had the largest progression rates – 27 per cent for Level 6+ via FE and 35 per cent for Level 6+ via School. However, disadvantaged participation was low. For Level 6+ via school just 6 per cent of female students were disadvantaged.

The largest volume of disadvantaged female students progressed after achieving a Level 6+ route. This was due to smaller level 2 and 3 FE progression rates for females compared to males – 1,400 progressed via FE and 3,000 progressed via Level 6+ (see Table 6).

Figure 1: Qualification routes: disadvantaged students and earnings progression

Highest qualification route	**Total students**	Students eligible for FSM	*% of students eligible for FSM*	*% of students eligible for FSM earning over £25k*
Male students				
Below level 2	**52,100**	18,600	*36%*	*9%*
Level 2 FE Adult	**39,400**	12,300	*31%*	*14%*
Level 2 FE 16-18	**22,800**	6,000	*26%*	*15%*
Level 2 School	**19,300**	3,100	*16%*	*24%*
Level 3 FE Adult	**34,600**	5,500	*16%*	*28%*
Level 3 FE 16-18	**30,500**	4,600	*15%*	*23%*
Level 3 School	**14,900**	1,200	*8%*	*28%*
Level 4 and 5	**12,300**	1,600	*13%*	*28%*
Level 6+ via FE	**38,300**	4,500	*12%*	*35%*
Level 6+ via School	**50,000**	2,500	*5%*	*43%*
Female students				
Below level 2	**33,800**	14,500	*43%*	*2%*
Level 2 FE Adult	**23,200**	7,400	*32%*	*3%*
Level 2 FE 16-18	**17,100**	5,400	*31%*	*3%*
Level 2 School	**17,200**	3,500	*21%*	*8%*
Level 3 FE Adult	**34,200**	7,100	*21%*	*6%*
Level 3 FE 16-18	**35,800**	5,900	*17%*	*10%*
Level 3 School	**14,400**	1,500	*10%*	*15%*
Level 4 and 5	**12,100**	1,900	*15%*	*17%*
Level 6+ via FE	**49,400**	6,100	*12%*	*27%*
Level 6+ via School	**59,000**	3,700	*6%*	*35%*

Source: Longitudinal Education Outcomes Study; FSM = Free School Meals

Bubble charts – reading Figures 2, 3, 5 and 6.

The charts present the data on disadvantage and earnings as follows:

- Qualification routes are represented as bubbles in the charts. These are further separated into routes for students who achieved 5 GCSEs A*-C at age 15 (red bubbles) and routes for those who did not (blue bubbles). For figures 5 and 6 the additional separation is by age (16-18 and 19-25)
- The relative size of each bubble represents the number of students achieving each route: larger bubbles indicate larger volumes of students.
- For each route, the horizontal axis describes the proportion of students eligible for free school meals. A qualification route plotted to the right of the chart includes a larger portion of disadvantaged students than one plotted to the left of the chart.
- For each route, the vertical axis describes the proportion of students eligible for free school meals who earn over £25k by age 26. A qualification route plotted towards the top of the chart will include a higher proportion of disadvantaged students who progress to high earning than one plotted towards the bottom of the chart.

The bubbles follow an upward trajectory from the lowest level qualification routes to level 6+ qualification routes, outlining the fact that higher levels of education are associated with increased earnings for disadvantaged students.

Bubbles plotted in a vertical line would represent an equal proportion of disadvantaged students on each route. It is clear from the charts that this is not the case. The increasing trajectory from the bottom right of the charts, where lower level routes are plotted, to the top left of the chart, where higher-level routes are plotted, suggests that routes associated with high earnings are less inclusive than those associated with low earnings.

2.5 Participation and earnings progression

Figures 2 and 3 show a clear negative relationship between disadvantaged participation and progression to high earning employment.

