TRANSFORMING TRANSITIONS

Addressing Barriers to Student Success: Final report to the Office for Students

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CONTENTS

APPENDIX 1: Theory of Change models is available as a separate document.

1.0 EXECUTIVE SUMMARY

1.1 The project context

In the context of national data, which suggested that students from different backgrounds were achieving differential outcomes at university and beyond, the *Transforming Transitions* project set out to explore both statistical data on the access and progression of BTEC students across the college-university transition. It also explored student and lecturer voices on transition.

1.2 Key findings

- The literature review confirmed that data appears to suggest that BTEC students are less likely to access university, less likely to progress through university to achieve 'good' degrees (defined as a first or 2.1), and less likely to enter higher-paid graduate employment than students with traditional academic qualifications, such as A-level. However, the research also highlights the complexity of the relationship between prior qualification, access to and progression through university, and subsequent employment outcomes. In particular, it points to the overlap between the BTEC cohort and the widening participation (WP) cohort, making it difficult to disentangle whether it is the social disadvantage or the prior qualification, or a combination of both, which is most significant in determining these patterns of progress. A key conclusion, therefore, is to caution against making simplistic, causal assumptions drawing only on prior qualification data.

- The statistical analysis of higher education (HE) data showed that, at both national level and at the partner HE institutions, students with a BTEC qualification were less likely to progress successfully through university. One partner institution data flagged that this was an issue at the end of the first year. The process of undertaking this analysis, however, drew attention to the need for more consistent collecting of data in HE and, particularly, in further education (FE), in order to make more robust cross-institution and national level comparisons. There is also some misunderstanding of the requirements of General Data Protection Regulation (GDPR), though this may reflect that the study was taking place just as GDPR came into force.

- Student interviews were conducted in the spring term of the academic year 2016/17. There were 39 face-to-face interviews involving 64 students, some interviewed individually, and some in groups. The HE student sample was categorised in three groups: those with a BTEC-only entry qualification; those with a BTEC plus A-level; and those with A-level/International Baccalaureate entry qualifications. The FE student interviews focused on those students taking a BTEC course.

  The student interviews indicated that:

  - It was very difficult to determine any finding which related only to students with a BTEC qualification, a reminder that the student group is highly heterogeneous and

that there are dangers in treating any sub-group of the student population as homogeneous.

- Not all students feel a sense of belonging at university. Some students find it hard to fit in or feel excluded by others and the judgments other students make about, for example, their BTEC qualification or their social or ethnic background. Universities seem to have a dominant culture, with its own set of values and interests, but which do not always allow space for the diversity of students and their interests.

- Many students struggle with the changed nature of academic support at university compared with FE. They are very used to high support at FE and find university support less overt. Expectations regarding academic literacy were a particular problem and so too were the expectations of mathematical competence for some courses. Some students were reluctant to access the support available at university for fear of seeming inadequate.

- Linked to the finding regarding academic support, many students found the relationships with tutors very different at university compared with those at FE. Typically, they formed close relationships with FE tutors, and felt able to ask for support, whereas at university lecturers often seemed distant or not to know them. This issue may have been more acute for BTEC students who often studied with the same tutor throughout their FE experience.

- The transition to university from FE caused some difficulties and lack of continuity for some students in terms of ways of teaching and learning. Large, group lectures – seminars which are not very participatory or interactive – and a fairly conservative set of teaching practices made the academic transition more challenging for some students unused to these ways of learning.

- Different assessment practices in FE and HE were also problematic for some students. In part, this was about type of assessment, with many university courses making heavy use of academic essays and examinations for assessment, compared with a much more diverse repertoire of assessment types at FE. However, it was also about less clarity and less feedback at university – in general the amount and quality of feedback in FE was considered to be better than at HE. However, many of these comments suggested that students wanted very precise feedback about what to do to secure good grades and were reluctant to be more independent in managing their own learning.

- The lecturer interviews were conducted face-to-face in the spring and summer terms of the academic year 2016/17, and involved seven FE lecturers and 11 university tutors. These showed that, in general, there was a high degree of correspondence between the lecturer perspectives and those of students, particularly in HE, picking up on similar issues

regarding transition. But a key, and important difference, was that lecturers were much more likely to present these transition challenges as binary differences between students with BTEC qualifications and other students, whereas the students themselves suggested the boundaries between qualification routes in terms of transition were much more blurred.

- HE partnerships between HE and FE**:** At the heart of the *Transforming Transitions* project was a collaboration between FE and HE institutions, and the insights gained from this have been particularly helpful. However, the process of research has made it very clear that there is very little shared working across the transition boundary and that mutual understanding of practices in the two sectors is relatively low. This was made particularly evident in the intervention on academic writing which involved all four FE colleges. Transforming the experience of transition and securing greater equality of outcomes needs better partnerships between FE and HE.

1.3 Limitations of the research

As with any research study, there are limitations in the research reported here, the most significant being the timeframe of the study which was too short to permit tracking students from FE, through HE, and into employment. The timeframe also meant that the interventions focused on the more 'instrumental' findings from the Phase 1 research because they could be implemented in the time available. But we feel very strongly that the interventions more likely to make sustainable change to student outcomes (for example, inclusive pedagogies; changing assessment practices; creating a sense of belonging) would need time for development, implementation and evaluation.

Another limitation, less with the design than with findings, is that although care was taken to sample students with different entry qualifications so that we could discern differences, the interview data make clear that the entry qualification variable was also intersected by other variables (social disadvantage; ethnicity; international student status). A study which explicitly samples to include these variables would provide greater capacity to understand the inter-relationship or not between these variables.

Finally, the complexity of *collaborative working* across eight different institutions needs to be noted. The everyday realities of institutional workplaces often made working together difficult, despite genuine commitment to the project. This was compounded by different ways of collecting data, both across the HE/FE transition and across universities, and different organisational structures, practices and responsibilities in universities.

2.0 INTRODUCTION

The *Transforming Transitions* project was one of a cluster of projects across the country, funded by the Higher Education Funding Council for England (HEFCE)[1] Catalyst programme *Addressing Barriers to Student Success* (HEFCE, 2017). This was prompted by growing concern about differential progression rates through university and differential outcomes in terms of graduate employment and salary. Successive reports from HEFCE (for example, HEFCE, 2013; HEFCE, 2018) had flagged differential patterns of progress and outcomes for students from ethnic minorities, disabled students, mature students and socially-disadvantaged students. The term 'social disadvantage' is widely used but there is no consistently used definition. For this project, we interpreted social disadvantage as including students who have experienced economic poverty, but also those who have experienced prejudice or inequality, and possess differing social and cultural capital from that of more privileged social groups. The *Transforming Transitions* project focused on the trajectories of students with vocational qualifications, principally the BTEC, because research had suggested, firstly, that this group did less well at university and, secondly, that vocational students were also often from groups identified as progressing less successfully (i.e. low socio-economic backgrounds, minority ethnic, mature, or disabled). We were aware that the relationship between vocational qualifications, social disadvantage and degree outcomes had not been fully investigated.

At the same time, internal data from one of the participating universities suggested that the first year of university is a critical one in determining future outcomes. Students who were academically successful at the end of year one were more likely to be awarded higher degree classifications at the end of their degree programmes, regardless of entry qualification. Thus, what happens to a student in their first year of undergraduate study seems particularly critical. Given research which has highlighted some of the problems of transition from post-16 education to university (Jones, 2008), both personal and academic, the *Transforming Transitions* project sought to understand the transition journey, through gathering both quantitative and qualitative data, in the hope that better understanding of the transition experience might lead to a transformation of outcomes.

The *Transforming Transitions* project was a collaboration of institutions across the higher education (HE) and further education (FE) divide: project lead University of Exeter; University of Birmingham; Loughborough University; Queen Mary University of London; City and Islington College, London; Exeter College; Hereford Sixth Form College; and Leicester College – the latter four all offering the BTEC qualification. Pearson, the provider of the BTEC qualification, was also a project partner. Research on student transitions has typically focused on interventions for students in their new university educational environment (for example, Leese, 2010). However, transition begins with the preparation of students for the next stage of their

[1] The former Higher Education Funding Council for England (HEFCE) was the predecessor of the Office for Students (OfS). The OfS took over some of its functions from April 2018.

education. Therefore, this project has specifically sought insights into transition from both FE and HE perspectives.

3.0 PROJECT RATIONALE AND APPROACH

3.1 Project background, rationale and research underpinnings

The *Transforming Transitions* project developed from the need to address the issues that arise when students with BTEC qualifications progress to HE. The BTEC is a 'specialist, work-related qualification' (Pearson 2018) and whilst it may also provide a route to further study, this is not its sole or primary aim. However, the popularity of the qualification has resulted in increasing numbers of students studying them and progressing to further study. In 2018, approximately 10% of all university entrants in the UK had studied only for a BTEC qualification. But this headline figure hides the imbalanced nature of the progression from BTEC to degree level study. BTEC entrants tend to study for a narrow range of degree subjects (Business, Sport and Exercise Science, health-related professions) at lower entry tariff universities.

