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Vocational and Mature Students Success in Higher Education Foundation Programmes

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Dr Anna M Black is a Senior Lecturer in Microbiology and has an interest in investigating the transition which students undergo when entering Higher Education and the impact this has on academic attainment. A Senior Fellow of the HEA, she has also been awarded a PGDip in Academic Studies with the focus of much of her early work on the academic attainment of international postgraduate students when combined with English for Academic Purpose provision.

Vocational and Mature Students Success in Higher Education Foundation Programmes

Higher Education in the UK is pressured to widen participation due to the social justice issues of mobility and movement through the class divide. However, those from lower classes and mature students, elect for qualifications that do not classically allow entry into university, for example, Business and Technology Education Council and Access to Higher Education Diplomas. A solution to this is a university bridging programme. Such a programme was analysed as to whether it prepares different cohorts of students effectively for undergraduate programmes; those who have just missed the entry tariff points but are coming from Advanced levels qualifications, the other coming from non-traditional entry routes. Data from one academic year was anonymised and analysed. Results indicated that students coming from widening participation courses score significantly lower on the programme than those coming from Advanced level awards of any subject. This indicates that vocational and returning to education qualifications fail to prepare students for academia due to being focused on the outcome, rather than the objective, of learning. The study also questions entry tariff point equivalency as it was seen that those with higher points, had non-traditional qualifications, yet performed worse, suggesting entry points cannot be used prognostically.

Keywords: academic preparedness; transition; higher education; foundation level; vocational qualifications; mature students

Introduction

The Dearing Report (NCIHE, 1997) made it clear that there was a need for increased participation in UK Higher Education due to personal and national economic drivers and the need for increased social mobility (Brunton & Buckley, 2020). However, those from lower socioeconomic groups and first generational mature students, are still under-represented groups in Higher Education. These two groups are less likely to have enrolled on, or to have achieved General Certificate of Education Advanced levels qualifications and hence are less likely to enrol at a Higher Education Institution due to not having appropriate entry qualifications (Hoare & Johnston, 2011). A possible route for these individuals' further education is the more vocational qualification such as those provided through Business and Technology Education Council awards, as they are a) more accessible due to lower entry requirements and b) vocationally focussed thereby offering the best possibility of direct employment (Connor et al., 2001; Vickers & Bekhradnia, 2007). An alternative further education opportunity is that of an Access to Higher Education Diploma. Most often used by mature students, those returning to education following a break in studies and those who feel lacking in self-efficacy and confidence, the diploma offers students another route to Higher Education (Shandler & Steenekamp, 2014). Access to Higher Education Diplomas are also often used by ex-military personnel as a means to military-civilian transition (Macer, 2018). Figure 1 details the routes available to access Higher Education in the UK.