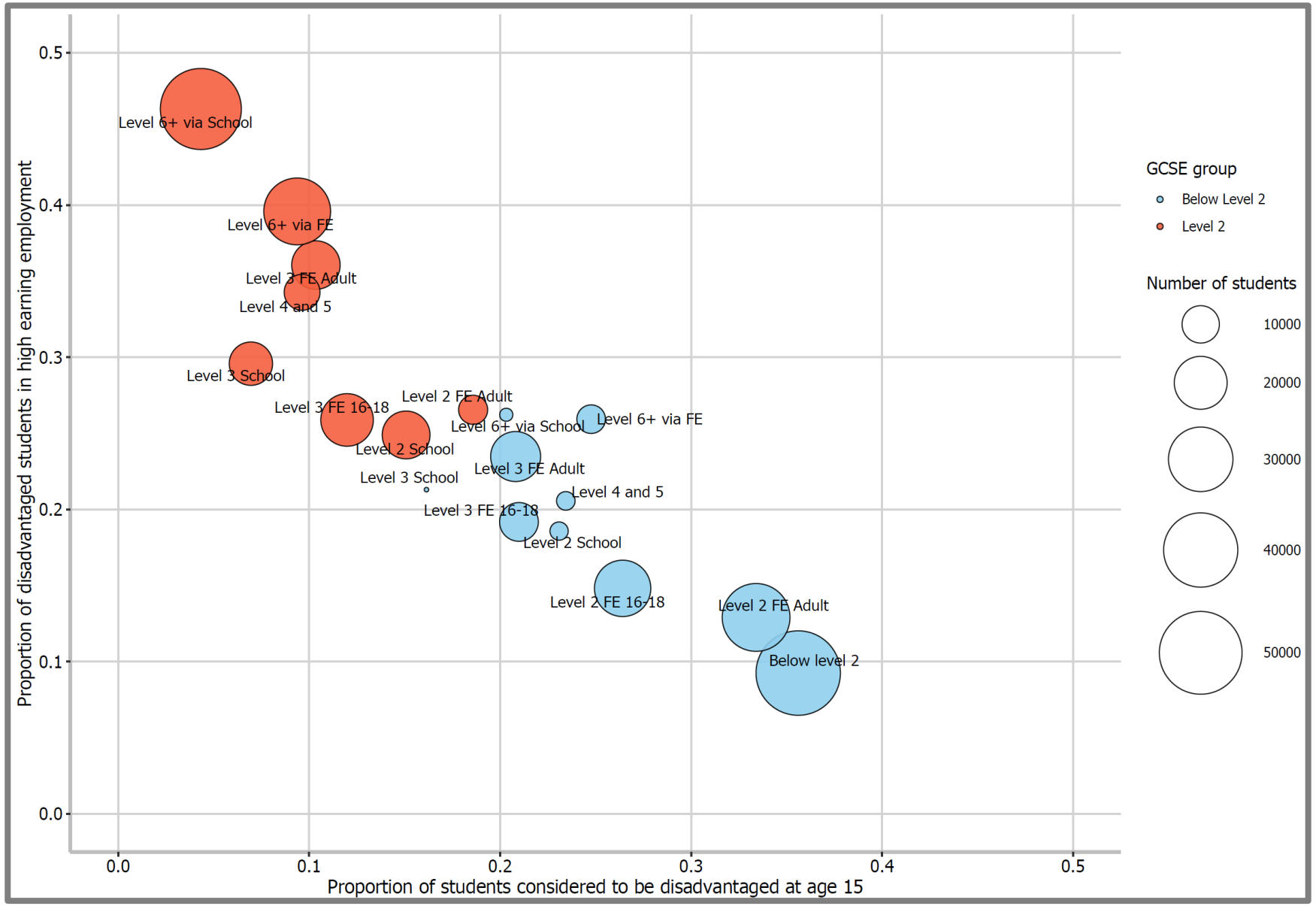
There is a tension observed in the data between high-level qualification routes, which show good earnings progression but include low numbers of disadvantaged students, and lower level routes, which include high numbers of disadvantaged students but poor earning progression.

Figure 2 and 3 also show that achieving GCSEs at age 15 can play an important role in earnings progression for disadvantaged students. For both men and women, qualification routes in which GCSEs were not achieved had the highest disadvantaged participation and the lowest rates of progression to high earning.

Figure 2 suggests that for men, level 2 and 3 FE sits in the middle of the relationship between disadvantaged participation and earnings progression, offering large numbers of disadvantaged and low attainment students courses that can result in progression up the income distribution, particularly so for those taking the higher level 3 FE routes.

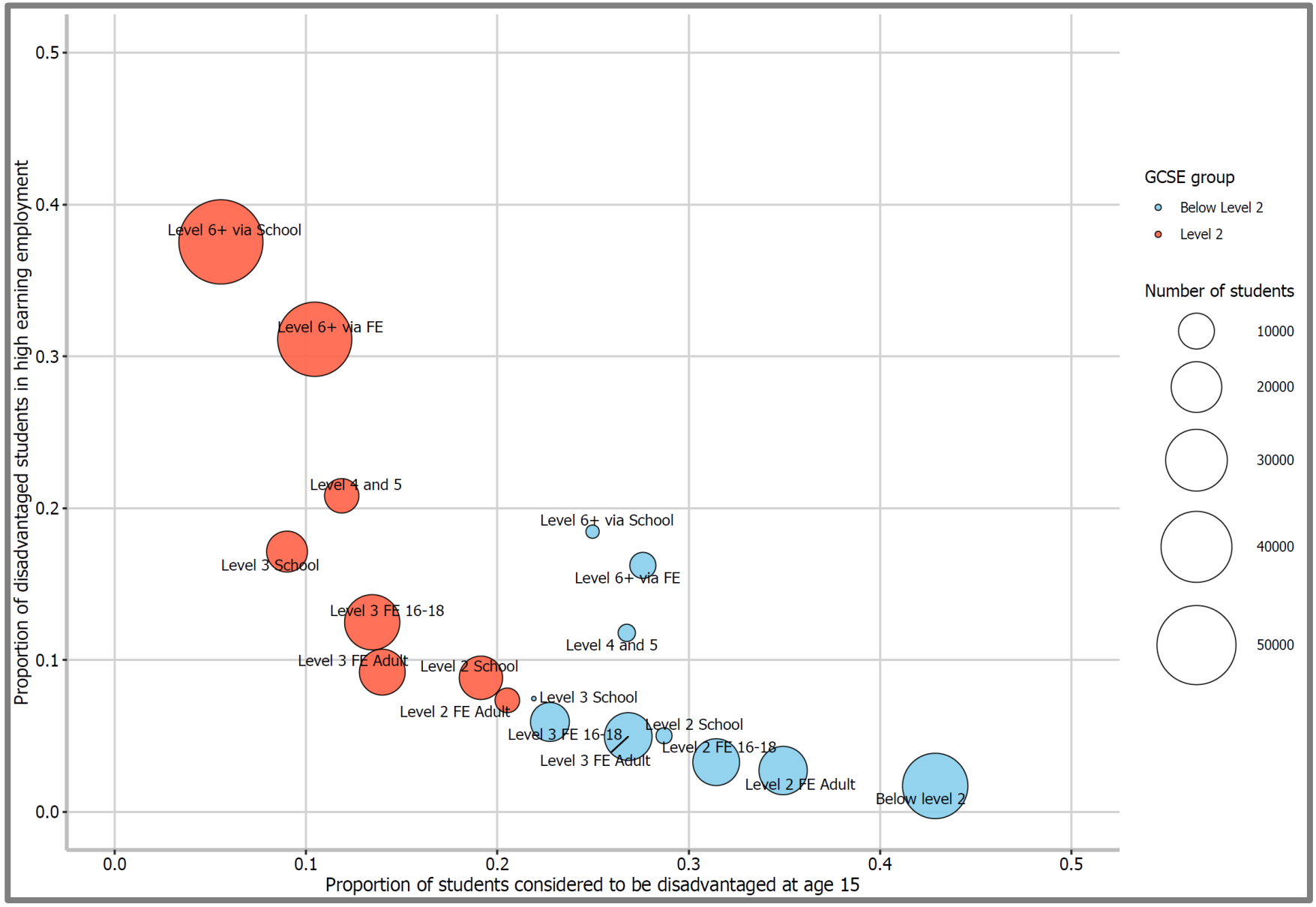
Figure 3 shows that the same is not true for women. It shows a dip in earnings progression for FE routes in the middle section of the chart. This suggests that level 2 and 3 FE does not play the same role in offering disadvantaged women progression up the income scale that it does for men. Potential reasons for this are discussed in section 4.

