

**Achievement, Progression and Labour Market Impact of BTEC
Qualifications: An Analysis Using the Eleventh Youth Cohort Study**

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1. Introduction

The analysis in this report considers the taking of, acquisition and impacts of BTEC qualifications amongst a recent cohort of young people. We use a longitudinal data set that follows the same people across a number of years. We can therefore observe, for example, young people studying for a BTEC qualification one year, the outcomes of that study the next year, and the impact that such study has had on their labour market outcomes the year after that.

The key questions to be answered begin with a consideration of who does a BTEC qualification, in terms of personal characteristics, prior qualifications and family background. We then estimate achievement rates one and two years after study for the qualifications began. The analysis of the raw data is then completed by considering what the individuals do after completing their BTEC, in terms of progression to higher levels of education, or success in the labour market.

The second half of the report then examines achievement, progression and labour market outcomes in terms of multivariate relationships. Thus, in the study of achievement, we consider which characteristics of individuals, their backgrounds, or their education are most strongly associated with attainment of BTEC qualifications. This will not only help identify what works best in the provision of these qualifications, but also make clear who is not achieving as well and so may require more help. The remaining multivariate analyses investigate the impact that such attainment has on participation in further or higher education, and on labour market outcomes. Of course, the descriptive statistics that form the first half of this report tell us the rate of progression to higher qualification levels, and the employment rate, of those who achieve a BTEC qualification. The advantage of examining these issues further in a multivariate setting is that such analysis controls for other characteristics of the individuals. Say we observe people who obtain a BTEC qualification being more likely to progress in education, or find a job in the labour market. What we would not know just by looking at the raw data is whether the acquisition of the BTEC qualification directly *caused* the improved progression or employment chances, or whether the characteristics of the individuals that led them to study for and acquire the qualification in the first place, are also the same characteristics that

improve the chances of progressing or finding a job. For example, if the people who acquire the BTEC qualification have a higher level of prior achievement from school, or come from a better social background, then if we were to observe a higher progression or employment rate amongst such people, we would not know whether it was the BTEC qualification itself, or their higher prior achievement and social background, that was helping them get on in further education or the labour market. The advantage of undertaking a multivariate analysis, such as the ones described and performed below, is that it lets us control for, or hold constant, these other characteristics of individuals, allowing us to focus on the ‘pure’ effect of the qualification itself. In effect what the results tell us is, if there were two people with the same individual, family and prior education characteristics, except one has a BTEC qualification and the other does not, what is the difference in their likelihoods of progressing to higher levels of education or into a job. Of course, we are implicitly assuming that we can control for *all* factors that simultaneously affect both the chances of acquiring a BTEC qualification and the outcome variable (progression or employment). Fortunately, the data set that we use contains a rich set of information, which while it can never control for everything, it does provide information on many of the characteristics that we would like to control for. It is to a description of this data set that we now turn.

2. Data and Methodology

The data set used in this report is the Youth Cohort Study (YCS). The YCS is a panel survey that monitors the educational and labour market decisions of young people as they make the transition from compulsory education at age 16 through to age 20. The survey was administered by the then Department for Education and Skills. We use the four annual sweeps from cohort 11 which follows students who completed their compulsory education, at age 16, in the summer of 2001¹. The first questionnaire (or sweep) was posted in the spring of 2002. The same sample of young people was then contacted on three subsequent occasions at intervals of one year. The respondents in each sweep provide a diary of their activities status over the previous twelve months,

¹ Cohort 11 of the YCS was selected for this analysis because it contains 4 sweeps providing us with more information than previous cohorts which contain only 3 sweeps.

describing their job if in work, or their course of study if still in education. Any qualifications acquired between sweeps of the survey are also recorded.

As mentioned in the Introduction, another useful aspect of the YCS is the very detailed information available with which to create control variables, so we can allow for differences in characteristics between those with and without BTEC qualifications, which might have also influenced the outcomes of interest. Thus, the YCS provides information on personal and demographic information (gender, ethnicity, health status), family background (such as occupation and education of parents, which parents are present in the young person's household and type of housing) and region of residence. Sweep 1 of the survey also collects information about all educational qualifications acquired in school before the first survey sweep. We therefore have an indication of individuals' prior attainment, that is, their starting point for the analysis of further education involvement and achievement considered here. By ensuring that we control for this starting point, we make comparisons across individuals fairer. The inclusion of this wealth of information in the YCS is what makes the data set attractive to use for the current analysis. Although sample sizes are necessarily much smaller in a sample survey such as the YCS, compared to administrative data sets such as the Individualised Learner Record (ILR), the latter do not have the information available to control for the many other determinants of progression or employment that we would like.

The number of respondents in the first sweep of the YCS is 16,707. There is attrition of 40% between the first and second sweeps and a further 23% attrition between Sweep 2 and Sweep 3. This means that we see 9,985 of these individuals in Sweep 2 and 7,728 in Sweep 3.² Between the final two sweeps (Sweep 3 and Sweep 4), there is a further 20% attrition, leaving 6,157 respondents in the final sweep. Obviously such attrition is a problem for the analysis, particularly if such attrition is non-random. For example, if educational achievers are more likely to continue responding to surveys such as the YCS, then they would be over-represented in the follow-up sweeps of the survey, and so bias upwards any estimate of the achievement rate. Weights are therefore applied to all analyses conducted in this report, with the weights

² The number of BTEC students in sweep1 is 876 and the number in sweep 2 is 518 which accords with the total cohort attrition rate.

set to make the observed sample in each sweep representative of the sample in the first sweep, which was itself representative of young people aged 16-17 by region, LEA and school type.

Turning to the methodology, the multivariate analyses in the second half of the report all involve dependent variables that are bivariate in nature (i.e. they are all yes/no variables, indicating whether or not an individual has achieved a particular qualification, whether they have progressed to a higher level etc). We therefore use an estimation technique that takes into account the nature of the dependent variable, known as probit estimation. The coefficients on the explanatory variables in such equations can be used to provide estimates of the impact of the variable in question on the probability of the dependent variable (i.e. achievement, progression etc) occurring, holding constant the impact of all other variables included in the equation. Before such analysis, however, we begin the results with a consideration of the raw data.

3. Results: Analysis of Raw Data

3.1 The Characteristics of those studying for a BTEC qualification at age 17

We first see the individuals in our sample in April 2002 when most are aged 17. In this first sweep of the survey, they report their labour market status and any qualifications for which they are currently studying. The group studying for a BTEC qualification at this time constitute five percent of the 17 year-olds in our sample (876 individuals). These individuals form the group of principal interest throughout this report. Of this group, the vast majority are studying for their BTEC qualification in full-time education (94%) with the rest studying through an apprenticeship (4%) and through employer training (1%). Two thirds of BTEC students are enrolled on a National Diploma course (i.e. an OND/ONC, which is Level 3 on the National Qualifications Framework), 15% are taking a First Diploma (Level 2) and 10% a First Certificate (Level 2). The remaining 10% are apparently unaware of the qualification level for which they are enrolled. Slightly more males (55%) than females are enrolled.

We first consider the starting point of the individuals who say that they are studying for a BTEC qualification when first surveyed in Sweep 1. Table 1 reports the prior GCSE results of those who are studying for each BTEC qualification in Sweep 1.

The majority of BTEC students have been successful in their GCSE examinations at school, with 59% having gained 5 or more A-C grades and a further 30% having gained between 1-4 A-C grades. As expected, there is large variation across the type of BTECs being studied, however. Three-quarters of those studying for a National Diploma have 5 or more good GCSEs, and almost all have at least 1. Since a National Diploma is a Level 3 qualification, it is not surprising that most have good GCSEs before being allowed on such courses. When we consider those studying for the two lowest levels of BTEC qualifications, only a minority already hold 5 or more good GCSEs, though even here, a majority in each case have at least 1 GCSE at grade C or above.

Table 1: Prior GCSE Qualifications by BTEC Level Studied (%)

N=876	1st certificate	1st diploma	National Diploma	Other BTEC ³	Total
No GCSEs	12.5	5.8	2.1	3.8	3.8
1-4 D-G grades	1.3	1.4	0.0	1.2	0.5
5+ D-G grades	16.3	23.0	1.5	3.8	6.5
1-4 A-C grades	43.8	54.7	21.5	35.0	30.0
5+ A-C grades	26.3	15.1	74.9	56.2	59.3
Total	100.0	100.0	100.0	100.0	100.0

A comparison of course types for all those taking vocational courses reveals that for both genders the traditional BTEC is far more popular than the traditional ‘City and Guilds’ and ‘RSA’ courses, but that more students are taking an NVQ course (34% and 50% of vocational students for males taking BTEC and NVQ, respectively). Nearly a quarter of BTEC students are also taking academic qualifications (8%, 13% and 2% for GCSEs, AS levels and A levels, respectively).

