Higher Education Attainment: An Institutional case study comparing Higher Education performance between students with A-Level only entry qualifications and students with alternative qualifications.

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ABSTRACT

This study examines the effect of entry qualifications on academic performance and degree outcomes in higher education. It observes that a growing number of students with vocational qualifications, such as BTEC, enter higher education but find it difficult to attain top grades compared to those with only A-level qualifications.

Using a mixed-methods strategy, the quantitative phase analyses UK undergraduate data to compare performance variations between students who entered with A-level-only qualifications and those with alternative entry qualifications (BTEC, a combination of A-level/BTEC, and Access). It accounts for demographic factors by performing a hierarchical linear regression that differentiates pre-COVID and COVID-affected cohorts. Meanwhile, the qualitative phase investigates student experiences during critical transition points by conducting interviews and applying thematic analysis.

The results are presented in phases to mirror students' academic journeys (Phase 1: Access, Phase 2: Transition, Phase 3: Success). They show that entry qualifications and degree subject pathways significantly predict student performance. A-Level-only students demonstrated the highest achievement in both Pre-COVID and COVID-affected cohorts. Those with both A-Levels and BTEC performed better than BTEC-only students but could not eliminate the performance gap with A-Level-only students. Access students displayed varied results, with COVID-affected cohorts showing the lowest performance. Nevertheless, performance improvements were noted across both BTEC and A-Level/BTEC-combination students. While Access students displayed better results, this was exclusively among the COVID-affected cohorts, with pre-COVID counterparts showing decreasing performance.

Overall, the findings reveal that most students adapt to university learning as they advance, alongside a rise in support-seeking behaviours and changes in how students leverage their networks. They underscore the challenges students with diverse entry qualifications and backgrounds encounter, which can impact their engagement and advancement. The study recommends an intervention prior to the start of the degree to enhance students' preparedness and facilitate a smoother transition from post-16 education to university.

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1. INTRODUCTION

1.1 Background

Over the last six decades, there has been a considerable change within higher education (HE), primarily resulting in an increasing number of students entering university. The influential Robbins report (1963) had elevated concerns about low participation rates, particularly amongst students from under-represented groups, such as students from low-participating neighbourhoods, students of the Global Majority (those who identify as Black, Asian, Mixed or from other minority ethnic groups), disabled, and mature students (Younger *et al.*, 2018). The report shifted the landscape of higher education, and a rise in university participation rates, from 5% to 30% between the 1960s and the 1990s, was reported (Barr and Crawford, 1998), particularly amongst students from under-represented groups (Huntley *et al.*, 2017). More recently, research has shown an increase in the number of students who hold vocational qualifications – such as Business and Technology Education Council (BTEC) – entering higher education (Gicheva and Petrie, 2018).

Although the admission of students with vocational qualifications is increasing, there is evidence showing that those with vocational entry qualifications are less likely to graduate with a first-class or an upper second-class honours, often referred to as a 'good degree', in comparison to those with academic qualifications, such as Advanced Level (A-level) qualifications (Shields and Masardo, 2018).

An examination of empirical literature suggests that the factors that influence students' academic performance and attainment are complex, particularly for those who come into higher education under the auspices of widening participation. Although data indicates that some students are still left behind. For example, research on ethnicity gaps showed that being of Global Majority heritage background can negatively impact student outcomes. It was highlighted that students from a Global Majority heritage background were less likely to achieve a First or 2.1 degree compared to their White peers (Broecke and Nicholls, 2006). Furthermore, while some students from non-traditional academic backgrounds succeed and graduate with as good a degree as their A-level counterparts, there are still students with vocational qualifications that are not meeting this expectation (Shields and Masardo, 2018). Research suggests that a student's degree outcome does affect their post-graduation destination, as well as impacting their long-term employability and salary-earning potential (Lessard-Phillips *et al.*, 2018). This illustrates that there is a clear need to understand the complex reasons for the attainment gaps between students with different university entry qualifications.

Researchers have attempted to explain this gap. Comparative studies by both Shields and Masardo (2018) and Gill (2018) reported better performance for students with academic qualifications. These are defined as qualifications that contribute to the students' specialised knowledge of a subject and not necessarily the application (Lewis, 2024). Both studies noted that purely academic pathways seemed to have provided better university preparation than purely vocational ones – with vocational qualifications defined as those that combine the development of knowledge and skills with practical learning (Lewis, 2024).