Figure 2: Male qualification routes: disadvantaged participation, progression to high earning and GCSE performance



Source: Longitudinal Education Outcomes Study

Figure 3: Female qualification routes: disadvantaged participation, progression to high earning and GCSE performance



Source: Longitudinal Education Outcomes Study

2.6 Results for non-disadvantaged students

Figure 4 shows the results of the analysis for students not eligible for free school meals (non-disadvantaged students). For this group of students, a higher proportion of non-disadvantaged students achieved the qualification routes that had the highest progression rates compared to those that had the lowest. For the below level 2 qualification route, 64 per cent of male students were non-disadvantaged, while for level 6+ via school 95 per cent were non-disadvantaged. For men, below level 2 had the lowest progression rate (17 per cent) while Level 6+ via School had the highest (55 per cent).

In contrast to the results for disadvantaged students, for non-disadvantaged students there is a positive relationship between participation and progression to high earning. In addition, for each qualification route progression to high earning was higher for non-disadvantaged students than for disadvantaged students (see Table 6).

Figure 4: Qualification routes: non-disadvantaged students and earnings progression

Highest qualification route	**Total students**	Students not eligible for FM	*% not eligible for FSM*	*% not eligible for FSM earning over £25k*
Male students				
Below level 2	**52,100**	33,600	*64%*	*17%*
Level 2 FE Adult	**39,400**	27,200	*69%*	*24%*
Level 2 FE 16-18	**22,800**	16,800	*74%*	*24%*
Level 2 School	**19,300**	16,100	*84%*	*32%*
Level 3 FE Adult	**34,600**	29,200	*84%*	*42%*
Level 3 FE 16-18	**30,500**	25,900	*85%*	*32%*
Level 3 School	**14,900**	13,700	*92%*	*36%*
Level 4 and 5	**12,300**	10,700	*87%*	*41%*
Level 6+ via FE	**38,300**	33,800	*88%*	*46%*
Level 6+ via School	**50,000**	47,500	*95%*	*55%*
Female students				
Below level 2	**33,800**	19,300	*57%*	*4%*
Level 2 FE Adult	**23,200**	15,800	*68%*	*6%*
Level 2 FE 16-18	**17,100**	11,700	*69%*	*6%*
Level 2 School	**17,200**	13,700	*79%*	*15%*
Level 3 FE Adult	**34,200**	27,100	*79%*	*10%*
Level 3 FE 16-18	**35,800**	29,900	*84%*	*16%*
Level 3 School	**14,400**	12,900	*90%*	*26%*
Level 4 and 5	**12,100**	10,200	*85%*	*28%*
Level 6+ via FE	**49,400**	43,300	*88%*	*39%*
Level 6+ via School	**59,000**	55,300	*94%*	*50%*

Source: Longitudinal Education Outcomes Study; FSM = Free School Meals

3. Further education and apprenticeships: detailed qualification routes

This section provides further detail for both classroom based FE qualification routes and apprenticeships. It includes analyses of:

- FE qualification routes by level, age and type of qualification (classroom based and apprenticeships).
- Qualifications routes by sector subject area.

As in section 2, for each qualification route the analysis compares disadvantaged participation with disadvantaged progression to high earning.

3.1 Further education by qualification type and level

Figures 5, 6 and 7 show the results for the FE qualification routes where there are at least 100 achievers in the data. The same pattern described in Section 2 is also present within FE: for FE qualification routes, there was a negative relationship between disadvantaged participation and progression to high earning.

Qualifications at level 3 and above and apprenticeships offered disadvantaged students better earnings progression than lower level classroom based qualifications. However, the lower level qualifications included a higher proportion of students considered disadvantaged. For the level 3 apprenticeships route, 11 per cent of males aged 19-25 were disadvantaged, and 44 per cent of these disadvantaged students progressed to high earning employment. This compares to 35 per cent and 11 per cent respectively for 19-25 males who achieved a level 2 classroom based FE route (see Table 8).

As seen in section 2, for all FE routes a much smaller proportion of disadvantaged females progressed to high earning than disadvantaged males. In contrast to the level 6+ routes discussed in Section 2, level 4+ FE did not offer women a large improvement in progression rates compared with the lower level FE qualifications.

For both males and females, the results for level 6 learning in the classroom are an outlier. This group includes a larger proportion of students who achieved qualifications in the arts, media and publishing sector subject area, which on average are known to result in lower annual earnings.

