

# Passports to Progress

How do vocational qualifications help young people in building their careers? **Part Two**

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## EXECUTIVE SUMMARY

The UK has struggled over many years to provide the right balance of academic and vocational education to suit the choices of young people and the needs of the economy. In particular, vocational education has been under-valued and treated as second-best to academic qualifications.

In an attempt to correct the imbalance, successive governments have sought to expand and improve opportunities in vocational education. This research is the second of two reports on vocational education. It provides analysis of how vocational qualifications support young people in building their careers by examining trends in young people with vocational qualifications going into higher education, and by analysing the returns of different vocational qualifications to employment prospects and earnings.

### **Progression into higher education**

By analysing the latest data from UCAS and HESA, we looked at rates of progression into higher education for young people with different types of qualification. We found that:

- Almost 100,000 students (1 in 4) entering university now have a BTEC qualification compared to just under 50,000 in 2008.
- Acceptance of those with BTECs and a combination of BTECs and A levels is increasing rapidly and the proportion has almost doubled in the last eight years. In 2008 just 14% of those accepted into higher education had a BTEC – in 2015 more than a quarter (26%) did.
- There is a big increase in students with BTECs, and with a combination of A levels and BTECs, entering university from the most disadvantaged areas. Between 2008-2015 students entering higher education from the most disadvantaged

backgrounds with just A level qualifications increased by 19%. However, those with BTECs increased by 116%. Those combining both A levels and BTECs increased by 340%, albeit from a low base.

- For young people taking A levels, prospects for progression into higher education depend heavily on where they are from. For young people taking BTECs, or a combination of BTECs and A levels, entry rates are much more even across areas.
- Increasing numbers of young people taking at least one vocational qualification at Key Stage 5 have very good GCSE results. In 2015, 37% of young people taking a Key Stage 5 vocational qualification had at least 5 A\* to C GCSEs or equivalents. Increasing numbers of young people taking BTECs or a combination of BTECs and A levels are also achieving high grades at Key Stage 5, and then progressing into higher education.
- Nevertheless, these high achievers are so far more likely to go to 'lower tariff' (less selective) higher education institutions. The most selective universities are still choosing 'high achieving' students who have taken A levels. In 2015, just 2% of 18 year old acceptances into higher tariff institutions had BTECs at grade ABB or above.

### **Employment outcomes for those not going into higher education**

We also analysed the employment and earnings prospects of those taking vocational qualifications but not going into higher education. Using the latest data from the Quarterly Labour Force Survey, we looked at employment outcomes for those with vocational qualifications at Level 2 and 3 as their highest qualification. We found:

- Those with vocational Level 2 qualifications as their highest qualification, and particularly those with vocational Level 3

- qualifications as their highest qualification, are more likely to be employed than the 16-65 year old population generally.
- Having a vocational Level 2 qualification as one's highest qualification, compared to a vocational Level 1 qualification, is associated with an 8% increase in the likelihood of being in employment, after controlling for other factors. The effect is even stronger – at 11% - for women.
  - Having a vocational Level 3 qualification as one's highest qualification, compared to having a vocational Level 2 qualification as one's highest qualification, is associated with a 15% increase in the likelihood of being in employment. The effect is again even stronger – at 17% - for women.
  - Furthermore, having a vocational Level 3 qualification as one's highest qualification, compared to having a Level 2 qualification as one's highest qualification, is associated with a 7% increase in weekly earnings. The effect is strongest for men.

### **Employment outcomes for those with vocational qualifications and going into higher education**

We then analysed the earnings prospects of young people who had taken a BTEC at Level 3 and then went into higher education. Using the latest Quarterly Labour Force Survey data, we found:

- Those with a BTEC and a degree have an hourly earnings premium of 20% compared to those with a BTEC as their highest qualification.
- Those with a BTEC and a degree have a gross weekly earnings premium of 22% compared to those with a BTEC as their highest qualification.



## Conclusions

Our previous report demonstrated that the binary divide between academic and vocational qualifications is breaking down. Many more pupils are taking both types of qualifications; and an increasing proportion of young people who are meeting the standard of 5 GCSEs at A\*-C are going on to take vocational qualifications too.

This report supports these findings. It shows that increasing numbers of young people are going into higher education with BTECs, and that the increase is particularly pronounced for young people taking a combination of BTECs and A levels.

Entry into higher education for those with BTECs is growing particularly fast for young people from disadvantaged backgrounds. Large differences in entry rates exist between areas for young people with A levels; but entry rates for those with BTECs or a combination of BTECs and A levels are much more equal across areas.

There are also sizeable wage premiums associated with vocational qualifications. People with Level 3 vocational qualifications command significantly higher wages than those with only a Level 2. Those with a Level 3 BTEC and a degree command even higher wage premiums.

## 1. INTRODUCTION

The UK has struggled over many years to provide the right balance of academic and vocational education that young people and the economy need. In particular, vocational education has been undervalued and treated as second-best to academic qualifications.<sup>1</sup>

Successive governments have sought to expand and improve opportunities in vocational education in an attempt to correct this imbalance. For instance, in 2012 David Cameron spoke of the significance of boosting vocational education as an important element of a “rebalancing effort” for the UK economy. He also stated his ambition to create “a high-quality vocational system that rewards the values of aspiration and achievement”.<sup>2</sup> Such interventions are the latest in a long-standing debate over the relative merits of academic and vocational qualifications, whereby many politicians have claimed that there should be ‘parity of esteem’.<sup>3</sup>

In the five years to 2013, there have been some apparent advances towards these aims, with higher take-up of vocational courses at Key Stage 4, when pupils are usually aged between 14 and 16, and Key Stage 5, when pupils are usually aged between 16 and 18. The number of students entered into a vocational level 3 qualification (normally taken at Key Stage 5) almost doubled between 2008/09 and 2013/14.<sup>4</sup> As will be seen later in this report, there is also evidence of a growing number of young people with vocational qualifications progressing into higher education.

However, difficulties remain in achieving the policy objectives of expanding and improving opportunities in vocational education. Despite existing research showing that there are significant benefits for learners, businesses and the economy that derive from young people taking vocational courses,<sup>5</sup> the official review of vocational

education carried out by Professor Alison Wolf in 2011 identified significant variation in the quality of different vocational qualifications.<sup>6</sup> It also noted concerns that some institutions were putting students onto easier courses to ‘game’ the system, thereby increasing the proportion of pupils achieving the benchmark of 5 A\* to C grades at GCSE or equivalent.