The particular issue which provided the impetus for the project was the concern that students with vocational qualifications, such as the BTEC, were not accessing the most selective universities and were not progressing through university in the same way as students with A-levels. Indeed, the data suggest that the outcomes for students entering university with BTEC qualifications are worrying. BTEC qualified students are less likely to achieve a 'good degree', that is one awarded at first or upper second class honours using the UK classification system, when compared with A-level students. HEFCE data (HEFCE, 2018) show that even those with the best BTEC results on university entry tend to achieve degree outcomes which are in line with those with mid to low A-level results.

Moreover, aside from eventual degree outcomes, BTEC qualified students are also less likely to complete their studies. Figures for withdrawal from university after one year of study show that BTEC qualified students have higher dropout rates. The evidence shows that BTEC students are more likely to drop out of university when compared with those on a traditional academic pathway, even when accounting for prior attainment (Hayward & Hoelscher, 2011). This emerging pattern of differential experiences comes in the face of evidence which suggests that young people with more access to different types of programmes and activities (e.g. work experience, career talks, workplace visits etc) are equipped with better networks and knowledge of the labour market. They can also make more informed decisions – leading to a more successful transition to adult employment (OECD, 2010; Symonds et al., 2011).

The transition to university is an important educational step for students yet the impact of transition experience on final outcomes is poorly understood. There is evidence that personal and academic issues and student expectations that are not addressed during the transition can lead to feelings of estrangement which may contribute to the marked differential outcomes on graduation (Jones, 2018). The *Transforming Transitions* project was inspired by the desire to

better understand the transition journey of BTEC students and to discover whether improving this journey could lead to a closing of the gap in outcomes. Our particular interest in vocational qualifications, particularly the BTEC, stemmed from the research which indicated that these students are more likely to be from a socially-disadvantaged group, and that these relationships had not been fully explored.

3.2 Provider context and collaboration

A key feature of the *Transforming Transitions* project work was the extent of partnership working between institutions and across the FE/HE divide. Four universities, the University of Exeter, the University of Birmingham, Loughborough University and Queen Mary University of London, and four providers of BTEC qualifications, City and Islington College, London, Exeter College, Hereford Sixth Form College and Leicester College, collaborated on the project. The initial impetus for the project came from a previous joint research study, conducted by the University of Exeter and Pearson, which had looked at the experiences and progression of BTEC students through degree programmes at Exeter. The Catalyst call created the opportunity to extend this, and the Deputy Vice-Chancellor for Education at Exeter, through the network of Deputy/Pro-Vice-Chancellors for Education, invited the other universities to collaborate. The four universities involved were all over-subscribed, research-intensive institutions because the data show that BTEC students in Russell Group universities are less likely to complete than those elsewhere. Additionally, the salary gap between BTEC students and traditional students, although narrowing, is significant and at its largest in Russell Group universities. From this position, it was a natural step to involve one FE provider with which each university already had a relationship. This collaboration between universities and FE BTEC providers was significant in allowing for new insights into the process of transition. Research on student transitions has typically focused on interventions put in place only once a student has arrived in the new university educational environment (for example, Leese 2010). However, transition is a process that starts with the preparation of students for the next stage of their education and this project has specifically explored transition from both the FE and the HE perspectives.

3.3 The methodology

The project adopted an *explore-design-implement-evaluate* methodology. Firstly, this was done by extending systematic data analysis and the investigation of BTEC students' learning experiences across the transition from one FE college and into one university through to the transition from four FE colleges and into four universities. Secondly, it involved designing and evaluating interventions which addressed the findings of these investigations, building on and scaling up the existing work undertaken at the partner universities. The project had three phases:

- investigation
- explanation
- evaluation.

3.3.1 Phase 1: Investigation

The initial exploratory phase built on an earlier project, as noted above, conducted at the University of Exeter and funded by Pearson, focussing on students' experiences of transition, and statistical analysis of admissions and progression data at all four universities, FE colleges and via national datasets available from the Higher Education Statistics Agency (HESA). A phase one partner symposium brought together all partners to develop a detailed project plan and to co-ordinate the phase one investigation. Upscaling the earlier work and building on its findings, three robust data collection strands were undertaken to provide an evidence-based understanding of the ways in which students experience the FE to HE transition. The three data collection strands were:

- a systematic literature review of extant research on BTEC students' educational and employment outcomes at university;
- a detailed statistical analysis of admission and progression patterns in FE and HE (from partner universities and HESA);
- a qualitative analysis of students' experiences of transition across the FE/HE boundary and lecturer perspectives on BTEC student progression.

3.3.2 The literature review

This adopted the principles of systematic reviewing, with clear exclusion and inclusion criteria, and seeking to answer the question: what do we know about BTEC students' educational and employment outcomes at university? The evidence arising from this was used to inform the qualitative strand of this phase and the analysis and interpretation of project data.

3.3.3 The statistical strand

This was conducted in parallel with the literature review and involved working with three different datasets. Institutional level historic admissions and progression data were approved for the project following ethics clearance. Planning units of partner universities extracted data and anonymised individual learner level data, which 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 at Exeter where this analysis was carried out. Students were grouped by prior qualifications depending on whether they entered partner universities with A-levels, International Baccalaureate (IB), BTEC, diplomas, certificate courses or a combination of these. At university level, analysis of historic progression data of all students (BTEC, BTEC plus A-level, and 'traditional' A-level/IB entry) was carried out at institutional, subject and subgroup levels. The data looked at in-year progression data and, where available, end-of-year progression data.

The second dataset came from FE colleges. At FE college level, the analysis considered the full post-16 cohort by qualification route and the key variables of gender, ethnicity, and Socio-Economic Status (SES), which partially addresses social disadvantage. It also analysed the

destinations of students by qualification – looking at choice of institution and programme or employment routes.

The third dataset used was obtained from HESA. This national dataset was used to check trends across the population of all students who enter HE from vocational qualification routes. We were able to look at popular degree courses in terms of subject areas for undergraduate courses taken by BTEC students – also to identify which universities were more likely to have BTEC students. We also analysed degree and employment outcomes for these students.

3.3.4 The qualitative strand

This strand sought to develop a nuanced understanding of the causes of differential outcomes for BTEC students and to hear first-hand the voices of the students. Our goal in this phase of the project was to gain an in-depth understanding of the lived experience of transition in order to tailor the later interventions to identified need. We focused on Sport Science, Business and Management, and Computer Science, because these represented three subjects common to all four institutions which had a number of BTEC students in their cohorts. For each of these subjects, and in collaboration with our FE partners, we conducted a series of interviews and focus groups with students and with their tutors and lecturers, as outlined below.

Sampling and data collection

The university students sample comprised three different cohorts in year one of each of the four partner universities, based on their entry qualifications: BTEC students; BTEC plus A-level; and A-level/IB only. This avoided the risk of stereotyped assumptions and unconscious bias about any group and also allowed the possibility of identifying mechanisms of advantage as well as disadvantage. The students taking part within the FE context were all second year BTEC students who were at the end of studying their course. The students were studying subjects related to Sport and Exercise Science, Business Studies, or Computer Studies.

Four separate semi-structured interview schedules were designed for the two student groups and the two lecturer groups (that is, from HE and FE). The questions drew on the literature review and all four were organised around the same themes:

- Teaching, learning and assessment experiences
- Literacy, numeracy and transferable experiences
- Relationships and social experiences

The precise questions were modified to take account of whether the interviews were with students or teachers, and whether they were in HE or FE. The interviews and focus groups were conducted with students, tutors and lecturers on site in both FE and HE contexts. Table 1 displays information about the number of students who took part and how many interviews or focus groups were conducted.

Table 1: Showing the number of interviews/focus groups with students and lecturers

University	Number of interviews/ focus groups	Number of students	Number of FE tutors	Number of HE lecturers
A	8	12	2	6
B	17	22	2	3
C	7	21	1	2
D	7	9	2	0
Totals	**39**	**64**	**7**	**11**

The interviews were all audio-recorded and transcribed by an independent transcriber (Victoria Pink). The analysis was conducted using 'bottom up' inductive coding and followed the process of 'thematic induction' as described by Braun and Clarke (2006). This involved attributing codes to segments of the data and, after the first phase of analysing, clustering them into coherent themes. The eight themes identified partly reflect the interview schedule themes but also generated unanticipated subjects. The themes were:

- Academic preparedness
- Academic support
- Assessment practices
- Reasons for choice of FE study
- Ways of learning
- Student perceptions and expectations of education pathway
- Transferable skills
- Social capital

3.3.5 Phase 2: Explanation

The findings of the three strands of data from phase 1 provided both generalised findings across groups, sub-groups and institutions and the particularities of groups and individuals involved. This gave us an in-depth understanding of the experience of transition and its relationship to differential outcomes for BTEC students. The second phase was *explanatory*, building on the findings of phase 1 by considering the causal relationships which underpin the differential outcomes and determining interventions which address these outcomes. In this phase, we built on our existing interventions, where appropriate, making them more evidence-based, improving their design, assessing the cost-effectiveness and extending their reach across partner institutions. This stage and the evaluation phase used a Theory of Change model (see Appendix 1) to support both the design of interventions and their evaluation. Each intervention was implemented across at least two partner universities or across two FE colleges, depending on the focus of the intervention.