3.2 Further education by sector subject area

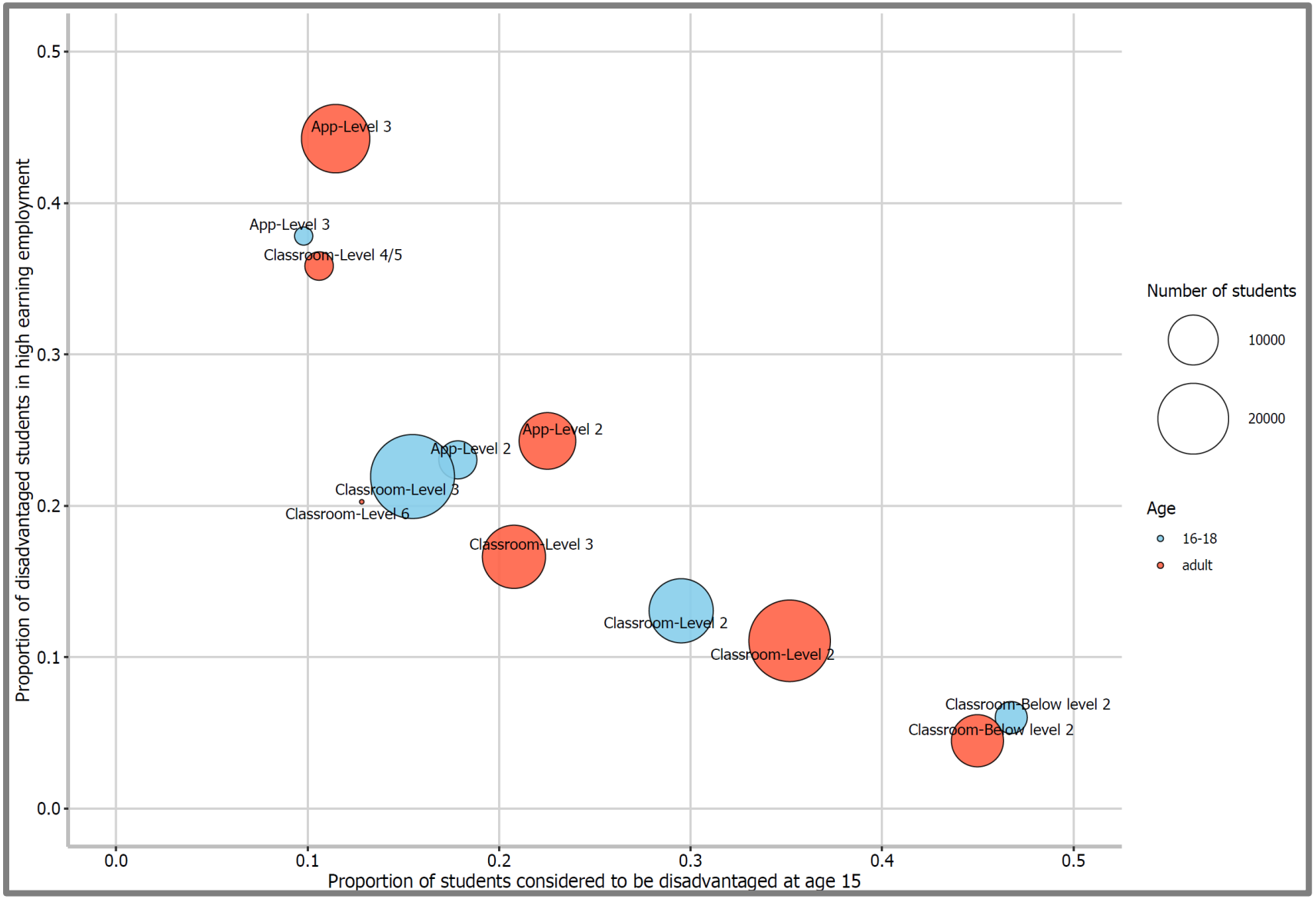
Figure 7 shows a breakdown of level 3 apprenticeship and classroom FE routes by Sector Subject Area (SSA)

For disadvantaged men, apprenticeship routes in engineering, construction and Information and Communication Technologies (ICT) offered the highest progression rates (57 per cent, 46 per cent and 40 per cent). However, construction and engineering had some of the lowest proportions of students considered disadvantaged (9 per cent and 10 per cent respectively). In contrast, apprenticeships in retail and health and social care had higher disadvantaged participation rates but lower rates of progression.

Very few women in the cohort achieved qualifications in ICT, engineering or construction so outcomes are not presented here. Business administration apprenticeships offered the best progression rates for women (14 per cent).

