Does prior qualification affect degree outcomes?

Pallavi Amitava Banerjee[a,1], Debra Myhill[a] and Carol Robinson[b]
[a]University of Exeter; [b]Loughborough Univesity

Abstract

Qualifications provided by the Business and Technology Education Council (BTEC), as Pearson claim, are career-based qualifications designed to give students the skills they need to move on to higher education or go straight into employment. In reality these qualifications are centred on work based scenarios and students taking up these qualifications are not directly prepared for University. However, some universities accept BTEC qualifications as admission entry requirements either stand alone or in combination with other qualifications. Consequently, a growing percentage of BTEC students are now taking up undergraduate courses at the University. Analysing historic admissions and progression data as part of our ongoing HEFCE funded project we show prior qualifications are a strong predictor of end of first year results in undergraduate courses in the subject areas of Business, Management studies, Computer science, Sports science. Research findings from the exploratory phase of our study shows amongst the subject areas considered BTEC students are more likely to join Sports and Exercise science where they are also more likely to succeed. They are least likely to take up a course in Computer science where they are relatively less successful. Our analysis shows that the highest percentage of those who did not progress to the second year of study had entered Universities with a BTEC qualification. Through individual facing and system facing changes universities can create more supportive learning environments to reduce these inequalities in educational outcomes for this quite often overlooked widening participation cohort.

Key words: prior qualifications, BTEC, higher education, undergraduate, disadvantage

Introduction

The Business and Technology Education Council (BTEC) qualifications are provided by Pearson Education Ltd and include secondary school leaving qualifications and further education qualifications in England, Wales, Northern Ireland and overseas, thereby, including key stage 4 programmes of study, qualifications for 16-19 year olds as well as adult learners. BTEC Level 3 qualifications are accepted by many universities for admissions to undergraduate courses. Many such universities base their conditional admissions offers on a student's predicted BTEC grades. BTEC qualifications are thus in theory equivalent to other qualifications, such as the General Certificate of Secondary Education (GCSE) (levels 1 to 2), A Level (level 3) and university degrees (levels 6 to 7). BTECs are undertaken in vocational subjects ranging from business studies to engineering (for a more detailed description see Appendix).

BTECs are seen by some as prized qualifications for the labour market drawing on work-based scenarios. Preparing students for university study is clearly not the BTEC's primary purpose (Gill and Vidal Rodeiro, 2014:6). As a result of this employment focus, BTECs are often cited as being an inferior qualification in terms of how well they prepare students for academic study in Higher Education (Gill & Vidal Rodeiro; 2014:10). To put it simply, in the post-16 qualification hierarchy, the traditional A level rules supreme (Gill, 2017:1; Smith & White; 2015:698). However, The Wolf Report's (2011) investigation into the quality of vocational courses indicates that despite Higher Educational Institutions' (HEIs) preferences for A levels, BTEC National Diplomas are fast becoming a possible route for a wider and more diverse range of students to gain access into HE institutions (p.33). In fact, last year, 1 in 4 students entering HE had a BTEC qualification, a figure which has doubled since 2008 (Mian, Richards & Broughton, 2016:6, for the Social Market Foundation).

This narrative of BTEC versus A level is further complicated by studies which suggest that students who enter university with BTEC qualifications do not perform as well (in their HE journey and outcomes) as their peers who enter university through the traditional A level route (McCoy & Adamson, 2016:162, 171; Hayward & Hoelscher, 2011:316). As a result, concerns have been raised

[1] Corresponding author: Graduate School of Education, University of Exeter, St Luke's Campus, Exeter EX1 2LU, UK Email: p.banerjee@exeter.ac.uk

over the parity between these two qualifications and their UCAS tariff scores. On the one hand, the growing numbers of students entering university through the BTEC entry route has successfully ensured that university education is not only a possibility for the privileged, but is a realistic opportunity addressing diversity. The fact however remains BTEC students are only gaining access into *some* higher education institutions, obtaining lower degree outcomes and have higher attrition rates (Greenbank, 2009:84; McCoy & Adamson, 2016: 168; The State of the Nation, 2016:105).

Over the years, this symbiotic relationship of access increase and lower outcomes has led to fierce debates in and out of government corners. In 2002 at The House of Lords, Baroness Warnock's vitriolic speech firmly placed her in opposition to the widening of access:

> *'I believe that, one way or another, we should stop filling our universities with students who displayed no interest in academic matters at school, whose talents are more practical than theoretical, and who will not change...too few of them have any interest in continuing to learn.'*

Nine years later, in the foreword to The Wolf Report (2011:7), John Hayes, the Minister of State for Further Education, Skills and Lifelong Learning, stated that:

> '*While there have been many calls over the years for greater parity of esteem between academic and vocational qualifications, in practice this has meant making what is practical more academic, to the detriment of both.'*

Consequently, this discourse has filtered down into the British media, with headlines such as '*BTECs 'set students up for failure' at university'* (The Times, 2nd November 2014) and The Guardian's *'Will taking a BTEC help or hinder your university application?*' (21st July 2015). Even the online edition of '*Which? University'* (September 2016) reinforces this narrative of inadequacy by stating that *'because BTECs are more practical, you don't necessarily get the opportunity to sharpen those more academic skills, like essay-writing, as you would at A-level.'* Evidently, these dominant discourses firmly position BTECs as the inferior entry route into HE.

Given the polarity of stances on the worthiness of vocational qualifications in preparing students' successful progression through higher education, it is necessary not only to explore the efficacy of widening participation programmes for students following the BTEC route into HE, but to also explore these students' transitions into university life. In this paper we explore this relatively under-researched area. Why does the evidence suggest that this heterogeneous cohort of students perform less well than their more 'academic' peers? Why are there higher attrition rates associated within this demographic? Is there strong evidence to establish a tangible link between prior entry qualification and degree and employment outcomes? Or are there other issues of intersectionality at play here? After all, identifying and understanding causality is often a multifaceted process which can be fraught with complexities. As Mountford-Zimdars et al. (2015:ii) state in their HEFCE study: '*inequalities outside HE affect individuals' performance within HE.'*

Widening Participation and Potential Barriers to Access

The discourse of BTEC inferiority firmly links to recent research undertaken by Mian, Richards & Broughton, (2016) for the Social Market Foundation study *'Passports to Progress'* who found that BTEC students are more likely to go to low-tariff universities than gain entrance into more traditional and elite institutions. In 2015, students with BTEC grades of ABB equivalents or above made up only 2% of students in higher tariff universities (Mian et al., 2016:7). As the uptake in BTECs is higher amongst students from underprivileged backgrounds, (Mian et al., 2016:6; Rouncefield-Swales, 2014), the evidence indicates that their post-16 qualification choices are presenting them with potential barriers to selective universities.

Low educational attainment is frequently linked with lower socio-economic status, whereas higher attainment is often considered to be a trait of the more affluent middle classes (Greenbank, 2009:83). As a result of this acknowledgement of the relationship between social and educational disadvantage, the government aims to double university places for students from low participation areas

(State of the Nation, 2016:115). Notably, this inscription of working class academic failure dovetails with the evidently emerging presentation of BTEC inferiority. As the BTEC pathway appears to be lacking in terms of its rigour in comparison to traditional post-16 qualifications (Wolf Report: 2011:7), a deficit model of this qualification seems to be emerging. Unsurprisingly, BTEC students are generarlly from working class families or classify for deprivation measures.