³ The ‘Other BTEC’ group are individuals who report that they are studying for a BTEC qualification, but when asked at what level, cannot report what level. This group could therefore also be labelled ‘BTEC: Unknown Level’.

Table 2 reveals the characteristics of BTEC students at each level. About a fifth of students are in receipt of an ‘Educational Maintenance Allowance’, being slightly more likely to be in receipt of it where studying for a National Diploma. Around 10% of our individuals report that they have a disability or are in poor health.

Table 2: Characteristics of BTEC students at age 17 (%)

	1st certificate	1st diploma	National Diploma	Other BTEC	Total
EMA	15.0	17.3	18.2	16.3	17.6
Ill health	10.0	8.6	10.1	5.0	9.4
Parents Managerial/Professional	21.8	20.8	30.5	35.4	28.8
Parents skilled non-manual	5.5	16.0	13.3	18.5	13.6
Parents skilled manual	30.9	35.9	27.6	16.9	28.1
Parents unskilled non-manual	1.8	4.7	3.7	3.1	3.7
Parents unskilled manual	40.0	22.6	24.9	26.2	25.9
Parents have a degree	16.3	15.8	16.3	23.8	16.9
Lives with both parents	68.7	68.4	76.1	75.0	74.1
Lives with one parent	22.5	28.0	19.6	20.0	21.2
Lives with neither parent	8.8	3.6	4.3	5.0	4.7
Both parents employed	46.3	56.8	66.6	53.8	62.0
One parent employed	30.0	32.4	24.1	36.2	27.0
Neither parent employed	23.7	10.8	9.4	10.0	11.0
North East	2.5	9.4	6.6	2.5	6.3
North West	15.0	13.0	16.6	8.8	15.2
Yorkshire/Humber	12.5	9.4	9.7	12.5	10.2
East Midlands	5.0	10.0	9.0	6.3	8.6
West Midlands	15.0	14.4	12.5	16.3	13.4
East	2.5	8.6	7.8	7.8	7.8
Inner London	0.0	2.2	1.9	1.7	1.7
Outer London	12.5	2.9	5.6	6.3	6.3
South East	18.8	14.4	13.3	15.0	14.2
South West	13.7	11.5	11.1	11.3	11.4
Wales	2.5	4.3	5.9	3.7	5.1

In terms of family background, BTEC students are least likely to have a father in an unskilled non-manual occupation (4%), otherwise students come from all other socio-economic backgrounds. Again there is variation across type of BTEC qualification, with 1 in 3 of National Diploma students coming from a household with a

professional head, compared to 1 in 5 of students studying for a First Certificate or Diploma. However, this is probably simply a reflection of the fact that young people from better-off backgrounds are more likely to have already achieved good GCSEs, and so have qualified for the higher level of BTEC study.⁴ The majority of students (83%) have parents who do not possess a degree level qualification. Three-quarters of students reside with both parents and over one-fifth live with a single parent. Those studying for a National Diploma are more likely to still live with both parents. 11% of BTEC students are from a household where neither parent is employed. As with the other family background characteristics, it is students of the lower BTEC level who are more likely to reside in a more disadvantaged, in this case workless, household (and so again the impact of family status is likely to be working through prior achievement in GCSEs). Finally, considering region, BTECs appear slightly more popular to students in the North West, South East and the West Midlands than other regions of England or Wales.

Overall, the typical BTEC student at age 17 is white, has gained good GCSEs at age 16, is studying full-time for a National Diploma at a college of further education, is in good health and is living with both parents who are in full-time employment.

3.2 What the Sweep 1 BTEC Students are Doing in Sweep 2

Table 3 describes the economic activity reported in Sweep 2 of the YCS in spring 2003 (when most are aged 18) of those students who were studying for a BTEC qualification at age 17. As throughout this report, the cross-tabulations are weighted to take into account the attrition across sweeps, hence making the tabulations representative of the original sample. We see that around three-quarters of students are still in full-time education. There is considerable variation across type of BTEC qualification, with 83% of original National Diploma students still in full-time education in Sweep 2, compared to 58% of original First Diploma students, and just 43% of original First Certificate students. This is to be expected, however, given the relative lengths of the courses at the three levels.

⁴ This point highlights the fact that in cross-tabulation analysis of this sort, the independent effect of single variables cannot be observed, a deficiency that the multivariate analysis in the second half of the report can correct.

Of those who have remained in full-time education, what courses are they now following in Sweep 2? It would be expected that many of those studying for a National Diploma in Sweep 1 would still be studying for the same qualification in Sweep 2 of the survey a year later. The data reveal that this is indeed the case. Of those studying for a National Diploma in Sweep 1, and still in full-time education in Sweep 2, 82% report that they are still studying for a National Diploma in Sweep 2.⁵ Of those studying for a First Diploma in Sweep 1, and still in full-time education in Sweep 2, 54%⁶ report that they have progressed and are now studying for a National Diploma. Only a tiny number (1.1%) are still studying for a First Diploma. Finally, of those studying for a First Certificate in Sweep 1, and still in full-time education in Sweep 2, 3% report that they have progressed and are now studying for a First Diploma, whilst 35% are now studying for a National Diploma in Sweep 2⁷. None of this group still in full-time education are still studying for a First Certificate.

Around 16% of Sweep 1 BTEC students are employed at age 18, with those who originally studied lower level qualifications being more likely to have moved into a job, this being a natural consequence of them being more likely to have left full-time education.

Table 3: Age 18 Economic Activity of Sweep 1 BTEC Students (%)

N=551	1st certificate	1st diploma	National Diploma	Other BTEC	Total
unemployed	11.9	8.3	1.1	1.3	3.9
employed	28.7	22.9	10.3	20.2	16.0
apprenticeship	16.8	3.3	4.8	2.7	5.6
FT education	42.6	57.7	82.8	74.5	72.0
other	0.0	7.9	1.1	1.2	2.6
Total	100.0	100.0	100.0	100.0	100.0

On looking at their route to study we find that of those in apprenticeships in Sweep 1, nearly one third are now in full-time employment. Of those who reported taking their

⁵ An implication of this is that we should not expect achievement to be too high in Sweep 2, with attainment of qualifications not showing up until Sweep 3 of the survey.

⁶ This represents 37% of *all* Sweep 1 First Diploma students progressing to a higher level, once we add those no longer in full-time education in Sweep 2 into the denominator.

⁷ This means that 27% of *all* Sweep 1 First Certificate students, thus including those no longer in full-time education in the denominator, have progressed to a higher level by Sweep 2.

BTEC course whilst in full-time education, 12% are now in employment whilst most (83%) are still in full-time education as their National Diploma course is still ongoing.

3.3 What the Sweep 1 BTEC Students Have Achieved by Sweep 2

As mentioned earlier, achievement levels in Sweep 2 should not be expected to be too high, given that we have just seen that many of those studying for a BTEC qualification in Sweep 1 of the survey are still studying for that same qualification in Sweep 2. Table 4 reports the achievement recorded by individuals in Sweep 2, amongst those who were studying for a BTEC in Sweep 1, by level of study. The achievements rates are indeed low. The highest achievement rate is amongst those studying for a First Diploma in Sweep 1, around 40% of whom have attained a BTEC qualification a year later (with the First Diploma unsurprisingly being the most likely BTEC qualification to have been attained by this group). Of those studying for a First Certificate in Sweep 1, 21% have acquired a BTEC qualification one year later. This is most likely to be a First Certificate, although almost as many have actually progressed and obtained a First Diploma by Sweep 2. Amongst those studying for a National Diploma in Sweep 1, only 4.8% have achieved this qualification by the time of the Sweep 2 survey, with even smaller numbers acquiring a lower level BTEC qualification. As mentioned however, since most of this group are still studying for their National Diploma in Sweep 2, this result should not be a surprise.