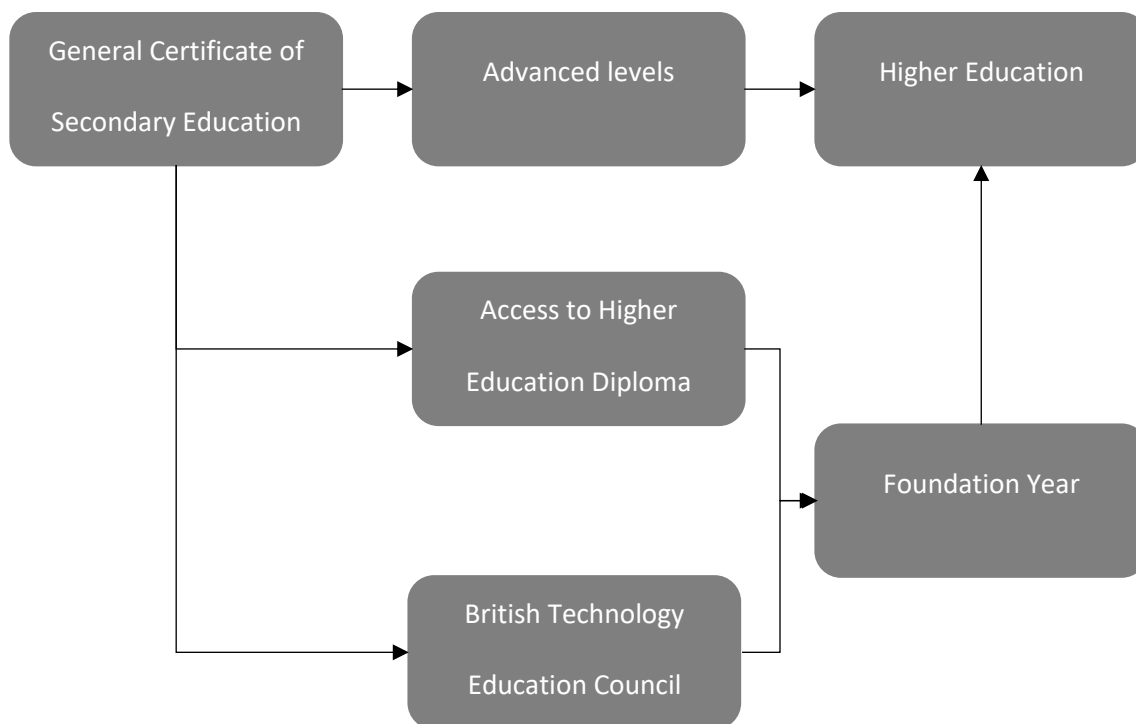


Figure 1. The possible routes to Higher Education in the UK. All students sit pre-16 compulsory General Certificates of Secondary Education and then can select a route of entry to Higher Education. Selection of an Access to Higher Education Diploma or British Technology Education Council route requires students to undertake an additional Foundation Year.

Both of these non-traditional routes will allow study at Higher Education and this, in turn, will increase their cultural capital (Bourdieu & Richardson, 1986) and readdress their position in the field (Bathmaker, 2015; Busher & James, 2019; Busher, James, Piela, & Palmer, 2014). However, these two types of award are not universally accepted as entry qualifications onto an undergraduate programme by all institutions and this reinforces the glass ceiling that already exists for these individuals and compounds the class divide. Therefore as well as increased participation, there is as much a need for widening participation (Osborne, 2003). To widen participation, Higher Education Institutions need to recognise a wider range of routes into Higher Education including British Technology Education Council routes and Access to Higher Education routes

(Macdonald & Stratta, 2001). The acceptance of these students could address the disparity of socio-economic groups and mature students represented in Higher Education.

Literature review

Social justice and mobility is a crucial concern for UK politics with an All Party Parliamentary Group (APPG) formed in 2011 to address the issue (Bathmaker, 2015). Social justice seeks to address the disparity in the distribution of wealth, privilege and, in the context of this study, the opportunity of education. This opportunity, to gain symbolic assets in the form of a university education, will allow movement through social class divides and in turn address the distribution of wealth and privilege. In the field of education, this requires a commitment to the idea of social justice being a process, not just a product (Hyttén & Bettez, 2011; Zajda, Majhanovich, & Rust, 2006). For Higher Education, this sees a need for constant development and transformation of programme and policy to address the disparity in participation by all groups of society and allow movement of social position.

To understand the role of a bridging programme in the context of widening participation and social movement, several theoretical frameworks must be considered. Bourdieu's theory of social positioning provides background as to the concept of social mobility and, in turn, social justice. Maslow's hierarchy of needs theory will identify the motivational factors which drive students, both traditional and non-traditional, towards a university education. Finally, an understanding of constructivism is also vital to determine the impact of prior various styles of learning on academic performance.

Bourdieu's theory of social positioning

Bourdieu's theory of social positioning sees the notion of 'cultural capital' as social assets which an individual possesses or acquires to promote social mobility (Edgerton & Roberts, 2014). These can be in the form of material or symbolic assets such as knowledge, skills and esteem, the like of which may result from completing a Higher Education award. The acquisition of capital allows for a redress of an individual's position in field and aids in an individual's social mobility (Bourdieu & Richardson, 1986). But what drives and motivates a student to want to complete an education and increase their cultural capital?

Maslow's hierarchy of needs

Maslow's hierarchy of needs presents a useful theory on which to explain the reasoning behind not just an adult student's need for a Higher Education qualification (such as job security), but their motivation for such an education. It is this motivation that sees them break the glass ceilings imposed by society and move through the social classes. Maslow defined five basic needs: physiological, safety, belongingness, esteem and self-actualisation (Gawel, 1996). The bottom of the hierarchy are physiological needs and once complete, the upper goals see psychological motivation being the driving force (Rouse, 2004). It is the last two needs that are addressed by higher education especially so for those of lower social classes seeking mobility or those returning to education to reach their full potential. When all necessary prior needs are met, Maslow postulated that individuals would seek the next levels of need; esteem and self-actualisation which one can see can be comfortably addressed through education. Acquisition of a university education brings with it the esteem required as part of

cultural and symbolic capital and allows an individual to realise their full potential (Schulte, 2018).