Similarly, in their study into vocational students' transition into HE, Hoelscher et al. (2008:140) argue that policy decisions regarding the widening of participation, in particular VET (vocational education and training) courses, do not reflect the reality of what actually happens; there is an incompatibility between rhetoric and reality - or as they put it - a *'mirage of wider opportunities'*: *'Given that the VET pathway is often construed as an alternative chance for those deemed 'unsuitable' for progression in the academic pathway, there is a need to assess how good an alternative it is, in terms of where, what and why graduates of the VET system study in HE.'* Analysing HESA and UCAS data sets from 2003/4 Holchester et al. (2008) found that students from academic backgrounds were more likely to attend a pre-1992 university (58%) whereas the figure dropped to 13.5% for students with vocational qualifications (p.140-141). Whilst participation has increased for students with vocational qualifications, many of whom are from disadvantaged areas, they argue that inequalities still exist; outcomes for vocational students are not in line with traditional students because the conventional A level route '*still opens up the best opportunities* (Hoelscher et al. 2008:149)*'*.

This disparity between student cohorts is further examined in Rouncefield-Swales (2014:11) study. Using HESA data to examine trends exhibited by vocational students over a three year time span, she not only confirmed that BTEC students were more likely to come from a '*low socio-economic group or a POLAR2 low participation neighbourhood than 'traditional entry' students'* but also identified that 42.1% of BTEC students in her study were first generation HE students - which is 10% higher than traditional students. As a result of this finding, Rouncefield-Swales suggests the vocational pathways are important mechanisms in the widening participation programme as they essentially provide stepping stones for students gaining access into higher education (2014:17).

Evidently in terms of trying to identify who a typical BTEC learner might be, there seems to be certain patterns emerging. Vocational students are more likely to be male, have a disability, come from a low socio-economic and non-white background as well as being older than the traditional student (Hayward & Hoelscher, 2011:322; Shields & Masardo, 2015). The 2014 report by Rouncefield-Swales' (a follow-up from the 2012 report *'Vocational progression to selecting universities'*), found that 26.3% of BTEC students entering HE were *'from a non-white ethnic group'* compared to 18.3% who entered via the traditional student route (p.13-14). Similarly, the same study highlighted that non-white BTEC entrants were more likely to study at a Million Plus institution (32.9%) and least likely to attend a Russell Group (17.8%). During the 2012/3 entry cycle, *'14.5% of 'BTEC students' who attended 1994 Group institutions had a disability…compared to only 8.2% of those in Russell Group institutions'* (Rouncefield-Swales, 2014:9-10). These statistics confirm findings of Hoelscher et al. (2008) as well as Hayward and Hoelscher (2011:322) whose studies also found that vocational students were more likely to apply for a post-1992 institution or FE colleges which provides HE level courses.

This theme of difference or being on *the outside* is reinforced in the 2016/7 Russell Group publication entitled: *'A Russell Group guide to making decisions about post-16 education',* as it warns prospective students that following a BTEC pathway might impede their progression onto HE: *'However, although BTECs have recently been redesigned it is very important to know that they may not be considered suitable preparation for many Russell Group degree courses,'* consequently suggesting that BTEC qualifications are '*less valuable than academic qualifications'* (Gill, 2017:2). This is an interesting point given the increase in students entering HE via the BTEC pathway. Acknowledging this disjunct Reay (2001: 334) critiques that *'the contemporary educational system retains remnants of past elite prejudices.'*

So, if there are potential barriers for students wishing to gain access into selecting universities, why are so many post-16 students continuing to follow BTEC pathways? The 2016 State of the Nation report argues that one of the reasons for this increase in BTEC uptake from low participation areas is simply because of a lack of access to alternative FE choices. Many of these students have restricted post-16 options due to lower KS4 attainment results. However, not all students choose the BTEC pathway as a result of low KS4 results. Shields and Masardo's (2015:24) study revealed that there were other reasons for choosing this route: lack of A level subject choice; desire to attend FE college rather

than stay on in local 6th form; friendship groups and family influences (p.38).

Furthermore, research undertaken by The Social Market Foundation (Mian et al, 2016:6), on behalf of Pearson, presents a slightly different and more positive view of students following the BTEC pathway. For this study, researchers used UCAS and HESA data to track the progression rates of students holding different types of prior qualifications. During their investigation, they found that 1 in 4 students entering university had a BTEC qualification –in fact there were 100,000 BTEC students entering HE in 2015 compared to just 50,000 in 2008. Again, it was recognised that this increase in participation is particularly prevalent in disadvantaged areas:

> *'Between 2008-2015 students entering higher education from the most disadvantaged backgrounds with just A level qualifications increased by 19%. However, those with BTECs increased by 116%. Those combining both A levels and BTECs increased by 340%, albeit from a low base.'*

Even though these impressive statistics indicate that real progress is being made in terms of widening access to HE, the types of institutions opening their doors to BTEC students still varies considerably. As the evidence indicates, these students are still more likely to attend a lower tariff university than a higher one. In fact, during the 2016 entry cycle, only 2.4 percent of students with BTECs were accepted into higher tariff institutions (Rouncefield-Swales, 2012:3; UCAS: 2016:25). However, Sheilds and Masardo (2015:29) point out that whilst there is a disparity between institutions granting access to BTEC students, the greatest polarity exists in research-intensive institutions and there is therefore a concern that the *'marketing of the BTEC, which largely depicts BTEC graduates as succeeding in research-intensive universities'* is misleading groups of students who believe this particular vocational route will grant them equal access to all HE institutions – even the research-intensive ones. As a result, they advocate for tighter regulation on BTEC marketing as some promotions claim that BTECs are an acknowledged route into elite universities whilst the actual entrance data for this cohort of students suggests otherwise (p39).

Evidently, social class and prior vocational study seem to play a pivotal role in the widening participation agenda. In their mixed methods study into changing patterns in vocational entry, Shields and Masardo (2005:5) focus on examining how well these qualifications prepare students for their HE experiences and argue that, *'students with vocational qualifications are more likely to be from areas with low participation in higher education and demographic groups associated with lower outcomes.'* However, whilst their findings are in cohesion with others, like Hoelscher et al (2008) and Rouncefield-Swales (2014) they also raise the issue of the 'mirage' effect (Hoelscher et al, 2008) by questioning the ambiguous promotion of BTECs:

> *'Pearson – the company that offers the qualification – describes BTECs as "work-related qualifications for learners taking their first steps into employment", but on the other hand it cites figures of 95% progress into higher education or employment, and notes the qualification has been developed in consultation with higher education experts (Pearson 2015a). Eight of 12 "case studies" of BTEC graduates on the company's website mention progression into higher education, usually at relatively elite institutions such as Kings College, York, and Durham (Pearson 2015b). Thus, students investigating the BTEC "learning brand" receive mixed messages about its value and use' (p.7).*

Attrition rates and learner identity

However, here lies the problem: universities with the highest widening participation success that also have the highest withdrawal rates (Reay et al, 2010:107; McCoy & Adamson, 2016: 168; The State of the Nation, 2016:105). As a result, it is becoming increasingly apparent that widening participation initiatives need to broaden their focus beyond the initial gaining of access (State of the Nation, 2016:120), particularly as it is suggested that students from vocational backgrounds are more likely to drop out or obtain lower degree classifications than their A level peers (McCoy & Adamson, 2016:168; State of the Nation, 2016:105).

