

Vocation, Vocation, Vocation

The role of vocational routes into higher education

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SMF

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FOREWORD

This report comes at an opportune moment. Not just educational policy, but the future of the country's economy, is at a crossroads. The Government has just published its long-awaited Industrial Strategy white paper, setting out bold ambitions to “ensure that everyone can improve their skills throughout their lives” and putting the development of people at the heart of its plan for the economy. Enhancing social mobility remains at the heart of its programme.

At the same time, the most significant reforms of the higher education system in a generation are being implemented. The Office for Students will begin operation shortly, now with added responsibility for addressing the future skills needs of employers. New T level qualifications, currently in development, will start in 2020, sitting alongside A levels and BTECs as an alternative route for young people.

The decisions we make now will shape the landscape for the next decade and beyond. The capacity of universities to absorb and respond to a plethora of initiatives from Government around regulation, innovation, and skills is being sorely tested. In this context, there is a danger that the implications of reforms to vocational education will receive less attention than they deserve. This makes this report an important and timely contribution.

Vocational qualifications at Level 3 - especially BTECs - have played a major role in broadening access to higher education in recent years, particularly from underrepresented groups and low-participation regions. In my view BTECs complement A levels and, of course, many applicants combine both qualifications. BTEC courses develop knowledge and skills whilst applying these to real-world tasks, scenarios, and challenges reflecting the world of work. All students require a personalised programme of study and support whilst at university regardless of what and how they have studied previously. It is crucial that we do not adopt a deficit model when considering the requirements of BTEC students. At Nottingham Trent University, our student analytics software – Dashboard – is the tool that our tutors and students use to ensure that everyone has the same opportunity to succeed.

In NTU's 2017 autumn intake, 34% of our incoming undergraduates possess at least one BTEC. A quarter of our UK undergraduates come from households with a mean average income of £15,000 or less. We also recruit a proportion of BME students which is well above the sector average. There is significant crossover here. For example, those students who come from families without a history of higher education are more likely to have studied for at least one BTEC. These qualifications have become a significant route to social mobility in recent years. We must not undermine their appeal by changing their curricula or assessment methods without due regard to this fact.

Neither should we simply usurp them as the Government introduces T levels. We must guard against creating a rigid divide between ‘academic’ and ‘technical’ education at Level 3 where the latter does not provide a ladder into selective universities such as NTU. The proposed bridging arrangements are recognition of this problem, but they must be as comprehensible to young people as they are practical for providers. Universities must engage in the design and delivery of these new qualifications as the present report recommends.

The report also calls for more collaboration between every part of the education system and in this context I welcome the suggestion of a review of the funding of and incentives within post-16 education even if it does give busy universities one more thing to think about!

Our future economy needs the right blend of academic and technical skills. Degree courses must encompass both in ways that acknowledge the strengths and weaknesses of all students, regardless of their background. If technical pathways are to have the rigour, prestige and progression which ministers, employers, and learners desire then they must open doors to degree and postgraduate study. Anything less will fail those learners, shackle our businesses, weaken our economy and thus make us all poorer.

Professor Edward Peck is Vice-Chancellor of Nottingham Trent University and Treasurer of University Alliance

EXECUTIVE SUMMARY:

International comparisons have shown that intermediate technical skills are low in the UK, whilst other evidence has shown that social mobility is stalling. As part of the response, the government has indicated its ambition to improve technical education at secondary level and beyond, and to create wider pathways for young people to progress and gain higher level technical skills. The Department of Education has promoted technical education as part of its strategy for improving social mobility. With the newly-formed Office for Students up and running, now is an important moment to review how the vocational route into higher education works and for whom.

Current role of vocational qualifications as an entry route to higher education

This report examines the current role vocational education plays in preparing young people for higher education, and how students can be helped to pursue the most appropriate learning and career path. For reasons of simplicity, we refer here to 'vocational' education to describe non-academic paths to avoid confusion over the terminology given the introduction of 'T Levels' and the 'technical route'.

BTECs are the most common type of vocational study at Level 3 and data show there has been a marked increase in the number of students studying BTEC courses in recent years. Fewer than 50,000 students studied one or more Level 3 BTECs in 2006; this figure had risen to 150,000 in 2014. Our analysis of UCAS data from 2016 looks at those who apply to, and are accepted into, higher education, and examines whether they studied A levels or BTECs. It shows that vocational qualifications now feature frequently among university applicants, with one in four of all applicants from England (26%) having studied at least one BTEC qualification at Level 3.¹

Our analysis reveals that vocational qualifications are particularly important among students with demographic characteristics often associated with greater disadvantage. Of those accepted into a higher education institution, students were much more likely to enter with a vocational qualification if:

- They previously lived in the North East, North West, Yorkshire and the Humber and the West Midlands, which is important given regional economic disparities.
- They come from an ethnic minority background – almost half (48%) of black students are accepted with at least one vocational qualification, and more than a third (37%) enter with only vocational qualifications. The Government has a target to increase the number of black and minority ethnic students going to university by 20% by 2020, given their historic underrepresentation in higher education.
- Their parents work(ed) in routine or manual occupations, with students twice as likely to enter having studied at least one vocational subject compared with those whose parents work(ed) in higher managerial or professional roles.
- They come from an area that sends a low proportion of its young people onto university.

The research also demonstrates how vocational qualifications are an important entry route for those from white working-class backgrounds. Across all regions a higher proportion of white working-class students are accepted to university with vocational qualifications compared to the average student. Meanwhile, half of white working-class university students from the North East, Yorkshire and the North West attend having studied at least one vocational course, and more than a third (36%) having studied only vocational subjects.

Ensuring the vocational route works

The report draws on insights from universities to assess how the vocational route into higher education can be effective, including ensuring that suitable applicants who wish to study at university can do so, and making sure that they can succeed in their studies.

Course design and assessment

This research identifies some of the existing challenges associated with the vocational route into higher education including qualification design, prior attainment and current progression routes. Historically, there has been some concern over grade inflation and the level of preparedness for higher education among students from vocational backgrounds. Universities we engaged with during this research reacted positively to the steps that are being taken to introduce external assessment and a larger mandatory core of appropriate content into BTECs.

Through our research we understand that students from vocational backgrounds are not always as well prepared as they could be for some university courses. There can be mismatch in terms of subject matter and the skills required, particularly when the course contains a scientific or mathematical component. One area which can hinder progression from vocational qualifications to higher education is a lack of clear progression routes for some degree programmes.

Building on the current improvements in module design is essential to ensure that more vocational Level 3 courses reflect requirements at university. This will require greater communication and collaboration between the HE sector and FE and sixth-forms. There are already examples of collaborative good practice, including the National Collaborative Outreach Programme (NCOP) which is funded by HEFCE. This could go further and one approach could be to aggregate the voices of Universities and FE providers, thus enabling collaboration to extend beyond areas of geographic proximity, permit the sharing of good practice and ensure the voices of both sectors are heard. The aggregation system should be designed to ensure that no university, or group of universities, is at an unfair advantage.

We recommend:

- Further and higher education institutions should work much more closely together, particularly on progression routes. The Office for Students and Department for Education should help facilitate this collaboration and include the Education and Skills Funding Agency (ESFA) when appropriate.
- Collectively, universities should explain better the requirements of different courses and modules in terms of subject matter and assessment. This could take place through existing university bodies.

Encouraging vocational students to apply where appropriate

Students from vocational backgrounds are less likely to study at high tariff institutions. This is likely to be explained by factors such as: higher tariff institutions offering a larger proportion of courses that are not suitable for students from a vocational background; and vocational students being reluctant to apply. We note that some universities do not publish their entry requirements for students from non-academic backgrounds, which may act as a barrier to entry for students.

Lessons can be learnt from behavioural science to help promote university to students from vocational backgrounds. For instance, the Behavioural Insights Team has conducted a trial to specifically promote high tariff universities to students, the goal was to encourage students to aim higher; we believe this could be developed further to focus on encouraging students from vocational courses to apply to all types of universities.

Ensuring that when students apply to university they are not judged based on the type of qualification they hold is essential for social mobility. Phillip Hammond said in the 2017 Spring Budget that there is “*still a lingering doubt about the parity of esteem attaching to technical education pursued through the Further Education route*”, but that the introduction of T levels should put an end to this.

To make those words a reality, the Government and the education sector should pursue a long-term goal of raising the profile and status of vocational and technical education, highlighting the value of these

qualifications for people looking to develop technical or career-orientated knowledge and skills, to progress onto either skilled work, higher education or training.

Some of the necessary changes can be made without legislation, regulation or other formal intervention. What is required is *leadership* – politicians and others in high-profile positions should use those positions to challenge social norms and customs that create the “doubt” Mr Hammond spoke of, by explaining the importance of vocational and technical education, not just to the UK economy as a whole but to the people receiving that education and to prospective students.

We recommend:

- The Government should lead a national conversation aimed at raising the profile and status of technical and vocational qualifications. Promoting an open discussion on the appropriateness of these qualifications for a variety of routes should be encouraged.
- Ministers and the Office for Students should encourage universities to publish the grade requirements for all types of qualifications on their website and within prospectuses.
- The Department for Education should initiate a trial to use behavioural science techniques to encourage appropriate students from vocational backgrounds to apply to university.

Given the changes occurring within the education system we need to ensure that students are well informed of the options available to them. The current provision of careers advice is often patchy and this can be to the detriment of disadvantaged students. In December 2017, DFE published its Careers Strategy. It is essential that when implemented this strategy ensures that students are informed of all routes available. It is important that the route from technical or vocational education to higher education is not ignored.

We recommend:

- The DfE should ensure that the implementation of the new Careers Strategy does not overlook the route into all forms of higher education for students from vocational and technical backgrounds.

Helping vocational students succeed at university

Getting students into university is only half of the story: we need to ensure that students who enter university are supported to succeed. Data shows that 12% of young students who entered university in 2014/15 with a BTEC qualification subsequently dropped out of university. This compares to an average for all students of 6.2%.² On occasion, vocational and academic students enter university with different skill-sets. Universities have a range of tools available to help them offer personalised support to both groups in order to promote success at higher education. Evidence from university access agreements shows that universities are increasing their investment on access and student success, which is due to represent over 45% of spending carried out under access agreements in 2021/22. There are several universities that discuss vocational or technical students within their agreements, but we did not encounter any discussion of formal mechanisms to ensure these students receive dedicated support.

We recommend:

- The newly appointed Director of Fair Access and Participation at the Office for Students should include the entry and retention of students from vocational backgrounds in the Office’s monitoring of HE institutions’ record on access and outcomes.

Ensuring that technical routes into higher education prosper under the new skills plan

The report looks towards the future to understand the risks and opportunities associated with the forthcoming changes to post-16 skills policy. Splitting the education system at Level 3 into an academic and a technical pathway may result in additional challenges for students wishing to enrol to a higher education course after studying a vocational qualification. At present, it is unclear how the new technical qualifications (T levels) will

compete with their counterparts within the academic pathway (A levels and Applied Generals), and how universities will incorporate technical qualifications into their admission processes in the future.

The Government is committed to introducing 'bridging provision' to enable students to switch pathways when moving onto higher level technical or academic education (or whilst still studying towards their chosen Level 3 qualification). This provision is set to be extremely important and its success is likely to be determined by the readiness of students to take it up and its credibility within the academic and technical sectors.