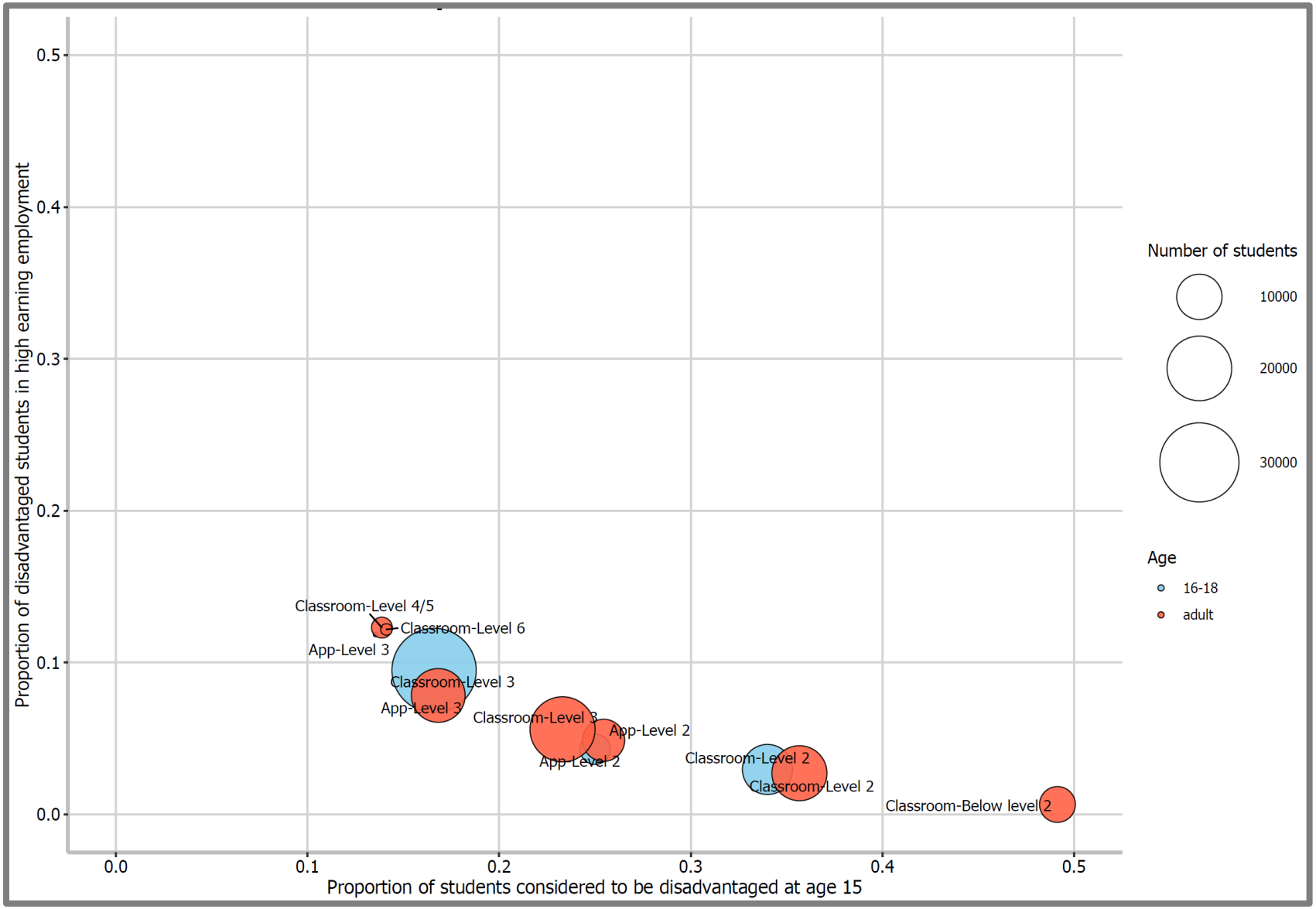
The differences between men and women outlined here are discussed further in Section 4.

Figure 5: Male further education qualification routes: disadvantaged participation and progression to high earning



Source: Longitudinal Education Outcomes Study

Figure 6: Female further education qualification routes: disadvantaged participation and progression to high earning



Source: Longitudinal Education Outcomes Study

Figure 7: Adult further education: level 3 qualification routes by sector subject area and gender

	Male students				Female students			
Sector subject area	**Total students**	Students eligible for FSM	*% eligible for FSM*	*% eligible for FSM and earning over £25k*	**Total students**	Students eligible for FSM	*% eligible for FSM*	*% eligible for FSM and earning over £25k*
Apprenticeships								
Agriculture, Horticulture and Animal Care	**300**	-	*6%*	- -	**400**	-	*9%*	- -
Arts, Media and Publishing	**-**	-	- -	- -	**-**	-	- -	- -
Business, Administration and Law	**1,900**	300	*16%*	*31%*	**4,900**	700	*14%*	*14%*
Construction, Planning and the Built Environment	**4,000**	400	*9%*	*46%*	**-**	-	- -	- -
Education and Training	**100**	-	*10%*	- -	**100**	-	*12%*	- -
Engineering and Manufacturing Technologies	**10,200**	1,000	*10%*	*57%*	**200**	-	*14%*	- -
Health, Public Services and Care	**600**	100	*18%*	*18%*	**5,900**	1,300	*21%*	*4%*
Information and Communication Technology	**1,300**	200	*16%*	*40%*	**200**	-	*20%*	- -
Leisure, Travel and Tourism	**900**	100	*13%*	*30%*	**500**	100	*12%*	*12%*
Retail and Commercial Enterprise	**1,100**	200	*14%*	*18%*	**3,000**	400	*14%*	*5%*
Classroom Based FE								
Agriculture, Horticulture and Animal Care	**1,500**	100	*9%*	*12%*	**1,800**	200	*13%*	*6%*
Arts, Media and Publishing	**8,200**	1,400	*17%*	*11%*	**8,500**	1,500	*18%*	*9%*
Business, Administration and Law	**4,800**	1,000	*21%*	*22%*	**5,400**	1,000	*19%*	*15%*
Construction, Planning and the Built Environment	**2,900**	500	*17%*	*30%*	**100**	-	*25%*	- -
Education and Training	**400**	100	*20%*	*9%*	**1,000**	200	*21%*	*5%*
Engineering and Manufacturing Technologies	**6,100**	1,100	*17%*	*29%*	**300**	-	*14%*	- -
Health, Public Services and Care	**3,000**	500	*17%*	*19%*	**15,300**	3,400	*22%*	*5%*
History, Philosophy and Theology	**1,300**	200	*14%*	*13%*	**1,600**	300	*17%*	*7%*
Information and Communication Technology	**4,400**	1,000	*23%*	*18%*	**900**	200	*24%*	*8%*
Languages, Literature and Culture	**1,400**	200	*12%*	*22%*	**2,800**	400	*14%*	*13%*
Leisure, Travel and Tourism	**4,900**	800	*16%*	*22%*	**3,500**	600	*17%*	*11%*
Preparation for Life and Work	**600**	200	*24%*	*19%*	**600**	100	*23%*	*7%*
Retail and Commercial Enterprise	**1,400**	200	*18%*	*14%*	**8,600**	1,600	*19%*	*4%*
Science and Mathematics	**2,400**	400	*16%*	*18%*	**2,500**	400	*16%*	*14%*
Social Sciences	**1,000**	200	*16%*	*23%*	**1,300**	300	*21%*	*8%*