Part of widening participation success is to ensure that students are supported throughout their HE journey – not just through the entry process. Gauging a deeper understanding of why attrition rates amongst BTEC students are so high is an essential part of the process in ensuring this cohort develop into resilient HE learners. In her analysis of HESA data, Rouncefield-Swales (2014:19) tracked the patterns of reasons given by students when withdrawing from university: academic failure; finance, health, and employment. Even though overall retention rates have been improving, the 2012/3 sample examined in this study identified that BTEC students were less likely to complete their HE study compared to A level students: only 67.% BTEC students completed their study compared to 92.3% of traditional A level students (2014:19-20). However, her research adds another dimension to this debate and argues that whilst there is a correlation between disadvantaged students and vocational study at post-16, attrition rates are actually linked to *all* disadvantaged students, regardless of their pre-university entry routes (2014:27).

Differential outcomes in education

Undoubtedly, prior education plays an integral part in students gaining access to university and therefore there needs to be a strong element of accuracy used to predict potential attainment at HE (Gill and Vidal Rodeiro, 2014:4; Mountford-Zimdars et al, 2015:22). One of the central issues surrounding the HE entry route discourse is the parity between different qualifications. Is a BTEC level 3 qualification valued the same as 3 A* at A level? Subsequently, there is much debate regarding the potential inequity of the UCAS tariff points score and whether in fact the different qualifications have been aligned correctly (Green and Vignoles 2012; Gill, 2015; Gill, 2017). After all, various qualifications privilege different sets of skills, knowledge and understandings. As a result, this *difference* in terms of post-16 learning trajectories, renders making direct comparisons between students who follow different qualification routes complex (Gill, 2017:11).

Understandably, the reliability of the tariff point score is important as it is often used to predict progress and judge institutional success. In fact, research has suggested that there is a strong correlation between prior attainment and degree outcome (Mountford-Zimdars et al., 2015). In many ways, this finding is not surprising as it is plausible to assume that high attaining students at KS4 and 5 will continue on that upward trajectory.

However, whilst a variety of research studies present a deficit model by indicating that students entering university via a BTEC pathway are somehow disadvantaged by their prior entry qualification, Pearsons' website (provider of the BTEC qualification) heralds the success of BTEC qualifications as a trajectory to HE and state that '*4 out of 5 of BTEC students go on to receive a First or Second class degree (The outcomes associated with the BTEC route of degree level acquisition, London Economics 2013)'* and that *'In 2015, 1 in 4 students who got into university in the UK did so with a BTEC (UCAS report – Progression Pathways January 2016).'* These impressive headline figures are slightly at odds with other findings – particularly in terms of degree classifications. Indeed, Gill and Vidal Rodeiro's (2014:6) study found that whilst the majority of BTEC students obtained a second class degree only a small number of this cohort gained a first*, 'even if they obtained the highest possible grade in the qualification.'*

The project design

Amidst these debates, nationally, the number and proportion of home students applying to a university with a BTEC continues to grow. For 2015 entry, UCAS (2015) report an increase of 18% from the previous year, and by 50% proportionally since 2011. Students taking a BTEC qualification now account for 15% of 18 year-old UCAS applicants. However, students taking vocational qualifications, such as BTECS, are more likely to be from low participation demographics (Shield and Masardo 2015), whilst students from socially advantaged independent schools are very rarely offered BTEC options. Thus, the cohort of students taking BTECs are an often-overlooked widening participation cohort. Many selective universities are now requiring A-levels alongside BTEC qualifications and therefore access to such universities may be reducing at a time when the proportion of 18 year olds with BTECs is increasing.

Research evidence highlights differential outcomes for BTEC students, who as a cohort are often disproportionately represented by widening participation groups (Bowl, 2001; Smith and Bocock, 1999). Academic performance at the end of year 1 has been shown to be significant in predicting the

outcome (Lee et al., 2010). However, there has been relatively little substantive effort to explore these differential outcomes and progression trajectories, particularly in relation to selective universities and in relation to transition from FE to HE.

The Higher Education Funding Council of England (HEFCE) has funded a consortium of four selective universities and their partner FE colleges under the Catalyst call, to develop a better understanding of transition of BTEC students into HE towards 'Addressing barriers to student success'. This project aims to exeplore this relatively under-researched area and to better understand and reduce the differential educational outcomes of BTEC students at selective universities through an investigation intervention to explore BTEC students' educational experiences across the FE/HE transition. The study builds on a current case study being developed by Pearson and the University of Exeter. This paper reports findings from the initial exploratory analysis of this project, carried out to develop the evidence-base for interventions.

The proposed project adopts an *explore-design-implement-evaluate* methodology, firstly by extending systematic data analysis and the investigation of BTEC students' learning experiences across the transition from one FE college and into one university to the transition from four FE colleges and into four universities; and secondly, by designing and evaluating interventions which address the findings of these investigations. Building on and scaling up the existing work undertaken at the partner universities, the project will develop a strategically significant systematic and scaled-up approach to understanding the learning needs and educational trajectories of BTEC students and to the development of interventions which address the barriers to their successful progress through university and into employment.

Our preliminary research findings show prior qualifications impact academic success of students in terms of course completion, progression and grades awarded. Academic and well-being resources are available to all students during their time at the university in the form of personal tutoring, peer-mentoring, pastoral support, online resources and study support. However, first year progression data in terms of whether students passed or did not pass their end of first year examination, the average marks attained at the end of first year and course completion rates all suggest there is further scope for improvement for the BTEC cohort.

Methods

Institutional level historic admissions and progression data of all students was approved for use by partner Universities. During phase one of the project data was extracted by colleagues across the Planning units of respective universities. Anonymised individual learner level data was then shared through encrypted files with the University of Exeter. The files were aligned in the same format and merged to create a dataset for the project. Students were grouped by prior qualifications depending on whether they entered partner Universities with A-levels, International Baccalaureate, BTEC, diplomas, certificate courses or a combination of these. Subsequently to mark these we classified them into four groups by qualifications ('traditional' A level/IB entry, BTEC+ A-level, BTEC and, certificates and diplomas classed as 'other'). Administrative data of all students was analysed at institutional, subject and subgroup levels, looking at in-year progression, where available; end-of-year progression data; retention rates; degree outcomes; and employment outcomes.

For the exploratory analysis presented here we excluded resits and all those students who entered via a foundation course. This was because the average end of year mark for these students was less than 40% and data quality was not the same across universities for these students. Also, the way this information was being collected and records were being maintained varied. To maintain consistency these cases were excluded. The main research question being addressed here is:

> *What proportion of students' progress to the next year of study, by prior qualification, and does it vary across the subject areas of Business studies, Sports and Computer science?*

The evidence arising from this analysis will be used to inform the planning of interventions for phase 2 of the project.

Exploratory analysis

This section reports the patterns of entry and progression of BTEC students during the first year of their undergraduate courses in the three subject areas that this study considered- Business studies, Computer

science and Sports science. The rationale for the choice of these subjects was that these disciplines had BTEC students across all four universities. It draws on the most up-to-date institutional data for the past four years, so the academic year just finished, 2016-17 is not included as progression data is not yet available. We look at aggregated data first then explore whether there are any institutional similarities and/or differences.