The intention had been to develop interventions that were robustly designed and evidence-informed, rather than over-focused on 'good ideas activities' where the underlying drivers of change have not been examined. However, one limitation of the intervention stage is that the timeframe of the project narrowed what was feasible as an intervention focus and so our choices were more instrumental than might have been desirable. The four interventions focused on academic writing, online pre-entry/entry support, mathematics support and personal tutoring (see Tables 2 and 3 below). These all derived from evidence in the phase 1 data, as intended. However, the qualitative data highlighted much more significant issues around, for example, ways of learning and assessment practices which would have required longer development and implementation times.

Table 2: Outlining the scope of the interventions

Intervention	Description	Partners
Academic writing	A suite of resources including Powerpoint presentations with audio commentary was developed for BTEC FE tutors to use in their teaching to support students in academic writing.	University of Exeter; Exeter College; Leicester College; City and Islington College; Hereford Sixth Form College.
Online support	The implementation of an online module, bespoke for each subject, targeted at pre-entry and first-year students. Its aim is to explain the ethos of the university, to provide a platform for academic and soft skills development and to address transition gaps.	Queen Mary University of London; University of Exeter; Loughborough University
Mathematics support	Identification of relevant semester one first-year quantitative modules in Business and Sport science, considered to be mathematics and statistics 'heavy' and the development of a package of support materials relevant to the discipline, to be put into practice alongside other forms of existing support.	Loughborough University; Birmingham University; University of Exeter
Personal tutoring	Development of existing personal tutoring policies and practices to: make available to tutors information on students' academic backgrounds; provide improved guidance outlining tutor role; develop and implement an	Birmingham University; University of Exeter

Intervention	Description	Partners
	improved recording system for students and tutors.	

Table 3: Outlining student involvement in the interventions

Intervention	Student involvement
Academic writing	Intervention group: 168 students Control group: 96 students
Online support	Approx 400 students
Mathematics support	1511 students offered support
Personal tutoring	1520 students in Business and Sports Science

3.3.6 Phase 3: Evaluation

Phase 3 was the main evaluation phase where the Evaluation Framework (see Appendix 2) was implemented for each intervention. The Evaluation Framework required the articulation of an explicit effectiveness question for each intervention, identification of the baseline and outcome data required to answer that question, and determination of the most appropriate methods of analysis in relation to that data. Our Evaluation Framework also included a process evaluation, eliciting qualitative data which provided evidence of both how the intervention was delivered and the circumstances or contexts which enabled or acted as a barrier to its success. In this way, we ensured a consistent and systematic approach to evaluation, combining both qualitative and quantitative data.

3.4 Theory of Change models

A Theory of Change model is valuable in planning for social change as it ensures that causal relationships are made explicit and that underlying assumptions are articulated. In particular, in cases such as this with complex causal relationships, '…*the precise link between activities and the achievement of the long-term goals are more fully understood. This leads to better planning, in that activities are linked to a detailed understanding of how change actually happens...'* (Harries, Hodgson and Noble, 2014). A partnership symposium was held, bringing together the four FE and four HE partners, and Pearson to share the findings of Phase 1 and to develop the Theory of Change model for this project. An expert on Theory of Change models from one of the partner universities led the workshop to familiarise all partners with this way of working. We then developed together four interventions which addressed the identified barriers or issues which arose from the first phase, each underpinned by a Theory of Change model and an Evaluation Framework. The full Theory of Change models are included in Appendix 1.

4.0 OUTCOMES AND FINDINGS

4.1 Findings from the literature review

In this section, we review the literature which examines and explains the relationship between vocational qualifications and access to, and progress through, university, thus mapping the educational terrain in which the *Transforming Transitions* project is placed.

The first point evidenced in the review of research is the British ambivalence about vocational qualifications. Several studies have drawn attention to the positioning of vocational qualifications as 'inferior' (Gill and Vidal Rodeiro, 2014; Gill, 2018; Smith and White, 2015; Shields and Masardo, 2015). Such discourses are significant as they may affect students' own sense of self-worth as they progress through university and how lecturers respond to them.

In the light of concerns about widening participation (WP) and social disadvantage, several studies highlight similar issues of access for students with vocational qualifications. Hoelscher, Hayward, Ertl and Dunbar-Goddet (2008) found that students with vocational qualifications were much less likely to attend a pre-92 university than students with conventional academic qualifications. Similarly, Mian, Richards and Broughton (2016) found that BTEC students were more likely to go to low-tariff universities than to more elite institutions. Significantly, research also shows that there is an intersection between students with vocational qualifications and disadvantaged groups. Hayward and Hoelscher (2011) reported that students with vocational qualifications were more likely to be black, Asian or minority ethnic (BAME), have a disability, or come from a low socio-economic background. Shields and Masardo (2015) also found that these students were more likely to come from low participation neighbourhoods, whilst Bhattacharrya, Ison and Blair (2003) found that more ethnic minority students chose vocational courses than did their white peers. Rouncefield-Swales (2014) found that BTEC students were more likely to be first generation HE students and more likely to live in a low participation neighbourhood.

Once at university, patterns of progression for BTEC students do not match those of students with traditional qualifications. Rouncefield-Swales (2014), Round, Brownless and Rout (2011) and Hayward and Hoelscher (2011) all report higher drop-out rates for BTEC students, even when controlling for prior attainment. Analysis of reasons for this attrition are not simply academic, but also personal and financial (Rouncefield-Swales, 2014). At the same time, in terms of degree outcomes, students with BTEC qualifications perform less well than the sector-adjusted average (HEFCE, 2013). However, whilst this data might appear to signal a particular progression problem for students with BTEC qualifications, research points to the interaction of disadvantage and the BTEC cohort. Both Rouncefield-Swales (2014) and Round, Brownless and Rout (2011) note the correlation between disadvantaged students and those taking vocational qualifications and argue the strong link between disadvantage and attrition rates. Critically, this underlines that educational outcomes are interactional, not binary, and that simply considering entry qualification is unwise.

Students with vocational qualifications also experience differential outcomes in terms of employment. The only HEFCE report which considered prior qualifications, as well as student characteristics, in terms of employment outcomes was in 2013. This found that both socially-disadvantaged students and those with vocational qualifications were less likely to be in employment than their advantaged peers and those with traditional prior qualifications. Six months after graduation 39% of students with vocational qualifications were in employment, compared with 66% of students with a UCAS tariff of more than 450 points (HEFCE, 2013:24). More recently, further evidence of a negative dividend for students with BTEC has emerged. The Social Mobility Commission (SMC) report (2016) found that, whilst BTECs were a route to university for students from low participation neighbourhoods, nevertheless students '…*with BTECs are most likely to access lower tariff university courses, which lead to lower wages…'* (SMC 2016:91). Research also highlights the effect of subject choice on degree outcomes. (SMC 2016) and Belfield et al (2018), both noted that degrees such as law, medicine and dentistry lead to higher employment and salary prospects than other degrees. Belfield et al, for example, note that '…*both the subject of degree and institution attended make a considerable difference to graduates' earnings…'* (2018:5).

What is evident from this brief analysis of the research is that the relationship between a BTEC prior qualification and subsequent access to, progression through, successful employment outcomes from university is complex. On the one hand, the data does seem to suggest poorer outcomes on each of these measures. On the other hand, research also indicates that the cohort of students choosing a BTEC is also likely to share the characteristics of the WP cohort. This means it is very difficult to determine whether it is the social disadvantage or the qualification route which is most significant in determining outcomes. Certainly, it would be unwise to draw any simplistic causal assumptions based only on prior qualification. In order to better understand and address these differential outcomes, we might consider the research on students' experiences at university, particularly research which identifies the experiences of students who are not from the predominant white, middle class, traditionally-qualified group. This has drawn attention to, for example, different social capital or habitus (Reay et al 2009), lower self-confidence (Mazenod, Francis, Archer, Hodgen, Taylor, Tereshchenko and Pepper, 2019), different learner identities (McCoy and Adamson 2016) and a sense of not belonging (Mountford-Zimdars et al, 2015). Understanding transition demands consideration of both the challenges of academic transition from post-16 ways of learning to those at university and understanding of the personal, economic and social issues that may act as constraints to access and progress.

4.2 Findings from the statistical analyses

This section reports on the statistical analyses investigating the access to and progression through university of students with a BTEC qualification. The first analysis considers national data, whilst the second explores access and progression data from the HE partner institutions

UCAS entry tariff is a way of ensuring comparability across various qualification routes.

Numerical scores are assigned to the possible grades that can be achieved in each type of qualification and points are then assigned to applicants. However, it remains unclear and debatable whether the equivalence of various prior qualification routes have been aligned correctly. The different qualifications via their different curriculum, pedagogical approach and course work bestow students with different sets of skills, knowledge and understanding. As a result, this difference in terms of post-16 learning trajectories renders making direct comparisons between students who follow different qualification routes complex.

Our analysis of population data from HESA shows that BTEC students were less likely to study at a Russell Group university and were relatively more likely to study at low tariff providers. Analysis of national datasets (Banerjee 2019) shows that the majority of BTEC students obtain a second-class degree and only a small proportion of this cohort gain a first*,* even if they had obtained the highest possible grade in the vocational qualification. The data illustrates differential degree outcomes linked to entry qualification, with non-BTEC students more represented in the higher award levels and vice versa.

Our analysis of institutional data from the project universities considered data for the academic years 2012-13 to 2015-16, and four different student groups:

- students with A-level or IB qualifications;
- students with only BTEC qualifications;
- students who had studied for a combination of A-level or IB and BTECs; and
- students with other qualifications such as diplomas and certificate courses.