Constructivism

Proposed by educational psychologists such as Piaget, Dewey and Vygotsky, constructivism is a core theory surrounding adult education that sees the instructor as a facilitator of learning (Huang, 2002). It proposes that the environment in which learning takes place should provide personal control for learning (Bostock, 1998) and that a student should actively construct knowledge rather than passively acquire it through the instructor (Al-Huneidi & Schreurs, 2013; Boudourides & Boudourides, 2003). It is often used in higher education as it promotes problem-solving as seen in the higher levels of Bloom's taxonomy (Mayer, 1999). Contrary to this theory of constructivism in adult learning, non-traditional post-16 education (British Technology Education Council awards and Access awards) is typically instructor-led with the passive acquirement of knowledge. Teacher centred education is a result of performative pedagogy and is prevalent in further education colleges due to the impact of league tables by which the college is judged (Noyes, 2012). The difference in these styles of learning create conflict when students pass from one environment to another.

Foundation programmes

The widening participation agenda as part of social mobility and justice has in part been achieved through the introduction of foundation programmes. One type of these foundation programmes is the Foundation Year which is delivered solely by a Higher Education Institution. These are different to Foundation Degrees which are delivered in combination by a Further Education Institution, a Higher Education Institution, plus an associated employer. Foundation Degrees lead directly onto the final year of a full undergraduate degree (Ooms, Burke, Marks-Maran, Webb, & Cooper,

2012; Pike & Harrison, 2011) whereas Foundation Years are delivered as an additional year of Level 3 study. Foundation Years are a unique route to accessing Higher Education for students who have either come from non-Advanced level routes such as British Technology Education Council awards and Access to Higher Education courses, have missed the entry grades associated with Advanced levels, or have chosen the wrong Level 3 subjects. Similar to projects such as UNIFY in South Africa (Mabila, Malatje, Addo-Bediako, Kazeni, & Mathabatha, 2006) and the Science Foundation Programme from the University of KwaZulu-Natal (Downs, 2010), which allow students with reduced matriculation scores entry onto otherwise inaccessible bachelor degrees, foundation years provide a Level 3 bridging opportunity for students who would otherwise be unable to start university (Lithauer & Wood, 2005). The foundation year is in addition to a normal 3-year degree and provides the opportunity for students to gain additional Level 3 education which will act as an adjunct to their current qualifications and will then allow them entry onto the undergraduate degrees.

Traditional Foundation Degrees are often perceived by students as ‘second-best’ and that students are not included in the hierarchy of Higher Education due to a large proportion of time spent in a Further Education Institution (Robinson, 2012).

Foundation Years are designed to overcome those feelings by including and enculturating students in Higher Education from day one. At no point are they treated any differently to traditional undergraduate students and are expected to adhere to the same policies and procedures.

Entry onto an Applied Science Foundation Year at a large university in the UK is subject to the acquisition of 80+ University and Colleges Admission Service tariff points from any subject in a range of study modes. These study modes range from

science-related Advanced levels, non-science related Advanced levels, science-related British Technology Education Council diplomas/extended diplomas, non-science based British Technology Education Council diplomas/extended diplomas, Access to Higher Education Diplomas of any subject, and those students entering with international equivalent qualifications such as the International Baccalaureate or matriculation scores. This bridging programme attracts on average 200 students per academic year and is designed to provide students with soft skills such as academic literacy, data handling and reflection alongside subject-specific knowledge on a range of topics. Topics that are taught are linked to the possible degrees that students can elect to study immediately following successful completion of the programme.

Research question

Literature indicates that there is a discourse surrounding Higher Education's widening participation programs and if they serve the student body well. However, there is limited research on the impact of Foundation Years on academic attainment instead the literature focusses on the success of students from Foundation Degrees. Similar to other studies (C. H. Smith, Mahon, & Newton, 2013), this research aims to look at the academic performance of a single year cohort of students, by comparing their entry qualifications and tariff points with their overall level average on this Foundation Year programme.

This study seeks to investigate the performance of students on a Level 3 bridging programme from various routes of entry and to determine if the non-traditional student can succeed in line with their more traditional peers. The results of this will help national and international institutions with their design of similar bridging programmes. It will also contribute to the current academic and UK parliamentary discourse

surrounding the widening participation agenda by highlighting that simply providing a widening participation course isn't enough. Such a provision needs to be tailored and targeted towards not just the subject but also towards upskilling a student ready for higher education study.

This study will analyse, via statistical tools, the relationship between tariff points and performance and will seek to identify any significant differences in performance (as judged by overall score) between the possible routes of entry: British Technology Education Council awards, Access to Higher Education Diplomas and Advanced level qualifications. The study will also investigate the impact that subject choice within these awards has.