1 *Patterns of entry*

The exploratory analysis considered the number of students enrolling as first year undergraduates at the three partner Universities. We considered the data for last four academic years from 2012-13 to 2015-16 in our study. Table 1 below shows the total number of students each year entering target subject areas of business studies, Sports and exercise science and computer science. For percentage values in tables below wherever relevant, all values were rounded off to the nearest whole number. The total number of students considered in this analysis was 5183.

Academic year	Number of students	Percentages
2012-13	353[2]	7
2013-14	1597	31
2014-15	1636	32
2015-16	1597	31
Total	5183	100

Table 1 Number of students during each academic year

For the analysis, we used the Joint Academic Coding System (JACS) defined by the Higher Education Statistics Agency (HESA) and the Universities and Colleges Admissions Service (UCAS) in the United Kingdom to classify academic subjects consistently across the sector. Table 2 below shows the aggregated data by JACS subject areas. In table 2, Sports and exercise science is C6. Computer Science includes Computer Science (I1), Computer Science and Business Studies (I1N1) and Software Engineering (I3). We looked at Business Studies (N1), Management Studies (N2) and Accounting (N4) aggregated under Business Studies below.

Subjects	Number of students	Percentages
Sport and exercise science	1696	33
Computer science	1091	21
Business & administrative studies	2396	46
Total	5183	100

Table 2 Students across subjects aggregated by JACS subject areas

The finer breakdown by JACS 3.0 principal subject codes in table 3 below shows the cohort sizes of these subjects were quite varied, with Sports and Exercise science being the largest and Software Engineering being the smallest (given that this is cohort data over 4 years).

JACS principal subject	Numbers	Percentages
Sports and Exercise science (C6)	1696	33
Computer science (I1)	953	18
Computer science and Business studies (I1N1)	112	2
Software Engineering (I3)	26	0.5
Business studies (N1)	635	12
Management studies (N2)	1148	22
Accounting (N4)	613	12
Total	5183	100

[2] *Very low value as data was provided by only one HEI for this year*

Table 3 Students across subjects aggregated by JACS 3.0 principal subject codes

We then looked at prior entry qualifications to consider how significant the BTEC cohort is within this group. The proportion of students by entry qualifications taking the whole cohort of 5183 students is summarised in table 4 below. The category 'other' included students with diplomas and certificate courses.

Qualifications	Numbers	Percentages
A/IB	3858	74
BTEC	546	11
BTEC and A/IB	389	7.5
Other	390	7.5
Total	5183	100

Table 4 Prior qualifications of the cohort

Clearly, by far the highest proportion of students in this case study cohort enter with an A level or IB qualification. Students with a BTEC qualification make up 10.5% of the whole cohort, with BTEC only qualification more prevalent than a BTEC plus A level or IB qualifications. This is represented graphically below.

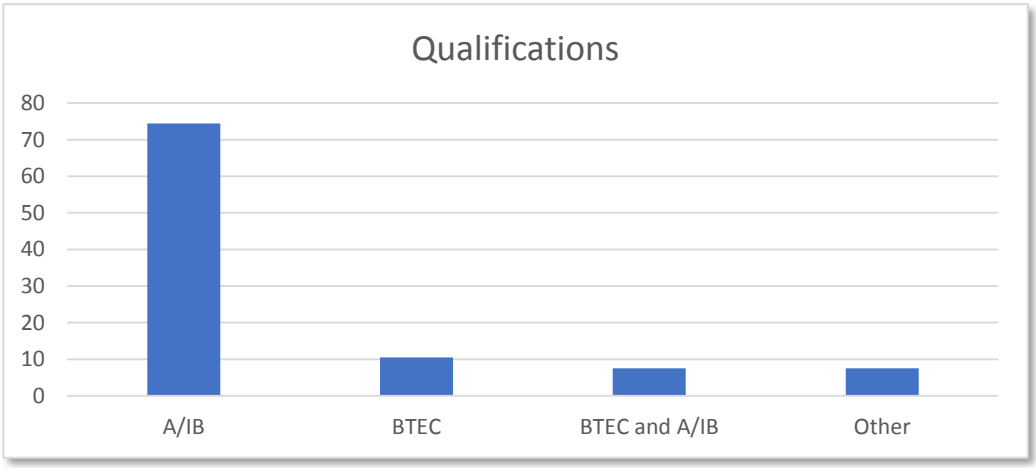

Figure 1 Prior qualifications of case study cohort on entry

The prior qualifications were then considered in more detail by analysing the subject-level information for the case study cohort (table 5). This reveals very different cohort patterns by prior qualification. More BTEC students take up Sports and exercise science, followed by computer science and the least percentage opt for Business studies.

Subject areas		Qualifications				
		A/IB	BTEC	BTEC and A/IB	Other	Total
Sport and exercise science	Numbers	1148	288	220	40	1696
	%	68	17	13	2	100
Computer science	Numbers	765	111	70	145	1091
	%	70	10	6	13	100
Business and management studies	Numbers	1945	147	99	205	2396
	%	81	6	4	9	100
Total	Numbers	3858	546	389	390	5183
	%	74	11	7.5	7.5	100

Table 5 Students across case study cohort subject areas by prior qualifications

1.1 Institution-wise patterns of entry

We then investigated whether there were any institutional differences in the patterns of entry across the subject areas considered in the study. A total of 1760 students entered University A to take up undergraduate courses during the last 4 years. Table 5a below shows the proportion of students by prior qualifications who entered the University A. Clearly by far the highest proportion of students in this case study cohort enter with an A-level or IB qualification. However very different patterns are revealed by analysing the subject level information. In Sports and exercise science students with a BTEC qualification are a majority (44%) followed by those with an A-level or IB (39%). However more students with A-level or IB entered computer science and Business studies.

		Qualifications			
Subject areas		A/IB	BTEC	BTEC and A/IB	Other
Sport and exercise science	Numbers	250	280	90	21
	%	39	44	14	3
Computer science	Numbers	138	4	12	10
	%	84	2	7	6
Business and management studies	Numbers	765	56	35	99
	%	80	6	4	10
Total	Numbers	1153	340	137	130
	%	66	19	8	7

Table 5a Proportion of students entering University A subject-wise by prior qualifications

We explored whether there were any trends across institutions in similar subject areas. No consistency was observed in this aspect. Across all subject areas University B had more students with A-level or IB qualifications and fewer students with a BTEC only qualification (Table 5b)

		Qualifications			
Subject areas		A/IB	BTEC	BTEC and A/IB	Other
Sport and exercise science	Numbers	898	8	130	19
	%	85	1	12	2
Computer science	Numbers	290	38	41	7
	%	77	10	11	2
Business and management studies	Numbers	827	52	47	12
	%	88	6	5	1
Total	Numbers	2015	98	218	38
	%	85	4	9	2

Table 5b Proportion of students entering the University B subject-wise by prior qualifications

The student body at University C was similar to University B. Across all subject areas, the majority entered with an A-level or IB qualification and relatively fewer students entered with a BTEC only qualification as seen in Table 5c below.

		Qualifications			
Subject areas		A/IB	BTEC	BTEC and A/IB	Other
Computer science	Numbers	337	69	17	128
	%	61	13	3	23
Business and management studies	Numbers	353	39	17	94
	%	70	8	3	19
Total	Numbers	690	108	34	222
	%	66	10	3	21

Table 5c Proportion of students entering University C subject-wise by prior qualifications

We then looked at the admissions data for the student body during the last four years to understand what proportion of students entered the project's partner Universities with BTEC qualifications during the last three years across the various undergraduate courses offered not just limiting by the three subject areas considered earlier. Figure 2 shows across the various undergraduate courses offered by the Universities, University C had the highest proportion of BTEC students joining in followed by University B and Uiversity A.