The data was collated for the three subject areas forming the sample for this study:

- Business Studies
- Computer Science
- Sport and Exercise Science.

There were some limitations in the data collected and the data quality was not uniform across all institutions. For example, some of the datasets did not have information on prior qualification routes taken by students. The other problem noted was end of first-year examination results were not consistently available.

The first analysis examined **prior entry qualifications** of all these students to estimate what proportion of students enter partner universities via academic and vocational routes. The highest proportion of students were those with an A-level or IB entry qualification (74% overall). There were relatively fewer students with vocational qualifications such as the BTEC (11%) and even fewer students had taken a combination of academic and vocational qualifications, diplomas and certificate courses (7.5%). BTEC students were most likely to be enrolled for courses in Sport and Exercise Science, followed by Computer Science. There was

considerable variability between the universities in the percentage of BTEC students entering these courses.

In terms of patterns of progression, an analysis investigated what proportion of students from different qualification routes passed the end of first-year examination at the university in the three subjects. Overall, whereas 94% of students with an A level/IB entry qualification passed the first-year programme, only 76% of students with a BTEC only qualification did so. The data also reveals that BTEC students were relatively more successful in Sport and Exercise Science. Given that the data also shows that Sport and Exercise Science enrol proportionally more BTEC students than the other two subjects, it may be that there is a closer match between course expectations at university and the BTEC qualification. Alternatively, it may be that university Sport and Exercise Science courses are better aligned to BTEC students' needs and preferences because there are more of them on the course.

Overall, this analysis of partner institution patterns of entry and progression broadly mirrors the national data presented earlier. Specifically, it shows that students with a BTEC-only prior qualification are in a minority in Business Studies and Computer Science, but over half of all students enrolled on Sport and Exercise Science degrees have a BTEC-only prior qualification. The analysis also indicates that students with a BTEC-only prior qualification were also more likely to fail their end of first-year examinations, although this likelihood seems to be less strong in Sport and Exercise Science. It is important to note, however, that the majority of students with a BTEC-only qualification *do* progress successfully. What this data is flagging is the differential outcomes between students with different prior qualifications, and it raises questions, which the statistical data cannot answer, about the reasons for these differential patterns of entry and progress.

In conclusion, the data analysis highlights the importance of addressing more systematically the access to and progress through university of students with a BTEC. Vocational students are not always accepted by elite universities nor are they accepted for admissions to all courses. Despite this, the number of students from vocational entry routes at the universities in undergraduate courses continues to grow. In 2016, one in four students entering HE held a BTEC qualification, double the 2008 figure. It is therefore more important than even to understand how these students perform when transitioning to university from their vocational entry route to what may be a more academically focused HE degree. The SMC report (2019) says that, at age 16, disadvantaged students are more likely to enter FE than school sixth forms. It is now becoming increasingly important to include students with vocational qualifications in the demographic groups for which retention and success is monitored. One challenge conducting this analysis has been the variability of data. This includes: data routinely collected by national organisations, such as UCAS, HESA and OfS; university institution-level data; and data collected by FE colleges. A shared understanding and agreement on what data might routinely be collected would facilitate a more informed understanding of transition.

4.3 Findings from the student interviews

The student interviews involved 64 students from the three groups – those with BTEC only entry qualifications, those with BTEC and A level and those with A level or IB – thus allowing us to probe not only BTEC students' perceptions and experiences, but also those of other students, and, therefore, avoiding making assumptions that our findings related only to the BTEC group. The qualitative analysis is condensed into three main themes:

- **Ways of learning** considers learning experiences, ways of learning and how academically well-prepared the students feel for their chosen university courses;
- **Assessment practices** captures students' vocal and varied views about the assessment practices they experience, including a significant section on assessment feedback;
- **Social experiences** pulls together comments concerning students' social transitions, including a range of issues surrounding students' social networks with peers and friendship groups and their accommodation choices.

Some significant themes emerge from this analysis of student voices across the transition. When considering ways of learning, a crucial theme for universities is greater awareness of the multiple starting points of students on some programmes in terms of disciplinary knowledge, and to consider how to accommodate this diversity into the programme of teaching. This may be relevant to all degree courses but may be particularly critical where a degree subject accepts students with a wide range of different A-levels or vocational subjects. An additional strong theme concerns the nature of the relationship between students and tutors, which appears to be closer and more constructive in post-16 settings than at university.

In terms of assessment practices, two central themes emerge after reflecting on the perspectives voiced by students: the types of assessment; and the helpfulness of assessment feedback. With regard to the types of assessment, there is more diversity in the types of assessment on the vocational courses than that found in A-levels. Equally, diversity exists in types of assessment in university undergraduate programmes, which vary from subject to subject. Students' voices reveal no real consensus around what kind of assessment is preferred, thus reflecting the diversity of previous learning experiences and personal preferences. Hoping to reduce differential outcomes, universities need to ensure that students experience a diversity of assessment types, including a reduction in the reliance on an examination and the written essay.

With regard to helpfulness of assessment feedback, this is a more complex issue and, from the voices of the students, a significant one. The students' dissatisfaction with the feedback they receive at university may not be simply related to the quality of the feedback provided. Although FE students do tend to receive more feedback, more individualised feedback, and more feedback aligned to defined performance standards, this may be due to the high accountability culture in FE, rather than to any superior professional understanding of effective feedback. The

question of what kind of learners universities aspire to foster and, more especially, how they might give support, in the future, to students moving away from a somewhat dependency-driven assessment culture to a more independent, self-directed engagement with learning and assessment is, therefore, an important one.

In addition, it would seem from these student voices that students bring with them different kinds of social capital, and this may be realised in differing degrees of engagement and belonging. For some, including vocational, ethnic minority and international students, this may mean their priority has been forming friendship groups with people like themselves. However, some students sought to create new networks of friends and, thus, build relationships across multiple networks. In supporting a move towards more inclusive and equitable student experiences, selective universities, which may have been less 'open' to non-traditional students, should possibly prioritise on-going commitment to gaining a holistic understanding, including the educational, social and cultural backgrounds, of the whole student cohort. Finally, one key finding from the analysis is that it highlights the heterogeneity of the BTEC group, and many of the transition issues described by BTEC students were shared by other student groups.

4.4 Findings from the interviews with teaching staff

The interviews with teaching staff in HE and FE focused on perceived differences between students who studied vocational qualifications and students who studied A-levels. The key themes arising from the interviews were: perceptions regarding academic preparedness; student performance and progress; academic skills; academic support; ways of learning; and personal and social issues of transition.

The analysis of lecturer interviews reveals some clear synergies in perspectives between lecturers and students. There appears to be a common recognition that both ways of learning and assessment practices at university can create challenges for students in their first year and that there are differing levels of academic support across the FE/HE transition. However, the lecturers and tutors are more inclined towards binary distinctions between students with BTEC qualifications and those with A-levels than are the students, who offer a more complex picture, including blurred boundaries between the different qualification routes. For example, the students themselves recognise that some A-levels provide a stronger preparation for academic writing than others, and that this is not simply a BTEC issue.

A risk of making binary judgments about BTEC and A-levels is that the diverse needs of diverse students is overlooked in favour of simpler assumptions. A further risk is that believing BTEC students are less well-prepared for university may lead to different decisions being made regarding entry requirements, particularly requiring BTEC students to also hold an A-level. Such decisions, given that the data indicate the interaction of WP characteristics with BTEC choices, might have the unfortunate consequence of decreasing access to university and at the same time widening the participation gap. The student voices are a salient reminder that

groups which share one common characteristic, such as a qualification route, are not homogeneous, but diverse and heterogeneous.

4.5 The findings from the interventions

4.5.1 Academic writing

The positive views echoed by tutors and students suggest support provided to students was well received and useful. Students' responses from interviews highlight that, in respect of academic writing, some students progressed in a few of the core criterion identified throughout this project – notably referencing addressing the question and developing a logical line of argument. However, the process of implementation revealed that FE tutors did not always have a clear understanding of how a research intervention is delivered. Some tutors did not follow instructions provided by the research team and this added further complexities in assessing the impact of the intervention. When the resources were used, there were inconsistencies in the how they were delivered. One tutor emailed resources to students, one tutor used their own resources and one tutor was co-opted from another department to deliver the resources. This meant a shared cultural understanding between FE and HE tutors around academic writing was not achieved during the intervention period. More sustained time to work with the FE tutors and support their use of the materials was needed and, ideally, more opportunities for meaningful exchange between FE and HE tutors in relation to expectations of academic writing.

4.5.2 Mathematics support

Survey data showed that students had accessed various forms of support at different levels. A greater proportion of students with no post-16 mathematics qualifications accessed support compared to students who had studied mathematics to a higher level. Students spoke positively about how the available support had assisted their learning. For example, the use of lecture capture technology to record live lectures for later online access allowed students to review their learning and offered flexibility. New software packages – such as ALEKS (**A**ssessment and **LE**arning in **K**nowledge **S**paces), a web-based assessment and learning system which provides individualised feedback to students on their learning in Mathematics – were deemed helpful by students. However, the study also highlighted the importance of ensuring that teaching staff understood how to use the software. Students were, however, found to choose physical, 'people-based' support, indicating that software cannot simply replace this type of support. Rather, online assistance seems to be better placed in forming a wider, more holistic package of mathematics and statistics support. The evaluation suggests that students had developed their skills as independent learners through understanding how to access and utilise relevant resources and forms of support to assist their understanding of troublesome topics.