Methodology

Entry routes and attainment data from 206 students were mined by the author from University held student records taken from the academic year 2018-19, anonymised by an allocation of unique ID number and analysed using correlation analysis (to investigate the impact of entry tariff points), single-factor ANOVA and subsequent student t tests assuming unequal variance throughout (to analyse specific differences in the attainment of various routes of entry). A probability value of 0.05 was used in all analyses. All analyses were performed using Microsoft Excel. Where a student had multiple entry qualifications, the qualification holding the most University and College Admissions Service entry tariff points was recorded as the student's entry route.

Findings

Summary of data

A general summary of the data including entry level, average University and College

Admission Service tariff points and average performance (as defined by final percentage obtained on completion of the course) is shown in Table 1.

| Qualification type | Average entry tariff points | Average performance (final %) |
|--|-----------------------------|-------------------------------|
| Advanced level qualification | 97 | 67 |
| <i>Science Advanced levels</i> | 94 | 70 |
| <i>Non Science Advanced levels</i> | 102 | 58 |
| British Technology Education Council awards | 109 | 50 |
| <i>Science British Technology Council awards</i> | 117 | 50 |
| <i>Non Science British Technology Council awards</i> | 101 | 51 |
| Access to Higher Education diplomas | 97 | 54 |

Table 1. Summary of general data including entry level, University and College Admission Service Tariff points and overall performance as measured by final grade percentage

Entry Tariff impact

A question that must first be answered is that regarding the equivalency of post-16-year-old qualifications and if the attribution of entry tariff points is fair across all qualifications. This will also impact the outcome of this study as it would be assumed that the higher the entry tariff points, the better the outcome of students on the foundation year. To understand the difference in entry tariff points between modes of entry a graphical representation was produced, and a student t test performed to look for any significant difference.

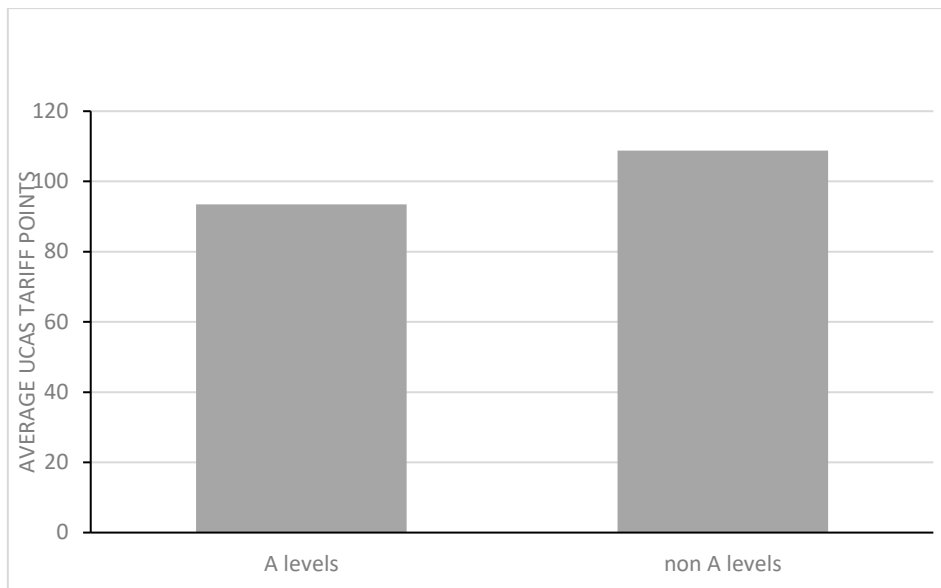


Figure 2. Average entry tariff points obtained by Advanced level routes and non-Advanced level routes

Figure 2 highlights the fact that on average students who took Advanced levels before coming to university had *lower* entry tariff points than those who had taken non-Advanced level routes. This difference equated to a p value less than 0.05 ($p=0.008$) indicating a significant difference in the attainment of entry points by different post-16 educational modes.

Correlation analysis was carried out to investigate if the performance of students on the foundation year was linked to their entry tariff points. The performance was determined as the average final percentage grade obtained by the student following completion of the six 20 credit modules. It was hypothesised that students entering Higher Education with higher entry tariff points (i.e. non-Advanced level route) would perform better than those with lower entry points. This correlation analysis showed that there was a slight negative correlation between entry tariff points on performance with an R value of -0.21 (figure 3), students with higher entry tariff points scored slightly lower on the Foundation Year than those with lower entry tariff points.