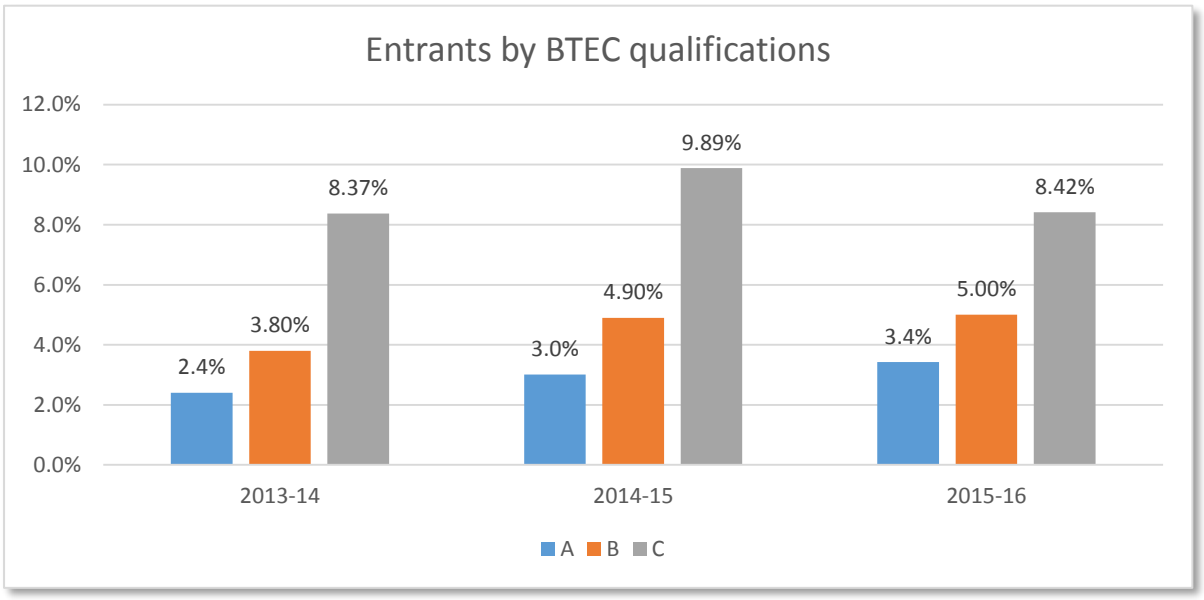

Figure 2 Percentages of first degree entrants with BTEC qualifications at partner Universities during the last three years

We then investigated how many students with BTEC only qualifications choose to go to partner Universities to study Sport and exercise science, Computer Science and Business studies. Most BTEC only students were at the University A, University B had a higher percentae of entrants with BTEC and A-level or IB qualification while University C had the highest percentage of students with 'other' qualifications as seen in Table 6 below. Thus 62% of the BTEC only students which the three universities recruit are from University A, 18% are from University B and 20% are from University C. This analysis helps us to understand where we should target interventions with BTEC only students during phase 2 of the project.

	University		
Qualifications	A	B	C
A/IB	30	52	18
BTEC	**62**	18	20
BTEC and A/IB	35	**56**	9
Other	33	10	**57**

Table 6 Percentages of first degree entrants in Universities by prior qualifications

We then analysed admission data to see what proportion of students with BTEC qualification choose to study Business studies, computer science and sports. Table 7 shows by far most BTEC students in HE were in Sports and exercise science followed by those with a BTEC and A-level or IB qualification. Computer science and Business studies had fewer BTEC students. Computer science had infact the same proportion of students with A-level or BTEC qualifications whereas more A level students entered Business studies. This gives us an idea of how the interventions should be targeted as there are more BTEC students in sports science.

Qualification	Sport and exercise science	Computer science	Business and management studies
A levels/IB	30	20	50
BTEC	**53**	20	27
BTEC and A/IB	**57**	18	25
Other	10	37	53

Table 7 Percentages of first degree entrants across years in the three subject areas

2 Patterns of progression

Given the concerns regarding differential outcomes for BTEC students, we analysed progression data. Table 8 below shows student progression to the second year of undergraduate study by prior qualification. The highest proportion of failures were those who had a BTEC prior qualification.

Qualifications	Whether passed first year of programme (%)		Total
	No	Yes	
A/IB	6	94	3858
BTEC	**24**	76	546
BTEC and A/IB	11	89	389
Other	17	83	390
Total	9	91	5183

Table 8 Proportion of students progressing to the next year of study by qualification

2.1 Subject-wise patterns of progression

Making use of end of first year progression data through a simple binary variable we then looked at the student progression rates in three subject areas across all these years. The variable identified whether the student had passed or failed their end of first year examination. We looked at students who were studying Sport and exercise science and the highest proportion of failures were those who had a BTEC only qualification whereas most students with an A-level or IB qualification went on to do well.

Qualifications		Whether passed first year of programme		Total
		No	Yes	
A/IB	Numbers	48	1100	1148
	%	4	**96**	100
BTEC	Numbers	54	234	288
	%	**19**	81	100
BTEC and A/IB	Numbers	11	209	220
	%	5	95	100
Other	Numbers	2	38	40
	%	5	95	100
Total	Numbers	115	1581	1696
	%	7	93	100

Table 9 Progression to second year of study for Sports and exercise science

To explore any possible trends in progression data across subject areas we looked at data for Computer science. Table 10 shows the highest proportion of those who did not progress to the second year of study had 'other' or BTEC qualifications.

Qualifications		Whether passed first year of programme		Total
		No	Yes	
A/IB	Numbers	91	674	765
	%	12	**88**	100
BTEC	Numbers	35	76	111

	%	**31.5**	68.5	100
BTEC and A/IB	Numbers	13	57	70
	%	19	81	100
Other	Numbers	36	109	145
	%	25	75	100
Total	Numbers	175	916	1091
	%	16	84	100

Table 10 Progression to second year of study by prior qualifications for Computer science

A similar pattern was observed in progression data for Business studies. The highest proportion of students who did not progress to the second year of study had entered with a BTEC qualification.

Qualifications		Whether passed first year of programme		Total
		No	Yes	
A/IB	Numbers	103	1842	1945
	%	5	**95**	100
BTEC	Numbers	44	103	147
	%	**30**	70	100
BTEC and A/IB	Numbers	18	81	99
	%	18	82	100
Other	Numbers	30	175	205
	%	15	85	100
Total	Numbers	195	2201	2396
	%	8	92	100

Table 11 Progression to second year of study by prior qualifications for Business studies

We then considered all entrants with BTEC only qualifications to undergraduate courses during the last four years in the subject areas of Business studies, Computer science, Sports and Exercise science as one case study group and called it the BTEC cohort. Figure 3 below shows the percentages of BTEC students who entered partner Universities to study these courses (blue), the percentages of students in the BTEC cohort who passed (yellow) or failed (grey) the first year of study.