More generally, the divide between academic and vocational education has created two types of imbalance in the opportunities available to pupils from different backgrounds. First, because the curriculum on offer and the advice given to students varies by institution, pupils may opt against a particular vocational or academic course because of the institution they attend, and despite the course’s appropriateness to their aspirations and abilities. Even with the increased take-up of vocational qualifications in recent years, take-up of vocational courses has continued to vary across pupils and across schools.<sup>7</sup> For example, previous research has demonstrated that pupils from more disadvantaged backgrounds are much more likely to take vocational courses, and schools in more disadvantaged areas are more likely to offer them.<sup>8</sup> Parental background, together with parental educational and career experiences, may also play an important role in the advice on pupils’ course choices given by parents. These factors may lead some pupils to choose a set of qualifications that are not a good match for their abilities and career aspirations.

Second, there has historically been a sense that young people should be making a binary choice between going down the academic or the vocational ‘route’. Rather than being encouraged to choose a mix of academic and vocational qualifications, pupils have tended to be pushed down a single path. The roots of this division stem in part from past educational reforms.<sup>9</sup> However, more recent policy also has the potential to reinforce this distinction. In July 2016 the Government “unequivocally” accepted the recommendations of a review chaired

by Lord Sainsbury, which included the creation of a set of new 'technical' education pathways.<sup>10</sup> It remains to be seen whether these reforms, if fully implemented, will reinforce the differences in opportunities available to young people from different backgrounds.

In this context it is crucial to understand the value of different types of educational qualifications for young people. How is the mix of different qualifications at Key Stages 4 and 5 changing over time? How are different groups of young people making choices? How do these choices depend on the institutions they attend, and the background of their parents? And what are the implications of these choices for their opportunities for progression – both for their careers, and their prospects of going onto higher education?

### **Questions this research addresses**

This research focuses on three aspects of the debate:

1. How have the trends in course take-up evolved over recent years? Is the distinction between separate vocational and academic 'streams' the most appropriate, or should we now be thinking in terms of combinations of the two – and of different types?
2. What is driving the differences in take-up of vocational and academic courses between different pupils? If the Government is committed to creating a "society where people have real chance to get on and get up - to escape the circumstances of their birth",<sup>11</sup> then we need to know why such differences persist, and whether all young people are able to take courses best suited to them. In particular, how are decisions made on course choice? Are they determined in large part by the needs of the student, or by constraints such as the course choices available at their school?

3. What is the value of different types of vocational qualifications to young people's career and higher education prospects? Given that the Wolf Report<sup>12</sup> identified a wide range of quality in different vocational qualifications, which types are most associated with good prospects in adult life, and how does this compare with different types of academic qualification?

This paper is the second of two reports on vocational education in England and Wales. The first report, *Passports to Progress: Part One*, aimed to answer questions one and two. It provided up-to-date evidence on trends in the take-up of academic and vocational courses at Key Stages 4 and 5, and evidence of how course choices are made.

This second report analyses the third question, and seeks to understand how taking a vocational qualification affects young people's career prospects and progression into higher education. It is structured as follows.

Section 2 gives some context by briefly summarising some of the key findings of the previous report. These findings include evidence on recent trends in the take-up of vocational and academic qualifications at Key Stages 4 and 5, and the attitudes of parents and head-teachers to vocational qualifications.

Section 3 looks at recent trends of progression into higher education. It demonstrates recent patterns in terms of young people with different types of qualification – both academic and vocational – going to universities of different types.

Sections 4 looks at progression into employment for those not going into higher education. It shows the likelihood of being in employment for people with different types of qualification, and discusses the relative merits of vocational qualifications at levels 2 and 3 for the chances of being in employment in adult life. Section 4 then looks at

the returns to earnings from different types of qualification, including the earnings premiums associated with different types of qualifications.

Section 5 also looks at returns to earnings, but those associated with both taking vocational qualifications at Key Stage 5, and then going onto university. Section 6 concludes by summarising key findings.

## 2. QUALIFICATION CHOICES AT KEY STAGES 4 AND 5: KEY FINDINGS FROM PART ONE

Before presenting our analysis of the opportunities for progression into higher education and employment given by different types of qualification, it is important to provide context to the discussion by very briefly summarising the key findings of the previous report.

### **Trends in the take-up of academic and vocational qualifications at Key Stages 4 and 5**

Using data from the National Pupil Database, we demonstrated some big changes in take-up.

- Over the last decade, the number of vocational courses completed at Key Stage 5 (KS5) rose by 179% to reach just over 400,000 in 2015. This rapid increase came alongside very steady take-up of academic courses: 935,000 academic KS5 courses were completed in 2015, compared to 933,000 in 2006.
- Much of the increase in vocational courses is due to increased take-up of BTECs. The number of pupils completing BTECs rose from 45,000 to 150,000 over the decade. This compares with an increase from 12,000 to 44,000 for other types of vocational qualification.
- Take-up varies by pupil background. 66% of pupils eligible for Free School Meals (FSM) completed a vocational course in 2015, compared to 44% of pupils not eligible for FSM. However, take-up among non-FSM pupils has shot up, from 14% to 44%.
- There is also a big rise in the take-up of vocational qualifications among those who have done well at Key Stage 4. 37% of those who achieved 5 A\* to C grades went on to do

KS5 vocational qualifications in 2015 – up from just 8% in 2006.

### **Head-teachers' attitudes towards vocational qualifications**

We interviewed nine head-teachers, from schools in nine of the ten geographical regions in England and Wales, to understand their views on vocational qualifications.

- Head-teachers emphasised the value of vocational qualifications in expanding the options available to pupils. Many thought it important to include vocational qualifications in their curriculum in order to create sufficient flexibility for pupils with different styles of learning, aspirations, and abilities.
- Vocational courses can have a crucial role in stimulating and motivating pupils. The effect on motivation can prevent pupils from dropping out and has a positive impact on their other studies. Head-teachers felt that, if pupils were unable to succeed in any of their subject choices, this can have a strong adverse effect on their motivation, well-being and mental health. Vocational courses can be very important in this regard to pupils achieving less well academically.
- Recommending a combination of vocational and academic courses to pupils is very common. Choosing an appropriate combination can lead to some students performing much better than they would have by following a 'pure' academic or vocational route. Some head-teachers felt the distinction itself between academic and vocational courses is misleading, since some vocational courses have significant academic content, and vice versa.
- Schools face staff, cost and demand constraints to offering vocational courses. For example, a particular vocational course can only be offered where a 'critical mass' of students



wish to take it. However, schools can increase the number of subject choices they offer by allowing pupils to take vocational subjects externally – for example, at a local Further Education College.

- Concerns over the eligibility of courses for inclusion in league tables can have a very significant influence over head-teachers' curriculum decisions. The English and Welsh Baccalaureate requirements have created constraints for schools in terms of the subjects they feel able to offer. However, some head-teachers are continuing to offer courses that cannot be included in league tables because they feel it is the right thing to do for their students.
- Some head-teachers acknowledged that, prior to the recent policy changes, there had been some 'gaming' of league tables. For instance, there was acknowledgement that some schools had decided to offer vocational courses with equivalence to four GCSEs because of the advantages this gives for league table rankings, rather than the value of the course itself.
- Head-teachers thought that, since the Wolf Report was published, the quality of vocational courses has risen considerably. The improvement in quality is at odds with a continued perception that vocational qualifications are an 'easy option'.