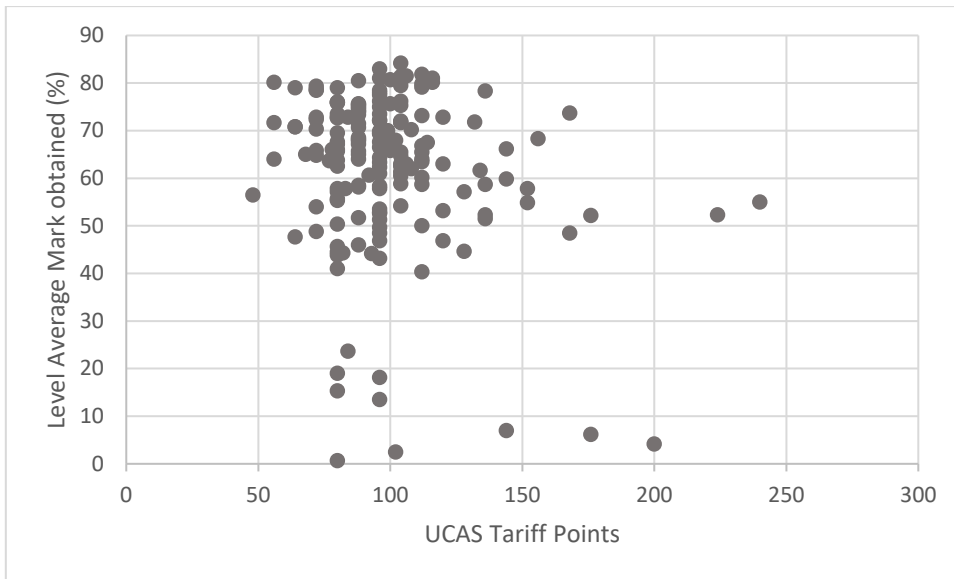


Figure 3. Correlation analysis of entry tariff points and academic performance (final average mark) on the Foundation Year.

ANOVA analysis

ANOVA analysis of all data, produced $F(7,404)=21.66$, $p=7.95 \times 10^{-25}$ indicating a statistically significant difference in academic achievement following vary modes of post-16 year old education. From a graphical representation of this data (figure 4), it can be seen that an Advanced level education ultimately leads to an increased final mark following the Applied Science Foundation Year.

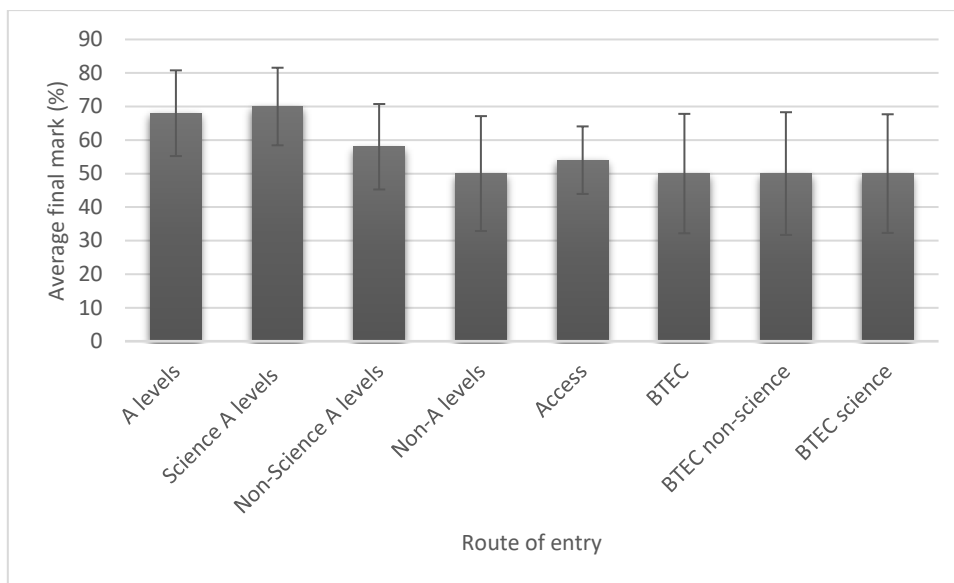


Figure 4. Average marks obtained from various routes of entry. The final average mark was calculated from 6 x 20 credit modules which all students study. Error bars indicate $1 \pm SD$.