We recommend that the DfE should consider the following aspects in scheme design:

- The Government should consider funding bridging courses as part of 16-18 learning.
- Bridging courses will need significant input from both the FE and HE sectors at each phase: development, design, implementation, and provision.
- The DfE should consider how the timing and length of the course could facilitate take-up, for example by considering summer-school courses, and provision taking place in the second year of Level 3 study, as well as other time slots.

CHAPTER 1: INTRODUCTION

The UK's skills challenge

The current economic picture within the UK is challenging, with productivity stagnating and prices rising quicker than wages. UK labour productivity, as measured by output per hour, has grown little since the financial crisis. Output per hour in Q2 2017 was equivalent to Q2 2008 and significantly below where it should have been if the pre-2007 trend had continued.³ UK productivity lags significantly behind competitor economies: UK output per hour was only 76 per cent of the US level, 78 per cent of the French and 79 per cent of the German level.⁴ According to the Independent Panel on Technical Education, the small size of the post-secondary technical education sector within England is the reason productivity is lagging behind countries such as France and Germany.⁵ This argument is supported by the Higher Education Policy Institute (HEPI), who suggest that a shortage of qualified technicians at Levels 4 and 5 is part of Britain's productivity problem.⁶

The UK economy remains divided. In 2015, gross value added (GVA) per hour worked in London was 32% above the national average, whereas in the West Midlands it is 15% below the national average. This is likely, in part at least, attributable to the differences in education attainment and skills within the UK regions: in London 52% of the 16-64 population have an NVQ Level 4 equivalent or higher (degree or higher) compared to only 31% in the North East.⁷ There is also a large difference in the proportion of young people from each region who attend university: the median participation rate in London is 48% compared to 29% in the North East.⁸ This regional disparity in the numbers obtaining higher level qualifications occurs alongside challenges associated with the UK's intermediary skills; this includes practical and technical skills. It is projected that the proportion of the population with intermediate level skills is due to fall and by 2020 the UK will be ranked 28th out of the 33 nations of the OECD.⁹ The previous Education Secretary Justine Greening has noted this risk: *"We face chronic problems in basic skills for many adults and we have shortages of people with advanced technical skills at below degree level and STEM skills at all levels."*¹⁰ It is important that the UK develops the practical and technical skills of those currently in low skill employment to ensure that the labour market has the skills to meet employers needs going forward.

The UK's social mobility challenge

At the same time, the UK's record on social mobility remains weak; a guiding principle of current policy is to address this and ensure that a child's future is not defined by the income or social class of their parents. Division in the UK is not limited to the regions, there is an emerging generational divide and an income and wealth divide. Those born in the 1980s are the first post-war cohort not to start working-age life with higher incomes than their predecessors had at the same age.¹¹ Whilst progress is being made in relation to social mobility, there is still work to be done. Only one in eight children from low-income backgrounds are likely to become high earners as adults.¹² With the backdrop of very uneven participation rates at university, the Government has set targets on widening participation in higher education. Firstly, to double the proportion of university entrants from disadvantaged backgrounds by the end of 2020 compared to 2009, and to increase the number of BME students going to university by 20% by 2020.¹³ Jo Johnson, the previous Minister of State for Universities, Science, Research and Innovation, is quoted as saying *"Our universities should be open to everyone who can benefit from them, regardless of family background or ability to pay."*¹⁴

Vocational and technical education as a route into higher education

Through the Skills Plan and Green Paper on Industrial Strategy, the Government has indicated its ambition to improve technical education at secondary level, and to create wider pathways for young people to progress and gain higher level technical skills. The Department for Education has also spoken about the importance of technical education as part of its strategy for improving social mobility.¹⁵ The Department for Education has identified 12 specific social mobility cold spots and has so far created six opportunity area plans to help address these, with the remaining six plans due in the future. Several plans mention vocational education, highlighting its importance to the social mobility agenda.

Existing evidence suggests that those following a vocational route into higher education can prosper. Research by London Economics found that students who obtained a degree having previously studied a BTEC were more likely to be employed post-graduation than students who went down the more traditional route of A level and degree.¹⁶ The research also suggested that, within certain industries and regions, there is a wage premium associated with the BTEC route of degree acquisition, showing the importance of this vocational route.

For vocational education to remain an important vehicle for social mobility, we must ensure that this route into higher education remains available; this is particularly important given the changes to technical education being introduced through the T levels. Over the next five years there will be momentous change across the post-16 education landscape. The introduction of T levels could transform the provision of technical education. However, there is very little information on the details on how T levels will work and it is unclear whether - and how - students will be able to continue their learning through the technical or academic routes.

This research

Research aims

The aim of this research is to understand how the vocational pathway into higher education is currently working, and how can it function successfully in the future. The current non-academic routes into higher education are often referred to as vocational or technical routes, however the latter can cause confusion with the planned T levels which are also being referred to as the 'technical route'. Throughout this paper we will refer to the current non-academic routes into higher education as vocational routes.

The analysis examines the characteristics and demographics of those attending university with vocational qualifications, assesses how universities can improve access and success for students taking vocational qualifications, and explores how policy should evolve as changes to post-16 reform take shape.

Research methods

The first section of this work focuses on the demographics of those accepted into university after having studied a vocational qualification at Level 3. We use BTECs as a proxy for vocational education due to data availability and the large proportion of vocational students who study BTECs. The data used in this analysis was obtained from UCAS under a special license and covers the application period 2015/2016. We are grateful to UCAS for making this data available. Following on from this, the report explores current university policy and practices. This draws on discussions with university admission teams and a roundtable with universities, think tanks and industry experts in London. The section also draws on analysis of access agreements from universities ranked within the UK's top 20.

CHAPTER 2: WHO TAKES THE VOCATIONAL ROUTE TO HIGHER EDUCATION?

Given the importance of high-level technical education and the Government’s social mobility agenda, it is important to comprehend the characteristics of students who enter university with technical or vocational qualifications. This section compares the demographics of students entering university after studying towards vocational qualifications at Level 3 with students who undertook academic qualifications.

Vocational qualifications at Level 3: An overview

As of 2014, Level 3 vocational qualifications in England are classified in two groups: Applied Generals and Tech Levels. Tech Level qualifications lead to recognised occupations and are recognised by a relevant trade or professional body, or employers representative of the industry sector.¹⁷ Applied General qualifications provide broad study of a vocational area, and need to be recognised by at least three higher education Institutions in order to be delivered.¹⁸

Pearson’s BTEC qualifications appear both as Technical courses and as Applied General courses. They can be studied either on their own, as a part of a work programme such as an apprenticeship, or in complement to other qualifications such as A levels.

BTECs are “designed for young people interested in a particular sector or industry, but unsure about what job they’d like to do” in the future¹⁹. As such, BTEC Nationals (Level 3) offer students a spectrum of opportunities, from continued technical learning to higher level study (either academic or technical, or a combination) to employment.

Each BTEC course is built around National Occupation Standards, as set by industry sectors. All BTEC students undertake the compulsory core units which provide a broad foundation and understanding about the sector of interest. In order to specialise and tailor learning to their interests and aspirations, students then have a range of optional units to choose from in order to obtain their final qualification.²⁰

BTEC courses involve a series of written or activity-based assignments, some completed individually and some involving teamwork. A proportion of these assignments may require students to carry out tasks in a work placement setting, if necessary. Recent reform has also seen the introduction of external assessment.

Grading ranges from Unclassified (U) to Pass (P) to Merit (M) to Distinction (D) to Distinction* (D*). The number of grades within each BTEC course varies dependent on the qualification type, as summarised in Table 1 below.

Table 1: BTEC qualifications at Level 3 and value of qualifications compared with A levels

Qualification and Curriculum Framework (QCF) BTEC Level 3 qualifications	New Regulated Qualifications Framework (RQF) BTEC Nationals	A level Equivalence
Certificate (graded P, M, D, D*)	National Certificate (graded P, M, D, D*)	0.5 x A level
Subsidiary Diploma (graded P, M, D, D*)	National Extended Certificate (graded P, M, D, D*)	1.0 x A level
90-credit Diploma (graded P to D*)	National Foundation Diploma (graded P, M, D, D*)	1.5 x A level
Diploma (graded PP to D*D*)	National Diploma (graded PP to D*D*)	2.0 x A level
Extended Diploma (graded PPP to D*D*D*)	National Extended Diploma (graded PPP to D*D*D*)	3.0 x A level

Source: Pearson

The following charts use BTEC qualifications at Level 3 as a proxy for vocational education. BTECs are one of the most common types of such qualifications in England: in 2015, BTEC courses accounted for 77% of vocational qualifications undertaken at Level 3.²⁰ Previous SMF research has shown that the increase in the popularity of vocational qualifications in recent years was driven mainly by the higher uptake of BTECs (150,000 students studied one or more BTECs at Level 3 in 2014, up from less than 50,000 students in 2006).²¹ UCAS describes BTEC courses as the ‘most popular and well-established option’ among Applied General qualifications.²²

Equivalently, we use GCE Advanced Level (A level) qualifications as a proxy for academic education at Level 3. It is common practice for students to study three or four subjects at A level in order to progress to higher education, as most higher education courses require specific A levels or combinations of A levels.²³

Data Description

Data on the number of students applying and being accepted with either a BTEC or an A level (or a mixture of both, or neither of the two) to university is collected on an annual basis by UCAS. We use data from the 2016 UCAS End of Cycle application period, recorded between September 2015 and 30 2016.

We focus on students in England only, as Wales, Northern Ireland, and Scotland have devolved power over education.

Our analysis reveals that more than half (54%) of all *applicants* in England applied to university in the 2016 Cycle after only having studied only A levels, whereas one in six (18%) held only BTEC qualifications. An additional 8% studied a mix of A levels and BTECs.

Two in ten (21%) applied to higher education after completing a different qualification. Due to the popularity of A levels and BTECs within the wide range of academic and vocational courses, respectively, and due to the sheer number of alternative combination of qualifications at Level 3, we focus our analysis on the remaining 79% of applicants, which represent roughly 390,000 students.

Note: The data includes students who applied during this period but deterred their entry by a year, however it excludes those who applied before September 2015. Students who enrolled through Clearing are excluded from the number of applicants, but are counted in the number of acceptances. Disclosure controls are applied, so the data is reported to the nearest five.