### **Parents' attitudes towards vocational qualifications**

We conducted a poll of parents with children aged between 14 and 18.

- Parents are more likely to think that academic qualifications provide students with a high quality education (77% agree) than they are to think vocational qualifications do (69% agree). 72% agree that a combination of academic and

- vocational qualifications taken together provide students with a high quality education.
- The pattern is different when parents are asked about the value of different qualifications for employment prospects. 74% agree that academic qualifications provide good employment prospects; 77% agree that vocational qualifications provide good employment prospects; and 79% agree that a combination of academic and vocational qualifications taken together provide good employment prospects.
  - The differences are much larger when parents are asked about prospects of pupils going to a university of their choice. 84% agree that academic qualifications provide good prospects; but just 44% agree that vocational qualifications provide good prospects. A combination of academic and vocational qualifications is somewhere in between, with 55% agreeing.
  - Parents in high income households are more likely to agree that academic qualifications provide pupils with a high quality education. 84% of parents in households with an annual income of £70,000 or over agreed; but just 70% of parents in households with an income of less than £20,000 did so.
  - Differences also exist when parents are asked whether vocational qualifications provide pupils with good prospects of going onto university. 54% of parents in households with an annual income of less than £20,000 agreed; but just 36% of parents in households with an income of £70,000 or over did so.

## **Conclusions**

The previous report concluded that the binary divide between academic and vocational qualifications is breaking down. Many more pupils are taking both types of qualifications; and an increasing

proportion of young people who are meeting the standard of 5 GCSEs at A\*-C are going on to take vocational qualifications too.

Parental attitudes lag behind these changes. Improving the perception of the quality of vocational qualifications is therefore of ongoing importance.

At the same time, we should recognise the challenges that some schools experience – for example, capacity, access to facilities and the demands of the accountability system – in providing vocational qualifications.

### 3. PROGRESSION INTO HIGHER EDUCATION

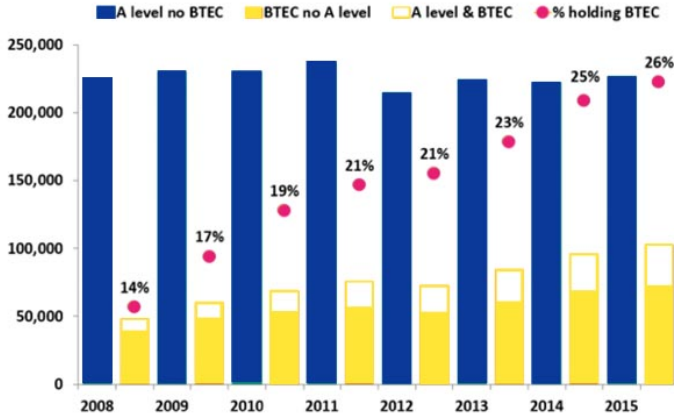
The previous report showed how an increasing number of young people are taking both vocational courses and a combination of academic and vocational courses at the same time; and that an increasing proportion of those with good GCSEs are going on to take vocational courses at Key Stage 5. But what are their prospects for progression into higher education? This section looks at recent trends in rates of progression into higher education for young people taking academic and vocational qualifications at Key Stage 5.

The most “popular and well-established” qualification amongst those accepted into higher education is a BTEC.<sup>13</sup> Take-up of other vocational qualifications is much lower, to the point where the most reliable sources of data on higher education progression – HESA and UCAS – predominantly focus on BTECs as the main vocational option. In this section we therefore also present data on BTECs rather than vocational qualifications more broadly.

**Most young people accepted into higher education have A levels, but acceptance of those with BTECs and a combination of BTECs and A levels is increasing rapidly**

Figure 1 shows that the proportion of acceptances into higher education holding A levels, BTECs, and a combination of the two. In 2008, a large majority of accepted students held A levels alone, with only 14% holding BTECs – the vast majority of these holding BTECs alone rather than a combination of BTECs and A levels. However, this has changed gradually such that, by 2015, over a quarter of acceptances held BTECs, and with a large increase in the numbers holding both BTECs and A levels at the same time.

**Figure 1: Acceptances into higher education holding A levels and BTECs**



Source: UCAS, *Progression Pathways*, Figure 8, (2016).

However, given that many more young people take A levels than BTECs or a combination, it is informative to look at acceptance rates by qualification type. Figure 2 shows acceptance rates – that is, the proportion of applicants accepted for entry – into higher education for 18 year olds by the type of qualification held.

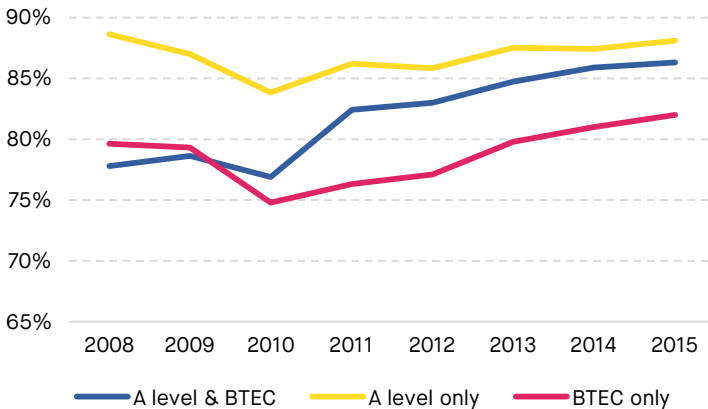
In 2008 around 89% of applicants with A levels were accepted into higher education. However, less than 80% of applicants with either BTECs or a combination of BTECs and A levels were accepted. By 2015 this pattern had changed. The acceptance rate of those with BTECs increased to 82%, whilst the acceptance rate of those with A levels decreased very slightly to 88%. The acceptance rate for those with a combination of both A levels and BTECs changed the most, increasing to over 86%, and only slightly below the rate for those with A levels.

This trend is particularly striking given the finding of the previous report that an increasing number of pupils achieving good GCSE

grades (at least 5 A\* to C equivalents including English and maths) are going on to take vocational courses at Key Stage 5.<sup>14</sup> At least part of the reason for this increased acceptance rate amongst those with vocational qualifications may well be that higher ability pupils are increasingly taking vocational qualifications at Key Stage 5. This is demonstrated by the fact that an increasing proportion of those being accepted into higher education having achieved high grades in A levels or their equivalents (at grades ABB or above) have done so by taking BTECs.