Science Advanced levels vs non-science Advanced levels

Of the 118 students with Advanced levels, an average of 58% was obtained by the non-science group and 70% by the science group. This difference of 12% equates to a p value <0.001 (6.82×10^{-5}) which indicates a very highly statistically significant result with those students coming from the non-science Advanced level group obtaining a significantly lower grade at the completion of the course than their counterparts with science Advanced levels as part of their entry qualifications. Therefore, the null hypothesis that Advanced level choice will have no effect on the attainment upon completion of the course is rejected and it can be assumed that Advanced level subject will have a significant effect on academic attainment on the programme.

Advanced levels vs non-Advanced levels

Of the total cohort of 206, 118 students possessed Advanced levels and 88 students possessed non-Advanced level alternatives. Those coming from Advanced levels scored on average 67% overall for the programme whereas those coming from non-Advanced

level routes scored on average 50%. This difference of 17% is a very highly significant difference with a $p < 0.001$ (6.64×10^{-13}). These students came from not only different routes of entry but also from different subjects. Students with a background in Advanced level subjects scored significantly higher than those from non-traditional routes so the null hypothesis can be rejected.

Advanced levels vs Business and Technology Education Council awards

Of the 158 students who entered with either Advanced levels or British Technology Education Council awards, an average of 67 and 50% were obtained respectively. This difference of 17% equates to a p value < 0.001 (5.1×10^{-7}) which shows a very highly statistically significant difference with students coming from Advanced levels scoring at the end of the programme significantly higher than those coming from the British Technology Education Council awards. This applies to any subject that a student studies on these routes. Therefore, the null hypothesis that route of entry between Advanced levels and British Technology Education Council awards will have no impact on the final grade obtained can be rejected and it can be confidently assumed that route of entry will affect academic attainment on the foundation year.

Advanced levels vs Access to Higher Education

With 118 students entering with Advanced levels and 8 students entering from Access to Higher Education courses, students entering from Advanced levels obtained an average mark of 67% whilst from Access to Higher Education courses scored 54%. This difference is statistically significant with a p value < 0.05 (0.006) with students coming from Advanced levels scoring on average 13% above their Access to Higher Education counterparts. The null hypothesis that route of entry between Advanced levels and Access to Higher Education will have no impact on final grade can be rejected and it

can be confidently assumed that this route of entry will affect academic performance on the foundation year.

British Technology Education Council awards vs Access to Higher Education

British Technology Education Council awards students (40) and Access to Higher Education students (8) collectively make up the second largest proportion of students on the foundation year following A levels. The analysis found that students who had come onto the programme from British Technology Education Council awards scored an average of 50% whereas students coming from Access to Higher Education courses scored 54%. This difference is not statistically significant with a p value >0.05 (0.36) indicating that the null hypothesis is accepted that there is no statistical difference between the academic attainment of students coming from Access to Higher Education and British Technology Education Council courses.

Science British Technology Education Council awards vs Non-science British Technology Education Council awards

British Technology Education Council awards students make up 27% of the student population on the programme and have a wide range of subject areas in which they studied their British Technology Education Council awards. Interestingly when comparing science British Technology Education Council awards students and non-science British Technology Education Council awards students there is no significant difference with a p value of >0.05 (0.44). This significance value shows that the difference in grade between the 2 groups (50% for science British Technology Education Council awards and 51% for non-science British Technology Education Council awards) is not significant and that the null hypothesis should be accepted that the choice of British Technology Education Council awards makes no impact on a

student's academic achievement.

Discussion

A Foundation Year programme such as this exists to serve a multi-faceted student body. Bringing together, and successfully educating students who have just missed the grades for a full undergraduate programme with those who have either chosen the wrong Advanced levels or are entering via non-traditional route, is an area that needs more research if we are to best serve all of these students effectively. This study has raised 3 important issues: impact of post-16 qualifications, level of academic preparedness, University and Colleges Admission Service point equivalency.

Discussion of findings

Impact of post-16 qualification

Data presented shows that when considering the route of entry to Higher Education, it is the difference between vocational or access, and academical awards which have a significant impact. Smith *et al* found that although students from non-traditional routes (such as vocational and access awards) can still pass a programme of study, they perform worse than their counterparts who have come via traditional routes (C. H. Smith et al., 2013). This is in line with the observations in this study, the fact that students with Advanced levels (of any subject) perform better than those students without such qualifications indicating that it is not just the exposure to level 3 teaching before joining the university but more the mode of this instruction which predicts a student's academic success (as seen in figure 4). This relationship between level 3 mode of study and the overall outcome was also observed by Peake, who highlighted that students from British Technology Education Council awards were half as likely to

achieve a 2:1 degree than those coming from Advanced levels (Peake, 2018).