Table 4: Achievement by Sweep 2, by Level of BTEC Study in Sweep 1 (%)

	Gained:	1st certificate	1st diploma	National Diploma	Other BTEC
Studied for:					
1st certificate		9.9	8.0	0.0	3.4
1st diploma		10.8	18.7	3.2	7.0
National Diploma		1.8	1.4	4.8	0.8
Other BTEC		0.0	0.0	0.0	0.0

In terms of the actual numbers of qualifications being obtained, just over one-third (36%) of the BTEC qualification obtained by Sweep 2 are First Diplomas, with around 28% of the attainments being a First Certificate and 21% a National Diploma.⁸

⁸ This division of achievements across the various levels may appear surprising, given that the attainment proportions in the National Diploma column are so much smaller than for the lower two levels. However, recall that around two-thirds of all Sweep 1 BTEC students were studying for a

15% of all people who reported that they had obtained a BTEC qualification unfortunately either did not specify the level, or were unsure which level they had achieved.

Table 3 above reported that most Sweep 1 BTEC students were still in full-time education in Sweep 2. Even when we consider only those who have acquired a BTEC qualification by Sweep 2, rather than all Sweep 1 BTEC students, two-thirds of these achievers are still in full-time education taking a national qualification. Nearly one-third of the achievers are now either in employment or in an apprenticeship. Only one individual reported that they were now unemployed.

3.4 The Characteristics of Those Enrolling for the First Time for a BTEC Qualification at Age 18

It should be pointed out here whilst discussing Sweep 2 that there were significant numbers in this sweep of the data who reported studying for a BTEC for the first time, having previously not been studying for a BTEC in Sweep 1. However, the majority of those taking BTECs for the first time at age 18 had been in full-time education previously taking other traditional vocational qualifications, such as RSA and City and Guilds (10%), academic courses, such as GCSE, AS and A levels (48%) and advanced NVQ (33%).

Considering the characteristics of these new BTEC students, an equal proportion of males and females enrol at age 18. The majority of students enrolling (91%) obtained good GCSE grades at age 16. The personal and family background characteristics of those enrolling at age 18 are similar to those who enrolled at age 17, being mainly white, in good health, studying for a National Diploma and living with both parents.

3.5 What the Sweep 1 BTEC Students are Doing in Sweep 3

Table 5 reports the economic activity in Sweep 3, of our cohort of young people who studied for a BTEC qualification in Sweep 1. Thus, by age 19 around half of those who were studying for a BTEC at age 17 are now in employment or in an

National Diploma, and so the 4.8% achievement rate is 4.8% of much larger base of students. This is why the actual number of National Diplomas attained is not much below the actual number of First Diplomas or Certificates.

apprenticeship. This rate is not too dissimilar for all levels of original BTEC study. A further 42% of Sweep 1 BTEC students are still in full-time education, while a minority are unemployed or inactive (10%).

Table 5: Age 19 Economic Activity of Sweep 1 BTEC Students (%)

N=401	1st certificate	1st diploma	National Diploma	Other BTEC	Total
unemployed	9.0	1.5	4.2	0.0	3.5
employed	49.2	38.6	40.0	55.2	41.7
apprenticeship	12.3	2.4	7.4	3.9	6.3
FT education	26.9	47.5	41.9	38.9	41.9
other	2.7	10.0	6.5	2.0	6.7
Total	100.0	100.0	100.0	100.0	100.0

If we consider what those still in full-time education are actually now doing, recall that in Sweep 2, the vast majority of original National Diploma students were still following that course. This is no longer the case in Sweep 3, with only 9% of original National Diploma student still following such a course. As we would expect, most have now completed their course. There is evidence of significant progression to higher levels of study amongst this group. Thus, of original (Sweep 1) National Diploma students who are still in full-time education in Sweep 3, 44% (or 19% of *all* original National Diploma students regardless of whether they are now still in full-time education) are now studying for a degree at university. A further 8% of this group still in full-time education (or 3.5% of all) are studying for a Diploma in Higher Education, and 11% (or 5% of all) for an HND.

We also observe some progression amongst those originally studying for the two lower levels of BTEC in Sweep 1. Although insignificantly small numbers of this group are in Higher Education by Sweep 3, significant numbers have progressed to higher levels of BTEC study. Amongst those originally studying for a First Diploma in Sweep 1, and still in full-time education in Sweep 3, 68% (or 32% of *all* original First Diploma students regardless of whether they are now still in full-time education) are now studying for a National Diploma. Similarly, amongst those originally studying for a First Certificate in Sweep 1, and still in full-time education in Sweep 3, 24% (or 18% of *all* original First Certificate students regardless of whether they are now still in full-time education) are now studying for a National Diploma.

3.6 What the Sweep 1 BTEC Students Have Achieved by Sweep 3

By Sweep 3 of the Youth Cohort Study, the achievement of BTEC students becomes apparent, as shown in Table 6. Of those originally studying for a National Diploma, over half have now achieved their goal⁹. Of those originally studying for the lower BTEC level, the picture is not as good, since 56% and 66% of original First Diploma and First Certificate students respectively have failed to acquire any BTEC qualifications by the age of 19 in Sweep 3. At least amongst those who have achieved, there is evidence of good progression within the two years considered, since of those who were initially studying for a First Diploma, 16% have moved up a level and acquired a National Diploma, while 11% of those who were initially studying for a First Certificate have moved up two levels, gaining a National Diploma.

Table 6: Achievement by Sweep 3, by Level of BTEC Study in Sweep 1 (%)

Gained:	1st certificate	1st diploma	National Diploma	Other BTEC
Studied for:				
1st certificate	8.8	14.0	10.8	0.0
1st diploma	8.5	19.5	15.7	0.0
National Diploma	2.4	1.4	56.3	0.4
Other BTEC	0.0	4.2	21.1	0.0

Table 7 reports the achievement by Sweep 3 of all BTEC students, whether they studied in Sweep 1 or 2. Since we are now including students who may not have had time to complete their courses by the time of the Sweep 3 survey, we would expect these achievement rates to be lower than in Table 6, which is indeed generally the case.

Table 7: Achievement by Sweep 3, by Level of BTEC Study in Sweep 1 or 2 (%)

Gained:	1st certificate	1st diploma	National Diploma	Other BTEC
Studied for:				
1st certificate	5.7	16.1	9.2	0.0
1st diploma	5.1	27.5	11.6	0.0
National Diploma	1.7	2.3	39.6	0.2
Other BTEC	1.8	2.7	20.0	1.7

⁹ This is of course consistent with the significant progression to higher levels of study observed for this group in Section 3.5.

3.7 What the Sweep 1 BTEC Students are Doing in Sweep 4

Finally, we consider what our original cohort of individuals who were studying for a BTEC qualification in Sweep 1 are doing by the age of 20 in Sweep 4. Table 8 displays Sweep 4 economic activity for this group, by the level of their original study.

Table 8: Age 20 Economic Activity of Sweep 1 BTEC Students (%)

N=297	1st certificate	1st diploma	National Diploma	Other BTEC	Total
unemployed	2.3	13.0	2.7	0.0	4.7
employed	59.3	47.5	49.1	71.0	51.2
apprenticeship	4.7	8.3	2.7	0.0	4.1
FT education	27.1	31.2	44.7	29.0	38.7
Other	6.6	0.0	0.8	0.0	1.3
Total	100.0	100.0	100.0	100.0	100.0

By Sweep 4, we can see that employment is the dominant economic activity, with over half of the original age 17 BTEC students now in a job by age 20. Significant numbers (39%) are however still in full-time education, particularly those who started out on a National Diploma course, quite a few of whom as we saw earlier have progressed to Higher Education. Only around 6% of the original sample of BTEC students are unemployed or inactive at the age of 20.

3.8 Summary of the Raw Data Analysis

The BTEC qualification is the most popular of the *traditional* vocational qualifications, although the newer NVQ qualifications are taken by more young people. Most students taking a BTEC course do so in full-time education, although a small proportion are taken by young people in employment or in an apprenticeship. Overall, the typical BTEC student at age 17 is white, of either gender, has gained good GCSEs at age 16, is studying full-time for a National Diploma at a college of Further Education, is in good health and living with both parents who are in full-time employment.

Considering those who start out at age 17 studying for a National Diploma, there is little evidence of achievement one year later. However, two years later in Sweep 3, over half of these students have achieved their aim and acquired a BTEC National Diploma qualification. Many of these achievers also do not stop there, with

significant numbers (almost half of this group who have remained in full-time education, representing 1 in 5 of all original National Diploma students) progressing to Higher Education by age 19.