4.5.3 Personal tutoring

Student attendance over the complete first year was below the number of mandatory meetings outlined in the relevant university-level guidance. This is potentially of concern if we are to argue that students and staff benefit from a set number of meetings. The findings point towards the need for a more nuanced understanding of the amount and type of support that students might actually need and wish to engage with, particularly in their first year. Stipulating a specific number of meetings may be a useful starting point for ensuring communication between tutors and students. However, in order to maximise participation and engagement with support systems, students will need to feel that they are accessible and offer something of value. The timing of and attendance at meetings could be particularly important when students begin their first-year study. This has the potential to facilitate the building of staff/student relationships and access to required information and services at the outset, including that provided in a tutor 'information giving' role. One difficulty with this approach is the provision of dedicated (and flexible) time by staff. There is a lack of high quality, accessible data available in order to examine student and staff participation in the tutoring system. There are mixed views about the extent to which tutors should be made aware of students' prior academic pathways and prior/current attainment. Seeking students' consent to share the information that they provide to universities at the time of admission would be a simple, cheap and easy way to ensure that tutors have a better understanding of the students that they will be supporting in the coming years.

4.5.4 Online module

Online modules can be useful pre-entry preparation tools, especially since students demonstrate higher levels of engagement and responsiveness during that phase. The project findings showed that as well as students needing support with the academic transition to university, there is also an emotional transition that they have to go through. Addressing the emotional transition is better suited for the pre-enrolment stage whereas academic transition comes after the first few weeks of enrolment. The module needs to be effectively embedded in the culture of the school or department and in organisational processes that are involved in recruitment, admissions, teaching, learning and assessment, personal tutoring and so on. This way, the module can become a platform that would help 'configure' stakeholders involved in the transition of the students and align their goals. It is essential that dedicated teams with a variety of skills (technical, student engagement, learning support and monitoring) need to be in place alongside the online module for the successful adaptation and integration of the module into the wider curriculum. Better co-ordination between teams in the same university is key.

4.6 Conclusions

Overall, however, we believe it is the findings from Phase 1 which are more significant than the interventions. Each of the four interventions was informed by the findings from Phase 1 as planned but, because of the short timeframe of the project, the interventions developed had to be feasible for implementation in a restricted time period. As a consequence, they tackle the more instrumental issues raised in Phase 1, which could be implemented quickly. The more significant findings relating to, for example, ways of learning and learning cultures, assessment practices and creating a sense of belonging would have required a significantly longer timeframe for development and implementation and more systemic change. It may well be that it is these interventions which offer the most promise for the future.

5.0 LEARNING AND RECOMMENDATIONS

5.1 Learning and recommendations from processes

5.1.1 Partnerships between FE and HE

Central to the *Transforming Transitions* project was a collaboration of institutions across FE and HE and the gleaning of insights from students and teachers in both sectors has proved particularly fruitful. FE/HE partnerships have the potential to support the transformation of student transitions. However, there is currently little shared working across the FE/HE boundary which risks negatively impacting on the students' transition experiences. It is noteworthy that two of the recommendations noted below relate to stronger collaboration across the transition. As vocational qualifications are now being acknowledged as contributing to widening HE access (Kelly, 2017) it might be the case that a more collaborative approach between higher education providers and FE colleges can support the progression of these students, and indeed all students, better. It was also the case in this project that FE tutors seemed very under pressure from a range of factors, including examination accountability and the need to meet performance targets, along with financial pressures, all of which meant some colleges felt under-resourced. Indeed, one key FE partner tutor was unexpectedly made redundant mid-way through the project. As a consequence, the FE tutors were harder to engage, despite genuine willingness to participate, because of these pressures.

Recommendation

Building closer links between FE and HE would allow for greater shared understanding to be developed. Such collaborations could be both local and national. At a local level, FE/HE partnerships would build stronger relationships and understanding between the two sectors and would create opportunities for possible cross-sector teaching or shared events. As many students do not go to their local university (although this number is increasing), a local partnership would not be dealing with transition between the two partners but in better understanding of how each sector operates.

However, to mobilise the kind of systemic change that is needed to allow all students to flourish at university, we would recommend the establishment of a national FE/HE forum, supported at the highest level, and including representatives from both examination boards, wellbeing services and FE and HE staff. Such a body should have the responsibility for addressing some of the key barriers and constraints we have identified and eschew the very natural tendency to assume the problem should be handled better in the other sector.

5.2 Learning and recommendations from solutions

In this study, the review of research, the statistical analyses of student progress through university and the experiences and perspectives of students and teachers in both FE and HE have generated a rich and complex understanding of students as they access and progress their way through university. Whilst the focus has been on students with vocational entry qualifications, many of the insights have been a reminder that the distinctions between student

groups are less clear-cut. The student body is a heterogeneous grouping of people who come from diverse backgrounds, bringing with them different experiences, but who will share a desire for their time at university to be as successful as possible. Success is not only about achieving a degree at the end of three years (though of course this is important!) – it also about developing as a person, meeting new people, experiencing new things and making the most of opportunities available. Very few of the issues related to transition are simply about having a vocational entry qualification. Almost all issues identified were present in all groups interviewed, although to varying degrees. This underlines that the student body is diverse and there are risks in treating any one group as homogeneous. It is important to think about each student as an individual, rather than boxing students into groups.

5.2.1 Helping students to develop a sense of belonging

It is critical for students to feel a sense of belonging and inclusion at university in order to reduce student drop-out rates and enable all students to achieve success. As outlined earlier, the experiences of students with vocational qualifications in this study reported mixed experiences of 'fitting in' during their first year of university. Barriers to feeling a sense of belonging were varied but included: the way other students viewed vocational qualifications; how accommodation choices impacted on participation; and social events which did not recognise diverse interests or cultural sensitivities.

Recommendations

Universities need to ensure that they recognise the potential benefits that students gain from living at home, not simply possible disadvantages. It is important that HE providers actively consider how to support students to develop broader networks whilst at university, enabling them to benefit from opportunities and extra-curricular activities. This might include, for example, being mindful of the timing of events so they are easier to join, especially for students who travel, and proactively considering how teaching, learning and assessment practices can encourage working with different students. Many universities are already alert to the possible risks of alcohol indulgence, inherent in Freshers or Induction Week. It would be wise to look more broadly at student experience across the university year and to ensure that any dominant culture of drinking and partying is moderated through the availability of different forms of networking and socialising. This may mean looking at student unions and how representative they are of the diversity of the student body and how actively they promote a range of ways of including students from any background.

5.2.2 Student academic support

The interviews with first-year undergraduate students show that many students find the nature of support on transition from FE to HE to be markedly different and sometimes challenging. This included: challenges created by the stronger relationships built with teaching staff in FE than in HE; the accessibility of academic support; and the reluctance of some students to access available support.

Recommendations

As the issues here strongly relate to differences between FE and HE, there needs to be closer collaboration and discussion across the two sectors to ensure that expectations are clear. This might include a formal grouping to include representation from FE, HE and the examination boards to agree common expectations in key areas. This could mean students either receive more appropriate preparation during FE programmes or it is more systematically provided in year one at university. For example, concerns about academic writing were raised by both students and HE lecturers. Here, there needs to be a clear shared definition of what academic writing is, as it is a term widely used but poorly understood, and to what extent it should be part of every FE qualification. This is an important discussion, as the assumption cannot simply be that academic writing must be addressed in FE. Rather, FE and HE need to discuss what is relevant and appropriate to address in each stage.

Whilst universities generally have well-developed academic and well-being support systems in place, students are not always aware of how to access them, and some students are reluctant to draw on these support systems. There needs to be more consideration of how to make these support systems more visible, but also how to encourage a culture amongst students whereby they are willing to seek and use available support. Many universities have academic mentoring structures in place; these may be a useful point of contact for active discussion of support needed and checking students know where to find that support.

5.2.3 Ways of teaching and learning

Although there are shifts in the way the notion of inclusivity is understood and defined, the *Transforming Transitions* project has found that there remains an expectation for students to fit into the ways a university operates, rather than of universities adapting policies and practices to better fit a diverse student body. Traditional forms of teaching and assessment may dominate which means that students from a vocational background are not always given the opportunity to demonstrate learning in alternative ways. This is also true of A-level students from more practical degree subjects, such as drama – another reminder of the heterogeneity of the student body.

Recommendations

The lecture, seminar and tutorial are perhaps the archetypal characteristics of learning at university, but there is now an urgent need to broaden the repertoire of learning experiences to reflect changes in understanding how we learn – also to ensure learning in university is better aligned with best practice in the school/FE sector and with the expectations of the workplace. A richer repertoire of learning experiences not only benefits a broader group of students, but also challenges those who are very comfortable with traditional ways of working. Learning how to work constructively in a group task to achieve a particular learning goal, for example, is as valuable a way of learning as attending a lecture. Likewise, participating in a seminar discussion which is genuinely dialogic and participatory is as valuable as writing an academic argument in an essay. The lecture is perhaps the iconic representation of university learning,

but was surprisingly problematic for students, regardless of background. A way forward here may be to more proactively consider how lectures are delivered in the first year of university, ensuring that students understand how to make notes and that pace and coverage of content are particularly carefully managed (and, more obviously, that lecturers are more consistently high quality!).