Figure 1: Applications by qualification type

Qualification Type	Percentage
A level	54%
BTEC	18%
Both	8%
Neither	21%

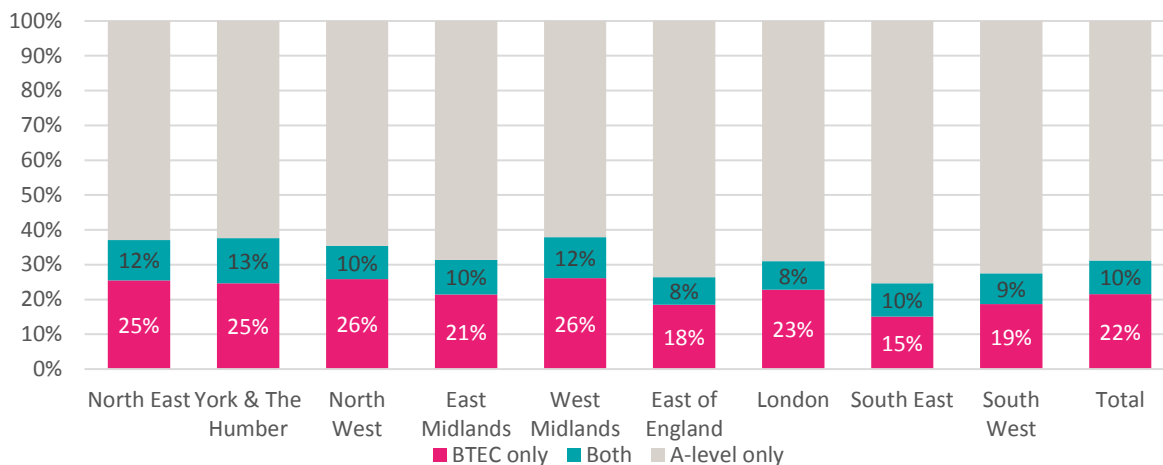
The remaining data²⁴ shows that on average, one fifth (22%) of students in England *accepted* to university hold solely BTEC qualifications, compared to seven in ten (69%) who hold only A level qualifications and the remaining 10% have a combination of A levels and BTECs.

The vocational route to HE across the regions

There are substantial regional differences in participation of young people in higher education in England. The median participation rate in London is 48% compared to 29% in the North East.²⁵ Figure 2 illustrates a North – South divide in the type of Level 3 qualifications students undertake prior to attending university. In the northern regions (the North East, Yorkshire and the Humber, the North West) and the West Midlands, we

see the largest proportion of students accepted to university with a BTEC: a quarter of accepted students hold only BTEC qualifications, whereas around 1 in 8 studied a BTEC in combination with an A level.

Figure 2: Acceptances by region



Source: SMF analysis of UCAS End of Cycle 2016 data

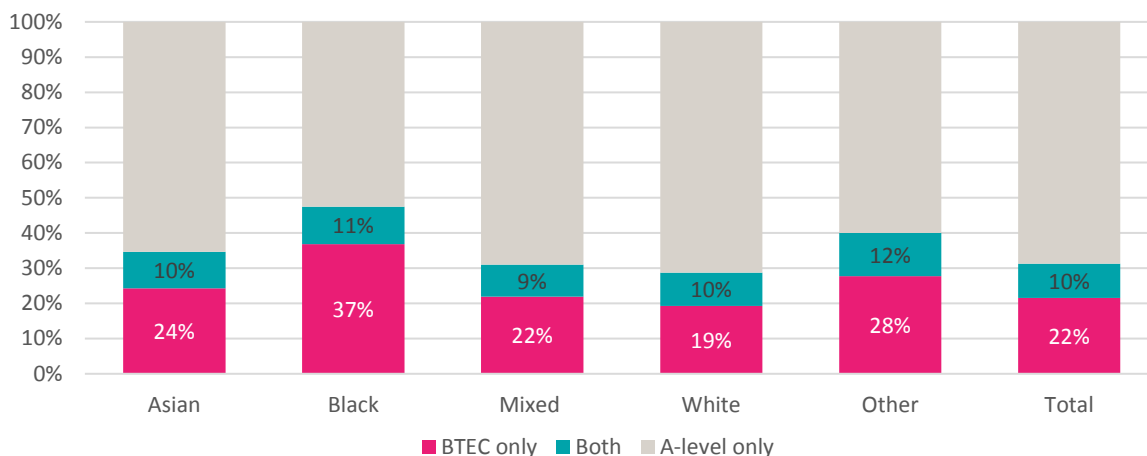
In contrast, the further South, and East, we extend the analysis, the less likely accepted students are to have studied towards a BTEC qualification at Level 3. In particular, the proportion of students accepted to university after having studied only BTECs are underrepresented in the East of England (18%) and the South West (19%), both when compared to other regions of England, and to the national average (22%). Furthermore, only 15% of accepted students from the South East were BTEC-only holders, which is markedly the lowest proportion across all regions.

The vocational route to HE by ethnicity

The Government has set a goal to increase the number of Black and Minority Ethnic (BME) students going to university by 20% by 2020, compared to 2009.²⁶ In the ten-year period between 2006 and 2016, the entry rate for Black English 18-year-old state school pupils increased from 20.9% to 37.5%.²⁷ It is therefore important to recognise and promote the routes used by BME students to progress into higher education.

Figure 3 shows a clear link between ethnic background and the likelihood of having studied a BTEC prior to being accepted into university. Students accepted to university from non-white backgrounds are more likely to have studied towards a BTEC qualification than white students. A quarter of Asian students (24%), just over one in five (22%) of mixed students, and 37% of black students were accepted to university after completing only BTEC qualifications. On the basis of this data, the proportions holding a mix of qualifications does not appear to differ so markedly.

Figure 3: Acceptances by ethnic background



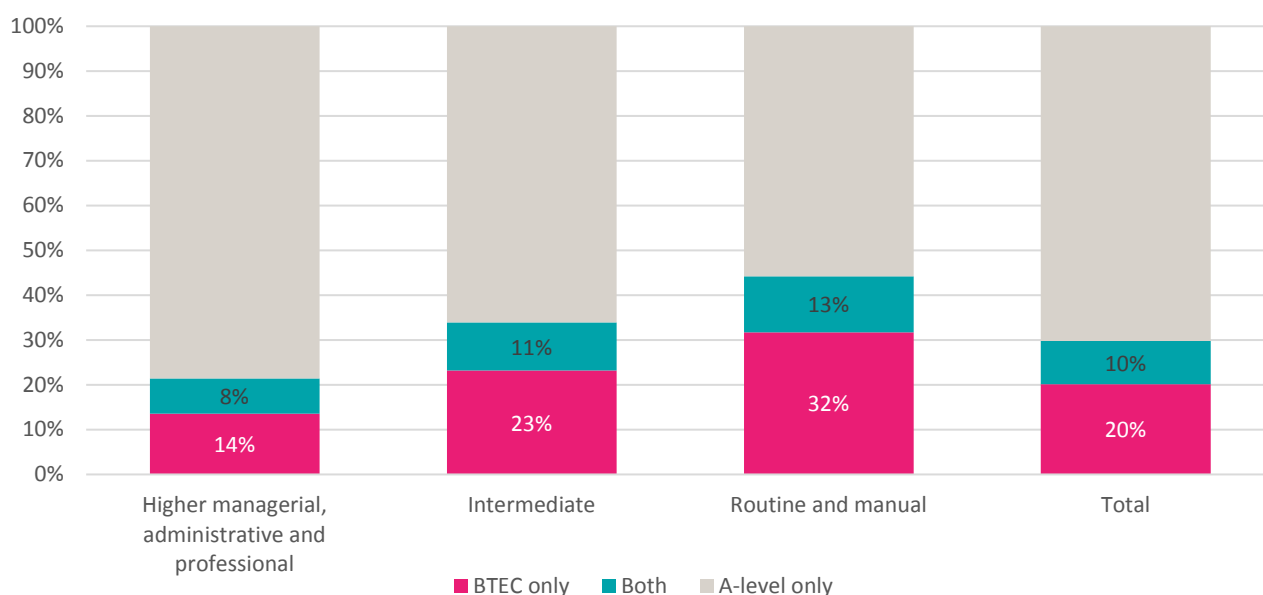
Source: SMF analysis of UCAS End of Cycle 2016 data

The vocational route to HE by socio-economic background

In a recent report by the Social Mobility Advisory Group evidence shows that “socio-economic disadvantage continues to be the most significant driver of inequality in terms of access to and outcomes from higher education”.²⁸ In addition to the Government’s target on improving the number of students from BME backgrounds, there is an ambition to double the proportion of university entrants from disadvantaged backgrounds by the end of this Parliament (compared to 2009).²⁹

Our research shows that students accepted to university from ‘working class’ backgrounds are more likely to have BTEC qualifications, when compared to the national average, as shown in Figure 4. Researchers interpret ‘working class’ in different ways often because of data availability. As the Education Select Committee has noted, NS-SEC occupational categories do not map over precisely to other definitions of working class (such as self-identification) and there are a number of reasonable groupings. Here we include occupations 5, 6 and 7 in our definition.³⁰ Three in ten (32%) of successful applicants from routine and manual labour market backgrounds have undertaken only BTEC courses, and an additional 13% hold a mix of BTECs and A levels. Figure 4 also highlights the trend that the more manual the parental occupation is, the more likely the student is to go to university with a BTEC qualifications (both standalone and as a complement to an A level).

Figure 4: Acceptances by occupational background of the student's parent

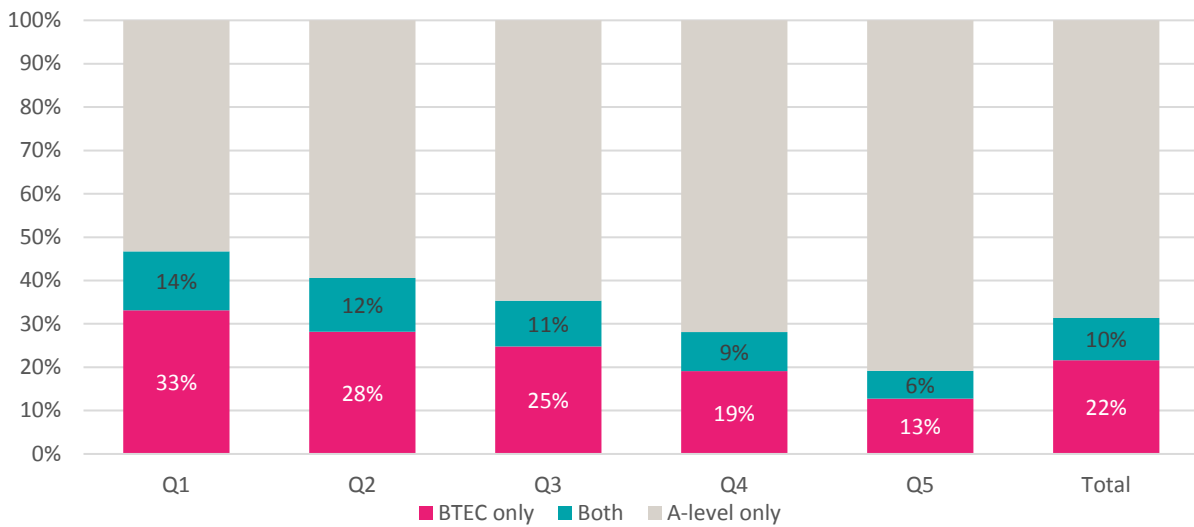


Source: SMF analysis of UCAS End of Cycle 2016 data

Note: The ‘Total’ column refers to the national (England) average of acceptances of students whose parental background is classified as NS-SEC 1 – 7; the data excludes students whose parental backgrounds are unspecified/unknown, hence why the ‘Total’ differs from the national averages specified in the remainder of the figures.

The impact of socio-economic background on the type of qualification studied prior to university is also pronounced when we look at the POLAR measure, which tracks how well an area performs in sending young people to university. Students accepted to university are more likely to have studied a BTEC (either on its own or as a mix with an A level) at Level 3 if they come from a low participation area: 47% of all successful students living in the most disadvantaged areas (Q1) are BTEC holders. In comparison, only one in five (19%) of accepted students from high participation areas studied towards a BTEC qualification prior to going to university.