The achievement rate for the lower BTEC qualifications is not as high, with 56% of original First Diploma (66% of original First Certificate) students having failed to acquire a BTEC qualification two years later by the age of 19 in Sweep 3. Amongst those who do achieve at these levels, however, there is evidence of significant progression onto a National Diploma, though not into Higher Education, at least by age 19.

Finally, in terms of labour market outcomes, most BTEC students who leave full-time education seem to find work, with the unemployment rate and inactivity rates being low for this group in all sweeps of the survey.

4. Results of the Multivariate Analysis

We now turn to consider the factors associated with achievement in BTEC qualifications, progression and successful outcomes in multivariate settings. As explained in the Introduction, the advantage of such an analysis is that the impact of any one variable on such outcomes can be isolated, holding constant the impact of all other variables in the equation.

4.1 Achievement

Table A1 in the appendix considers the factors that are associated with the attainment of BTEC qualifications. As was seen in the analysis of raw data, the levels of achievement are quite low in Sweep 2, as students have not had time to complete all of the relevant courses. Therefore we consider here only achievement by Sweep 3. Even in this case, the numbers achieving First Diplomas and First Certificates were too low to allow robust statistical analysis separately for these qualifications. In Table A1 we therefore consider the factors associated with the attainment of a National Diploma, where the numbers are larger, in column 1, while in column 2 we consider the acquirement of *any* BTEC qualification, whatever the level. The numbers in the

table represent ‘marginal effects,’ that is the estimated change in the probability of achieving a qualification, if the variable in question holds.

Looking at the results in Table A1, there are actually few statistically significant relationships (as indicated by asterisks). The top two rows show that studying for a BTEC qualification in full-time education or through an apprenticeship both attract positive effects, which means that the probability of achieving a BTEC qualification is higher under these two forms of provision, measured relative to the omitted category of provision type, which is studying whilst in employment.¹⁰ There are strong positive effects on BTEC achievement (the largest in the table) associated with undertaking further education in an independent school or college, private training centre or Further Education College, relative to in a sixth form college. Not too much should be made of this result, however, since students are much more likely to study for a BTEC qualification in a college than in a sixth form college, so it is not surprising that they are also more likely to achieve BTEC qualifications in the former.

Being in receipt of an Education Maintenance Allowance (EMA) is positively related to the probability of achieving a Level 3 BTEC, or any BTEC qualification, though in both cases it just fails to achieve statistical significance. Since the EMA has incentive payments built in when certain duration or achievement targets are attained, this motivation factor may be the reason for the higher achievement rate of EMA students. Alternatively, the receipt of the regular weekly payment may reduce the need for part-time working to supplement income, allowing more time for study.

In terms of prior achievement, there is evidence that those students with higher GCSE scores are more likely to achieve a BTEC National Diploma, with the probability rising by about 3 percentage points if the student has either 5+ or 1-4 GCSEs at grade C or above. Recall that we are controlling for family background characteristics, so the GCSE scores are not simply picking up the fact that those students with higher prior achievement are more likely to come from a better-off family. There is some evidence to suggest that the additional impact of having 5 or more good GCSEs is less

¹⁰ The apprenticeship effect just fails to achieve statistical significance, but this is probably due to the small numbers of individuals studying via this route which reduces the precision of the estimate, rather than being due to the actual, true, effect being zero.

important when we add in the lower BTEC qualifications and consider the achievement of *any* BTEC qualification.

With respect to the impact of family background on BTEC achievement, very few of the variables included to measure such effects seem to have an independent statistically significant impact once other factors are controlled for. There is some evidence that, controlling for other characteristics, students who have an absent father are less likely to achieve any BTEC qualifications. There is also some, more surprising, evidence that BTEC achievement is lower amongst students with professional mothers, though not fathers. It is not obvious why this should be the case. Overall with respect to family background, to put a positive spin on the lack of statistically significant results, it could be argued that individuals from different social backgrounds do not have different achievement rates, so BTEC qualifications do not favour one social class above another.

The ethnicity effects reveal that, compared to the omitted category of white students, the only statistically significant difference in achievement rates is for Indian, Bangladeshi and Pakistani individuals, who have a relatively lower achievement rate for National Diploma BTECs. This racial gap is wider, though still only 1.9-2.4 percentage points, when we consider the achievement of all BTECs, rather than just National Diplomas. Finally, there are no statistically significant differences in achievement rates across any of the regions.

One issue connected to the results in Table A1 is that the observed relationships between characteristics and achievement could be due to the fact that individuals with those characteristics are more likely to participate in Further Education, and so more likely to achieve simply because they participated in the first place. Table A2 in the appendix therefore presents the results when we replicate the achievement equations of Table A1, but only for a sample of young people who participated in full-time education in Sweep 1 of the YCS survey¹¹. We are therefore asking, conditional on participating in the first place, who is more likely to achieve a BTEC qualification.

¹¹ We would have liked to also present results based only on a sample who were studying specifically for BTEC qualifications in Sweep 1. However, when we tried such an analysis, the effects were very imprecisely measured, due to the small sample size when only BTEC students were considered.

This would therefore be a pure achievement effect, independent of any participation effects. On the whole, however, the results in Table A2 reveal that making this distinction does not change the estimated effects to any great extent. Most of the effects discussed above with respect to Table A1 remain in Table A2. Differences include there being even stronger evidence that having 5 or more good GCSEs is important for achieving National Diplomas, but is *not* important for achieving lower level BTEC qualifications, that having both parents in work is now associated with a higher achievement rate, in particular of National Diplomas specifically, and that individuals whose families live in social housing now have a lower achievement rate. We also include variables to control for the level of BTEC being studied. It should not be a surprise that the effects of these variables are strongly positive, since if someone is actually studying for a BTEC qualification in Sweep 1, they are clearly much more likely to achieve one by Sweep 3, compared to someone who was not following such a course. What is of more interest, therefore, is the relative size of the effects for the various levels of BTEC qualifications. The results show that, relative to the omitted category of First Certificates, students studying for a First Diploma are 23 percentage points more likely to achieve their goal, whilst students on a National Diploma course are 47 percentage points more likely to acquire the qualification. These differences are consistent with the analysis of raw data presented in Section 3 above.

4.2 Progression

We now turn to a consideration of the likelihood of individuals being in full-time education in the later sweeps of the survey, focussing in particular on the impact of earlier BTEC achievement on this probability. As before, because achievement is low in Sweep 2, leading to imprecise results, we focus on Sweep 3 where the achievement rate is much higher. The other characteristics that we control for in the progression equation are much the same as the ones included in the achievement equations above. One new factor that it is important to control for is the highest qualification achieved by Sweep 3. If we did not do this, then when we compare progression amongst BTEC and non-BTEC holders, the latter will include, for example, people who have achieved good A levels, who as we know from other research are very likely to proceed to university. This would make the comparison between BTEC and non-BTEC holders unfair, and so we include control variables for highest qualification

obtained. Specifically, we add variables to indicate individuals whose highest qualifications are academic at Level 3 (i.e. 2 or more A levels), individuals whose highest qualification is a vocational Level 3 qualification other than a BTEC National Diploma (so that we do not double-count the National Diplomas), individuals whose highest qualifications are academic at Level 2 (i.e. 5 or more GCSEs at grade C or above), and individuals whose highest qualification is a vocational Level 2 qualification other than a BTEC First Diploma (again to avoid double-counting). Taking all of the highest qualification and BTEC variables together, we have covered all alternatives at Levels 2 and 3, and so the interpretation of the estimated effects on these variables is the increased likelihood of participating in full-time education in Sweep 3 when these qualifications are held, relative to the omitted group who are therefore those whose highest qualification in Sweep 3 is below Level 2.

The estimated impacts of achieving a BTEC qualification at each of the first two levels, on the probability of still being in full-time education at the age of 19 in Sweep 3, are presented in Table 9.¹²

Table 9: Impact of BTEC Attainment on the Probability of Participating in Full-Time Education at Age 19

	Sweep 3 Education Participation , Amongst all Respondents	Sweep 3 Participation, Amongst those who Participated in Sweep 1
Achieve BTEC First Certificate	31.5 percentage points	20.3 percentage points
Achieve BTEC First Diploma	37.3 percentage points	23.4 percentage points
Achieve BTEC National Diploma	32.3 percentage points	16.2 percentage points
Achieve other BTEC	19.6 percentage points	20.6 percentage points

Looking initially at the first column of results, it is clear that acquiring a BTEC qualification at any of the specified levels is strongly associated with progression in education; individuals who have previously acquired a BTEC qualification are 32-37 percentage points more likely to still be in education at age 19, compared to those whose highest qualification lies below Level 2. If we compare the size of these effects to those on the other achievement variables in the full set of results in Table

¹² The full set of results showing the estimated effects and standard errors for all of the variables in the progression equations are presented in Table A3 in the appendix.