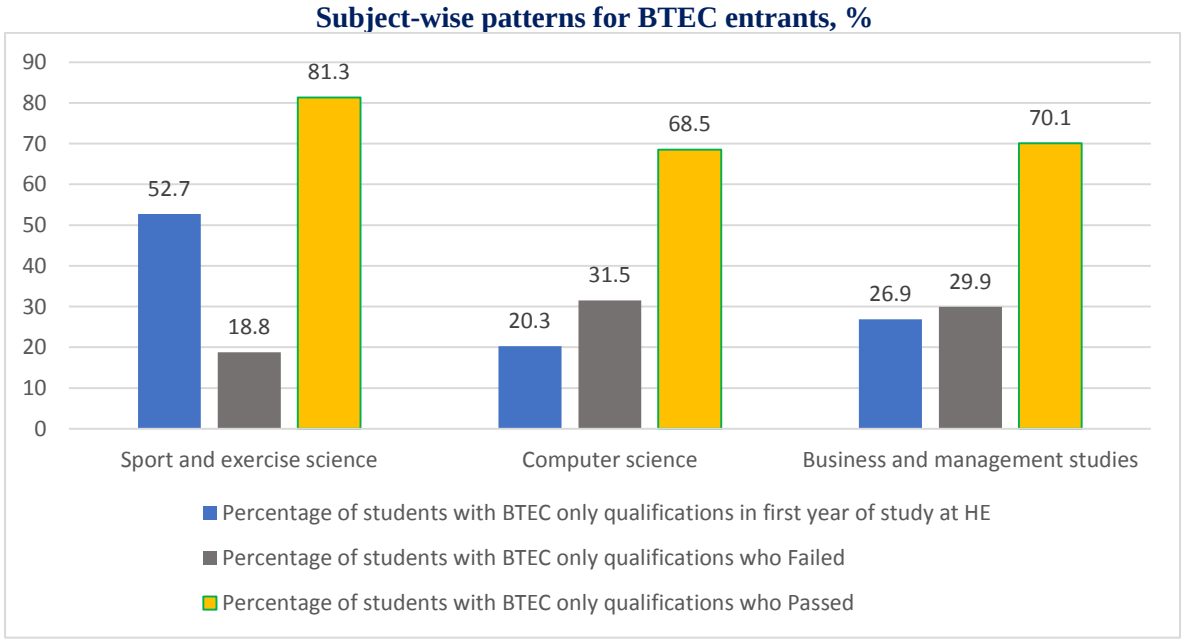

Figure 3 Proportion of BTEC entrants and their progression to second year of study

Amongst these three subject areas the highest percentage of students with BTEC qualifications entered to study Sport and exercise science followed by Business and then Computer Science. Subject-wise clustering in figure 3 shows BTEC students are more likely to enter partner HEIs to study first degrees in Sport and Exercise science where they are also more likely to pass the end of first year examination. Their next preferred option to study amongst these three subjects is Business and Management and they are least likely to study Computer science. However, the percentage of those who failed to progress to the second year of study in Business and Computer science was higher than that of Sports and exercise science.

Binary logistic regression

End of first year progression data for undergraduate studens in the three subject areas were available to us in the form of a continuous variable and a binary categorical variable. The continuous variable was in the form of average marks at the end of first year. The categorical variable identified whether a student had passed or failed the end of first year examination. There was some missing progression data which could be because the students had withdrawn from the course/programme to join another programme or higher education institution or perhaps they dropped out of higher education before taking the exam. The analysis below considered data from one HE provider.

We looked at the correlation between the explanatory variables - gender, parental education, social class, disability, prior qualifications were considered – and marks obtained in the end of first year examination. Amongst the independent varibales considered in the analysis prior qualifications have the highest value of Pearson's correlation coefficient as seen in table 12 below.

	Explanatory variables				
	Gender	Parental education	Social class	Disability	Prior qualifications
Average end of first year examination marks	0.2	-0.1	0.05	-0.05	-0.4
Number of cases	1616	1521	1507	1616	1376

Table 12 Correlation between end of first year marks and explanatory variables

Dummy variables were then created to recode the various categorical variables to ensure logistic regression results are interpreted correctly after the analysis. Parental education and gender were available in the dataset as binary variables. The dummy variable for disability was a binary variable where no known disability was coded as 0 and all other categories of reported disability were coded as 1. The binary dummy variable for social class was coded on the basis of belonging or not belonging to professional or intermediate class. Working class was therefore defined as not being professional or intermediate class. For prior qualifications we considered only two categories students who had A level/IB qualifications and the second category included all those who had a BTEC only? qualification.

A total of 1760 student records were available. Of these data on some variables was missing for 455 cases and these were excluded from the analysis. The regression model thus considered at 1305cases. Amongst these data was available for 1305 cases. The analysis (table 13 and appendix 2) shows prior qualifications increase the logit of estimated log odds of passing the end of first year examination by 1.676 to unit. Thus students with A level or IB qualifications are 3.25 times more likely to pass the end of first year examination than BTEC students. In other words we can infer that controlling for all other variables in our model there is a relationship between prior qualifications and passing the end of first year examination.

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	dummy pared(1)	-.581	.234	6.169	1	.013	.559

	dummy SEC(1)	-.035	.239	.021	1	.884	.966
	dummy disable(1)	-.091	.376	.058	1	.809	.913
	gender(1)	-.171	.254	.452	1	.501	.843
	dummyquals(1)	1.676	.236	50.325	1	.000	5.346
	Constant	1.986	.454	19.118	1	.000	7.287
a. Variable(s) entered on step 1: dummy pared, dummy SEC, dummy disable, gender, dummyquals.							

Table 13 Binary logistic regression

Discussion and conclusion

Overall patterns of progression show more BTEC students fail the end of first year examination as compared to entrants with other qualifications (Table 8). One possible explanation for this is the different starting points where HE entrants are due to their prior qualifications in terms of academic skills, expectations in and from HE. Although the data shows a differential outcome foor the BTEC cohort, it remains true that the majoriy of BTEC entrants do progress successfully to second yrar study. This any moves to alter admissions crtiria to 'raise the bar' could exclude many BTEC students who do succeed. The focus therefore should be on apropropriate identification of and support for those at risk of failing in year 1. Interventions may therefore be needed to target support around learning and progression of BTEC students during first year in HE.

Subject-wise patterns of progressions for BTEC students show they are less successful in Computer science and Business studies as compared to Sports (Figure 3). Interventions and academic support in HE needs to be tailored across subject-areas in line with course structure and programme requirements to help BTEC students achieve better educational outcomes. One of the bigger challenges is equipping organisations to embed research findings into practice to improve student success. Through individual facing and system facing changes universities can create more supportive learning environments to reduce these inequalities for this quite often overlooked widening participation cohort. Interventions need to be planned during the life-cycle of a student.

Revisiting the questions raised earlier regarding the efficacy of widening participation programmes; HE performances of BTEC students; as well as questioning why failure rates are so prevalent in this group of students, it is evident that whilst the BTEC pathway provides students with a stepping stone into higher education (Rouncefield-Swales, 2014), it appears that once access has been granted, HE providers need to cultivate further strategies to ensure that this cohort of students continue to develop stronger learner identities. This would enable them to become more resilient and therefore more able to adapt to established institutional habituses, particularly when studying in selective universities.

Even though there is clearly a difference in all student groups transitioning into higher education, it appears that some groups are more different than others and are therefore automatically positioned as outsiders in the domains of traditional educational institutions. If government intention is to ensure that all students are given equal access to all higher educational institutions as well as the experience of degree success, widening participation initiatives need to move beyond the entry process. In the State of the Nation Report (2016:v) The Rt. Hon. Alan Milburn and The Rt. Hon. Baroness Gillian Shephard argued that there is a need for policy change regarding social mobility: *'It is not just that new policies are needed. New ways of thinking are needed too.'* This sentiment is reinforced by the Chief Executive of UCAS, Mary Curnock Cook (2016:4) who firmly asserts that change needs to take place much earlier in a student's educational journey (UCAS: 2016:4).