Source: Longitudinal Education Outcomes Study; FSM = Free School Meals

4. Further education earnings outcomes and gender

Sections 2 and 3 concluded that FE qualification routes did not offer the same rates of progression to high earning for disadvantaged women as for disadvantaged men. Two potential explanations for this are discussed here:

- FE courses with the highest earnings outcomes are dominated by men.
- The age of first time mothers is associated with levels of education.

4.1 Further education courses

Table 4 shows the top apprenticeships ordered by progression to high earning for disadvantaged students by level and sector subject area. These are made up of apprenticeships in engineering, construction and ICT, and are overwhelmingly dominated by men: at least 87 per cent of disadvantaged students achieving the top 5 types of apprenticeships were men.

In contrast, women dominated the bottom 5 apprenticeships, including apprenticeships in retail, and health, public services and care (Table 5). For the lowest ranking apprenticeships in health, public services and care, just 8 per cent of disadvantaged students were male.

Table 4: Progression to high earning for disadvantaged students: top 5 apprenticeships

Level	Sector subject area	Disadvantaged students	*% high earning*	*% male*
Level 3	Engineering and Manufacturing Technologies	1,100	*56%*	*97%*
Level 3	Construction, Planning and the Built Environment	400	*46%*	*98%*
Level 3	Information and Communication Technology	200	*40%*	*88%*
Level 2	Engineering and Manufacturing Technologies	1,000	*31%*	*95%*
Level 2	Information and Communication Technology	200	*29%*	*87%*

Table 5: Progression to high earning for disadvantaged students: bottom 5 apprenticeships

Level	Sector subject area	Disadvantaged students	*% high earning*	*% male*
Level 3	Health, Public Services and Care	1,400	*5%*	*8%*
Level 2	Retail and Commercial Enterprise	2,300	*8%*	*40%*
Level 3	Retail and Commercial Enterprise	600	*9%*	*27%*
Level 2	Health, Public Services and Care	1,200	*9%*	*23%*
Level 3	Agriculture, Horticulture and Animal Care	100	*10%*	*36%*

4.2 Level of education and age of first time mothers

Recent research[3] shows that women educated to degree level are more likely to remain childless or have children at a later age than those with lower levels of education. In addition, the age gap between first time mothers educated to degree level and those with a lower level of education has widened over time.

At the age earnings are observed in this report, women achieving lower level qualification routes, such as level 2 or 3 in FE, are more likely to have children than those achieving level 6+ qualifications. This is likely to explain, in part, the different patterns of progression to high earning for men and women – especially for the lower level FE routes. However, due to data limitations, we are not able to isolate mothers in the analysis to test this.

Women who have children aged between 1 and 12 are more likely to be in part time employment than full time employment[4]. Earnings measures based on LEO data do not account for differences in hours worked (see section 1.3); as a result, groups with a high incidence of part time working will have lower proportions earning over £25k. This will likely affect the results for women who followed FE and lower level qualification routes more than those who followed a level 6+ route.

[3] Berrington, Ann et al (2015) Educational differences in childbearing widen in Britain Southampton, GB. ESRC Centre for Population Change 4pp. (ESRC Centre for Population Change Briefing Papers, 29) https://eprints.soton.ac.uk/383138/

[4] Office for National Statistics: Families and the Labour Market, England: 2017 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/familiesandthelabourmarketengland/2017

5. Analysis of headline data: 21k threshold

Figure 8 below shows the headline results for disadvantaged students based on the £21k earnings threshold, which is approximately median earnings for the cohort in the 2016-17 tax year.

As would be expected, the lower threshold increases progression to high earning for all qualification routes. However, the headline results remain the same: there is a negative relationship between disadvantaged participation and progression to high earnings, FE routes had middling to good progression rates for men but much less substantial progression rates for women, and level 6+ routes has the highest progression rates for both men and women.

Figure 8: Qualification routes: disadvantaged students and earnings progression

Highest qualification route	**Total students**	Students eligible for FSM	*% eligible for FSM*	*% eligible for FSM and earning over £21k*
Male students				
Below level 2	**52,100**	18,600	*36%*	*16%*
Level 2 FE Adult	**39,400**	12,300	*31%*	*23%*
Level 2 FE 16-18	**22,800**	6,000	*26%*	*24%*
Level 2 School	**19,300**	3,100	*16%*	*35%*
Level 3 FE Adult	**34,600**	5,500	*16%*	*38%*
Level 3 FE 16-18	**30,500**	4,600	*15%*	*34%*
Level 3 School	**14,900**	1,200	*8%*	*40%*
Level 4 and 5	**12,300**	1,600	*13%*	*39%*
Level 6+ via FE	**38,300**	4,500	*12%*	*48%*
Level 6+ via School	**50,000**	2,500	*5%*	*53%*
Female students				
Below level 2	**33,800**	14,500	*43%*	*3%*
Level 2 FE Adult	**23,200**	7,400	*32%*	*7%*
Level 2 FE 16-18	**17,100**	5,400	*31%*	*6%*
Level 2 School	**17,200**	3,500	*21%*	*13%*
Level 3 FE Adult	**34,200**	7,100	*21%*	*12%*
Level 3 FE 16-18	**35,800**	5,900	*17%*	*16%*
Level 3 School	**14,400**	1,500	*10%*	*23%*
Level 4 and 5	**12,100**	1,900	*15%*	*27%*
Level 6+ via FE	**49,400**	6,100	*12%*	*40%*
Level 6+ via School	**59,000**	3,700	*6%*	*47%*