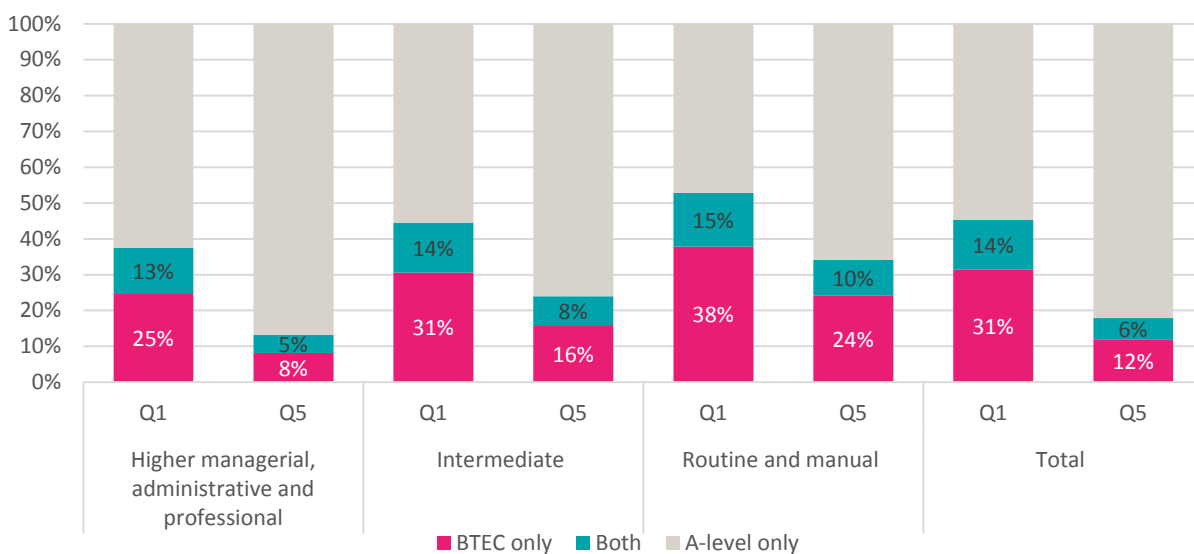
Figure 5: Acceptances by participation rate of local area (POLAR 3)



Source: SMF analysis of UCAS End of Cycle 2016 data

Controlling for the participation rate of students' home area and the occupational background of their parents reinforces the above findings. Students from low participation areas (Q1) are more likely to have studied at least one BTEC course prior to being accepted to university, regardless of parental occupation. Simultaneously, the more routine the occupation of their parents is, the more likely accepted students are to hold a BTEC qualification, regardless of their home area's history of sending young people to university. This shows the importance of looking beyond single metrics of disadvantage when analysing the routes to higher education. Across all measures of disadvantage, vocational qualifications are an important route, and even more so when we focus on those in low participation areas and from low socio-economic backgrounds.

Figure 6: Acceptances by participation rate of local area (POLAR 3) and parental occupational background



Source: SMF analysis of UCAS End of Cycle 2016 data.

Note: Total column not equal to previous graphs due to aforementioned issues associated with the inclusion of occupation classifications

For students from higher managerial, administrative, and professional socio-economic backgrounds, almost four in ten (38%) of students living in the most disadvantaged areas (Q1) were accepted to university with a BTEC qualification, either by itself or in combination with an A level. In comparison, just over one in ten (13%) students of the same socio-economic class living in high participation areas (Q5) were accepted having studied a BTEC at Level 3.

Accepted students whose parents work in routine and manual jobs were the most likely to have studied a BTEC. Over half (53%) of students from low participation areas (Q1) and one in three (34%) of those living in the least disadvantaged areas (Q5) were accepted to university with either solely BTEC qualifications, or a mix of BTECs and A levels. As Figure 6 shows, students accepted to university from low participation areas with parents working in manual and routine jobs are the most likely group to hold a BTEC qualification.

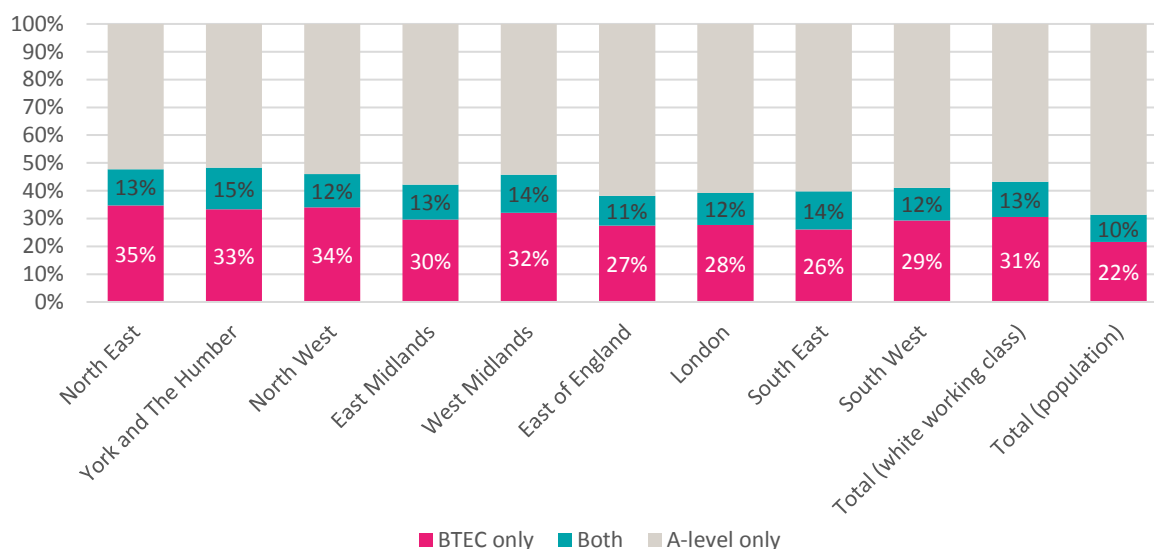
The ‘White Working Class’ dimension

White students from working class backgrounds are systematically underachieving in education. At age 16, White British students from routine and manual occupations are outperformed by all ethnic minority groups from similar backgrounds (except for Black Caribbean boys who do not perform any differently than White British boys).³¹ As highlighted by Theresa May in her first speech as Prime Minister, white working-class boys are “less likely than anybody else in Britain to go to university”.³²

With this evidence in mind, we shift our attention to the acceptances of white students from ‘working-class’ routine and manual socio-economic backgrounds. White working-class students accepted into higher education are very likely to have studied a BTEC at Level 3, when compared to the national average (32%): 44% of accepted white working-class students undertook at least one BTEC qualification.

Regional disparities are marked. Around a half of white working-class students accepted to university in 2016 from the North East (48%), Yorkshire and the Humber (48%), the North West (46%) and the West Midlands (46%) held at least one BTEC qualification at Level 3.

Figure 7: Acceptances of white working-class students, by region



Source: SMF analysis of UCAS End of Cycle 2016 data

Summary

The data analysis highlights the following trends:

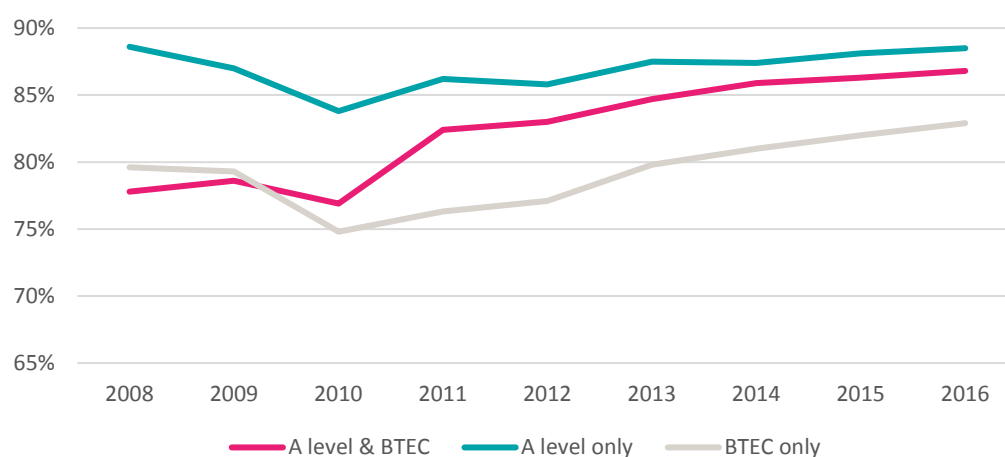
- On average, one fifth (22%) of students in England are accepted to university after studying solely BTEC qualifications at Level 3. A further one in ten (10%) are accepted with a combination of A levels and BTECs.
- There is a geographical divide in the type of Level 3 qualifications students undertake prior to attending university. Students from the North are more likely to be accepted to university after studying at least one BTEC, whereas students from the South and East are mainly accepted after having studied A levels.
- In particular, in the northern regions (the North East, Yorkshire and the Humber, the North West) and the West Midlands a quarter of accepted students hold a BTEC, whereas around 1 in 8 studied a BTEC in combination with an A level.
- Students accepted to university from non-white backgrounds are more likely to have studied towards a BTEC qualification than white students. A quarter of Asian students (24%), just over one in five (22%) of mixed students, and 37% of black students were accepted to university after completing only BTEC qualifications at Level 3.
- Accepted students from 'working class' backgrounds are more likely to have studied only BTEC courses at Level 3. We find that the more manual the parental occupation is, the more likely the student is to go to university with a BTEC qualification (both standalone and as a complement to an A level).
- Students accepted to university are more likely to have studied a BTEC (either on its own or as a mix with an A level) at Level 3 if they come from a low participation area (in relation to the area's history of sending its young people on to higher education). 47% of all successful students living in the most disadvantaged areas (Q1) are BTEC holders.
- Controlling for the participation rate of students' home area and the occupational background of their parents reinforces the above two findings. Students from low participation areas (Q1) are more likely to have studied at least one BTEC course prior to being accepted to university regardless of parental occupation. Simultaneously, the more routine the occupation of their parents is, the more likely accepted students are to hold a BTEC qualification, regardless of their home area's history of sending young people to university.
- White working-class students accepted into higher education are very likely to have studied a BTEC at Level 3, when compared to the national average. Regional disparities remaining, almost a half of all students from white working-class backgrounds in the North East (48%), York and the Humber (48%), the North West (46%), and the West Midlands (46%) were accepted to university after studying at least one BTEC course.

CHAPTER 3: UNIVERSITY POLICY AND PRACTICES

The previous chapter revealed that many students from disadvantaged backgrounds who are accepted into higher education institutions have previously studied vocational courses.

Whilst the number of students attending universities with vocational qualifications has increased in recent years, these students still face obstacles when applying to university. Figure 8 illustrates that the acceptance rate gap between those with A levels and those with BTECs has narrowed overtime however there is still a considerable difference. In 2016, the acceptance rate for students with A levels was 89% compared to 83% for students with BTECs, a gap of 6 percentage points.³³

Figure 8: Acceptance rate by qualification over time



Source: UCAS (2016)

This chapter explores:

- Factors that hinder progression into higher education of students with vocational qualifications including qualification design, prior attainment and clear progression routes.
- Policies that support progression into higher education including admissions policies, information, advice and encouragement to vocational students and the role of Access Agreements.
- Interventions that can help ensure that vocational students prosper when at university.