Pre-university education and performance seems to play a key role in a young person's decision to enter higher education (Hoare and Johnston, 2011). However, the disparities in performance in higher education between students with different qualifications suggest that some students could be receiving better preparation for higher education than others. Therefore, an examination of the post-16 education environment could give further understanding as to whether these translate into gaps in the level of preparedness for HE. These educational disparities can be understood through the lens of Bourdieu's work, which argues that individuals are constrained by their 'habitus'. Habitus is defined as a set of learned preferences or dispositions by which a person navigates the social world (Edgerton and Roberts, 2014), with each class having a different habitus that informs their practices, beliefs, and values (Bourdieu, 1977).

An individual can be confined by their position in society and the capital they possess (in terms of amount, quality, and composition), and this can influence their trajectory in education and beyond (Häuberer, 2011). Studies have concluded that the resources linked to different types of capital will increase a person's chance of succeeding in a variety of fields (Bourdieu, 1984).

A field is described as a specific social context (Bourdieu, 1984) – for example, schools, higher education – and each field would have specific power dynamics at play (Naidoo, 2004). However, what has not been thoroughly scrutinised is whether there are distinct types of capital being cultivated amongst students while at their post-16 education institutions, effectively differentiating students by their different entry qualifications, which is what this doctoral research aims to explore. Using the lens of capital theory could shed light on whether the disparities in degree outcome could be explained by students having certain types of advantageous capital and whether it affects their level of preparedness for HE. This is explored further in Chapter 3.

1.2 Research objectives

This doctoral study aims to investigate whether there are attainment disparities in degree outcomes between students with A-Level only qualifications and those with alternative qualifications such as BTEC, A-Level/BTEC combinations, and Access courses. With

widening participation as the core theme that weaves the thesis together, this doctoral study seeks to understand students' undergraduate academic journeys from the first to the final year, exploring whether attainment disparities are present from the beginning of their first year and either develop or narrow as they progress or arise at a different point in their studies.

It is also important to investigate students' experiences at key transition points, such as their post-16 transition to university. A comparative review of experiences based on the institution they previously attended will provide insights into the activities offered and the skills students developed to feel prepared for the university environment. Examining prior learning environments, particularly students' learning experiences and access to opportunities, would help us understand the roles they play in students' preparedness for university and whether there is a difference between the institutions they come from, such as sixth forms, sixth form colleges, or Further Education (FE) colleges. Additionally, exploring students' experiences during the transitions between different academic years would help us understand their perceptions of preparedness prior to and during their university journey, particularly those with characterises that fall under widening participation.

1.3 Research questions

Considering the research aims and objectives outlined in the previous section, this thesis will specifically address the following research questions:

- Are there performance differences at university between A-Level only students and students with BTEC, Access, or BTEC/A-Level combination entry qualifications throughout their undergraduate studies?
- What patterns emerge from the data in terms of the outcomes for each academic year?
- Does the type of entry qualification predict students' final undergraduate degree outcome when student characteristics, such as prior academic achievement, age, gender, ethnicity, disability and POLAR4, are controlled for?
- To what extent does social and cultural capital generated for the student whilst at their post-16 education institution help with their preparedness for Higher Education?

1.4 Motivation

My interest in this particular subject area, specifically focusing on attainment gaps, began in the 2010s, when I was employed as a curriculum consultant at Kingston University. The University created the role in response to their own research into the performance disparities between White students and students of Global Majority heritage, particularly Black students.

The project aimed not only to understand these disparities but also to develop different intervention strategies by which the gap could be closed.

My personal interest was piqued by the findings, as someone who had studied at Kingston University and is a Black African student. I had gained entry with A-Levels for my bachelor's degree and graduated with a 2.2 and so felt a vested interest in understanding this phenomenon. The data collected by Kingston University suggested that students from Global Majority backgrounds were less likely to obtain a 'good degree' (a 2.1 or First). I wanted to develop some understanding of why this was happening, particularly as it was not unique to that institution but reflected a broader trend across the sector. This sparked my interest in exploring attainment disparities and considering how factors such as social characteristics or background might impact degree outcomes.