A3, it is clear that with the exception of academic Level 3 qualifications (the acquisition of A levels having a very large effect on the progression rate, mostly to degree level, of course), we can say that the acquisition of BTEC qualifications as a highest qualification by age 19 has a larger impact on remaining in full-time education than any other qualification.¹³

The first column of results in Tables 9 and A3 are based on all individuals observed in Sweep 3 of the YCS. It may be that there are unobserved factors associated with participation in full-time education at any age, such as motivation or commitment, which mean that the people observed in education in Sweep 3 are likely to be the same people who were observed in education in Sweep 1. If the achievement of qualifications such as BTECs is also correlated with these unobserved factors, then the positive impacts on participation of these qualifications may simply be due to the fact that the people who achieved them were more likely to have participated in Sweep 1 at age 17, and so more likely to participate at any age. We therefore re-estimated the progression equation based only on a sample of individuals who participated in full-time education in Sweep 1, the results of which are presented in the final columns of Tables 9 and A3. These results are therefore answering the question, ‘conditional on having chosen to participate in full-time education at age 17, are individuals who have acquired a BTEC qualification more likely to be still participating at age 19, holding other characteristics constant?’ The results in the final column show that this is indeed the case. Although as expected the size of the effects are much reduced (with the exception of ‘other’ BTECs), they remain positive and statistically significant. They suggest that, amongst individuals who were in full-time education at age 17, those who go on to acquire a BTEC qualification are 16-23 percentage points more likely to be still participating at age 19 than individuals whose highest qualification is below Level 2. It therefore seems that the acquisition of BTEC qualifications has a significant effect on the decision to continue one’s education.

¹³ It may be thought surprising that the acquisition of academic Level 2 qualifications (i.e. 5 or more good GCSEs) does not have at least as large an effect on remaining in full-time education. Recall, however, that these are *highest* qualification levels, and so the individuals being considered by this variable are those who have at best GCSEs by age 19, and so does not include those who acquired good GCSEs and went on to obtain good A levels, who of course will be included in the academic Level 3 variable instead.

Briefly considering the impact of the control variables in the progression equation, the results in Table A3 reveal that participation in full-time education at age 19 is significantly higher amongst: those not living in social housing; Indian, Bangladeshi, Pakistani and Chinese individuals compared to white individuals; young people whose father works in a professional/managerial or skilled non-manual occupation; and people living in London.

Table 10 (with the full set of results in Table A4 in the appendix) repeats the analysis of Table 9 exactly, except it is now considering participation in full-time education in Sweep 4, when most of the respondents are aged 20.

Table 10: Impact of BTEC Attainment on the Probability of Participating in Full-Time Education at Age 20

	Sweep 4 Education Participation , Amongst all Respondents	Sweep 4 Participation, Amongst those who Participated in Sweep 1
Achieve BTEC First Certificate	-3.7 percentage points	-12.8 percentage points
Achieve BTEC First Diploma	18.4 percentage points	0.5 percentage points
Achieve BTEC National Diploma	41.6 percentage points	27.2 percentage points
Achieve other BTEC	-0.4 percentage points	1.1 percentage points

Focussing on the preferred set of results in the final column, these reveal that, amongst those who initially began in post-compulsory schooling at age 17, only the acquisition of a National Diploma amongst BTEC qualifications raises the probability of someone still being in full-time education at age 20, by 27 percentage points. Someone who achieved only a First Certificate is actually less likely to be in education at age 20 (though the estimated effect is imprecisely measured and is statistically insignificantly different from zero as shown in Table A4), whilst First Diplomas and other BTEC qualifications have essentially a zero impact on the probability of studying at age 20. These results are not unexpected, however. By Sweep 4 individuals are in their fourth year after the end of compulsory schooling, and many who followed vocational courses will have acquired the qualifications they wanted by this age. Most people in full-time education at age 20 are therefore those in Higher Education, and as we saw in Section 3, it is National Diplomas, but not

other BTEC qualifications, that seem to lead progression into Higher Education for some.

The impacts of the various control variables on participation in Sweep 4 are very similar to those estimated at Sweep 3. One difference in Sweep 4 is that an individual with two graduate parents is significantly more likely to be participating in full-time education in Sweep 4, whilst if neither of an individual's parents acquired a degree they are less likely to be participating in Sweep 4. Since we argued above that Sweep 4 is likely to be more about Higher Education, the influence of parents' experiences of university is to be expected here.

4.3 Labour Market Outcomes

The final piece of analysis considers the labour market outcomes of those who acquire a BTEC qualification, in terms of the likelihood of being in employment, in both Sweeps 3 and 4.

Table 11 (and Table A5 in the appendix) considers the impact of acquiring BTEC qualifications on the probability of being in employment at age 19 in Sweep 3. The control variables included are exactly the same as in the progression equations in Section 4.2. We therefore again control for the individuals' highest qualification achievement, for the reasons outlined in the previous section. It was decided to base the employment equations on a sample of individuals who were *not* in full-time education in the relevant sweep. As we saw above, qualifications influence the decision to remain in education, particularly at age 19 in Sweep 3. If we estimated employment equations on the full sample, therefore, the results would simply be the mirror-image of the education results (those more likely to be in education are less likely to be in employment). Thus the focus in this section is what benefits BTEC qualifications provide in respect of finding a job, amongst those individuals who have already left full-time education.

The results in the first column of Table 11 show that the achievement of all BTEC qualifications except for National Diplomas is actually associated with lower likelihoods of employment, compared to individuals whose highest qualification is

below Level 2. National Diplomas, at least, are associated with a 12 percentage point higher probability of being in employment at age 19.

Table 11: Impact of BTEC Attainment on the Probability of Being in Employment at Age 19, Amongst Those Who Have Left Education

	In Employment	In Employment or Apprenticeship
Achieve BTEC First Certificate	-14.1 percentage points	-2.5 percentage points
Achieve BTEC First Diploma	-4.0 percentage points	0.4 percentage points
Achieve BTEC National Diploma	12.0 percentage points	11.2 percentage points
Achieve other BTEC	-1.9 percentage points	-2.6 percentage points

One issue to be considered is that BTEC qualifications may be taken as part of, or lead into, apprenticeship placements. The final column of Table 11 therefore presents the results when a position in a job *or* on an apprenticeship is considered. As can be seen, the negative effects on the lower BTEC qualifications all but disappear. This suggests that although they do not lead to jobs more than other qualifications do, they are more likely to lead into apprenticeships, so that their overall impact on being in employment or an apprenticeship is essentially benign. It can be seen that additionally considering apprenticeships has virtually no impact on the National Diploma effect one way or the other.

The results on the control variables in Table A5 show that other qualifications, with the exception of A levels which do not seem to help the chances of employment at this age, are associated with a higher probability of being in employment or on an apprenticeship. The relative size of the effects show that BTEC National Diplomas are very much in line with other vocational Level 3 qualifications as far as leading to employment is concerned. However, the lower BTEC qualifications do not seem to improve employability as much as other Level 2 academic or vocational qualifications.

The remaining control variables show that employment likelihoods are higher amongst: males (when we consider employment *or* apprenticeship); young people in households where both parents are working; young people in households without

graduate parents; individuals not living in social housing; Chinese and other Asian individuals (but lower amongst Indian individuals, all relative to white individuals); young people in good health; individuals with skilled manual fathers (only when we include apprenticeship); and those living in the East of England and the South-West, relative to Inner London.

Finally, Table 12 (and Table A6 in the appendix) repeats the analysis of Tables 11 and A5, for respondents aged 20 in Sweep 4.