Issues that hinder higher education progression

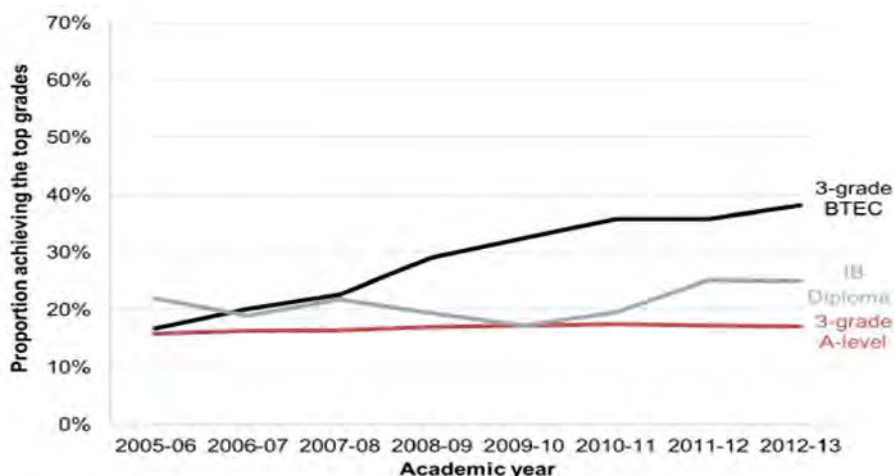
As shown, students with vocational qualifications achieve a lower acceptance rate into university than students from a solely academic background. Below we explore a range of factors that may explain this and how they may be overcome.

Qualification design

One explanation for the lower acceptance rates of BTEC students could be the qualification itself, in recent years there has been some criticism of BTECs, often centring around grade inflation. There has been a large increase in the proportion of BTEC students obtaining the top grades since 2005, whereas the proportion receiving top A level grades has remained consistent. In 2012/13, 38% of students studying BTECs received top grades compared to less than 20% of those studying A levels.

Arguably, the high proportion of students receiving high marks does little to reassure admission departments that the grades being awarded represent the true ability of the students. During our conversations with admissions departments it was clear that this is something that they are concerned about.

Figure 9: Proportions of three-grade A level, three-grade BTEC and IB Diploma cohorts achieving the ‘top grades’³⁴

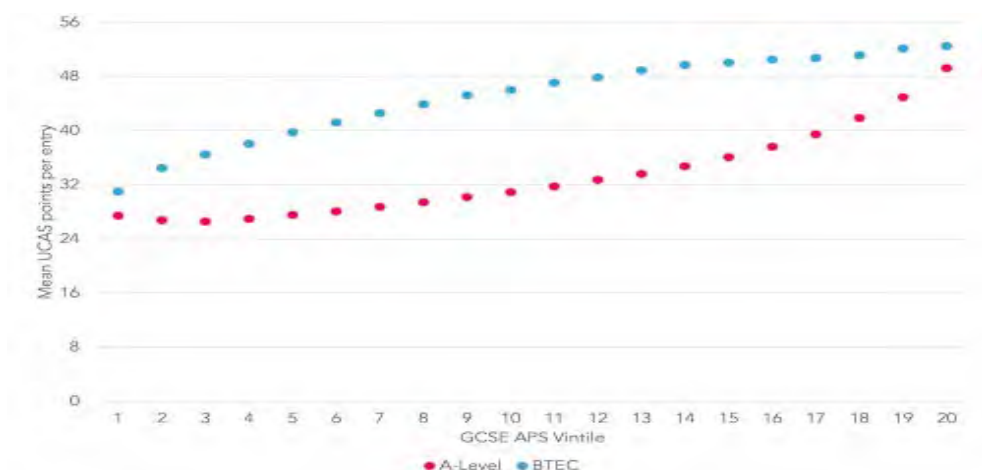


Source: HEFCE (2015)

This graph was published as part of a HEFCE report in 2015 and uses data from the academic year 2012/13. Since then BTECs have undergone changes to improve their rigour and there are several other changes which are in the process of being implemented. September 2014 saw the introduction of stricter rules of internal assessments such as the restriction of one submission per assessment and tightening the rules around the resubmission and retaking of assessments³⁵. External assessment was introduced in 2016 a bid to drive up rigour and credibility: it accounts for at least 33% of a student’s final grade, and most subjects studied via BTECs have at least one written examination. The reform also restructured BTEC courses at Level 3 so that more emphasis was given to research skills, mathematics and/or English (writing).³⁶

To ensure that BTEC students can progress into high tariff institutions, we must look at what more can be done to ensure that the current reputation of BTECs at some of these institutions is improved and tackling issues around grade inflation and student ability is essential.

Figure 10: Relationship between UCAS points and GCSE grades



Source: Education Datalab, 2017³⁷

Figure 10 shows how students with the same GCSE grade profile perform at Level 3. The graph shows that BTEC students receive more UCAS points compared to A level students along every GCSE vintile. This means that students who achieve equal grades at GCSE level will perform differently at Level 3, with the student who

chose to study a BTEC outperforming the student who opted for A levels. Worryingly this could suggest that BTEC performance is not a clear representation of a student's ability. However, as BTEC tend to be more technical than GCSEs some of this variation may be explained by new assessment methods that are better suited to the student's way of learning. Not only do BTEC students sit fewer examinations but students are assessed on their ability throughout the year rather than relying on an end of term assessment where their ability to retain information is tested. It could also suggest that students who have chosen to do a BTEC have chosen a subject that better reflects their interests, the ability to specialise on one area means a student may find more enjoyment in the learning experience compared to when studying GCSEs and find that they are able to achieve more than they have at previous levels of education.

Prior attainment

Alongside issues of grade inflation, universities described problems associated with the varying academic ability of technical and vocational students who attend university with the same grade profiles. The lack of examinations within the technical and vocational courses means that students entering university via this route may not have developed as many skills that are needed to succeed within higher education, this could include a lack of examination practice, difficulties with independent study or an inability to adapt to academic writing styles.

If universities believe that students entering via a vocational route are not sufficiently prepared for higher education they may be reluctant to extend an offer to these students' due to increased expenditure on support services. Universities spoke positively about steps being taken with BTECs, such as the introduction of external assessments to reduce variability and more examinations to ensure students are better prepared for the academic aspect of university.

Students from technical or vocational backgrounds tend to attend medium to low tariff higher education institutions. In 2016 the proportion of English 18 year olds at higher tariff universities that held higher grades at BTEC increased to 2.4%. The comparable figure for lower tariff providers was 16.4%.³⁸ This evidence shows that the proportion at higher tariff institutions rose, whilst those at medium to low tariff fell. High tariff institutions tend to offer more traditional courses which remain highly academic and therefore the lack of progression into these universities from students with vocational qualifications at Level 3 may be a consequence of subjects offered at higher education institutions. However, our discussions with admissions teams revealed some concerns associated with previous attainment. While students with vocational qualifications often meet the Level 3 entry requirements, there can be problems when looking at their performance at level 2, students from these backgrounds can fall short of the requirement to hold 5 A*-C grades including Maths and English. This view supports previous SMF research which found that not achieving 5 A*-C grades at GCSE increases the likelihood that a student will take a BTEC by almost 200%.³⁹

Failure to meet level 2 requirements can stop students being able to progress into higher education and is likely to impact advancements in social mobility. The compulsory resits that have been in place for students who fail to reach grade C or grade 4 under the new grading system should in practice remove these issues however this system is widely criticised as being inappropriate for some students.⁴⁰ Students can struggle with examinations and by forcing resits on students that do not perform well in an academic environment may be counterproductive. Compulsory academic resits could demotivate students further and reduce their confidence in their ability to succeed, particularly within vocational based courses or within higher education. If compulsory resits of GCSEs do little to improve the numbers of learners obtaining their Maths and English GCSEs then the government should reconsider its policy and look beyond the traditional GCSE examinations.

Progression routes

Another area that may hinder progression from Applied Generals to higher education is a lack of a clear progression route. There are subjects with clear crossover in terms of content and skills developed at FE and what is needed for success at HE, however, this can be dependent upon the content offered by sixth-forms and colleges. Students who have studied vocational qualifications at Level 3 and progress onto a technical

degree, such as social work and nursing, can find that their previous experience has prepared them well for their HE courses. In these circumstances, there is a clear progression route from Level 3 to degree, which results in students being well prepared due to similarities in the subject content and the assessment types. Issues can arise when students have taken optional modules that do not prepare them for the content of their degree. Examples often quoted include a lack of science knowledge for sports science or insufficient mathematics for engineering degrees, although there are changes occurring within the BTEC curriculum.⁴¹

In our discussions, high tariff universities were open to allowing students from vocational backgrounds to apply for subjects with a technical or practical element at university, whereas they were more hesitant in accepting students from vocational backgrounds onto courses they deemed more traditional or academic. In these cases, universities may be less clear on how students from the vocational backgrounds would fare on their chosen university course.

Clearer progression routes can be created by improving module similarities, adjusting the modes of assessment and developing more of the study skills needed to succeed. There are some good practices apparent within the sector. More could be done to help facilitate this coloration, including involvement from the Department for Education, the Office for Students and the Education and Skills Funding Agency (ESFA).

Recommendation 1:

Further and higher education institutions should work much more closely together, particularly on progression routes. The Office for Students and Department for Education should help facilitate this collaboration and include the Education and Skills Funding Agency (ESFA) when appropriate.

The case studies below highlight the role that colleges and sixth-forms can play in ensuring their students not only progress into higher education but succeed once there. Collaboration on a local or regional level between FE and HE can be of particular importance given that we know students from lower socio-economic backgrounds are more likely to study at an institution close to their home.⁴²

Case Study

The University of Sheffield is pursuing initiatives to improve the transition from further education to higher education for BTEC students. These have been undertaken following recognition that BTEC students had higher drop-out rates and that they often come from Widening Participation backgrounds.

The University has established a partnership with local schools and colleges as well as Pearson and HEPP with support from HEFCE. Eleven University departments covering all faculties have participated in the programme. Academics from these departments observed study and practices in FE settings and vice versa with a view to collectively assessing how the transition from FE to HE could be improved. Participants identified a wide range of themes including critical thinking, independent learning and tutor feedback.

This analysis has led to six work streams being set up, including a summer school for BTEC students, a new 'Studying in HE' module, promotion of an existing mentor scheme to BTEC students, FE teachers observing teaching at the university, more targeted outreach activities for BTEC students and a tailored online resource for FE students before entry.

Case Study

Brunel University London worked with a local college to create an 'Education Exchange. This involved a meeting between FE and HE practitioners working in the same discipline to discuss the BTEC and university first year syllabi, teaching and assessment methods and student academic support. The aim of this Education Exchange was to look at the BTEC programme in relation to what is required during the first year in key subject areas, as well as to discuss current practice and innovative ideas around supporting transition.⁴³

Working locally has its benefits but more could be done to ensure students throughout the country succeed, not all colleges or universities are geographically suited to collaboration of this type. There is potential for universities and FE colleges to aggregate their voices. This could allow wider and more influential collaboration, allowing universities of all sizes and reputations to raise issues that they feel influence access and progression for all students. The aggregation system should be created to ensure no single university, or group of universities, has an advantage. One option could be for Universities UK to create a panel from across its membership to advise on these issues.