When comparing students who had studied for Advanced levels, those students who had studied science topics performed significantly better than those who had studied non-science topics. This is to be expected as the content of a science-based Foundation Year is at Level 3 in nature and thus similar in topic and depth as Advanced levels. Prior knowledge of the science topics beyond General Certificate of Secondary Education (Level 2) means that these students can excel in the Foundation Year, where other students experience the content for the first time and as such score lower in assignments and summative assessments. These students are those who have just missed the grades for entry onto a standard undergraduate degree.

Considering the non-Advanced level routes of entry and comparison of students' academic performance based on the type of non-Advanced level route, it can be seen that there is no significant difference between the performance of those students coming from a British Technology Education Council awards compared with an Access to Higher Education Diploma. Likewise, within the British Technology Education Council awards route, when comparing science-based awards and non-science based awards there is no significant difference indicating that the British Technology Education Council awards subject itself does not influence the performance of students. This is in comparison to the previously mentioned relationship of the topic studied in Advanced levels where the subject did influence performance. This compounds the theory that exposure to a science Advanced level is a better prognostic indicator of academic performance but that the mode of post-16 education is equal if not more important. The three modes (Advanced level, British Technology Education Council awards and Access to Higher Education Diploma) evidently differ in their ability to prepare students for higher education and this can be attributed to their differing focus; one

academically, one vocationally and one for redeveloping learning.

Academic preparedness

The findings of this study would suggest that although students may have the institutions requisite qualifications for entry onto a foundation programme, students prior experience of education may lead to disparity in terms of academic preparedness. Subject content between Advanced level sciences, Access to Higher Education, and British Technology Education Council awards sciences should be largely similar given that all are level 3 yet there remains a significant difference between the academic performance of students coming from the three routes (Bailey & Bekhradnia, 2008; Hoskins, Newstead, & Dennis, 1997; Shields & Masardo, 2018). It may be the focus on vocational learning which is seen in British Technology Education Council awards and the outcome-based style of learning in Access to Higher Education courses (P. J. Smith, 2000) which does not prepare students for reading for a degree (M. F. Smith, 2018) and that the transition provision and support by Higher Education Institution's must be carefully designed to support students coming from such qualifications (Gamar, 2017).

The transition from post-16 education to Higher Education is a difficult one, even more so for the non-traditional student who may not have had the same educational experiences as the traditional student (Bathmaker, 2015; Leathwood & O'Connell, 2003; Lowe & Cook, 2003; Money, Nixon, & Graham, 2020; Simm, Marvell, Schaaf, & Winlow, 2012). This situation is not reserved for higher education in the UK. In Australia, the Technical and Further Education qualification acts much like the UK British Technology Education Council awards, and studies have looked at the impact that prior education via a Technical and Further Education had on first-year undergraduate success and found a significant difference in attainment, with the Technical and Further Education students scoring lower than the more traditional route

student (Tickell & Smyrniotis, 2004). Literature suggests that part of this unpreparedness comes about from the style of learning. Non Advanced level programmes are often very instructor-led with a definitive scheme of work which if completed will follow to success (P. J. Smith, 2000). Students enter Higher Education unprepared for the more academic constructivist style of learning which places its emphasis firmly on self-directed learning. Although constructivism can be simply defined as the active construction of learning, it is more usually applied to the acquisition of knowledge by one's own means, through the process of building upon current knowledge to generate an independent thinker (Schweitzer & Stephenson, 2008). In a Higher Education Institution this is largely driven by independent learning which other, non Advanced level, qualifications typically do not prepare students for (Gijbels, Van de Watering, Dochy, & Van Den Bossche, 2006).

Warren (2002) defined 3 models of curriculum design for such bridging programmes: integrated, semi-integrated and separate. Integrated programmes have all students as a focus and are primarily aimed at preparing students for Higher Education via the use of complex learning activities in which a student gains the subject knowledge and academic literacy skills together. A separate programme has the non-traditional student as its focus such as the students identified in this study. The focus of such a programme is on the development of academic literacy and core competencies required for study at Higher Education. A semi-integrated programme blends these 2 together; whilst teaching subject-specific material via academically defined modes of instructions it will also deliver and develop academic competency skills such as criticality in writing. From these distinctions, it was identified that a *semi-integrated* programme will serve the disadvantaged or non-traditional student as effectively, or even better, as it does the student who is coming from a traditional Advanced level

route (Warren, 2002). By design, the programme in question in this study should be considered a *semi-integrated* provision as it places both the traditional students and non-traditional student at the focus of the education, by being designed to be both remedial (consolidating subject knowledge based on what a student should already know) and developmental (developing an individual student into an effective learner) (Warren, 2002). However, the success of such a semi-integrated programme from a student performance perspective is not seen in this study and it raises the issue as to whether this programme is truly *semi-integrated* or not, or should it be redesigned to 2 *separate* programmes; one designed for those students coming from Advanced level with the appropriate academic literacy and one for those students from other routes which will provide students with the necessary skills and subject knowledge. Further qualitative studies, via focus groups, investigating the perceived academic preparedness of bridging programme students would allow for a more thorough and robust investigation into this important issue.