Table 12: Impact of BTEC Attainment on the Probability of Being in Employment at Age 20, Amongst Those Who Have Left Education

	In Employment	In Employment or Apprenticeship
Achieve BTEC First Certificate	10.2 percentage points	9.0 percentage points
Achieve BTEC First Diploma	2.2 percentage points	4.9 percentage points
Achieve BTEC National Diploma	17.1 percentage points	14.2 percentage points

The results in Table 12 show that, by the age of 20, none of the BTEC qualifications are associated with a lower probability of employment, relative to individuals whose highest qualification is below Level 2. Thus BTEC First Certificates and First Diplomas are now both associated with a higher probability of employment, particularly the former, though due to the smaller samples in Sweep 4, all fail to achieve statistical significance. National Diplomas now have an even larger impact on finding employment than they did in Sweep 3, and this effect is certainly statistically significant. The size of the National Diploma effect is larger than that of other Level 3 academic¹⁴ and vocational qualifications.

5. Conclusions

This report has made use of a data set that followed a recent cohort of young people, over the four years of their lives that followed the completion of compulsory education. The focus has been on BTEC qualifications, to determine how successful

¹⁴ Level 3 academic qualifications (A levels) now have a positive effect on employment likelihood, unlike in Sweep 3.

young people are in the achievement of BTECs, and what impact such achievement has on the average likelihood of further study, or moving into employment.

The results in the report have shown that, although BTECs are taken by fewer students than the newer NVQs, they are still more popular than other traditional vocational qualifications, such as City and Guilds or RSA.

In terms of achievement, the results show very low achievement rates by age 18. By age 19, however, significant numbers have obtained a National Diploma qualification, producing an achievement rate of above 50%. For the lower BTEC qualifications, the achievement rate by age 19 is only 34% for those starting out on First Certificate courses, and 44% for those starting out on First Diploma courses. At least amongst those who do achieve, there is evidence of advancement, with significant numbers achieving a qualification above that for which they were originally enrolled at age 17. The multivariate analysis attempted to find predictors of achievement for BTEC qualifications. Achievement rates were higher when individuals studied in a place of education or as part of an apprenticeship, rather than when in employment. However, there was little evidence that any personal or family background characteristics were important for explaining BTEC achievement. Obtaining 5 or more good GCSEs at school seems to be important for subsequent success on BTEC National Diploma courses, though not on BTECs at the lower level.

Amongst those young people who do acquire a BTEC qualification, there is strong evidence that this acquisition persuades them to continue to higher levels of education, even when controlling for background characteristics and original education choices at age 17. Individuals who acquire a BTEC qualification at a lower level are shown to be more likely still to be in full-time education at age 19, relative to individuals whose highest qualification is below Level 2. The raw data showed that approximately 1 in 3 original First Diploma students progress to studying for a National Diploma, with this figure being just under 1 in 5 for original First Certificate students. By the age of 20, however, the impact of the earlier achievement is no longer in evidence, as individuals with such achievements are no more likely to be in full-time education in Sweep 4 than those below Level 2. For those who acquire a National Diploma, however, this is shown to significantly increase their likelihood of

participating in full-time education at both age 19 and 20. This is consistent with the analysis of the raw data, which revealed significant progression from National Diplomas to Higher Education.

Finally, amongst those young people who leave education, BTEC National Diploma qualifications are shown to significantly increase their chances of finding a job, at least as much as any other qualification. Unfortunately the same cannot be said of BTEC qualifications at the lower level, although any evidence of a negative effect on employment chances of such qualifications is reduced when we consider apprenticeship placements within the employment category, and is removed altogether by age 20.

Table A1: Determinants of BTEC Achievement

	Achieve National Diploma by Sweep 3	Achieve any BTEC qualification by Sweep 3
In education sweep 1	0.011 (0.004)**	0.024 (0.007)**
In apprenticeship sweep 1	0.031 (0.019)	0.036 (0.021)
Sweep 1 independent school/college/TC	0.072 (0.024)**	0.097 (0.030)**
Sweep 1 FE college	0.084 (0.010)**	0.109 (0.012)**
Sweep 1 EMA holder	0.010 (0.005)	0.018 (0.009)
Male	0.002 (0.002)	0.008 (0.004)
5+ GCSEs grades A-C	0.026 (0.011)*	0.015 (0.013)
1-4 GCSEs grades A-C	0.030 (0.017)	0.029 (0.017)
5+ GCSEs grades D-G	0.001 (0.011)	0.014 (0.018)
1-4 GCSEs grades D-G	0.015 (0.033)	0.023 (0.034)
Lives with father only	-0.003 (0.005)	0.003 (0.009)
Lives with mother only	-0.005 (0.003)	-0.013 (0.005)*
Lives with neither parent	-0.005 (0.006)	-0.003 (0.012)
Both parents working	0.005 (0.003)	0.005 (0.006)
Neither parent works	0.004 (0.006)	0.007 (0.009)
Both parents have a degree	-0.002 (0.004)	-0.005 (0.008)
Neither parent has a degree	-0.003 (0.004)	0.000 (0.007)
Both parents alevels highest educational attainment	0.008 (0.008)	0.017 (0.014)
Neither parent has gained alevels	-0.001 (0.003)	-0.007 (0.006)
Social housing	-0.005 (0.004)	-0.011 (0.006)
Black	-0.001 (0.006)	-0.002 (0.010)
Indian	-0.013 (0.003)**	-0.024 (0.005)**
Bangladeshi/Pakistani	-0.008 (0.004)*	-0.019 (0.007)**
Chinese	-0.007 (0.007)	0.032 (0.035)
Other Asian		-0.015 (0.015)
Mixed	-0.002 (0.007)	0.007 (0.016)

Other race	0.000	0.003
	(0.012)	(0.021)
Ill health or disability	0.001	-0.002
	(0.004)	(0.007)
Father: Managerial & professional	0.004	0.004
	(0.004)	(0.005)**
Father: Skilled non-manual	0.002	-0.006
	(0.004)	(0.006)
Father: Skilled manual	0.002	-0.010
	(0.004)	(0.010)
Father: Unskilled non-manual	0.006	-0.008
	(0.010)	(0.010)
Mother: Managerial & professional	-0.010	-0.017
	(0.003)**	(0.007)
Mother: Skilled non-manual	-0.004	-0.005
	(0.003)	(0.006)
Mother: Skilled manual	-0.009	-0.000
	(0.004)*	(0.006)
Mother: Unskilled non-manual	-0.002	-0.002
	(0.003)	(0.006)
North East	0.018	0.043
	(0.018)	(0.030)
North West	0.011	0.046
	(0.012)	(0.025)
Yorkshire and Humberside	0.005	0.016
	(0.011)	(0.018)
East Midlands	0.009	0.015
	(0.013)	(0.019)
West Midlands	0.009	0.030
	(0.012)	(0.023)
East of England	0.008	0.020
	(0.012)	(0.020)
Outer London	0.008	0.007
	(0.013)	(0.017)
South East	0.009	0.029
	(0.012)	(0.021)
South West	0.008	0.027
	(0.012)	(0.022)
Wales	0.011	0.035
	(0.015)	(0.028)
Observations	7727	7777

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A2: Determinants of BTEC Achievement Amongst Participators in Full-Time Education in Sweep 1

	Achieve National Diploma by Sweep 3	Achieve any BTEC qualification by Sweep 3
Sweep 1 independent school/college/TC	0.118 (0.035)**	0.043 (0.023)
Sweep 1 FE college	0.108 (0.010)**	0.052 (0.010)**
Sweep 1 EMA holder	0.017 (0.008)*	0.020 (0.010)
Male	0.003 (0.004)	0.006 (0.005)
5+ GCSEs grades A-C	0.030 (0.012)*	-0.008 (0.018)
1-4 GCSEs grades A-C	0.040 (0.027)	0.020 (0.021)
5+ GCSEs grades D-G	0.002 (0.018)	0.021 (0.025)
1-4 GCSEs grades D-G		0.028 (0.044)
Lives with father only	-0.003 (0.009)	0.006 (0.012)
Lives with mother only	-0.006 (0.006)	-0.013 (0.007)
Lives with neither parent	-0.013 (0.008)	-0.016 (0.011)
Both parents working	0.012 (0.005)*	0.010 (0.007)
Neither parent works	0.010 (0.010)	0.016 (0.012)
Both parents have a degree	-0.004 (0.007)	-0.008 (0.009)
Neither parent has a degree	-0.007 (0.007)	-0.012 (0.010)
Both parents alevels highest educational attainment	0.015 (0.013)	0.015 (0.016)
Neither parent has gained alevels	-0.003 (0.005)	-0.002 (0.007)
Social housing	-0.006 (0.006)	-0.013 (0.007)*
Black	0.002 (0.011)	-0.005 (0.011)
Indian	-0.021 (0.004)**	-0.019 (0.008)*
Bangladeshi/Pakistani	-0.013 (0.007)	-0.020 (0.007)**
Chinese	-0.011 (0.013)	0.045 (0.045)
Other Asian		-0.007 (0.025)
Mixed	-0.001 (0.013)	0.004 (0.018)
Other race	0.006 (0.023)	0.009 (0.029)
Ill health or disability	0.002 (0.007)	-0.007 (0.007)