Recommendation 2:

Collectively, universities should explain better the requirements of different courses and modules in terms of subject matter and assessment. This could take place through existing university bodies.

Supporting progression into higher education

This section explores how admissions processes can be designed to give vocational students a fair opportunity to participate in higher education. It also describes what more can be done to ensure that those not following the traditional academic path are aware of the opportunities through higher education study and able to apply.

Admissions

Admissions processes are already going through changes to widen participation. In recent years there has been an increase in the number of universities using contextualised admissions, this is where the student's background and circumstances are considered alongside their application. The London School of Economics (LSE) received attention recently for the improvements it has made regarding widening participation, with research by Reform suggesting that in 2015/16 LSE's contextualised admissions policy led to a 3.41 percentage points increase in the proportion of disadvantaged students.⁴⁴ In the current admissions cycle UCAS is working with a small number of universities to test the feasibility of using their Multiple Equality Measure (MEM) in the contextualised admissions process.⁴⁵ Vocational students may benefit from an increased use of contextualised admissions due to their demographics.

The Government's goal is that T levels will achieve parity of esteem with A levels. For this to be achieved the government needs to allow adequate time for technical qualifications to bed in and for the transition from the current system to be smooth. Education policy has gone through numerous changes over the years and the sector needs time to adjust to change without the fear of more changes.

Going forward Applied General and A levels will both be within the academic route following the introduction of the post-16 skills plan and therefore, in the long-term, should be treated equally by admissions. Admission equality would mean that a student who meets the entry criteria for their chosen course is not assessed based on the type of qualification they have obtained. A more open discussion on the appropriateness of different entry routes and qualifications would allow universities to make better informed decisions during the admission process, whilst recognising that different qualifications prepare students for different things.

Recommendation 3:

The Government should lead a national conversation aimed at raising the profile and status of technical and vocational qualifications. Promoting an open discussion on the appropriateness of these qualifications for a variety of routes should be encouraged.

An alternative method for pursuing equality could be qualification blind admissions. Currently, there are situations where students with non-traditional qualifications are expected to receive higher grades than those

coming through with purely academic qualification, there are university courses where the BTEC requirements are not equivalent in points to the A level grades required. Situations such as this need to be carefully considered when designing the qualification blind admissions system. We envisage that the system, potentially run by UCAS, would allow a university to guarantee that the applicant had met the entry requirements asked of them, including subject and grade requirements, but the university would be unaware of the qualification. The applicant would be judged on their personal statement and other supplementary information. This would require significant and fundamental changes to the admission process.

Encouraging students to apply to university

Past research has shown that there are constraints that prevent students choosing the optimal subject mix at age 14 and 16, and that preconceptions may determine what learning pathways students pursue.

A study in 2014 found that only 30% of young people believed that universities would consider BTEC qualifications when looking at applicants.⁴⁶ Previous SMF research has shown that parents tend to believe that academic qualifications offer a higher quality of education compared to vocational qualifications.⁴⁷ Parental attitudes combined with a lack of knowledge among potential applicants could be limiting choices. In the future, BTECs and other Applied Generals will be included in the academic pathway, and this may itself reduce some of the stigma attached to these qualifications. Whilst there are some university degree programmes that do not accept vocational students, this is not the norm, therefore the student's belief that universities will not accept BTEC qualifications appears to be unsubstantiated. Several of the universities we spoke to accept BTEC and other vocational qualifications and openly publish the grade requirements on their website. By being open on vocational qualification grade requirements, providing information on Level 3 course preferences and alerting students to circumstances where an academic qualification is needed alongside a vocational qualification, students will be well informed and confident in their ability to progress into higher education.

Recommendation 4:

Ministers and the Office for Students should encourage universities to publish the grade requirements for all types of qualifications on their website and within prospectuses.

Encouraging students, particularly those from disadvantaged backgrounds, to apply to university is an issue for policymakers. As mentioned, the government has set two goals on widening participation. Research conducted by the SMF in 2016 showed that if current trends were to continue then the government is likely to fall short of its targets.⁴⁸ Therefore there could be reason to look beyond traditional methods of engaging students with their post 18 options.

Nudge theory is being used to encourage students not only to apply to university but to apply to higher tariff universities. In 2017, the Behavioural Insights Team and the Department for Education (DfE) conducted a large scale randomised control trial (RCT) to encourage students to apply to high tariff institutions. The trial involved sending letters to 11,104 students either to their home, their school or both addresses. Whilst the trial had no significant impact on the numbers applying to university, it did have a positive and significant impact on the numbers applying to Russell Group Universities.⁴⁹ We suggest extending this trial to focus on those from vocational backgrounds and their entry into all types of higher education institutions.

Recommendation 5:

The Department for Education should initiate a trial to use behavioural science techniques to encourage appropriate students from vocational backgrounds to apply to university.

Informing students

To help students be successful with their applications to university we must ensure students are provided with the correct information to maximise their chance of success. Some university degree programmes require an A level alongside a vocational qualification, it is important that students are made aware of these requirements as early as possible when choosing which subjects and qualifications to study at Level 3. The importance of information, advice and guidance (IAG) was highlighted within the final report from the Social Mobility Advisory Group. It stated that students from disadvantaged backgrounds may not be able to access quality advice and guidance through their current networks compared to more privileged students, particularly in relation to the provision within schools. The report states that “the quality of IAG in state schools is also often patchy, reinforcing disadvantage for state school pupils.”⁵⁰ The importance of information and guidance is also mentioned within the Department for Education’s delivery plans for its social mobility and opportunity area research. Ensuring that students, particularly those with less traditional qualification, are aware of all the progression routes available to them should be a top priority for schools, colleges and universities. The government is due to publish a careers strategy shortly, including proposals to improve the quality and coverage of careers advice in schools.⁵¹

The National Careers Service offers advice in various forms to individuals looking for careers advice, however the government does not have a comparable service for those looking for education advice. UCAS offers advice for students on their 16-18 choices and on higher education options, but, whilst the information provided on the UCAS service is detailed and student-friendly, it requires students to be proactive and engage with the UCAS website.

When the post-16 skills plan comes into force, pupils will be making a choice between the academic and technical pathway at an early age and we must ensure that they can access the information needed to make a well-informed decision that will enable them to succeed in the future. UCAS does not have knowledge on the student, their background or the local offerings, advice that is tailored to the student is likely of more value. We welcome the announcement from the DfE that the careers strategy is to be published in autumn/winter 2017. It is essential that the careers strategy and subsequent provision of advice recognises the current routes in higher education, ensuring that the route from technical or vocational education into higher education is not overlooked.

Recommendation 6:

The DfE should ensure that the implementation of the new Careers Strategy does not overlook the route into all forms of higher education for students from vocational and technical backgrounds.

Access agreements

We have demonstrated that students from ethnic minorities, areas with low levels of higher education participation and low socio-economic backgrounds tend to be more likely to enter university with a vocational qualification compared to the average student. Therefore, by accepting students from vocational backgrounds universities can make progress on widening participation. As part of the Teaching Excellence and Student Outcomes Framework (TEF) consideration is given to the outcomes of students from different types of backgrounds, the backgrounds of students are monitored in Access and Participation Agreements. University access agreements are annual reports that outline the initiatives being used by higher education institutions to improve access, student success and progression amongst young people from under-represented and disadvantaged groups. The Office for Fair Access (OFFA) also refers to these as target groups, which include, but are not limited to, people from lower socio-economic groups or from neighbourhoods where higher education participation is low, people from low income backgrounds, some ethnic groups or sub-groups (such as white males from economically disadvantaged backgrounds).⁵² Our data analysis in Chapter 2 has shown that students who attend university having previously studied a BTEC are

more likely to fall into these groups than the typical student and therefore could be within scope of the access agreements.

Therefore, it may be beneficial for access agreements to focus specific attention on these entry routes.

Focusing on universities who are reported as being within the top 20 in the UK according to the Good University Guide⁵³ there are several institutions who fail to mention vocational or technical education within their access agreements. However, there are some universities who give specific mention to the access and participation of those from vocational or technical backgrounds.

The University of Nottingham

Details of the university's bursary offering are discussed within their 2018/19 access agreement. The university offers students entering via access routes or with vocational qualifications and with a residential income of up to £35,000 a bursary of £1,000 a year throughout their undergraduate degree. Bursaries can help students support themselves at university and this type of direct help may allow students to succeed. The university also offers foundation courses in some of their more selective courses which have lower entry requirements than typical degrees and they receive a high proportion of applicants with vocational qualifications.⁵⁴

The University of Exeter

With the 2018/19 access agreement the university mentions that they are currently undergoing a research project which seeks to tackle the potential barriers faced by students with vocational qualifications when they enter higher education. The project will seek to identify and challenge the barriers experienced by students with BTECs as they apply for, and then enter higher education. The aim of the project is to address the gap between those taking solely BTEC qualifications and those moving into higher education, following this the university will identify ways in which they can smooth and aid the transition once they enter university.⁵⁵

The University of Bath

There are numerous mentions of vocational qualifications within the University of Bath's 2018/19 access agreement. They are concentrating their efforts on access and success. Their outreach work is focused on sub-groups of students, one of which includes those from vocational backgrounds. The University states that from 2017 there will extra support in their admissions department with the newly created role of Admissions Progression Officer, the officer will work to enhance the applicant experience of those applying with Access to HE diplomas or vocational qualifications. Not only is the university focusing on access but they state that they will closely monitor participation and retention rates of students with characteristics that have previously been linked with higher than average dropout rates, including those with vocational qualifications.⁵⁶

Due to the demographics of those studying vocational qualifications it is more likely that they have very little experience of the higher education system. Universities, colleges and sixth-forms should do more to improve students' knowledge of higher education, either through open days, taster sessions and summer schools. These types of activities are actively encouraged by OFFA and within access agreements due to their ability to improve access to higher education.

Encouraging success at university

It is important that we encourage those who enter university with BTECs or other vocational qualifications to succeed. There are numerous benefits associated with this route of degree acquisition including higher than average employment rates compared to A level plus degree holders. There is a wage premium within certain industries and regions. It can also offer a route back into education for those who have taken time out of the education system.⁵⁷

However, those from vocational backgrounds can find the transition to higher education study particularly challenging. In our discussions, universities raised issues regarding the level of preparation students of entering the higher education system. In some cases, this lack of preparation can come from a lack of examination experience and the divergence between modules studied at Level 3 and first year course design. However, it is worth noting that steps are being taken within the new Regulated Qualifications Framework to recognise and combat these difficulties.

A wider focus on retention and success

In the academic year 2015/16 more than half of access agreement investment was spent on financial support and less than one third was spend on access and student success. Evidence on the effectiveness of financial support is mixed, OFFA has previously conducted research suggesting financial support has no significant impact on retention rates.⁵⁸ However, this was before tuition changes in 2012, following this OFFA have developed a set of tools to allow universities to evaluate the impact of their financial support packages. Investment projections based on access agreement data show a trend towards greater spending on access and success. In 2021/22, it is projected that spending on access and student success will increase to over 45% of total investment spending.⁵⁹ According to data from OFFA universities have historically spent more money on access than on student success, however predictions suggest that from 2018/19 this trend will reverse.⁶⁰ This represents a positive step towards moving the debate on widening participation away from focusing solely on the numbers attending university towards retention and graduate success.