Of those going onto university with high grades, there is a clear increase in the proportion having taken BTECs. It appears there is an increasing trend for young people who have done well at GCSE to take BTECs at Key Stage 5, and for those who do well in their BTECs to go onto higher education.

**Figure 2: Acceptance rates into higher education by type of qualification held, 18 year olds only**



Source: UCAS End of Cycle Report 2015, Figure 104.

**Nevertheless those with BTECs are so far less likely to go to ‘higher tariff’ universities**

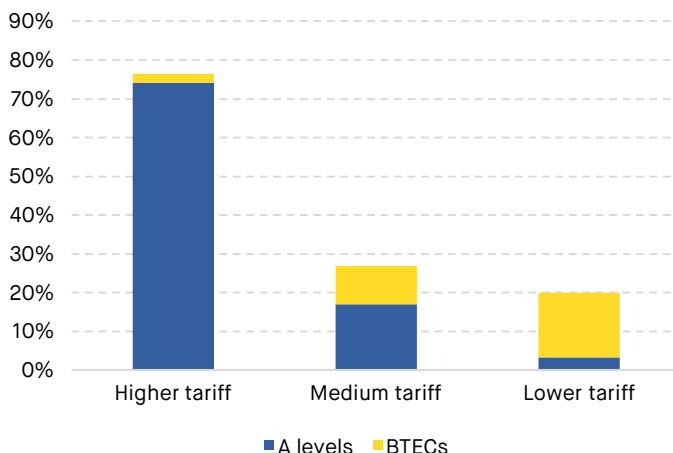
Despite the narrowing acceptance rates between A levels and BTECs, and the increased acceptance of high achievers taking BTECs, there are big differences by qualification type in the kinds of universities young people are attending. Those with BTECs, and with a combination of BTECs and A levels, are less likely to go to higher tariff universities.

Figure 3 shows the proportion of 18 year olds who have been accepted into higher education holding high grades of ABB or above, broken down by the university’s tariff, and by qualification type. High achievers with A levels dominate the highest tariff universities, with 74% of acceptances coming from this group, compared to just 2% of high achievers with BTECs. Despite making up a significant and increasing proportion of high achievers, those with BTECs are unlikely to be accepted into the most selective universities. There are, however, a few cases of selective universities making progress in recent years. For instance, King’s College London nearly quadrupled its intake of young people with BTECs between 2008 and 2015; students with BTECs now make up over 7% of its acceptances. Exeter University has done almost as well, by more than doubling its intake of young people with BTECs over the same period to reach an acceptance rate of just under 7%.<sup>15</sup>

Amongst middle tariff institutions the proportions of high achievers taking either BTECs or A levels is more even, with 17% of acceptances from high achievers taking A levels, and 10% taking BTECs.

Lower tariff universities, by contrast, are much more likely to accept high achieving young people with BTECs than high achieving young people with A levels.

**Figure 3: Proportion of English 18 year old acceptances who are holding ABB+ grades, by university tariff and qualification type (2015)**



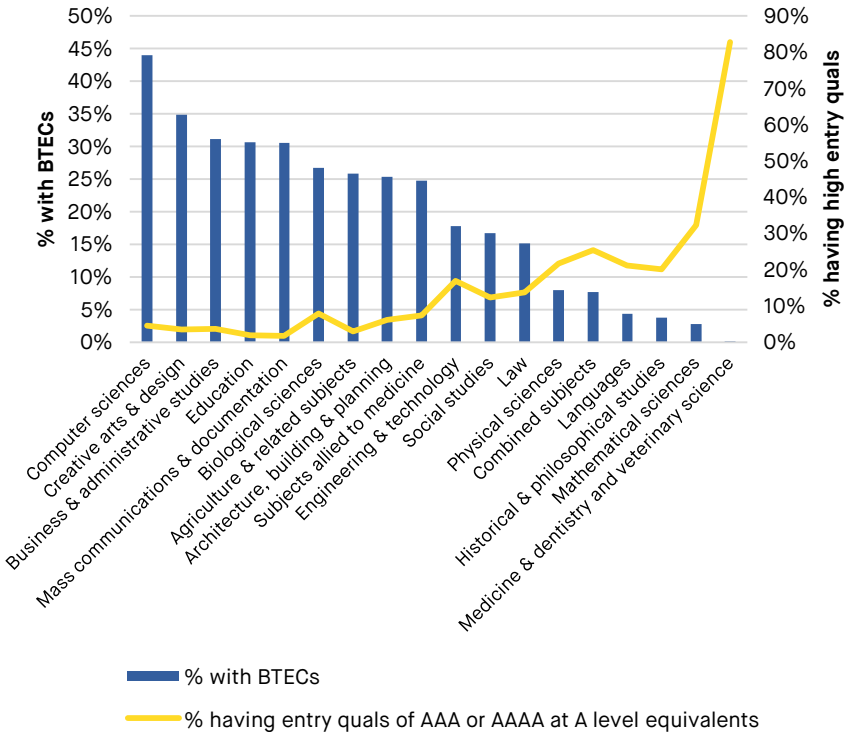
Source: SMF analysis of UCAS End of Cycle Report 2015, Figures 107 and 108.

**Part of this difference is likely to be due to the subjects offered by institutions of different types**

Why might this be the case? It is, at least in part, likely to be because of the types of subjects offered at different types of higher education institution. Figure 4 shows, across all higher education providers, the proportion of students holding a BTEC qualification by university subject, and the proportion of students facing entry requirements of AAA or higher at A level or equivalent by university subject. Generally speaking it is the subjects with the lowest proportion of students facing very high entry requirements that have the highest proportion of students with BTECs.



**Figure 4: Proportion of students holding a BTEC qualification by university subject; and proportion of students facing entry requirements of AAA or higher at A level or equivalent by university subject**



Source: SMF analysis of HESA, Table SP2, UK domiciled young entrants to full-time first degree courses by subject and entry qualifications, 2014/15.

It is worth noting that part of the reason for this is likely to be that students tend to study for a degree that is related to their Key Stage 5 course choices. Those taking BTECs are relatively unlikely to apply to study languages, or historical and philosophical studies, simply because of the lack of similarity in the subject matter.

Furthermore, it is worth noting one particular outlier. This difference between subjects is exaggerated by Medicine, dentistry, and veterinary science. A huge 83% of students taking these subjects faced entry requirements of AAA or above; and just 10 had BTECs, across all English universities.