Father: Managerial & professional	0.004	-0.003
	(0.006)	(0.007)
Father: Skilled non-manual	0.004	-0.012
	(0.007)	(0.007)
Father: Skilled manual	0.005	-0.011
	(0.006)	(0.012)
Father: Unskilled non-manual	0.002	-0.013
	(0.012)	(0.008)
Mother: Managerial & professional	-0.018	-0.013
	(0.005)**	(0.008)
Mother: Skilled non-manual	-0.006	-0.004
	(0.005)	(0.008)
Mother: Skilled manual	-0.014	-0.002
	(0.007)	(0.007)
Mother: Unskilled non-manual	-0.005	0.000
	(0.005)	(0.009)
North East	0.031	0.029
	(0.028)	(0.026)
North West	0.012	0.047
	(0.017)	(0.026)
Yorkshire and Humberside	0.009	0.024
	(0.017)	(0.021)
East Midlands	0.016	0.013
	(0.020)	(0.021)
West Midlands	0.018	0.024
	(0.020)	(0.022)
East of England	0.014	0.020
	(0.020)	(0.021)
Outer London	0.013	0.007
	(0.020)	(0.018)
South East	0.013	0.037
	(0.018)	(0.023)
South West	0.016	0.024
	(0.020)	(0.022)
Wales	0.021	0.047
	(0.024)	(0.031)
Studied for First Diploma		0.238
		(0.063)**
Studied for National Diploma		0.468
		(0.042)**
Studied for Other BTEC		0.164
		(0.072)*
Observations	6399	6482

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A3: Determinants of Participation in Full-Time Education in Sweep 3

	Sweep 3 Education Participation , Amongst all Respondents	Sweep 3 Participation, Amongst those who Participated in Sweep 1
Achieve BTEC First Certificate	0.315 (0.093)**	0.203 (0.083)*
Achieve BTEC First Diploma	0.373 (0.059)**	0.234 (0.060)**
Achieve BTEC National Diploma	0.323 (0.033)**	0.162 (0.037)**
Achieve other BTEC	0.196 (0.146)	0.206 (0.130)
Achieved academic level 3 by sweep 3	0.527 (0.018)**	0.372 (0.027)**
Achieved voc level 3 (other than BTEC) by sweep 3	0.268 (0.032)**	0.140 (0.036)**
Achieved academic level 2 by sweep 3	0.214 (0.025)**	0.118 (0.031)**
Achieved voc level 2 (other than BTEC) by sweep 3	0.175 (0.031)**	0.110 (0.037)**
Male	-0.019 (0.015)	0.009 (0.016)
Lives with father only	-0.029 (0.037)	-0.006 (0.043)
Lives with mother only	0.001 (0.026)	-0.017 (0.028)
Lives with neither parent	-0.040 (0.037)	0.032 (0.045)
Both parents working	-0.048 (0.019)*	-0.026 (0.020)
Neither parent works	0.049 (0.031)	0.028 (0.033)
Both parents have a degree	0.049 (0.031)	0.032 (0.030)
Neither parent has a degree	-0.039 (0.025)	-0.018 (0.026)
Both parents alevels highest educational attainment	0.047 (0.033)	0.033 (0.036)
Neither parent has gained alevels	-0.005 (0.021)	-0.033 (0.022)
Social housing	-0.075 (0.028)**	-0.087 (0.032)**
Black	0.077 (0.044)	0.035 (0.047)
Indian	0.359 (0.039)**	0.274 (0.033)**
Bangladeshi/Pakistani	0.255 (0.048)**	0.239 (0.043)**
Chinese	0.440 (0.083)**	0.339 (0.066)**
Other Asian	0.008 (0.080)	0.010 (0.087)
Mixed	0.086 (0.052)	0.086 (0.054)
Other race	0.245 (0.075)**	0.265 (0.055)**

Ill health or disability	0.041	0.029
	(0.028)	(0.031)
Father: Managerial & professional	0.074	0.031
	(0.022)**	(0.023)**
Father: Skilled non-manual	0.098	0.074
	(0.027)**	(0.026)**
Father: Skilled manual	0.019	0.012
	(0.023)	(0.025)
Father: Unskilled non-manual	0.015	0.005
	(0.044)	(0.024)
Mother: Managerial & professional	0.039	0.060
	(0.026)	(0.027)
Mother: Skilled non-manual	0.041	0.037
	(0.024)	(0.025)
Mother: Skilled manual	0.031	0.028
	(0.053)	(0.058)
Mother: Unskilled non-manual	0.003	0.011
	(0.021)	(0.047)
North East	-0.148	-0.148
	(0.047)**	(0.057)**
North West	-0.138	-0.100
	(0.046)**	(0.054)
Yorkshire and Humberside	-0.128	-0.124
	(0.047)**	(0.055)*
East Midlands	-0.172	-0.156
	(0.043)**	(0.054)**
West Midlands	-0.159	-0.143
	(0.043)**	(0.052)**
East of England	-0.198	-0.224
	(0.041)**	(0.051)**
Outer London	-0.086	-0.078
	(0.049)	(0.055)
South East	-0.183	-0.186
	(0.042)**	(0.051)**
South West	-0.187	-0.192
	(0.042)**	(0.052)**
Wales	-0.076	-0.059
	(0.053)	(0.059)
Observations	7777	6482

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A4: Determinants of Participation in Full-Time Education in Sweep 4

	Sweep 4 Education Participation , Amongst all Respondents	Sweep 4 Participation, Amongst those who Participated in Sweep 1
Achieve BTEC First Certificate	-0.037 (0.135)	-0.128 (0.137)
Achieve BTEC First Diploma	0.184 (0.098)	0.005 (0.091)
Achieve BTEC National Diploma	0.416 (0.037)**	0.272 (0.037)**
Achieve other BTEC	-0.004 (0.119)	0.011 (0.134)
Achieved academic level 3 by sweep 3	0.708 (0.018)**	0.614 (0.027)**
Achieved voc level 3 (other than BTEC) by sweep 3	0.386 (0.035)**	0.284 (0.035)**
Achieved academic level 2 by sweep 3	0.202 (0.033)**	0.114 (0.039)**
Achieved voc level 2 (other than BTEC) by sweep 3	0.089 (0.042)*	0.023 (0.051)
Male	-0.007 (0.018)	0.019 (0.020)
Lives with father only	-0.080 (0.046)	-0.124 (0.055)*
Lives with mother only	-0.035 (0.030)	-0.041 (0.034)
Lives with neither parent	-0.035 (0.052)	0.006 (0.064)
Both parents working	-0.080 (0.025)**	-0.038 (0.026)
Neither parent works	0.083 (0.042)*	0.081 (0.043)
Both parents have a degree	0.081 (0.042)	0.081 (0.041)*
Neither parent has a degree	-0.115 (0.030)**	-0.097 (0.031)**
Both parents alevels highest educational attainment	0.089 (0.042)*	0.070 (0.043)
Neither parent has gained alevels	-0.012 (0.024)	-0.025 (0.027)
Social housing	-0.079 (0.032)*	-0.120 (0.040)**
Black	0.014 (0.063)	-0.050 (0.071)
Indian	0.444 (0.048)**	0.348 (0.036)**
Bangladeshi/Pakistani	0.198 (0.063)**	0.209 (0.056)**
Chinese	0.543 (0.073)**	0.443 (0.020)**
Other Asian	0.048 (0.130)	0.065 (0.134)
Mixed	0.017 (0.069)	0.079 (0.071)
Other race	0.158 (0.106)	0.210 (0.102)*