The introduction of the Teaching Excellence and Students Outcomes Framework (TEF) means that universities are measured against their ability to retain students, the results are benchmarked against student intake and widening participation experts have been included on the TEF panel. Previous SMF research has shown that universities with high proportions of students from low socio-economic backgrounds or areas of low participation in higher education tend to see higher than average levels of dropout.⁶¹ This creates a trade-off between accepting more students from backgrounds that allow universities to meet widening participation targets and ensuring that retention rates remain close to the benchmark.

We heard in our research that some university admissions teams believe that students from vocational backgrounds have higher than average dropout rates. The gap between A level and BTEC students in terms of completion rates, degree classification and average earning has narrowed considerably in recent years.⁶² At present that data shows that 12% of young students who entered university in 2014/15 with a BTEC qualification subsequently dropped out of university, compared to 6.2% for all students.⁶³

However, there is very little evidence on dropout rates that takes into account the socio-economic characteristics of the vocational student population. To wit, since vocational students are more likely than non-vocational students to be from the groups that have the highest dropout rates, a direct comparison of the whole population of vocational students with the whole population of non-vocational students is not especially useful. A useful comparison would be between the dropout rates of vocational students and that of non-vocational students from similar backgrounds. Yet such research has not been carried out. We believe this should be rectified.

The creation of the Office for Students (OfS) brings a number of opportunities to the HE sector, within a recent consultation the DfE stated that the OfS will be well placed to “drive improvements across the sector by providing advice on good practice on access and participation.”⁶⁴ The new Director for Fair Access and

Participation at the OfS should include students from vocational backgrounds within the monitoring of access and outcomes.

Recommendation 7:

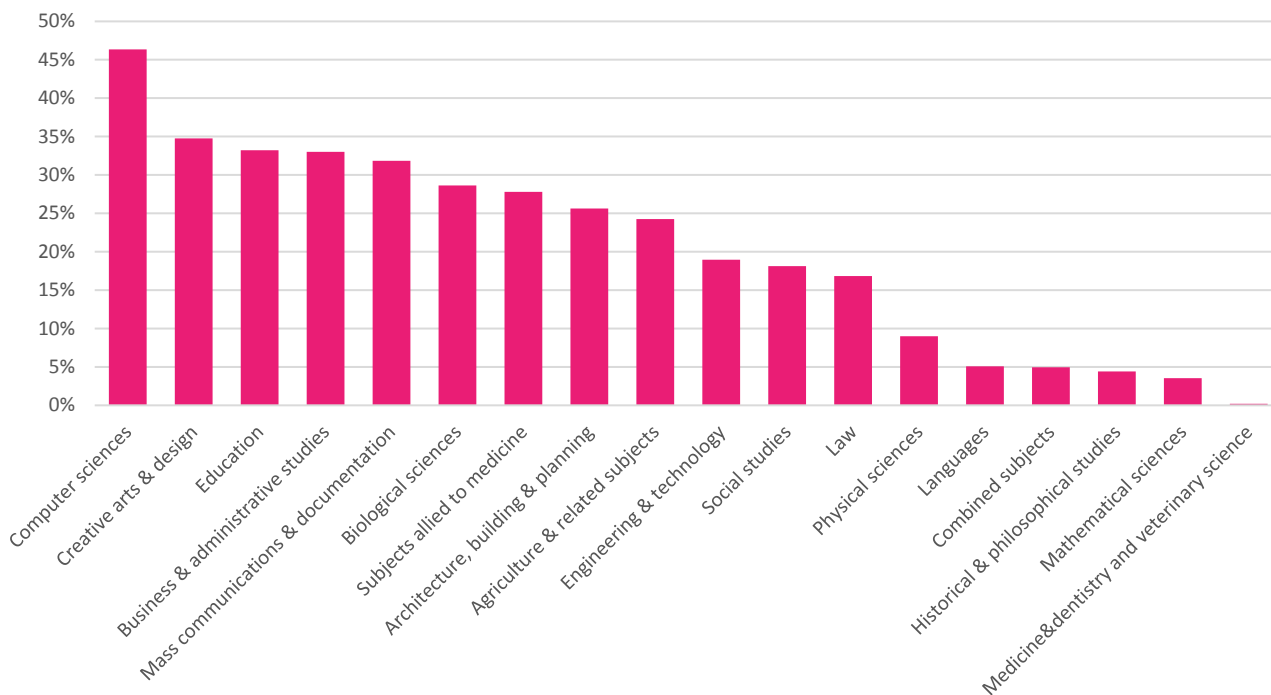
The newly appointed Director of Fair Access and Participation at the Office for Students should include the entry and retention of students from vocational backgrounds in the Office’s monitoring of HE institutions’ record on access and outcomes.

Supporting the evolving needs of students

Students who obtain vocational qualifications at Level 3 go on to study a wide variety of subjects at university.

Figure 11 shows the proportion of students per university subject who hold a BTEC qualification. The research shows that 46% of those studying computer science at university hold a BTEC qualification compared to only 0.2% of those who study medicine, dentistry and veterinary science. There are a number of science or mathematic based subjects where there are a large proportion of BTEC students, this includes engineering and technology, and biological sciences. In these subjects, there is a need for students to have a strong mathematic ability. Universities have several tools available to support the students who may find themselves struggling with the mathematical content of their courses. Most students are offered conditional places at university several months before they are due to start. Some universities are using this time to equip prospective students with the knowledge needed to succeed on their chosen course. We have heard from universities who are offering online summer modules in mathematics and statistics for students who need additional support and learning. Whilst a summer module is informative it may not be adequate for all students; others may find that they need additional support throughout university to keep pace with other students, particularly those with more knowledge of the subject.

Figure 11: Proportion of students holding a BTEC qualification by university subject 2015/16



Source: HEFCE (2017)

Students from vocational backgrounds can find that the mode of assessment at university differs from the methods they have become accustomed to during their college and sixth form experience. Universities, particularly those offering more traditional courses, tend to use examinations as the main method of assessment, which can be very different to the predominately coursework based vocational qualifications. We have explained how some vocational qualifications are adjusting to increase the number of exams students sit during Level 3 to ensure that they are prepared for the assessment methods used in HEIs.

Through our research we came across instances where universities have gone further than to offer additional support and have looked at course design. For university courses that accept a high proportion of students coming through with vocational qualifications, some have looked at the way they offer their modules and allow students to choose between modules to reflect their ability, particularly in relation to maths.

Case Study

Brunel University London found that in 2013/14 75% of their students who had BTECs found that preparing for and undertaking exams were the most challenging and daunting aspects of their first year. As a result, the university offered sessions relating to exam and revision preparation within departments that had a high proportion of students from technical backgrounds. The 'Preparing for Exams' sessions were trialled in Civil Engineering, Electronic and Computer Engineering and Mechanical Engineering. BTEC students were twice as likely to 'disagree' or 'strongly disagree' to the statements "I feel confident about revising" and "I feel confident about the exams" compared to A level students at the start of the session. At the end of the session, BTEC and A level students registered greater confidence, but BTEC students were the most improved.⁶⁵

Meanwhile, universities can also proactively seek to match students with specific tutors. Being engaged with the academic aspects of university life is important to ensure students remain committed to their university and chosen course, this is where personal or academic tutors can play a vital role. Matching students and tutors correctly can be important for future success, universities have several tools at their discretion to facilitate a strong match. Universities have information on a range of student identifiers such as ethnicity, socio-economic background and qualifications obtained, they can use this information to ensure that they match students with tutors who have experience dealing with individual needs and understand some of the additional support they may need in adjusting to university life. We have heard anecdotally from universities that they are using their student experience officers to do this precise and important matching exercises.

Mature students

When we think about student access and success we should not limit our thoughts to young students. Mature students are important for improving productivity and economic growth within the UK⁶⁶ and vocational education has a role to play when looking at how to reskill the workforce. In the Autumn budget, the Chancellor of the Exchequer stated plans to create a new partnership with industry and trade unions to deliver a National Retraining Scheme, giving people the skills they need throughout to get a well-paid job.⁶⁷ The higher level technical degrees should be easily accessible for mature students and this is where collaboration and partnership between FE and HE can play a significant role. In recent years there has been a dramatic decline in the number of mature and part-time students attending higher education. There are several contributing factors to this decline such as a lack of clear advice and guidance and adverse attitudes towards debt and student loans.⁶⁸ Alongside the creation of the National Retraining Scheme, the government should review how it is funds and supports lifelong learning.

Summary

This chapter has proposed that

- Further and higher education institutions should work much more closely together, particularly on progression routes. The Office for Students and Department for Education should help facilitate this collaboration and include the Education and Skills Funding Agency (ESFA) when appropriate.
- Universities should work together to explain better the requirements of different courses and modules in terms of subject matter and assessment. This could take place through existing university bodies.
- The Government should lead a national conversation aimed at raising the profile and status of technical and vocational qualifications, promoting an open discussion on the appropriateness of these qualifications for a variety of routes should be encouraged.
- Ministers and the Office for Students should encourage universities to publish the grade requirements for all types of qualifications on their website and within prospectuses.
- The Department for Education should initiate a trial to use behavioural science techniques to encourage appropriate students from vocational backgrounds to apply to university.
- When implemented, the DfE's Careers Strategy should ensure that students are informed of all routes available.
- The newly appointed Director of Fair Access and Participation at the Office for Students should include the entry and retention of students from vocational backgrounds in the Office's monitoring of HE institutions' record on access and outcomes.

CHAPTER 4: FUTURE POLICY LANDSCAPE

As noted in Chapter 1, the Government has accepted the recommendations of the Sainsbury review on technical education, and has subsequently introduced a series of policies to encourage social mobility and tackle the inefficiencies within the technical education sector. In this section, we discuss the opportunities and risks these changes could deliver, particularly when focusing on progression into higher education.

Post-16 Skills Plan

Students between the ages of 16 and 18 can currently choose between 13,000 available qualifications.⁶⁹ In a bid to simplify the system, whilst simultaneously aligning technical education to international success stories⁷⁰ and debunking the view that technical courses are inferior to academic options, the Government is splitting the education system into two distinct pathways at Level 3: an academic pathway and a technical pathway.

The academic pathway is unaffected by the Post-16 Skills Plan: after completing their Level 2 qualifications (GCSEs and equivalents), students can study A levels, Applied Generals such as BTECs, or a mix of the two.

The technical pathway will consist of 15 routes of training, each aligned with a specific industry. Eleven of those routes will offer students a choice between employer-based training, such as an apprenticeship, and new college-based technical courses (T levels).