**Young people from disadvantaged areas taking A levels have much lower higher education entry rates, but those taking BTECs or a combination do not**

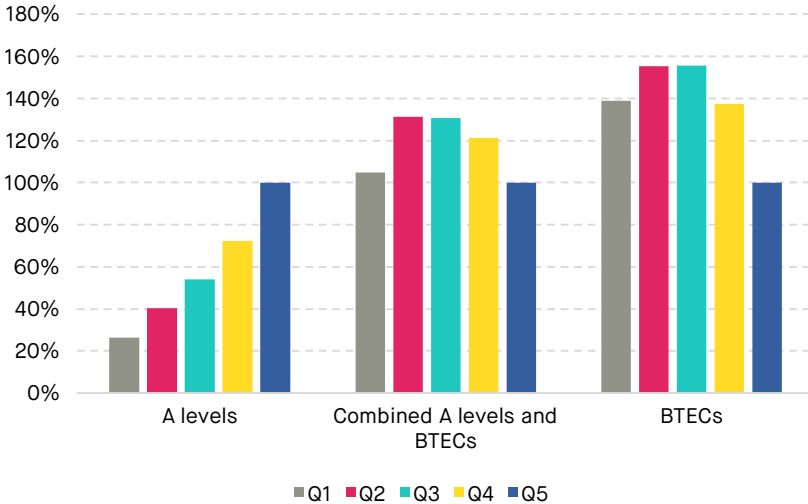
Another notable trend is that differences in entry rates by POLAR3 group are much smaller for young people with BTECs, and with a combination of BTECs, than they are for those with A levels.

POLAR3 is an indicator of the number of young people participating in higher education in a local area. Figure 5 includes five quintiles, with Q1 indicating the lowest level of university participation and Q5 the highest. Government policy has recently focused on widening participation rates amongst under-represented groups, and includes a target to increase the participation of students living in POLAR3 Q1. Figure 5 shows the entry rate of each of the five quintiles as a proportion of the most advantaged quintile.

For those with A levels, the proportion accepted for entry into university is lowest in Q1 and highest in Q5. The differences are large: Q1 has an entry rate of just 27% that of Q5.

However, young people with BTECs or a combination of BTECs and A levels have higher rates of entry if they live in low participation areas, compared to the most advantaged area. Of those with BTECs, those living in Q3 have an entry rate that is 55% higher than those living in Q5, the most advantaged area. The figures are similar for those taking a combination of A levels and BTECs.

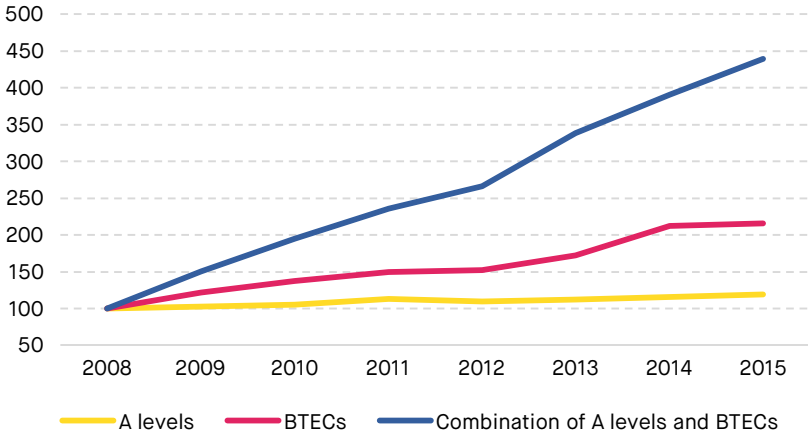
**Figure 5: Comparison of entry rates between POLAR3 quintiles, by qualification type**



Source: SMF analysis of UCAS End of Cycle Report 2015, Figures 101, 102 and 103, 18 year olds only.

Furthermore, these differences have remained stubbornly large over a number of years: the entry rate for those with A levels from the most advantaged areas was almost the same in 2015 as it was in 2008, whilst the entry rate for those from the most disadvantaged areas increased only very slightly. Figure 6 shows the how the entry rate has changed over time for young people from the most disadvantaged POLAR3 quintile, where the entry rate in 2008 is represented as 100. By far the fastest growth has come from those with BTECs, and particularly from those with a combination of BTECs and A levels. The entry rate for those with A levels increased by just 19% over this period; for those with BTECs there was a 116% increase; and for those with a combination of A levels and BTECs the increase was 340%, albeit from a lower base.<sup>16</sup>

**Figure 6: Entry rate of young people from the most disadvantaged POLAR3 area, by qualification type (2008 = 100).**



Source: SMF analysis of UCAS End of Cycle Report 2015, Figures 101, 102 and 103. English 18 year olds only.

Why might this be? It is difficult to tell from the statistics alone, although it may be because of the characteristics of those living in the Q5 areas. If vocational qualifications are seen negatively by schools in more affluent areas, perhaps those choosing to take them are not encouraged to go onto university, or have made their choice because they do not wish to do so. Alternatively, this could have more to do with those living in lower participation areas. It may indicate that taking BTECs, or a combination of BTECs and A levels, can be a valuable way of increasing one’s chances of getting into university for those living in areas with low rates of university participation.

What is clear from these findings, however, is the stark difference in entry rates by area depending on qualification type. Of those taking A levels, many more young people from advantaged areas go onto higher education; yet of those taking BTECs or a combination, the entry rates are much more even between different areas.

## **The role of further education colleges in providing higher education**

Not all students in higher education are taught in Higher Education Institutions (HEIs). As we set out in Passports to Progress, Part One, further education colleges play a very important role in the provision of vocational education at Key Stage 5. Nearly all English further education colleges offer vocational courses, and they are crucial in expanding the options and opportunities available to young people.<sup>17</sup> Further education colleges also play a key role in the provision of higher education, and there are distinct aspects of their role that it is important to discuss.

There are some technical challenges with compiling data on higher education students taught in further education colleges, so reliable data is not routinely available. However, the Department for Business, Innovation and Skills (BIS, now renamed BEIS) brought together statistics from several agencies to produce comprehensive data for 2009-10.<sup>18</sup>

In 2009-10 around 8%, or 177,000, of those in higher education were being taught in further education colleges. In contrast to HEIs, where a majority (58%) study for a Bachelor's degree and a further quarter (24%) study at Postgraduate level, nearly half (47%) of higher education students at further education colleges study at a level below the Bachelor's degree. An additional difference is that a majority (60%) of students study part-time, in contrast to just 35% of students at higher education institutions.<sup>19</sup>

It is most common for young people to hold A levels when entering HEIs to study for a Bachelor's degree: two-thirds (66%) of young people held A levels as their highest qualification in 2009-10. By contrast, those joining further education colleges to study for a Bachelor's degree had a much broader range of qualifications. Just 35% had A levels as their highest qualification; 10% had a BTEC at

Level 3; and 28% already had some kind of undergraduate qualification.<sup>20</sup> Further education colleges have an important role in allowing access to higher education for those who have not taken the standard A level 'route'.