In similar vein, universities need to prioritise the development of inclusive pedagogies, drawing on existing best practice in the sector. One argument is that inclusive learning and teaching represents '…*the ways in which pedagogy, curriculum, and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all. It embraces a view that diversity stems from individual differences that can enrich the lives and learning of others…'* (Thomas and May, 2010:9). Crucially, inclusive pedagogies focus on the capacity to learn and on being a learner – rejecting notions of fixed intelligence quotients (IQ). Instead, deterministic ideas of fixed IQ are replaced by a view of 'growth mindsets' (Dweck, 2012), which are predicated on the idea that we are capable of achieving more than we think we can if we have the right attitude and an appropriate learning climate.

5.2.4 Assessment models

The dominant form of student assessment in HE tends to be examination. The study revealed that HE lecturers perceived students who had studied vocational qualifications as being less experienced in both preparing for and sitting examinations, where the ability to write under pressure within a set time is all important. Some FE tutors voiced a concern that the assessment processes for vocational qualifications did not adequately prepare students for the predominantly examination-based assessment methods at HE. The provision of feedback was another key area where there were significant differences between the student experience at HE and FE. The amount and quality of feedback on written work in HE meant that many students found it hard to learn from feedback to inform future work, and many students reported that they missed the one-to-one feedback that they had received at FE.

Recommendations

In line with the recommendations around ways of learning, one clear recommendation here relates to encouraging universities to adopt a broader range of assessment types. This would be better suited to the diverse student community and enable students to demonstrate learning through methods that draw on their differing strengths. It would also help bring about a shift in discourse, moving from deficit discourses and stereotyping of students with vocational qualifications to inclusive discourses which recognise the strengths of diversity. This may not mean that students choose assessment types, though this could be considered, but rather that all students have to demonstrate their learning in a variety of ways. It is equally important that students who are uncomfortable with presentation or group work as a mode of assessment build the presentation skills and collaboration skills needed for these assessment modes. Similarly, it is important for other students to develop the skills of revision and time-management for coping with examinations.

The transition issues related to feedback clearly need to be addressed but require a different kind of solution. Whilst at face value, the obvious recommendation might be that universities should strengthen and develop the feedback they give to students, the problem appears to be more around what feedback is for and issues surrounding expectations. The high-stakes accountability system of the school and FE sector mean that feedback on assessment is strongly geared towards examination success, not necessarily towards learning or developing independence. A critical aspect of a university education is being an independent, self-managing learner and feedback is often geared more towards learning and future development than how to get a first-class degree grade. This difference in the purposes of assessment is the issue which needs to be addressed and, as with core academic expectations, it would benefit from discussion across the HE/FE boundaries and at policy level to agree and develop a more natural progression from FE assessment feedback in to HE assessment feedback.

5.3 Discussion and reflection on challenges faced during the project

One significant challenge we faced in the study was time, in several different ways. The two-year timeframe of the project meant that our research design from the outset could not include any tracking of students from FE, through university and into employment. The timeframe also meant, as discussed earlier, that we had to select interventions which were feasible to implement in the timeframe, meaning that arguably our interventions tackled the less important issues. The bigger issues suggested by this study, for example, those based around belonging and fitting in, inclusive pedagogies and changing assessment practices are not amenable to short term interventions but require sustained development, implementation and evaluation. We feel that this is where further research and innovation is needed. Time was also an issue for some the subject staff involved, particularly those in FE.

Another challenge was the complexity of collaborative working across eight different institutions. Even where there was a commitment to collaboration, as highlighted in this project, the everyday realities of institutional workplaces often made working together difficult. This was manifest in a range of ways: staff changes due to promotions or new posts; the immediacy of other priorities such as examination preparation or inspection in FE; different ways of collecting data both across the HE/FE transition and across universities; and different organisational structures, practices and responsibilities in universities.

5.4 Reflections and learning from the evaluation of the project

When we wrote the application for this project, we were very clear that we did not want to begin scaling up any intervention without first understanding the problem we were trying to address and having a clear and evidenced reason for the intervention. Now, at this point of reflection, we are glad we made that decision as the data from the student and lecturer/tutor interviews in Phase 1 of our study feel to us to be the most significant output from the study. This is because they reveal so much about the real on-the-ground transition experiences and because they underline the nuances and the complexity of access and participation. We feel that an issue as

complex as widening access and participation is unlikely to be ‘solved’ by any single intervention, but by interventions which are targeted at carefully identified needs. Those needs are likely to be shared by students across different groups. One key reflection, therefore, is that there is a need for a larger, national study investigating students’ experiences at university, both social and academic, involving more subjects than we considered and more characteristics than prior qualifications. This would provide insights that might inform not simply interventions, but different ways of thinking about the issues and about the best ways to address them.

6.0 NEXT STEPS

There has been high uptake of the project within the four universities especially, but also beyond. In general, this has involved the project findings being used to inform decision-making at an operational and strategic level, but also for awareness-raising, bringing the dual issues of vocational qualifications and the transition experiences of socially-disadvantaged students to the foreground of attention. The following are examples of follow-on engagement and action.

6.1 Internal dissemination

All four universities held an internal dissemination event to share the findings and consider next steps. These events were high-level events attended by people with very senior responsibilities within the institution and those with leadership responsibilities in areas relevant to the findings. In Birmingham, the outcomes of the project were presented to the whole university as part of the Higher Education Futures Institute conference in July 2019. The Pro-Vice-Chancellor (Education) and Director of Student Engagement chaired the session. In Exeter, the Deputy Vice-Chancellor (Education) chaired the event and a second parallel event was held at the Penryn campus in Cornwall. At Loughborough, the internal event was attended by the Pro-Vice-Chancellor (Teaching) and many other senior colleagues from across the university including Head of Student Services, WP colleagues, Associate Deans of Teaching. The internal dissemination event at Queen Mary University raised awareness of transition issues, leading to direct actions to address transition, particularly the emotional aspects. Some of the consequences of these internal dissemination events are outlined below.

One of the research fellows on the project subsequently took up a lectureship at the University of Warwick. As a consequence of her involvement, she has held talks with central university WP colleagues about the lack of visible admissions information for BTEC students. Prior to her appointment, the BA in Education was the only undergraduate course at Warwick to mention on any of their admissions pages/materials that they will consider BTEC qualifications. The project findings were also shared at the Warwick Education Conference in May in 2019, attracting interest from academics and other staff from across the university.

6.2 Admissions

Both the Universities of Birmingham and Warwick have updated entry requirements for courses, to indicate their willingness to consider BTEC students applying for their courses and to enable more appropriate decisions about the BTEC subjects accepted as entry to particular courses. The *Transforming Transitions* team have been directly involved in these discussions. The team leader at Birmingham worked with the Director of Admissions to update entry requirements while at Exeter dissemination events were run with staff directly involved with admissions. The Project Director has also contributed project insights for consideration by the admissions team at Exeter on how to provide better support across the FE/HE transition.

6.3 Online module to support transition

The online module (one of the interventions) to support students, pre-entry and immediately after entry, has been developed and integrated into university support provision in different ways. At Loughborough University, the Pro-Vice-Chancellor (Teaching) has been leading on the development of 'Personal Best' (PB), an app to support our students with their studies. This year, PB has been rolled out in the curriculum to all first-year undergraduate students, following a pilot over the last two years. The online module we developed at Loughborough, as part of the *Transforming Transitions* project, has informed the development of the study skills element within PB, and is also informing the development of a new PB transition 'module' designed to help students transition to university. The Pro-Vice-Chancellor also chaired a working group, involving staff from across the university, to review induction processes to university for future students, including the roll out of the transition 'module' mentioned above. It is likely that the transition activity will be a badge pathway within PB – i.e. the students complete a number of resources as a result of which they will get a digital badge. This will be the first in their journey which will ultimately lead to a PB award alongside their degree.

Birmingham has a revised pre-entry module which now includes better targeted guidance for offer holders regarding the preparation work that they can undertake prior to arrival to aid transition. At Queen Mary University, the important findings of the project relating to the 'emotional transition' to university, have led to the development of a new online module, with more emphasis on the emotional aspects of transition. This was launched at the start of the academic year in 2019 and made available to all incoming students. There is ongoing, continuous collaboration between the *Transforming Transitions* institutional lead and the relevant team, looking at what improvements to make for the future.

6.4 Additional mathematics support

The mathematics intervention has now been rolled out across the University of Birmingham's Business School programmes. It has been developed in light of the intervention findings and now offers more face-to-face support alongside the online materials. Similarly, targeted mathematics support will continue in both the School of Business and Economics and School of Sport, Exercise and Health Sciences at Loughborough University.

6.5 Personal tutoring and academic mentoring

Birmingham has improved its tutoring provision across the university, based on the targeting of support to students as appropriate. Tutor records are now improved – using the portfolio and personal learning platform PebblePad – and they are building a system to allow monitoring of engagement in tutoring much more closely. Similarly, at Exeter, the findings from academic tutoring intervention have informed the development of the university's academic mentoring system.