For many people, education is a mechanism which opens doors: both in terms of personal enlightenment as well as through educational and economic success. But what has become evident is that we are not all afforded the same opportunities which enable us to make the same choices in life. Therefore, the widening of participation is an essential component in drive for higher education equality and the insurance that all students, regardless of social background, are also provided with the opportunity to be '*choosers*'.

Clearly, the evidence suggests that there are issues of ambiguity surrounding the positive outcomes experienced by students following a BTEC route into HE. Research evidence points to the need for

universities to develop strategies to support these students once they have gained entrance. As McArthur (2011:736) states, *'Higher education should enable students to develop and celebrate their own identities. To do that, students need to be able to develop their own voices in ways that enrich rather than suppress who they are (McArthur, 2009). The sounds of higher education should therefore be a cacophony of different voices.'*

Acknowledgements:
This paper reports findings from a research project funded by the Higher Education Funding Council of England (HEFCE). We are grateful to Paul Ruddock, Linda Bull, Jane Reid and Kieran Nagar for dealing promptly with our data requests. We thank Hayley Dalton for her comments and suggestions on the appendix on BTEC specifications.

References

Archer, L. and Leathwood, C. (2003). Identities, inequalities and higher education. In: Archer, L. Hutchings, M. and Ross, (eds.) A *Higher Education and Social Class: issues of exclusion and inclusion*. Oxon: RoutledgeFalmer. 175-192.

Bowl, M. (2001) Experiencing the barriers: non-traditional students entering higher education. Research Papers in Education Vol. 16, Iss. 2
http://www.tandfonline.com/doi/full/10.1080/02671520110037410

Briggs, A.R.J., Clark, J. and Hall, I., 2012. Building bridges: understanding student transition to university. *Quality in Higher Education*, *18*(1), pp.3-21.

CFE (2015). *Student Opportunity outcomes framework research: in-depth study Report to HEFCE by CFE Research July 2015.* Available: http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/Independentresearch/2015/Student,opportunity,outcomes,in-depth,study/HEFCE2015_sodepth.pdf. [Last accessed 4th April 2017.]

Gill, T. and Vidal Rodeiro, C. L. (2014). Predictive validity of level 3 qualifications: Extended Project, Cambridge Pre-U, International Baccalaureate, BTEC Diploma. Cambridge Assessment Research Report. Cambridge, UK: Cambridge Assessment.

Gill, T., 2017. Preparing students for university study: a statistical comparison of different post-16 qualifications. Research Papers in Education, pp.1-19.

Greenback, P. (2009). *Widening participation and social class.* Available: https://www.researchgate.net/publication/273768422_Widening_participation_and_social_class. [Last accessed 4th April 2017.]

Green, F. and Vignoles, A., 2012. An empirical method for deriving grade equivalence for university entrance qualifications: an application to A levels and the International Baccalaureate. Oxford Review of Education, 38(4), pp.473-491.

Hayward, G. and Hoelscher, M., 2011. The use of large-scale administrative data sets to monitor progression from vocational education and training into higher education in the UK: possibilities and methodological challenges. Research in Comparative and International Education, 6(3), pp.316-329.

HEFCE. (2013). Higher education and beyond: Outcomes from full-time first degree study'. Available: http://www.hefce.ac.uk/pubs/year/2013/201315/. [Last accessed 21.5.2017].
HEFCE. (2015). 'Differences in employment outcomes: Equality and diversity characteristics' (2015). Available: http://www.hefce.ac.uk/pubs/year/2015/201523/. Last accessed [21.5.2017].

HEFCE. (2015). Causes of differences in student outcomes. Available: http://www.hefce.ac.uk/pubs/rereports/Year/2015/diffout/. Last accessed 21.5.2017].

HEFCE. (2016). Higher education in England 2016: Key facts. Available: http://www.hefce.ac.uk/pubs/year/2016/201620/. Last accessed [21.5.2017].

Henry, J. (2014). *BTecs set students up for failure at university.* Available: www.thetimes.co.uk/article/btecs-set-students-up-for-failure-at-university-360grz7bt5x. [Last accessed 4th April 2017]

Hoelscher, M., Hayward, G., Ertl, H. and Dunbar-Goddet, H., 2008. The transition from vocational education and training to higher education: a successful pathway? Research Papers in Education, 23(2), pp.139-151.

House of Commons Public Accounts February 2008. (2008). Available: http://www.publications.parliament.uk/pa/cm200708/cmselect/cmpubacc/322/32202.htm [last accessed 21.5.2017

House of Lords Hansard (2002) University Finance Debate: Baroness Warnock, Vol.641(9) 27/11/02

House of Lords, Select Committee On Social Mobility and Stationery Office (Great Britain), 2016. HLP 120-Overlooked and Left Behind: Improving the Transition from School to Work for the Majority of Young People. The Stationery Office.

Lee, S., Harrison, M., Pell, G. and Robinson, C. (2008) Predicting performance of 1st year engineering students and the importance of assessment tools therein. Engineering Education, 3 (1), pp. 44-51

London Economics. (2013). The outcomes associated with the BTEC route of degree level acquisition: A report for Pearson. London available: https://londoneconomics.co.uk/blog/publication/the-outcomes-associated-with-the-btec-route-of-degree-level-acquisition/ [last accessed 21.5.2017].

McArthur, J 2011, 'Reconsidering the economic and social purposes of higher education' Higher Education Research and Development, vol 30, no. 6, pp. 737-749. DOI: 10.1080/07294360.2010.539596

McArthur, J. (2009). Diverse student voices in disciplinary discourses. In C. Kreber (Ed.), The university and its disciplines (pp. 119–128). New York: Routledge.

McCoy, T. and Adamson, D. (2016). Building a House on Sand? In: Steventon, G., Cureton, D. and Clouder, L. (Eds.) Student Attainment in Higher Education: Issues, Controversies and Debates.. Oxon: Routledge. 161 - 173.

McDonough, P. (1997) Choosing colleges: how social class and schools structure opportunity (New York, State University of New York Press).

McGinley, M. (2016). *Quick guide to BTECs.* Available: http://university.which.co.uk/advice/a-level-choices/what-are-btecs. [Last accessed 4th April 2017.]

Mian, E., Richards, B. and Broughton, N., 2016. Passports to Progress. Social Market Foundation

Mountford-Zimdars, A., Sabri, D., Moore, J., Sanders, J., Jones, S. and Higham, L., 2015. Causes of Differences in Student Outcomes (HEFCE).

Pearson (2015a) Welcome to BTEC [Internet]. Available from: http://qualifications.pearson.com/en/about-us/qualification-brands/btec.html [1 March 2015].

Pearson (2015b) BTEC Case Studies [Internet]. Available from: http://qualifications.pearson.com/en/about-us/qualification-brands/btec/progress-with-btec/case-studies.html [1 March 2015].

Read, B., Archer, L. and Leathwood, C., 2003. Challenging cultures? Student conceptions of'belonging'and'isolation'at a post-1992 university. Studies in higher education, 28(3), pp.261-277.