Further education colleges also play an important role in providing access to higher education for those from disadvantaged areas. Those from the 20% of areas with the lowest higher education participation were much less likely to enter into an HEI, with just 11% of HEI entrants coming from these areas. Entrants into further education colleges, however, were not less likely to come from disadvantaged areas: 20% of entrants came from the 20% lowest participation areas.<sup>21</sup> The participation bias that favours certain areas over others that can be found for HEIs is not, therefore, found for further education colleges.

## 4. EMPLOYMENT OUTCOMES

Not all young people with vocational qualifications go into higher education, of course. It is just as important to understand how people with vocational qualifications fare in the labour market. In this section we look at the employment outcomes and earnings of people with vocational qualifications at Level 2 (equivalent to achieving A\*-C GCSE grades) and Level 3 (equivalent to A-levels), and for whom these are their highest qualifications. Our analysis covers England and Wales.

Our data come from the Quarterly Labour Force Survey (QLFS), which contains data on employment, earnings, qualifications, type of work, family background and demographics for a sample of individuals every quarter.

As well as descriptive analysis, we also estimate the return to vocational qualifications. We estimate the likelihood that individuals with vocational qualifications at a given level are employed compared to those who have qualifications at the level below, after taking into account other factors that affect employment. We also estimate the additional earnings that individuals with vocational qualifications at a given level receive compared to those who have qualifications at the level below.

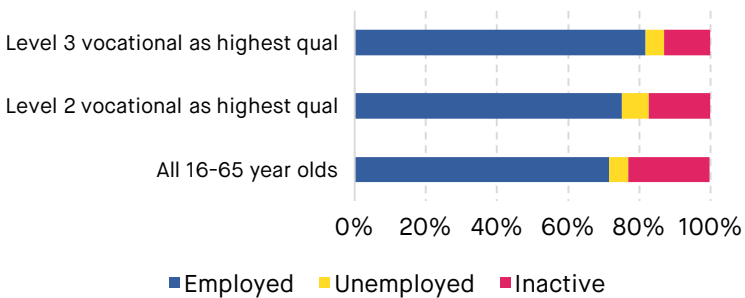
We pool data from 2011 to 2015, giving us five years' worth of data, to ensure sufficient sample size. Our analysis is therefore reflective of this particular period in time. The early years of this period in particular were notable for falling real wages, and a steadying in wage inequality.<sup>22</sup> This may have affected the return to qualifications during this particular period.

In the QLFS, individuals are tracked over five quarters. In pooling the data, we only use survey responses from the first quarter that an individual is included, to ensure that there is no double-counting.

### Vocational qualifications and likelihood of being in employment

Figure 7 shows the proportion of 16-65 years olds in employment, across different groups. Those who have Level 2 vocational qualifications as their highest qualification are more likely to be in employment than the group of all 16 to 65 year olds as a whole; and those who have Level 3 vocational qualifications as their highest qualification are even more likely to be in employment than those with Level 2 vocational qualifications as their highest qualification. Figure 8 shows how a similar pattern holds across men and women.

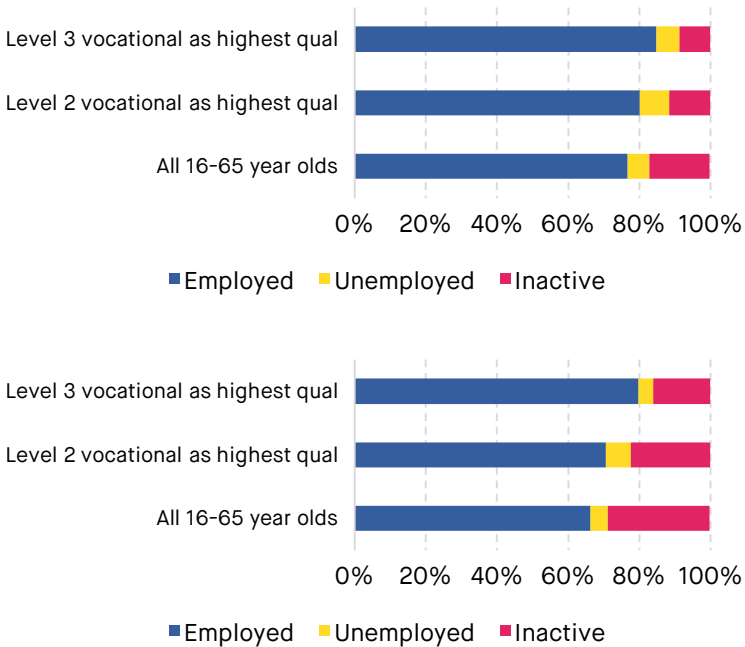
**Figure 7: Employment status by type of vocational qualification**



Source: SMF analysis of QLFS 2011-2015



**Figure 8: Employment status for men (top) and women (bottom)**



Source: SMF analysis of QLFS 2011-2015

This analysis presents some indication of the value of vocational qualifications in improving employment outcomes. However, it does not tell us whether such qualifications are associated with a higher likelihood of being in work once other important factors are taken into account. Those who hold specific qualifications may differ from the general population in terms of their age, family status, region and ethnicity, all of which may in turn affect the likelihood of being in work. We have therefore undertaken regression analysis controlling for these factors.

Furthermore, if we want to estimate the specific contribution of a qualification to the likelihood of being employed, we need to choose the right comparison groups. We focus on analysing the outcomes among groups that have the specific qualifications of interest as their highest qualification. This means, for example, that our group of Level 3 vocational qualification holders do not include those who progressed onto a Level 4 or higher qualification. The reason for doing this is that if we included those who progressed in our analysis, we would not be able to distinguish the value of the qualification of interest from the value of higher qualifications. Our comparison group are those who hold qualifications at the level below the qualification of interest.

Below, we set out the results of our regression analysis for the likelihood of being employed. Further details of the model are included in the Annex.

Figure 9 shows that those with a level 3 vocational qualification as their highest qualification are 15 percentage points more likely to be in work compared to those with level 2 qualifications only. The return is even higher for women.

**Figure 9: Level 3 qualifications - percentage point (pp) increase in likelihood of being in employment, compared to those with Level 2 qualifications only**

	Vocational qualifications Level 3
All	15 pp***
Men	14 pp ***
Women	17 pp ***

\*10% level of statistical significance, \*\*5% level of statistical significance, \*\*\*1% level of statistical significance

Source: SMF analysis of QLFS 2011-2015

Level 2 vocational qualifications also increase the likelihood of being in employment compared to having Level 1 qualifications only, by 8 percentage points. As with Level 3 qualifications, the effect is larger for women.