Entry tariff points

When considering this phenomenon of disparity between attainment, it is also important to consider the impact of entry tariff points. Based on the importance placed upon entry tariff points and their sole use in the decision to admit a student to an undergraduate course, it can be assumed that the entry tariff points would show a direct correlation to academic ability. A first glance of the overall data shown here could lead to the assumption that ‘Advanced level students must obtain higher entry tariff points’ and hence have the upper hand in attainment as they are more ‘qualified’ than their counterparts coming from vocational courses. However, similar to Gill, it was found that students coming from other routes were more likely to have obtained higher entry tariff points than those coming from Advanced levels (figure 2) (Gill, 2016). The data

presented in figure 3 therefore would imply that entry tariff points are not a strong indicator of Higher Education performance.

This finding is not restricted to just British Technology Education Council awards and Access to Higher Education Diplomas. The Welsh Baccalaureate Qualification is a qualification founded by the Welsh Joint Education Council as part of its widening participation policy. With the proposed equivalency of an Advanced level, one would expect that acquisition of such a qualification would improve a student's retention and success at a Higher Education institution. Yhnell *et al* studied the success of these students and found that at selective universities (those requesting higher tariff points) holding a Welsh Baccalaureate Qualification was negatively correlated with academic success, again showing the inequivalence between tariff points awarded outside of standard Advanced level qualifications (Yhnell et al., 2016). This negative correlation is not seen in all cases, and some studies show that the entry scores can, in fact, be used as a prognostic indicator of programme success (Kirby & Dempster, 2015; Owusu-Apenten & Xu, 2012).

Care should be taken in making any such conclusion from this study due to the limited data set presented here but it does open up avenues of further study. Such studies should involve the use of a larger data set looking not just at a single foundation programme but looking at all programmes of an institution or multiple institutions. This would identify, more robustly, if the trend observed here is replicated across not just a single programme but also across departments, schools, faculties, and institutions within the Higher Education sector as a whole. A second avenue generated from this work would be to look at the impact of motivation on academic performance. A student may have very high entry scores but if lacking the motivation will ultimately score lower; do

different entry routes have differing levels of motivation and can this contribute to the effect observed here?

Implications

Institutional policies regarding the widening participation agenda need to be addressed by instructors and policymakers to better serve all of the students entering Higher Education from varying entry routes. The widening participation agenda, although being addressed through the use of bridging programmes, is still requiring work. In many situations, it is viewed as a goal; offering places to mature students or those from non-traditional routes to fill a quota and to be accountable. The evidence presented here has shown that the act of offering a programme as a step towards reaching Higher Education is not always enough and that such a programme should be considered part of the 'process' of social justice. A student beginning a course will have intrinsic motivation to succeed as seen in Maslow's hierarchy, but it will require a redesign of these programmes and associated assessments to align and guide students to constructivist principles. This will address the intrinsic motivation that these students have and the need for them to become increasingly autonomous. Support to develop into constructivist learning may take various forms such as the use of student-driven formative assessments where feedback will inform the student of their learning abilities and will provide an opportunity to grow in efficacy without the penalty of losing marks (Rushton, 2005; Thevathayan & Hamilton, 2015).

Conclusions

To conclude, the data and discussions of literature presented here show that Level 3 or pre-university vocational and returning to education awards do not adequately prepare students for subsequent and additional Level 3 study at a Higher

Education Institution. This is not because these students obtain lower grade qualifications, conversely, it is observed that they score slightly higher entry tariff points. Instead, it points towards a lack of ‘preparedness’ for HE study amongst these students, that they lack the academic literacy, self-efficacy and exposure to constructivist style of learning that their more traditional counterparts already possess. This study has highlighted through an analysis of performance, that students coming from instructor-led educational settings, who are didactically taught knowledge to retain, perform statistically worse than their constructivism exposed counterparts. These students’ success depends on developing this critical higher educational style and institutions must provide for their students, a secure and supportive environment for this crucial development to occur.

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