Reay, D., 2001. Finding or losing yourself?: working-class relationships to education. Journal of Education Policy 16, 333–346. doi:10.1080/02680930117164

Reay, D., Ball, S. and David, M. (2010). 'It's Taking Me a Long Time but I'll Get There in the End': Mature students on access courses and higher education choice. British Education Research Journal. 28 (1), 5 – 19

Reay, D., Crozier, G and Clayton, J. (2009). 'Fitting in' or 'standing out': working-class students in UK higher education. *British Educational Research Journal*. 36 (1), 107 -124.

Reay, D., (2004). 'It's all becoming a habitus': beyond the habitual use of habitus in educational research. British Journal of Sociology of Education. 25 (4), 431 - 444.

Reidy, T. (2015). *Will taking a BTec help or hinder your university application?.* Available: https://www.theguardian.com/education/2015/jul/21/will-taking-a-btec-help-or-hinder-your-university-application. [Last accessed 4th April 2017.]

Rouncefield-Swales, A. (2012). Vocational progression to selecting universities. Available: http://www.academia.edu/28967926/Vocational_progression_to_selecting_universities. [Last accessed 13th May 2017]

Rouncefield-Swales, A. (2014). *Vocational Progression to Selecting Universities Comparisons and Trends 2010 - 2013.* Available: http://www.careerpilot.org.uk/upload/Final_BTEC_Research_2014.pdf. [Last accessed 4th April 2017.]

Russell Group. 2016/7. *Informed Choices: A Russell Group Guide to Making Decisions about Post-16 Education*. London: Russell Group.

Shields, R. and Masardo. (2015). Higher education in England 2016: Key facts. Available: https://www.heacademy.ac.uk/knowledge-hub/changing-patterns-vocational-entry-qualifications-student-support-and-outcomes. [Last accessed 21.5.2017].

Smith, D. and Bocock, J. (1999) Participation and progression in mass higher education: policy and the FHE interface. Journal of Education Policy Vol. 14, Iss. 3

Smith, E. and White, P., 2015. What makes a successful undergraduate? The relationship between student characteristics, degree subject and academic success at university. British Educational Research Journal, 41(4), pp.686-708.

Social Mobility Commission (2016). *State of the Nation 2016: Social Mobility in Great Britain.* Available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/569410/Social_Mobility_Commission_2016_REPORT_WEB__1__.pdf. [Last accessed 4th April 2017.]

Sutton Trust (2000) Entry to leading universities (London, Sutton Trust).

Thomas, L. 2001. Widening participation in post-compulsory education. London: Continuum. Universities UK, and Price Waterhouse Coopers. 2007. The economic benefits of a degree. Research report. London: Universities UK.

Thomas, L. (2002). Student retention in higher education: the role of institutional habitus. *Journal of Education Policy*. 17 (4), 423 - 442.

UCAS. (2016). End of Cycle Report 2016: UCAS Analysis and Research December 2016. Available: https://www.ucas.com/file/86541/download?token=PQnaAI5f. [Last accessed 13th May 2017.]

Wolf, A., 2011. Review of vocational education: The Wolf Report.

Appendix 1

BTEC qualifications are available in a large range of sectors includingAnimal Management, Applied Science, Art & Design, Business, Computing, Construction, Children's Care and Learning, Creative Digital Media Production, Early Years & Education, Engineering, , Hospitality, Health & Social Care, Land-based Disciplines, Music / Music Technology, Performing Arts, Public Services, Sport, Sport and Exercise Science, Travel & Tourism.

Upper Secondary Qualification (Level 3)

The following Level 3 courses, known as BTEC Nationals, are intended for those with five or more GCSE grades A*-C including English, mathematics and science. The qualification names for Level 3 courses changed dependent on whether they were awarded though the forthcoming National Qualification Framework (NQF) or the predecessor Qualification Credit Framework (QCF):

NQF (2016)	QCF (2010)	A level size equivalence	Grading
BTEC Level 3 Extended Diploma	BTEC Level 3 Extended Diploma	3 x A levels	PPP to D*D*D*
BTEC Level 3 Diploma	BTEC Level 3 Diploma	2 x A levels	PP to D*D*
BTEC Level 3 Foundation Diploma	BTEC Level 3 90-Credit Diploma	1.5 x A levels	PP to D*D*
BTEC Level 3 Extended Certificate	BTEC Level 3 Subsidiary Diploma	1 x A level	Pass to Distinction*
BTEC Level 3 Certificate	BTEC Level 3 Certificate	0.5 x A level	Pass to Distinction*

Key stage 4 and post-16 qualifications (Level 2)

The following Level 2 or Level 1/2 courses, known as BTEC Firsts. Some are offered in schools as a complement to GCSE programmes and others are offered in post-16 institutions In the 2012 version of the qualifications, students who do not achieve the minimum Level 2 Pass grade will receive a Level 1 Pass in the given qualification equivalent to GCSE grades D-E and therefore does not count to the A*-C measurement system. The qualification names for Level 2 courses changed dependant on the phase in which they were developed. and the framework on which they originally sat (shown in the table below).

NQF (2012)	QCF (2010)	GCSE size equivalence	Grading
BTEC Level1/ 2 Diploma	No equivalent	4 x GCSEs	PPP to D*D*D*

BTEC Level 1/2 Extended Certificate	BTEC Level 2 Diploma	3 x GCSEs	PPP to D*D*D*
BTEC Level 1/2 Certificate	BTEC Level 2 Extended Certificate	2 x GCSEs	PP to D*D*
BTEC Level 1/2 Award	BTEC Level 2 Certificate	1 x GCSE	Pass to Distinction*

BTEC Grading in more detail

BTEC qualifications are graded differently from the typical A*-G (now 9-1) or A*-E at GCSE and A-Level. The four grades that BTEC offers are: Pass, Merit, Distinction and Distinction* (Pronounced Distinction-Star).

A BTEC Level 1 and 2 grading is equivalent to a GCSE. A Level 1 Pass is equivalent to grades D-G or 3-1 at GCSE. At Level 2, a Pass grade is equivalent to a grade C or 4/5 at GCSE, a Merit Grade is equivalent to a B or 6 Grade at GCSE, a Distinction is equivalent to Grade A or 7 at GCSE and Distinction* (Pronounced Distinction-star) is equivalent to Grade A* or 8/9 at GCSE.

A Level 3 BTEC is equivalent to an A-Level and therefore grading is slightly different to allow and help students gain access to further education in University or Apprenticeships. At Level 3, a Pass grade is equivalent to an E at A-Level, a Merit grade is equivalent to a C at A-Level, a Distinction is equivalent to an A at A-Level and lastly a Distinction* is equivalent to a A* at A-Level.

At both Level 1/2 and Level 3 BTECs, a unit that does not meet the criteria for a Pass grade will receive a 'U' meaning 'Ungraded' and, in some cases, the student may not receive a BTEC qualification in that subject. Additionally, grade Distinction* was introduced later, in 2010 to enable pupils to earn a grade equivalent to the top GCSE or A-Level grade and this meant that more discrimination was possible of students performing at the highest grades.

Appendix 2

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	603.648[a]	0.057	0.141
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than 0.001.			

Classification Table[a]

			Predicted		
			Passed first year of programme/Not passed		Percentage Correct
	Observed		No	Yes	
Step 1	Passed first year of programme/Not passed	No	0	95	.0
		Yes	0	1210	100.0
	Overall Percentage				92.7
a. The cut value is .500					