**Figure 10: Level 2 qualifications - percentage point increase in likelihood of being in employment, compared to those with Level 1 qualifications only**

	Vocational qualifications Level 2
All	8 pp***
Men	6 pp***
Women	11 pp***

\*10% level of statistical significance, \*\*5% level of statistical significance, \*\*\*1% level of statistical significance

Source: SMF analysis of QLFS 2011-2015

As set out earlier, our analysis examines the difference in probabilities of employment based on those who hold a vocational qualification at Level 2 (or Level 3) at maximum. This allows us to look at the increase in probability of employment associated with holding that specific qualification. However, it is important to recognise that the beneficial outcomes of undertaking qualifications are not reflected in employment statistics alone. Some individuals may use a qualification as a gateway to higher qualifications, which may in turn broaden their career opportunities.

This could be true of those taking Level 2 qualifications, who could use them as a gateway to Level 3. It could also be the case that Level 3 qualifications are used as a gateway to higher education; for instance, Section III above shows a recent rapid increase in those with BTECs going onto higher education.

## **Vocational qualifications and earnings**

It is also important to understand the earnings potential of those with vocational qualifications. In this section, we set out our analysis of the earnings of those with vocational Level 3 qualifications as their highest qualifications. The charts below compare earnings across different groups. It is clear that, on average, earnings for those with vocational qualifications are lower than for the average of all those in work. However, earnings of those with Level 3 vocational qualifications are only a little below the average of all those in work.

As with our analysis of the likelihood of employment, a deeper understanding of the effect of taking qualifications on earnings requires taking into account a number of other factors that affect wages. Those with vocational qualifications as their highest qualification may be different to other people in work. In our regression analysis, we control for age, ethnicity, region of usual residence, marital status, dependent children under 16, whether the job is full-time or part-time, whether the job is permanent or temporary, whether the job is in the public sector or private sector, other qualifications held, and yearly and seasonal effects.

As before, we focus on earnings among groups that have the specific qualifications of interest as their highest qualification. Our comparison group are those who hold qualifications at the level below the qualification of interest.

**Figure 11: Hourly and weekly pay for those with vocational qualifications**



Source: SMF analysis of QLFS 2011-2015

Figure 12 below sets out the results of our analysis of earnings of Level 3 qualification holders, compared to Level 2 holders, controlling for the range of factors set out above. Overall, Level 3 vocational qualifications are associated with a gross weekly income increase of 7%, with larger increases for men, as compared with having a Level 2 vocational qualification as the highest qualification. The effect on hourly pay is positive but much smaller indicating that those with a Level 3 vocational qualification tend to work a greater number of hours than those with a Level 2 vocational qualification as their highest. The effect on hourly pay is not statistically significant for women, indicating no change in women’s hourly pay.

**Figure 12: Gross weekly earnings for Level 3 qualifications - percentage increase in gross weekly earnings, compared to those with Level 2 qualifications only**

	Vocational qualifications Level 3
All	7%***
Men	10%***
Women	4%***

\*10% level of statistical significance, \*\*5% level of statistical significance, \*\*\*1% level of statistical significance

Source: SMF analysis of QLFS 2011-2015

## 5. EARNINGS OF THOSE WITH VOCATIONAL QUALIFICATIONS WHO HAVE ALSO COMPLETED HIGHER EDUCATION

What are the labour market outcomes for those who have both completed vocational qualifications at Key Stage 5, and gone on to higher education? Did going into higher education result in an earnings premium for these people? Using similar regression techniques to the previous section, this section presents evidence on the earnings of graduates who had also completed vocational courses.

Figure 13 shows the results of regressions that compare those with a Level 3 BTEC (but no A levels) as their highest qualification, with those with a Level 3 BTEC but also a degree level qualification. The regressions show that, controlling for demographic and other factors, those who have taken Level 3 BTECs and then gone on to higher education earn 20% more on an hourly basis, and 22% more on a weekly basis, than those holding a Level 3 BTEC as their highest qualification. Those holding a combination of BTECs and A levels are excluded. For these people, therefore, there is a clear earnings premium associated with going into higher education rather than going into employment with a BTEC as a highest qualification.

**Figure 13: Earnings returns for degree-level qualifications: people with BTECs and no A levels**

	<b>Earnings premium</b>
Hourly earnings	20%***
Gross weekly earnings	22%***

\*10% level of statistical significance, \*\*5% level of statistical significance, \*\*\*1% level of statistical significance

Source: SMF analysis of QLFS 2011-2015

But what of those who have taken a combination of BTECs and A levels before going into higher education? Figure 14 shows the results of regressions that compare those with both a Level 3 BTEC and at least one A level as their highest qualifications, with those with both BTECs and A levels but also a degree level qualification. The regressions show that, controlling for demographic and other factors, those who have taken BTECs and A levels and then gone on to higher education earn 9% more on an hourly basis than those with BTECs and A levels combined as their highest qualification. However, this effect is only significant at the 10% level, so it should be interpreted with caution. The effect for gross weekly earnings is not statistically significant.

**Figure 14: Earnings returns for degree-level qualifications: people with BTECs and A levels combined**

	<b>Earnings premium</b>
Hourly earnings	9%*
Gross weekly earnings	8%

\*10% level of statistical significance, \*\*5% level of statistical significance, \*\*\*1% level of statistical significance

Source: SMF analysis of QLFS 2011-2015

Why might it be the case that the earnings premium for those with a combination of A levels and BTECs is smaller and less clear-cut than for those with BTECs alone? Two explanations are possible. First, it may have something to do with the tradition of young people taking either the academic or vocational ‘route’; and perhaps those that did not, choosing a combination instead, are a slightly different group. Second, the sample size for those taking both A levels and BTECs is considerably smaller than for those taking BTECs alone, which makes statistical significance more difficult to establish.



## 6. CONCLUSIONS

### KEY FINDINGS

#### Progression into higher education

We looked at rates of progression into higher education for young people with different types of qualification.

- Almost 100,000 students (1 in 4) entering university now have a BTEC qualification compared to just under 50,000 in 2008, according to the latest available UCAS data.
- Acceptance of those with BTECs and a combination of BTECs and A levels is increasing rapidly and the proportion has almost doubled in the last eight years. In 2008 just 14% of those accepted into higher education had a BTEC – in 2015 more than a quarter (26%) did.
- There is a big increase in students with BTECs, and with a combination of A levels and BTECs, entering university from the most disadvantaged areas. Between 2008-2015 students entering higher education from the most disadvantaged backgrounds with just A level qualifications increased by 19%. However, those with BTECs increased by 116%. Those combining both A levels and BTECs increased by 340%, albeit from a low base.
- Increasing numbers of young people taking at least one vocational qualification at Key Stage 5 have very good GCSE results (37% in 2015; 'good' means at least 5 A\* to C GCSEs or equivalents, including English and maths). Increasing numbers of young people taking BTECs or a combination of BTECs and A levels are also achieving high grades at Key Stage 5, and then progressing into higher education.
- Nevertheless, these high achievers are so far more likely to go to 'lower tariff' (less selective) higher education institutions.