T levels are currently being developed. Each T level course is expected to enhance skills in English, maths, and digital content and would require students to partake in a work placement of up to 3 months. As summarised in Table 2, the first T levels – within the *Digital*, *Construction*, and *Education and Childcare* routes – are to be delivered by a limited number of training providers as early as 2020. College-based training in a total of six routes – the aforementioned three, joined by *Legal, Finance and Accounting*, *Engineering and Manufacturing*, and *Health and Science* – is planned to be fully rolled out in September 2021; whereas September 2022 will see the introduction of T levels within the *Hair and Beauty*, *Agriculture, Environment, and Animal Care*, *Business and Administrative*, *Catering and Hospitality*, and *Creative and Design* routes.⁷¹

Table 2: Planned rollout of T levels, by route

2020 Limited Routes	2021 Full Routes	2022 Full Routes
Digital Construction Education & Childcare	Digital Construction Education & Childcare Legal, Finance & Accounting Engineering & Manufacturing Health & Science	Hair & Beauty Agriculture, Environment & Animal Care Business & Administrative Catering & Hospitality Creative & Design

Source: Department for Education

The remaining four routes are to be delivered exclusively via employer-based apprenticeships (*Sales, Marketing and Procurement*, *Protective Services*, *Social Care*, and *Transport and Logistics*).

This reimagined education system aims to provide clear routes for young people to pursue academic and technical training and ultimately enter the labour force as skilled workers. However, challenges remain in regard to the development of courses and qualifications, and ensuring their credibility, recognition, and rigour. Below we identify three dilemmas to which policymakers should be alert.

Level 3: T levels and Applied Generals

It is unclear how new T level courses and existing Applied General qualifications will be perceived in relation to one another under the new separated system. Aged 16, students may be unsure of their preferences for the future and might end up with a decision which could lead to a potential mismatch between their skills and aspirations and the path they choose. There is a risk that students see the education system as a choice

between two absolutes: an academic A level or a technical T level. This binary divide stems from a wide range of factors including past education reforms, parental advice, school curriculum design, teacher advice and societal norms.⁷²

As previous SMF research has argued, this bifurcation brings considerable risks, including students not selecting the optimal mix of qualifications to suit their interests and their skills.⁷³ The research demonstrated that a growing proportion of students are taking both vocational and academic subjects at Level 3.

In a dual system, students who would have performed well if studying a qualification containing a mix of academic and applied components (such as an Applied General) could find themselves on a course which is not well-suited to their needs. This could consequently lead to a potential hollowing-out of entry routes into higher education. In turn, provision for under 18s could suffer, leading to lower availability of options for students at Level 3 to choose from. It could also hinder the access route to universities for many disadvantaged students who would have benefitted by studying a BTEC at Level 3, this could have serious implications for the progress that has been made with widening participation.⁷⁴ An opposite effect may also arise: students could see Applied General courses as a ‘best-of-both-worlds’ fail-safe option at the expense of the newly developed and untested T levels.

Although the two scenarios described above deal in absolutes, they motivate the need to provide students with adequate guidance and widely available information on the educational options on offer. The Government has already flagged up advice strategy as an area which needs further development.

International example: Singapore

Post-secondary education in Singapore has tackled the issue of competing Applied Generals and T levels by segmenting the system in three pathways instead of two,⁷⁵ thus giving students an extra choice of study stream prior to going to university.

Dedicating a separate pathway to Applied General qualifications brings these courses forward as an alternative route for students to both purely academic and purely technical qualifications.

At the end of secondary education, usually aged 16 or 17, students in Singapore have the option to enrol directly to study over 100 different subjects at A level, which would take them to university upon completion.

As soon to be the case in England, some students instead choose to study one of the over 90 full-time technical courses on offer at an Institute of Technical Education. Approximately 28,000 choose this option, before progressing either directly to the workplace or continuing their studies at a Polytechnic.

Polytechnics tend to offer more applied learning than A levels and more academic components than Institutes of Technical Education, in a manner not too dissimilar to Applied General qualifications in England. Singapore’s five Polytechnics offer more than 40 different courses each, in the fields of Engineering, Business Management, Game Design, and Health and Social Care. They attract more than 70,000 students, who then progress to the workplace or to university.

Note: Students from each of the three streams outlined above can also continue studying at one of Singapore’s two specialised Arts Institutions. Around 4,000 enrol in these institutions.

Universities and T levels

T levels are being designed with the objective of being as rigorous within the technical sector as A levels currently are within the academic sector.⁷⁶ Thus far, it is unclear how universities will incorporate T levels into

their admissions schemes. The picture has become more complex by reforms being made in parallel to A levels, namely a growing focus on examination assessment.

In response, the Department for Education has announced a review into higher level technical education⁷⁷, focusing on how T level students can progress into the workplace and assessing the potential role T levels could play in upskilling and retraining workers.

Bridging Provision

In the context of the new twin tracks in education, effective bridging provision will be crucial to ensure that young people retain choices beyond the age of 16 and are able to select the pathway at age 18 which best suits their skills and aspirations. Well-developed and well-functioning bridging courses will also contribute towards the success of students at their chosen area of higher study, as many higher education programmes tend to blend academic and technical skills and knowledge to some degree, rather than focusing on exclusively academic study or exclusively technical study.

In theory, bridging provision courses should also enable students to switch between the academic and technical pathways *during* their studies between 16 and 18. Bridging for this purpose is likely to be more simplistic whilst studying at Level 3 than prior to entering higher education. As the scope of this research focuses on routes into higher education, our discussion below concentrates on students who are planning to switch pathways after they have completed their studies at Level 3.

International example: Switzerland

The restructure of the UK education system at Level 3 and above would result in a system not too dissimilar from the 'dual' systems in Switzerland, Germany, Austria, Denmark, and Norway.

The Swiss dual vocational education and training (VET) system is argued to be one of the key factors driving the success story of the country's economy.⁷⁸ Whilst the number of students studying for a traditional academic degree at a traditional university is restricted and the majority of young people participate in a VET, switching between academic and technical learning is not uncommon.

The Swiss system⁷⁹ tends to follow a year-long additional training for each type of learner. These courses can be undertaken either simultaneously with studying or as an additional year after studies are completed.

Swiss students following the academic pathway at a traditional university can transfer to a more technical mode of training at a University of Applied Sciences (UAS), but only after at least a year of full-time work.

Students with a Vocational Baccalaureate (likely to be equivalent to A Level 3 T level), can sit an additional exam – the University Aptitude Test – which enables them to enter the more traditional academic university system.

Apprentices on the other hand have the option to pursue a year-long more applied version of the Academic Baccalaureate (equivalent to A levels) which enables them to enrol into a UAS.

Note: Bridge-year courses in Switzerland are held at lower-secondary level in order to prepare students for vocational education and learning, at 15. Bridging courses in the UK are to be incorporated after completing Level 3 qualifications in either the academic or the technical pathway, at 18/19. The international example above refers to additional examinations which can be taken around the same age (18/19) in Switzerland.

Currently, there is little information on the structure and delivery of the new bridging provision as these courses are still in the process of development. Therefore, below we discuss broad design principles that should be considered as the policy develops.

At present, there are already some forms of ‘bridging’ on offer within the current UK education system. There are many universities which offer foundation years to students who require additional knowledge or skills before they start their university degree. These courses allow students who do not have the suitable qualifications for direct entry into their chosen degree to progress, often with one foundation year opening the door to several different degrees. There is an opportunity for those designing the new bridging provision to look to these courses as an example of how to enable access from technical to academic education.

Simple and clear course design

It is unlikely that any single bridging course could be universally applicable. However, we can hypothesise that students switching from academic to technical learning might find themselves lacking applied knowledge, practical skills, and/or work experience. On the other hand, students switching from the technical pathway to the academic pathway are likely to require more in-depth theoretical knowledge and the ability to adapt to a different assessment system.

Bridging courses should match the origin route of the student with their discipline of choice as smoothly and transparently as possible. For technical students wishing to enrol for a traditional university degree, this may mean that bridging courses could be established for each of the 15 technical routes.

Bridging courses will have to address two components. Firstly, bridging should ensure that students wishing to switch pathways have the skills needed to succeed in an alternative pathway. This is likely to be founded on basic academic writing and numeracy, or work experience.

The second component is likely to be more specific to the requirements of the destination course and account for any prerequisite knowledge or skills provided by the corresponding Level 3 qualification in the opposite pathway. As students can apply to study in a variety of fields at a number of universities, we envision this component could be grouped by disciplines, in a manner not too dissimilar from the 15 technical routes.

Collaboration between FE and HE

We envision the system to rely heavily on collaboration between the further education and the higher education sectors. Schools and further education colleges could be responsible for the first component of bridging training; these institutions have more information on their students than universities, so they should ensure that students wishing to switch pathways have the necessary skills and knowledge to succeed in the opposite pathway. Higher education institutions should, in turn, be accountable for ensuring that schools and FE colleges have all the available information on the prerequisite skills and knowledge needed for their chosen course at university.

We expect both sectors to be involved in the development of bridging courses at the appropriate time, once the structure and content of the new T levels has become clear.

Timeliness and duration

Students may be dissuaded from undertaking bridging provision if they consider it excessively time-consuming or if the timing is inconvenient. Potential options for further consideration include:

- Extra training undertaken in parallel with T levels/ A levels, preferably in the second year of study. This would ensure that students have had enough time to reflect on whether they wish to continue their current learning pathway or switch. Incorporating the appropriate bridging course with classroom learning enables students to complete their Level 3 qualifications and add-on training simultaneously, which in turn could drive down the cost of provision of bridging. However, this approach may place excessive burdens on the student.

- Training undertaken during the summer before the start of the academic year. Summer-school style provision would allow students to focus on their respective Level 3 qualifications and decide whether to change pathways even after obtaining their final grades.

Funding

Neither students nor universities are likely to want to bear the costs of undertaking and assessing a bridging course, at least not on a pay-as-you-go basis. We expect that at least a proportion of courses to be undertaken at the student's school or FE college prior to switching pathways, unless the destination higher education Institution has a suitable alternative in place, or is able to offer the course. In such instances, the bridging training could be considered as an extension to 16-18 learning, and therefore to be funded by the state.

Currently, some students (holding either vocational or academic qualifications at Level 3) who are not deemed ready for some degree programmes are required to complete a Foundation Year at university. Often at the price (and duration) of a full year of tuition fees, Foundation Year courses can be expensive and time consuming. The Government therefore should consider how bridging provision will sit alongside and substitute for existing Foundation Year courses, including funding arrangements for Foundation Year courses.

Credibility

Bridging provision would need to certify to universities that students coming from the technical pathway have the necessary skills and knowledge to undertake A Level 3 course, and graduate; vice versa, providers of higher level technical training would need assurance that students from the academic pathway have the required transferrable skills and/or work experience to study towards a technical qualification. Following this line of reasoning, we also expect for bridging courses to be assessed and accredited by a small number of providers, potentially the same bodies which offer Level 3 qualifications within the academic and/or technical pathways.

Summary

The discussion above results in the following set of recommendations for the Department for Education to consider in respect to the development and design of bridging provision courses:

- The Government should consider funding bridging courses as part of 16-18 learning.
- Bridging courses will need significant input from both the FE and HE sectors at each phase: development, design, implementation, and provision. This could be facilitated by having representatives from FE and HE institutions on each of the 15 route panels, and by involving FE and HE institutions in the design of bridging courses.
- Depending on the ultimate design of T levels, differentiated provision should be explored for each of the 15 technical routes with each course having two components: Skills (such as English and/or Maths, or work experience); and Content (or competency), in the form of prerequisite knowledge.
- The DfE should consider how the timing and length of the course could facilitate take-up, for example by considering summer-school courses, and provision taking place in the second year of Level 3 study, as well as other time slots.

Endnotes

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