6.6 New initiatives informed by the project findings

The project findings have either led directly to the establishment of new initiatives or strategic groups or have played a role in informing the work of these groups:

- Loughborough University has formed a new Access and Participation Committee and the work of the *Transforming Transitions* project has informed their future strategy.
- At Loughborough, a report, with the recommendations from the final report to OfS, was submitted to the Equality and Diversity Committee.
- At Exeter, a new Centre for Social Mobility has been established, co-directed by an academic researcher in this area and the university's Head of Widening Participation, bringing together research and practice. Lee Elliott-Major, from the Sutton Trust, which champions social mobility, has been appointed as a Professor of Practice to the Centre. In addition to standard meetings, the Centre holds an annual conference which is attended by academics and practitioners from different university departments. The project director spoke at each of these conferences and led a practical workshop on inclusive pedagogies.
- In addition, three of the project team have now been given WP responsibilities within their own institutions. At Exeter, the project institutional lead is Widening Participation Officer for the College of Social Sciences, working with the Associate Dean for Education. At Warwick, the research fellow has been designated the education department WP Lead and has used findings from the overall project and final report to inform work in the department to improve access, support and provision for BTEC and other WP students. And at Queen Mary University, the project institutional lead was appointed as year tutor for first-year students in Electronic engineering and Computer science, and part of that role is explicitly to deal with any transition issues faced by first-year students.

6.7 Follow-on activity beyond the partner institutions

There has also been considerable national interest in the project findings and project colleagues have been involved in a raft of events and activities, at which they discuss the findings and their implications. In addition, to the major national stakeholder event, hosted by Pearson at its offices in the Strand in February 2019, the team has presented or led workshops at: the Trent Institute for Teaching and Learning BTEC Conference at Nottingham Trent University; the Russell Group DVC/PVCs for Education meeting; the ECU-Advance HE conference; and at a meeting of the Chartered Association of Business Schools.

We have presented at a NEON (National Education Opportunities Network) meeting workshop. One project member is working with colleagues at Nottingham Trent University – helping them to design improved transition processes for students joining their institution. Another project member was invited to a meeting with the Ofqual Chair of Research in Coventry in September

2019, where she talked about the project findings. The academic writing resources produced for one of the interventions have been shared widely with FE colleges, via the NEON network, and also through direct sharing by request with some attendees of the end-of-project dissemination event.

In addition, project partner Pearson has been sharing the findings with HE institutions and other networks to help them prepare for BTEC. It has also used the findings regarding subject deficits in its own internal reviews. The research has also been presented at the British Educational Research Association conference and a book, *'Transforming Transitions – Examining Inequalities'* which was published in 2019.

7.0 CONCLUSIONS

Overall, this study has emphasised the dangers of creating binary distinctions between sub-groups of the student body and the critical importance of recognising the heterogeneity of the student population. In focusing on the BTEC as a prior qualification, it has highlighted the complex inter-relationship of factors which may contribute to success, or lack of it, and warns against simplistic assumptions about the BTEC as a prior qualification. Although there may be some differences between students with different prior qualifications, there are also differences within these student groups. In the end, our study may have generated more insights into the inclusivity of HE and the discontinuities in learning experiences between FE and HE, than it has informed understanding of BTEC students in particular. If we are to create transformative change which genuinely addresses the issues of social justice across the transition, through university and into the workplace, the nature of change needed is significant.

Our recommendations are flagging a need for a more systemic culture change in both FE and HE which more proactively acknowledges and addresses the diversity and heterogeneity of the student population. Our work has focused on qualification differences. There is often a focus on differences in gender, ethnicity, disability, and socio-economic background. Diversity encompasses a broad panoply of human differences which students bring to their study. One way to illustrate this diversity is represented in Table 5 below.

Table 5: A Taxonomy of Student Diversity from Thomas and May (2010:5)

Diversity dimensions	Examples
Educational	Level/type of entry qualifications; skills; ability; knowledge; educational experience; life and work experience; learning approaches.
Dispositional	Identity; self-esteem; confidence; motivations; aspirations; expectations; preferences; attitudes; assumptions; beliefs; emotional intelligence; learning styles; perspectives; interests; self-awareness; gender; sexuality.
Circumstantial	Age; disability; paid/voluntary employment; caring responsibilities; geographical location; access to IT and transport services; flexibility; time available; financial background and means; marital status.
Cultural	Language; values; cultural capita; religion and belief; country of origin/residence; ethnicity/race; social background.

Such diversity does require a cultural shift in thinking away from an expectation that students need to adapt to the dominant and preferred way of operating in a university to a more inclusive approach, which '…*necessitates a shift away from supporting specific student groups through a discrete set of policies or time-bound interventions, towards equity considerations being embedded within all functions of the institution and treated as an ongoing process of quality*

enhancement. Making a shift of such magnitude requires cultural and systemic change at both the policy and practice level…" (May and Bridger, 2010:6).

Finally, the majority of our recommendations focus on university provision, largely because the data pointed most obviously to HE. But it is important not to position this as solely a university problem. Our data has also highlighted that the very heavily supported and test-oriented nature of the school and FE curriculum may not be preparing students for being the independent learners that both the university and employers want. And, of course, many of the deeper causes of differential access and progression are rooted in social and political factors that have been stubbornly resistant to change.

8.0 ABBREVIATIONS

The following table lists and explains abbreviations used in this report.

Abbreviation	Explanation
ABSS	Addressing Barriers to Student Success
ALEKS	**A**ssessment and **LE**arning in **K**nowledge **S**paces
BAME	Black, Asian or minority ethnic
FE	further education
HE	higher education
HEFCE	Higher Education Funding Council for England
HESA	Higher Education Statistics Agency
IB	International Baccalaureate
NEON	National Education Opportunities Network
OfS	Office for Students
SES	socio-economic status
SMC	Social Mobility Commission
WP	widening participation

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Note: Appendix 1 is available as a separate document.[2]

APPENDIX 2: Evaluation Frameworks

	Intervention: Preparing for academic writing in HE
Intervention description	In response to the Phase 1 findings that BTEC (and other) students struggle with the expectations and demands of academic writing when they are at university, this intervention sets out to provide FE tutors with greater understanding of the practices and expectations of academic writing at university, and greater confidence in embedding this in their BTEC teaching. Exeter University has prepared a set of bespoke materials for FE tutors addressing writing argument, structuring writing, being critical and referencing – all of which reflect HE assessment expectations.
Outcome	• FE tutors will have better understanding of expectations of academic writing in HE. • FE tutors will have greater confidence embedding preparation for academic writing into their BTEC courses. • Students will demonstrate improvement in academic writing in their assignments. • Students will have better understanding of academic writing skills needed in HE.
Evaluation methods	
Sample: Size and type	Experimental design with intervention (I) and control (C) groups at all four FE colleges. A non-random sample was selected following a purposive sampling strategy. Each group has about 13 students and altogether 191 students (I+C) are taking part in the study.
Duration	Four to six weeks Two cycles with evaluation and refinement in between. The pilot study (Phase 1) has been completed and phase 2 is in progress. The intervention and data collection will be completed by December. We will then start working on data analysis and writing up of the final report from January 2019 onwards.
Data collection	1. Baseline pre-intervention surveys administered to intervention and control groups 2. Pre-intervention content analysis of FE students' assignments by research team 3. Post-intervention content analysis of assignments (all students; n=to be confirmed depending on what is shared by FE tutors) 4. Post-intervention surveys administered to students 5. Interviews with FE tutors and focus groups (one focus group per college; two tutors per college)

[2] See https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/addressing-barriers-to-student-success-programme/abss-project-university-of-exeter/

Data analysis	**Statistical:** Descriptive statistics plus effect size estimates of progression scores to evaluate the impact of the intervention **Qualitative:** Content analysis of assignment Inductive thematic analysis of the interviews
Counterfactual	Via use of control groups
Timeline	
	Cycle 1: was completed during spring and summer 2018 Evaluation/refinement was completed during summer term 2018 Cycle 2: autumn term 2018, ongoing to be completed by December 2018 Data analysis: January and February 2019 Evaluation and report: March 2019

	Intervention: Mathematics support
Intervention description	This intervention aims to support those students who have not studied mathematics post-16, to identify and address gaps in their knowledge and ensure that they are able to achieve their potential in their chosen programme. Current maths/statistics support provision in each institution has been assessed and contact with support staff has been established/renewed. (Autumn term 2017) Academic leads identified areas where support is required e.g. algebra, equations of straight lines, differentiation, mean, standard deviation. (Autumn term 2017) Academic leads met with support staff to identify relevant resources. Institutional lead at Loughborough assisted with this where necessary. (Autumn term 2017) Package of support materials relevant to the discipline was assembled – this included paper-based/online help sheets and online videos. (By end of Semester 1, 2017/18) Each discipline/HE institution developed a model of mathematics support relevant to their situation. This includes peer support/1-1 support/workshops/separate teaching for students who have not studied mathematics post-16, lecture capture, etc. (By end of Semester 1, 2017/18) The maths support provision was publicised and BTEC and other students encouraged to avail themselves of the support. (Start of Semester 2 2017/18 and again during Semester 1 2018/19) Academic leads in the universities planned the interventions and worked with module leaders and providers of mathematics support. The interventions were/are delivered via a variety of people – this includes mathematics support staff, PhD students, peer-assisted learning facilitators and module leaders.
Outcome	• Students become aware of topics which they need to master and the resources to support them in doing so. • Students demonstrate increased confidence and skills in tackling mathematics/statistics problems. • Students achieve improved results in quantitative first-year modules and hence improve progression to Year 2. • Students improve their skills in independent learning by learning how to access and utilise relevant resources, allowing for more self-directed learning. • Academic leads/module leaders and personal tutors have greater awareness of areas of difficulty and resources to support students with these. • Support staff have increased awareness of how mathematics/statistics is used in relevant disciplines and can use this to support all students from these disciplines.