Ill health or disability	0.055	0.055
	(0.036)	(0.039)
Father: Managerial & professional	0.069	0.034
	(0.027)**	(0.028)
Father: Skilled non-manual	0.068	0.045
	(0.031)*	(0.033)
Father: Skilled manual	0.031	-0.075
	(0.028)	(0.068)
Father: Unskilled non-manual	0.061	0.045
	(0.055)	(0.031)
Mother: Managerial & professional	0.055	0.044
	(0.033)	(0.035)
Mother: Skilled non-manual	0.043	0.024
	(0.028)	(0.030)
Mother: Skilled manual	-0.058	0.004
	(0.054)	(0.030)
Mother: Unskilled non-manual	-0.050	-0.058
	(0.026)	(0.057)
North East	-0.207	-0.205
	(0.050)**	(0.073)**
North West	-0.201	-0.163
	(0.050)**	(0.068)*
Yorkshire and Humberside	-0.190	-0.163
	(0.051)**	(0.072)*
East Midlands	-0.230	-0.200
	(0.046)**	(0.071)**
West Midlands	-0.234	-0.227
	(0.045)**	(0.066)**
East of England	-0.291	-0.304
	(0.038)**	(0.061)**
Outer London	-0.122	-0.105
	(0.060)*	(0.076)
South East	-0.256	-0.259
	(0.046)**	(0.065)**
South West	-0.215	-0.187
	(0.048)**	(0.070)**
Wales	-0.180	-0.190
	(0.054)**	(0.074)**
Observations	6171	5279

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A5: Determinants of Being in Employment in Sweep 3

	Whether in employment	Whether in employment or apprenticeship
Achieve BTEC First Certificate	-0.141 (0.141)	-0.025 (0.128)
Achieve BTEC First Diploma	-0.040 (0.100)	0.004 (0.098)
Achieve BTEC National Diploma	0.120 (0.037)**	0.112 (0.028)**
Achieve other BTEC	-0.019 (0.212)	-0.026 (0.192)
Achieved academic level 3 by sweep 3	-0.005 (0.025)	-0.059 (0.023)*
Achieved voc level 3 (other than BTEC) by sweep 3	0.111 (0.037)**	0.121 (0.025)**
Achieved academic level 2 by sweep 3	0.080 (0.024)**	0.113 (0.019)**
Achieved voc level 2 (other than BTEC) by sweep 3	0.077 (0.030)*	0.110 (0.024)**
Male	0.015 (0.019)	0.078 (0.017)**
Lives with father only	-0.006 (0.044)	0.001 (0.040)
Lives with mother only	-0.022 (0.032)	-0.036 (0.029)
Lives with neither parent	-0.068 (0.047)	-0.101 (0.046)*
Both parents working	0.064 (0.025)*	0.068 (0.023)**
Neither parent works	-0.018 (0.037)	-0.001 (0.032)
Both parents have a degree	-0.120 (0.046)**	-0.125 (0.044)**
Neither parent has a degree	0.015 (0.036)	0.034 (0.033)
Both parents alevels highest educational attainment	0.016 (0.048)	0.015 (0.043)
Neither parent has gained alevels	0.002 (0.028)	-0.016 (0.026)
Social housing	-0.063 (0.030)*	-0.075 (0.028)**
Black	-0.035 (0.054)	-0.056 (0.050)
Indian	-0.296 (0.086)**	-0.298 (0.094)**
Bangladeshi/Pakistani	-0.043 (0.081)	-0.067 (0.075)
Chinese	0.227 (0.103)*	0.159 (0.077)*
Other Asian	0.071 (0.120)	0.130 (0.061)*
Mixed	-0.107 (0.080)	-0.092 (0.077)
Other race	0.022 (0.143)	0.096 (0.124)
Ill health or disability	-0.077 (0.035)*	-0.077 (0.033)*

Father: Managerial & professional	-0.023	-0.049
	(0.030)	(0.033)
Father: Skilled non-manual	-0.038	-0.037
	(0.036)	(0.026)
Father: Skilled manual	-0.000	0.045
	(0.027)	(0.023)*
Father: Unskilled non-manual	-0.073	0.033
	(0.054)	(0.045)
Mother: Managerial & professional	-0.091	-0.022
	(0.036)*	(0.027)
Mother: Skilled non-manual	-0.011	0.005
	(0.029)	(0.035)
Mother: Skilled manual	-0.025	0.052
	(0.076)	(0.057)
Mother: Unskilled non-manual	0.035	-0.024
	(0.027)	(0.023)
North East	0.031	0.084
	(0.074)	(0.053)
North West	0.009	0.081
	(0.070)	(0.051)
Yorkshire and Humberside	0.015	0.071
	(0.071)	(0.052)
East Midlands	0.042	0.089
	(0.071)	(0.051)
West Midlands	0.016	0.083
	(0.071)	(0.050)
East of England	0.087	0.142
	(0.064)	(0.040)**
Outer London	-0.007	0.051
	(0.076)	(0.057)
South East	0.030	0.079
	(0.068)	(0.051)
South West	0.047	0.096
	(0.068)	(0.047)*
Wales	-0.017	0.020
	(0.083)	(0.068)
Observations	3685	3685

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A6: Determinants of Being in Employment in Sweep 4

	Whether in employment	Whether in employment or apprenticeship
Achieve BTEC First Certificate	0.102 (0.068)	0.090 (0.050)
Achieve BTEC First Diploma	0.022 (0.094)	0.049 (0.083)
Achieve BTEC National Diploma	0.171 (0.029)**	0.142 (0.018)**
Achieved academic level 3 by sweep 3	0.095 (0.025)**	0.080 (0.019)**
Achieved voc level 3 (other than BTEC) by sweep 3	0.112 (0.038)**	0.096 (0.030)**
Achieved academic level 2 by sweep 3	0.052 (0.024)*	0.077 (0.019)**
Achieved voc level 2 (other than BTEC) by sweep 3	0.073 (0.029)*	0.069 (0.023)**
Male	-0.002 (0.022)	0.076 (0.020)**
Lives with father only	0.038 (0.042)	0.024 (0.036)
Lives with mother only	-0.044 (0.038)	-0.026 (0.033)
Lives with neither parent	-0.062 (0.058)	-0.058 (0.056)
Both parents working	0.096 (0.029)**	0.079 (0.026)**
Neither parent works	-0.033 (0.041)	-0.031 (0.036)
Both parents have a degree	-0.020 (0.060)	-0.039 (0.051)
Neither parent has a degree	0.094 (0.047)*	0.081 (0.043)
Both parents alevels highest educational attainment	-0.084 (0.062)	-0.059 (0.057)
Neither parent has gained alevels	-0.063 (0.030)*	-0.040 (0.027)
Social housing	-0.048 (0.033)	-0.034 (0.029)
Black	0.015 (0.055)	-0.008 (0.050)
Indian	-0.215 (0.106)*	-0.214 (0.102)*
Bangladeshi/Pakistani	-0.024 (0.083)	-0.072 (0.081)
Chinese	-0.010 (0.278)	-0.143 (0.305)
Other Asian	0.117 (0.135)	0.086 (0.100)
Mixed	-0.141 (0.100)	-0.112 (0.100)
Other race	-0.286 (0.172)	-0.205 (0.180)
Ill health or disability	-0.027 (0.034)	-0.056 (0.032)
Father: Managerial & professional	0.007 (0.034)	0.023 (0.032)

Father: Skilled non-manual	-0.004	0.002
	(0.037)	(0.034)
Father: Skilled manual	-0.033	0.037
	(0.030)	(0.026)
Father: Unskilled non-manual	-0.068	0.032
	(0.065)	(0.061)
Mother: Managerial & professional	-0.021	0.017
	(0.042)	(0.028)
Mother: Skilled non-manual	-0.007	0.016
	(0.032)	(0.026)
Mother: Skilled manual	-0.001	-0.009
	(0.081)	(0.062)
Mother: Unskilled non-manual	0.007	-0.053
	(0.030)	(0.025)
North East	-0.049	0.023
	(0.094)	(0.067)
North West	-0.056	0.022
	(0.088)	(0.063)
Yorkshire and Humberside	-0.070	-0.019
	(0.091)	(0.072)
East Midlands	-0.022	0.076
	(0.089)	(0.054)
West Midlands	-0.090	-0.005
	(0.093)	(0.069)
East of England	0.006	0.068
	(0.081)	(0.053)
Outer London	-0.044	-0.017
	(0.095)	(0.077)
South East	-0.049	0.016
	(0.087)	(0.065)
South West	-0.010	0.057
	(0.085)	(0.056)
Wales	-0.094	-0.035
	(0.104)	(0.083)
Observations	2672	2672

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%