Source: Longitudinal Education Outcomes Study; FSM = Free School Meals

6. Additional tables

Table 6: Qualification routes by gender and disadvantage: participation and progression to high earning employment

		Students eligible for free school meals				Students not eligible for free school meals			
				Earning over £25k				Earning over £25k	
Highest qualification route	**Total students**	**Students**	***% of total students***	**Students**	**% of students eligible for FSM**	**Students**	**% of total students**	**Students**	**% of students not eligible for FSM**
Male students									
Below level 2	**52,100**	18,600	*36%*	1,700	*9%*	33,600	*64%*	5,600	*17%*
Level 2 FE Adult	**39,400**	12,300	*31%*	1,700	*14%*	27,200	*69%*	6,500	*24%*
Level 2 FE 16-18	**22,800**	6,000	*26%*	900	*15%*	16,800	*74%*	4,000	*24%*
Level 2 School	**19,300**	3,100	*16%*	700	*24%*	16,100	*84%*	5,200	*32%*
Level 3 FE Adult	**34,600**	5,500	*16%*	1,500	*27%*	29,200	*84%*	12,200	*42%*
Level 3 FE 16-18	**30,500**	4,600	*15%*	1,000	*23%*	25,900	*85%*	8,300	*32%*
Level 3 School	**14,900**	1,200	*8%*	300	*28%*	13,700	*92%*	4,900	*36%*
Level 4 and 5	**12,300**	1,600	*13%*	500	*28%*	10,700	*87%*	4,400	*41%*
Level 6+ via FE	**38,300**	4,500	*12%*	1,600	*35%*	33,800	*88%*	15,400	*46%*
Level 6+ via School	**50,000**	2,500	*5%*	1,100	*43%*	47,500	*95%*	26,300	*55%*
Total	**314,200**	**59,800**	***19%***	**11,100**	***19%***	**254,300**	***81%***	**92,900**	***37%***
Female students									
Below level 2	**33,800**	14,500	*43%*	200	*2%*	19,300	*57%*	700	*4%*
Level 2 FE Adult	**23,200**	7,400	*32%*	200	*3%*	15,800	*68%*	1,000	*6%*
Level 2 FE 16-18	**17,100**	5,400	*31%*	200	*3%*	11,700	*69%*	700	*6%*
Level 2 School	**17,200**	3,500	*21%*	300	*8%*	13,700	*79%*	2,000	*15%*
Level 3 FE Adult	**34,200**	7,100	*21%*	400	*6%*	27,100	*79%*	2,700	*10%*
Level 3 FE 16-18	**35,800**	5,900	*17%*	600	*10%*	29,900	*83%*	4,800	*16%*
Level 3 School	**14,400**	1,500	*10%*	200	*15%*	12,900	*90%*	3,300	*26%*
Level 4 and 5	**12,100**	1,900	*15%*	300	*17%*	10,200	*85%*	2,800	*28%*
Level 6+ via FE	**49,400**	6,100	*12%*	1,700	*27%*	43,300	*88%*	16,900	*39%*
Level 6+ via School	**59,000**	3,700	*6%*	1,300	*35%*	55,300	*94%*	27,600	*50%*
Total	**296,200**	**56,900**	***19%***	**5,500**	***10%***	**239,300**	***81%***	**62,600**	***26%***

Table 7: Qualification routes by gender: participation, progression to high earning employment and GCSE performance

	Students with 5 A*-Cs at GCSE					Students with below 5 A*-Cs at GCSE				
				Earning over £25k					Earning over £25k	
Highest qualification route	**Total students**	**Disadvantaged Students**	***% of total students***	**students**	***% of disadvantaged students***	**Total students**	**Disadvantaged Students**	***% of total students***	**students**	***% of disadvantaged students***
Male students										
Below level 2	**-**	-	-	-	-	**52,100**	18,600	*36%*	1,700	*9%*
Level 2 FE Adult	**6,200**	1,200	*19%*	300	*27%*	**33,200**	11,100	*33%*	1,400	*13%*
Level 2 FE 16-18	**-**	-	-	-	-	**22,800**	6,000	*26%*	900	*15%*
Level 2 School	**16,300**	2,500	*15%*	600	*25%*	**2,900**	700	*23%*	100	*19%*
Level 3 FE Adult	**16,800**	1,700	*10%*	600	*36%*	**17,900**	3,700	*21%*	900	*23%*
Level 3 FE 16-18	**19,800**	2,400	*12%*	600	*26%*	**10,800**	2,300	*21%*	400	*19%*
Level 3 School	**13,400**	900	*7%*	300	*30%*	**1,400**	200	*16%*	-	*21%*
Level 4 and 5	**9,200**	900	*10%*	300	*34%*	**3,000**	700	*23%*	100	*21%*
Level 6+ via FE	**32,300**	3,000	*9%*	1,200	*40%*	**6,000**	1,500	*25%*	400	*26%*
Level 6+ via School	**48,000**	2,100	*4%*	1,000	*46%*	**2,000**	400	*20%*	100	*26%*
Total	**162,000**	**14,700**	***9%***	**4,900**	***33%***	**152,100**	**45,200**	***30%***	**6,200**	***14%***
Female students										
Below level 2	**-**	-	-	-	-	**33,800**	14,500	*43%*	200	*2%*
Level 2 FE Adult	**5,000**	1,000	*21%*	100	*7%*	**18,200**	6,400	*35%*	200	*3%*
Level 2 FE 16-18	**-**	-	-	-	-	**17,100**	5,400	*31%*	200	*3%*
Level 2 School	**14,700**	2,800	*19%*	200	*9%*	**2,600**	700	*29%*	-	*5%*
Level 3 FE Adult	**16,400**	2,300	*14%*	200	*9%*	**17,800**	4,800	*27%*	200	*5%*
Level 3 FE 16-18	**24,000**	3,200	*13%*	400	*12%*	**11,800**	2,700	*23%*	200	*6%*
Level 3 School	**13,000**	1,200	*9%*	200	*17%*	**1,400**	300	*22%*	-	*7%*
Level 4 and 5	**9,200**	1,100	*12%*	200	*21%*	**2,900**	800	*27%*	100	*12%*
Level 6+ via FE	**43,900**	4,600	*10%*	1,400	*31%*	**5,500**	1,500	*28%*	200	*16%*
Level 6+ via School	**56,900**	3,200	*6%*	1,200	*38%*	**2,100**	500	*25%*	100	*18%*
Total	**183,100**	**19,400**	***11%***	**4,000**	***21%***	**113,100**	**37,500**	***33%***	**1,500**	***4%***