The most selective universities are still choosing 'high achieving' students who have taken A levels. In 2015, just 2% of 18 year old acceptances into higher tariff institutions had BTECs at grade ABB or above.

- After university, those with a BTEC and a degree have an hourly earnings premium of 20% compared to those with a BTEC as their highest qualification. Those with a BTEC and a degree have a gross weekly earnings premium of 22% compared to those with a BTEC as their highest qualification.

### **Employment outcomes for those not going into higher education**

For those not going into higher education, we looked at employment outcomes for those with vocational qualifications at Level 2 and 3 as their highest qualification.

- Those with vocational Level 2 qualifications as their highest qualification, and particularly those with vocational Level 3 qualifications as their highest qualification, are more likely to be employed than the 16-65 year old population generally.
- Having a vocational Level 2 qualification as one's highest qualification, compared to a vocational Level 1 qualification, is associated with an 8% increase in the likelihood of being in employment, after controlling for other factors. The effect is even stronger – at 11% - for women.
- Having a vocational Level 3 qualification as one's highest qualification, compared to having a vocational Level 2 qualification as one's highest qualification, is associated with a 15% increase in the likelihood of being in employment. The effect is again even stronger – at 17% - for women.
- Furthermore, having a vocational Level 3 qualification as one's highest qualification, compared to having a Level 2 qualification as one's highest qualification, is associated with

a 7% increase in weekly earnings. The effect is strongest for men.

### **Employment outcomes for those with vocational qualifications and going onto higher education**

We looked at later employment outcomes for those who had taken a BTEC at Level 3 and then went into higher education.

- Those with a BTEC and a degree have an hourly earnings premium of 20% compared to those with a BTEC as their highest qualification.
- Those with a BTEC and a degree have a gross weekly earnings premium of 22% compared to those with a BTEC as their highest qualification.

## ANNEX

Our regression analysis follows that used by London Economics and others.<sup>23</sup>

For employment likelihood, we use a probit model. The dependent variable is a binary variable coded as 1 if the individual is employed and 0 if not. Our independent variable of interest, also a binary variable, is having a vocational (or BTEC) qualification at Level 2 (or Level 3) as the highest qualification. The control group is made up of those with qualifications at the Level below the qualification of interest. We control for the following: age, age squared, ethnicity, region of usual residence, marital status, dependent children under 16, yearly and seasonal dummies, other qualifications below that of the highest qualification of interest.

For earnings, we use a standard ordinary least squares (OLS) model. The dependent variable is earnings, which we look at on a weekly basis and an hourly basis. Our group of interest and control group are the same as for the employment analysis. We include additional control variables beyond that included in the employment analysis, namely, whether on a permanent/temporary contract, whether full time or part-time, and whether in the public or private sector.

## ENDNOTES

<sup>1</sup> House of Lords Select Committee on Social Mobility, Overlooked and left behind: improving the transition from school to work for the majority of young people, (2016)

<sup>2</sup> David Cameron speech, Friday April 20 2012.

<https://toryspeeches.files.wordpress.com/2013/11/david-cameron-apprenticeships-speech.pdf>

<sup>3</sup> Review of Vocational Education – The Wolf Report (2011).

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/180504/DFE-00031-2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

<sup>4</sup> Department for Education and Office for National Statistics, Statistical First Release 23rd Oct 2014, (2014).

<sup>5</sup> National Foundation for Educational Research, A literature review of the value of vocational Qualifications, (2015)

<sup>6</sup> Review of Vocational Education – The Wolf Report (2011).

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/180504/DFE-00031-2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

<sup>7</sup> Wenchao Jin, Alastair Muriel and Luke Sibieta, Subject and course choices at ages 14 and 16 amongst young people in England: insights from behavioural economics, (2011).

<sup>8</sup> Wenchao Jin, Alastair Muriel and Luke Sibieta, Subject and course choices at ages 14 and 16 amongst young people in England: insights from behavioural economics, (2011).

<sup>9</sup> John West and Hilary Steedman, Finding Our Way: Vocational Education in England, (2003).

<sup>10</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/536043/Post-16\\_Skills\\_Plan.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536043/Post-16_Skills_Plan.pdf)

<sup>11</sup> David Cameron speech, Friday, April 20 2012.

<https://toryspeeches.files.wordpress.com/2013/11/david-cameron-apprenticeships-speech.pdf>

<sup>12</sup> Review of Vocational Education – The Wolf Report (2011).

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/180504/DFE-00031-2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

<sup>13</sup> UCAS, Progression Pathways, (2016).

[https://www.ucas.com/sites/default/files/progression\\_pathways\\_report\\_final\\_v2\\_0.pdf](https://www.ucas.com/sites/default/files/progression_pathways_report_final_v2_0.pdf)

<sup>14</sup> Ben Richards, Passports to Progress, Part One. (2016).

<http://www.smf.co.uk/wp-content/uploads/2016/07/Social-Market->

Foundation-Passports-to-Progress-Vocational-Qualifications-Embargoed-0001-070716.pdf

<sup>15</sup> UCAS, Main scheme acceptances by provider and BTEC, (2015).

[https://www.ucas.com/sites/default/files/hep\\_level\\_report\\_2015-dr4\\_014\\_02.pdf](https://www.ucas.com/sites/default/files/hep_level_report_2015-dr4_014_02.pdf)

<sup>16</sup> UCAS, End of Cycle Report, Figure 101. (2015).

<sup>17</sup> Ben Richards, Passports to Progress, Part One. (2016).

<http://www.smf.co.uk/wp-content/uploads/2016/07/Social-Market-Foundation-Passports-to-Progress-Vocational-Qualifications-Embargoed-0001-070716.pdf>

<sup>18</sup> BIS, Understanding Higher Education in Further Education Colleges, (2012). [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32425/12-905-understanding-higher-education-colleges-in-further-education-colleges.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32425/12-905-understanding-higher-education-colleges-in-further-education-colleges.pdf)

<sup>19</sup> BIS, Understanding Higher Education in Further Education Colleges, (2012). [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf)

<sup>20</sup> BIS, Understanding Higher Education in Further Education Colleges, (2012). [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf)

<sup>21</sup> BIS, Understanding Higher Education in Further Education Colleges, (2012). [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32425/12-905-understanding-higher-education-in-further-education-colleges.pdf)

<sup>22</sup> <http://www.resolutionfoundation.org/data/labour-market-charts/> ; <http://blogs.lse.ac.uk/politicsandpolicy/real-wages-and-living-standards-the-latest-uk-evidence/>

<sup>23</sup> London Economics, Returns to BTEC vocational qualifications, Final Report for Pearson, (2010).