	• Where applicable, peer mentors and peer assisted learning facilitators gain invaluable experience that can contribute to their employability.
Intervention method	
Sample: Size and type	All first-year BTEC students in the disciplines/HE institutions involved. In Semester 2 2017/18, this was 785 students and we expected a similar number in Semester 1 2018/19. The support package is offered to all first-year students on the above programmes whether or not they have studied mathematics post-16.
Duration	Planning for the intervention took place in the autumn term 2017/18 and the intervention is running twice – Semester 2 2017/18 and Semester 1 2018/19.
Data collection	1. Administer a questionnaire to ascertain mathematics confidence and student feedback on the support provided. (204 students completed this at the end of Semester 2, 2017/18) 2. Where possible, monitor uptake of resources provided and student engagement with the support. (Monitoring of attendance at workshops and use of software to support students was undertaken in Semester 2, 2017/18) 3. Gather results from quantitative modules for cohorts of students taking part in the intervention. (This was undertaken at one of the participating universities in Semester 2, 2017/18) 4. Focus groups/interviews with students to measure impact from the student perspective, including impact on confidence and independent learning. (Fourteen students, from all three universities, took part interviews or focus groups in Semester 2, 2017/18) 5. Interviews with academic staff to measure the impact from a pedagogical perspective. (Five academic staff, from all three universities, took part interviews or focus groups in Semester 2, 2017/18) The above data collection is being repeated in Semester 1, 2018/19.
Data analysis	Analyse questionnaire data and interview focus group data to report on staff and student feedback and impact. (Quantitative and qualitative analysis) Analyse results of BTEC students in relevant quantitative modules. (Undertaken for one university in Semester 2, 2017/18) Analyse uptake of resources. (Limited data was available in Semester 2, 17/18. More data is being sought for Semester 1, 2018/19) All of the above has been completed for the data collection in Semester 2, 2017/18. A report giving details of the interventions, data collection and analysis was produced in August 2018. The data analysis will be repeated at the end of Semester 1, 2018/19.

Counterfactual	Gather results from quantitative modules from previous cohorts for the above groups of students.
Timeline	
	Preparation – Semester 1 – 2017/18 First wave of intervention – Semester 2 – 2017/18 Second wave of intervention – Semester 1 – 2018/19

	Intervention: Online module
Intervention description	In the Phase 1 findings, BTEC students identified at the end of the first year that independence was a key feature of the difference between their previous studies and their university experience, and that this had an effect on their academic performance. The student interviews/focus groups also highlighted various specific 'transition gaps' in academic preparedness. The intervention will develop an online module for all first-year students to access at any point from pre-enrolment onwards. The online module will help students to develop more realistic expectations of university before they arrive or early on in their studies. This will help them through the initial transition period more quickly, and equip them better to identify any support they may require to help them over the 'transition gaps' at an early stage, thereby developing greater independence. BTEC students in particular will feel better equipped to tackle the first year of their studies, and differential outcomes will be reduced as a result. The online module will be developed for piloting with first-year students during the third semester of 2017/18 or early in the first semester of 2018/19. Since Birmingham and Exeter are basing their online modules on existing modules, they will not participate in the pilot. Feedback from this process will be used to finalise the online module, ready for delivery around the start of 2018/19. Although the module will be targeted at BTEC students, non-BTEC students will also be involved in the pilot, to establish if the online module may be of use to other students too. Once ready, first-year students will be informed about the module before or at enrolment and will be encouraged to access it early on. This will be reinforced during the induction period, and integrated into other first semester activities.
Outcome	• Participation in online module by relevant students. • Engagement with the quizzes. • Discussion of online module results with personal tutors and other staff. • Greater take-up of support services and resources resulting from self-evaluation. • Students have greater self-confidence in their learning strategies. • Students have more realistic expectations of university study. • Reduced differential in student outcomes at degree award (beyond the scope of this project). • Students are more proactive in identifying their own ongoing learning and support needs and seeking relevant support and resources (beyond the scope of this project). • Students are more likely to progress to their second year (beyond the scope of this project).

Intervention method	
Sample: Size and type	All first-year students in the disciplines/HE institutions involved.
Duration	Development of the intervention will take place in 2017/18, followed by a short pilot for those HE institutions who are developing the module from scratch, and the intervention will run in Semester 1 2018/19.
Data collection	1. During intervention: Gather online usage statistics for participating students at both individual student and cohort (BTEC, BTEC+A-Level, A-Level) granularity. 2. Post-intervention: Participating students will receive a link to an external evaluation questionnaire on SurveyMonkey, either from the online module itself or by email after participating. This will capture (i) feedback on the module content and delivery, and (ii) any concrete actions taken or planned as a result of engagement with the online module. 3. Post-intervention: Gather data on participating students' academic performance in Semester 1 2018/19, where available.
Data analysis	Analyse online usage statistics for individual students and cohorts (BTEC, BTEC+A-Level, A-Level) (statistical analysis). Analyse student post-questionnaires to identify implications for usage of support services (statistical and qualitative analysis). Analyse student post-questionnaires for feedback on online module content and delivery, to inform changes (qualitative analysis). Compare academic performance of participating students with non-participating students and students from previous year(s), where available (statistical analysis). Correlate data for individual students to build up a complete picture: questionnaire data, online usage statistics and academic performance, where available (statistical analysis).
Counterfactual	Gather data on first-year students' academic performance and progression from previous year(s).
Timeline	
	Development – 2017/18 Pilot – Semester 3 2017/18 / early in Semester 1 2018/19 Delivery – Semester 1 2018/19

	Intervention: Personal tutoring
Intervention description	This intervention is based on improving the academic tutoring that students receive. The intervention will involve issuing improved guidance to academic tutors, allocating students to tutors who have detailed knowledge of each student's academic background before arriving at university and making clear to students what the role of an academic tutor is and how to profit from the tutoring relationship. In the first year of the programme (2017/18), each discipline/HE institution will develop a model of tutoring relevant to their situation. This intervention will involve developing improved guidance for academic tutors. This guidance will go beyond outlining minimum numbers of tutor meetings and their basic function: it will outline the issues to be addressed at each tutor meeting, how to support students through tutoring and how to use tutoring to identify the academic development needs of students. To ensure that this is undertaken, a new tutorial recording system will be introduced allowing both students and tutors to record the content and outcomes of meetings. In the second year (2018/19), guidance will be revised as deemed appropriate by the academic staff within each school. There will also be further changes to the recording system for tutorial meetings too, e.g. at Birmingham PebblePad software is to be introduced; at Exeter, the MyProgress Dashboard will be used as a new way of recording and monitoring engagement with tutoring. Academic leads in the universities identified above will plan the intervention and work with programme leaders.
Outcome	• Students perceive academic tutoring to be a key support system during their first year of study at university. • Students are more quickly able to identify areas for further development and to access support to address any gaps. • Students' wellbeing improves as they feel better supported through transition into HE. • HE institutions are better able to identify and deliver the right support at the right times. • Student progression, retention and academic performance improve. • Students are more likely to ask for help when they need it (having established good relationships with their tutors in the first year). • Students are better equipped to be aware of any skills gaps and to reflect on development needs (i.e. better independent learning).
Intervention method	
Sample: Size and type	All first-year students in the disciplines/HE institutions involved will be included within the revised tutoring process.
Duration	The intervention will be implemented for during the academic year 2017/8 and the iterated version will run again during the 2018/19 academic year.
Data collection	1. Students' engagement with tutoring: attendance at tutoring sessions, completion of associated work.

	2. Student attainment/progression and how this relates to engagement in tutoring. 3. Focus groups with BTEC students to determine usefulness and effectiveness of tutoring. 4. Focus groups with non-BTEC students to identify differential perceptions of tutoring. 5. Interviews with tutors to examine attitudes towards and effectiveness of new guidance, processes and perceptions on student outcomes.
Data analysis	An analysis of the engagement in tutoring by different cohorts of students. This analysis to establish if BTEC qualification is associated with student engagement in tutoring. An analysis of student attainment and progression measured by level of engagement in tutoring. This will not prove causation but may establish a correlation. Focus group outcomes analysed to judge student perceptions of tutoring. Analysis of non-BTEC students to ascertain differential experiences of tutoring for BTEC and non-BTEC students. Analysis of staff interviews to examine attitudes and experiences of tutoring, its impact on different groups of students, and the strengths/challenges of the intervention models. The analysis of data collected in 2017/18 was presented in an interim report, completed in summer 2018.
Counterfactual	As well as examining BTEC students' progress and experiences, we will also be considering the outcomes and perceptions of students from other qualification backgrounds as a comparison.
Timeline	
	Implement revised process – Semester 1-2 – 2017/18 Evaluate 2017/18 intervention – End of Semester 2 – 2017/18 Second wave of intervention – Semester 1 – 2018/19 Evaluate 2018/19 intervention – Semester 1-2 – 2018/19