Table 8: Further education qualification routes by gender: disadvantaged participation and progression to high earning

		Disadvantaged male students				Disadvantaged female students				
				Earning over £25k					Earning over £25k	
FE qualification route	**Total male students**	**Students**	***% of total students***	**Students**	***% of disadvantaged students***	**Total female students**	**Students**	***% of total students***	**Students**	***% of disadvantaged students***
Age 16-18										
Below level 2-Classroom	**4,400**	2,100	*47%*	100	*6%*	**2,700**	1,400	*54%*	-	*
Level 2-App	**5,600**	1,000	*18%*	200	*23%*	**4,800**	1,200	*25%*	100	*5%*
Level 2-Classroom	**16,900**	4,900	*29%*	600	*13%*	**12,100**	4,100	*34%*	100	*3%*
Level 3-App	**1,700**	200	*10%*	100	*38%*	**1,400**	200	*13%*	-	*13%*
Level 3-Classroom	**28,500**	4,400	*15%*	1,000	*22%*	**34,200**	5,700	*17%*	500	*9%*
Level 4/5-Classroom	**100**	-	*21%*	-	-	**100**	-	-	-	-
Total	**57,200**	**12,600**	***22%***	**2,100**	***16%***	**55,300**	**12,600**	***23%***	**700**	***6%***
Age 19-25										
Below level 2-Classroom	**10,900**	4,900	*45%*	200	*4%*	**6,500**	3,200	*49%*	-	*1%*
Level 2-App	**12,800**	2,900	*23%*	700	*24%*	**8,700**	2,200	*25%*	100	*5%*
Level 2-Classroom	**26,600**	9,400	*35%*	1,000	*11%*	**14,500**	5,200	*36%*	100	*3%*
Level 3-App	**18,700**	2,100	*11%*	900	*44%*	**13,900**	2,300	*17%*	200	*8%*
Level 3-Classroom	**15,900**	3,300	*21%*	600	*17%*	**20,300**	4,700	*23%*	300	*6%*
Level 4/5-App	**200**	-	*8%*	-	-	**400**	-	-	-	-
Level 4/5-Classroom	**3,600**	400	*11%*	100	*36%*	**2,800**	400	*14%*	-	*12%*
Level 6-Classroom	**1,200**	100	*13%*	-	*20%*	**1,700**	200	*14%*	-	*12%*
Total	**90,200**	**23,200**	***26%***	**3,600**	***16%***	**68,900**	**18,300**	***27%***	**800**	***4%***

7. Related publications

- Destinations of KS4 and KS5 pupils. Data on key stage 4 (KS4) and key stage 5 (KS5) students going into education, employment and training destinations.
- Level 2 and 3 attainment by young people aged 19. Latest information on the attainment of 19 year olds from 2004 to 2016
- Further education outcome-based success measures. Statistics showing the destination outcomes of learners completing further education training using longitudinal education outcomes data.
- Graduate outcomes (LEO): 2015 to 2016. Employment and earnings outcomes of higher education graduates broken down by subject studied and graduate characteristics.
- Graduate outcomes for all subjects by university. Employment and earnings of higher education graduates broken down by graduate characteristic, subject studied and university attended.
- Graduate outcomes, by degree subject and university. Employment and earnings of higher education graduates broken down by graduate characteristic, subject studied and university attended.
- The earnings differentials associated with vocational education and training. Research analysing the economic benefits to an individual from achieving further education qualifications.
- Further education qualifications in maths and English: returns and benefits. Research analysing the economic benefits associated with further education qualifications in maths and English.
- Further education: comparing labour market economic benefits from qualifications gained. Estimates the economic benefits to an individual from achieving further education qualifications.
- Further education: impact of skills and training on the unemployed. This research estimates the economic benefits to unemployed individuals from achieving further education qualifications.
- Longitudinal education outcomes study: how we use and share data. How the government shares and uses personal data as part of the 'Longitudinal education outcomes study'.
- Post-16 education: highest level of achievement by age 25. Estimates for the highest level of education achieved by age 25 for the cohort of students who completed GCSEs in 2005.

8. Get in touch

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