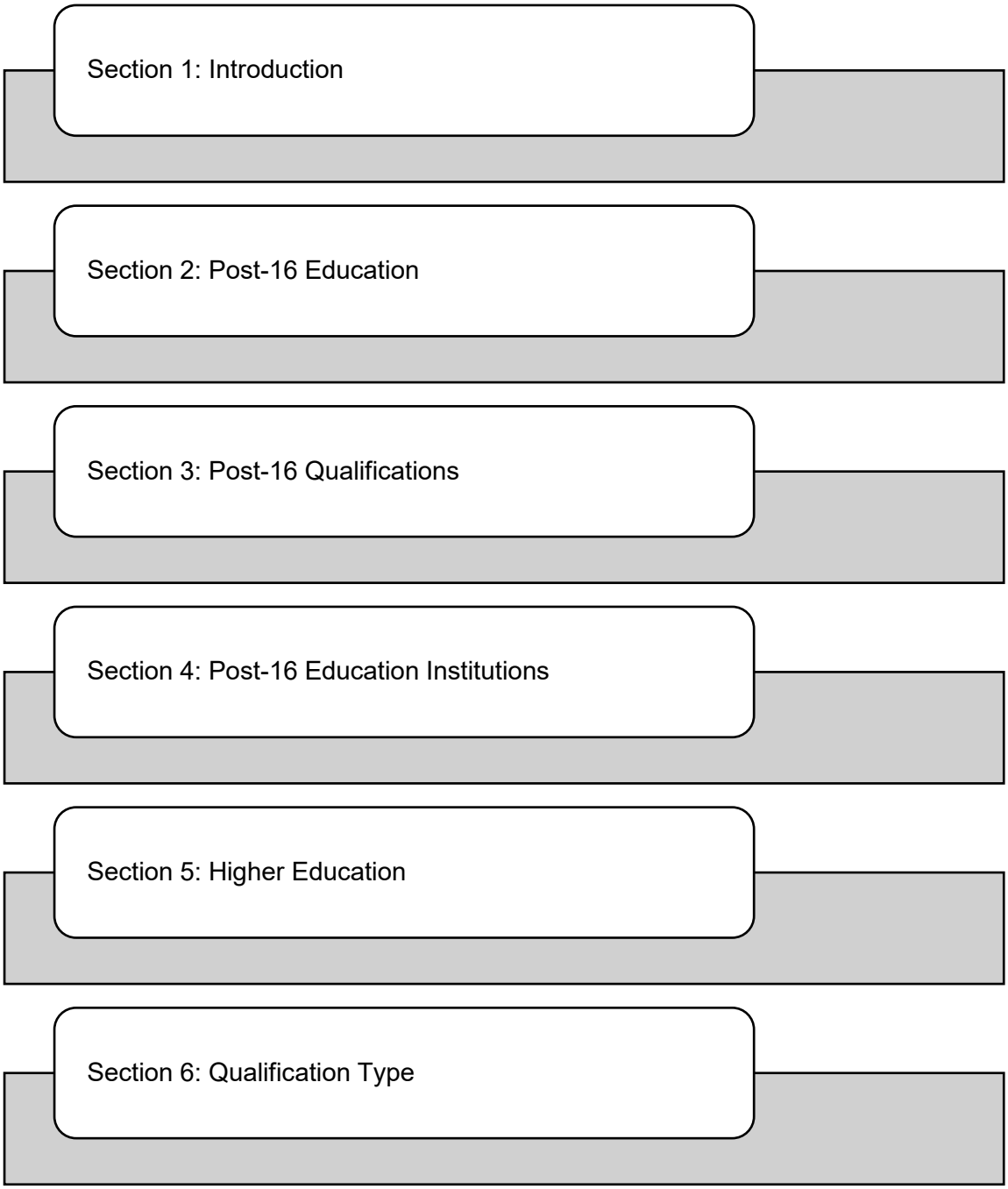
As a result, I pursued positions that provided opportunities to be involved in work examining ethnicity attainment gaps in student outcomes. When the opportunity arose to conduct PhD, research centred on attainment gaps, with a particular focus on entry qualifications, I was highly motivated to pursue this direction. This offered a chance to examine disparities from a different perspective and given how widening participation intersects with this issue, exploring entry qualifications provided a valuable lens for understanding why such disparities persist. Trying to understand why these gaps exist has been the main motivation behind my efforts to identify what other factors might be at play.

1.5 Thesis structure

The next chapter of the thesis examines the UK education context concerning entry qualifications. Chapter 3 will include a literature review and provide insights into empirical research on attainment in higher education. It will investigate capital theory and the capabilities approach, forming the basis of this study's theoretical framework, which will be presented and discussed.

Chapter 4 will present the methodology, justifying the chosen pragmatic approach. This section will outline a detailed breakdown of the quantitative and qualitative approaches. Chapter 5 will present the study results in three distinct phases that reflect the student higher education journey, capturing some pre-university experiences up to the students' final year at university (Phase 1: Access, Phase 2: Transition, and Phase 3: Success). Finally, Chapter 6 will present the discussion of the study results and findings and give a conclusion.

2. UK EDUCATION CONTEXT



2.1 Introduction

The chapter will provide some policy context pertaining to the changes in widening participation within higher education. An examination of post-16 education qualifications and institutions will be undertaken to understand the different learning environments from which students come and their differences and similarities. A comparison of attainment in higher education between students with vocational and academic qualifications will be made.

2.2 Post-16 education

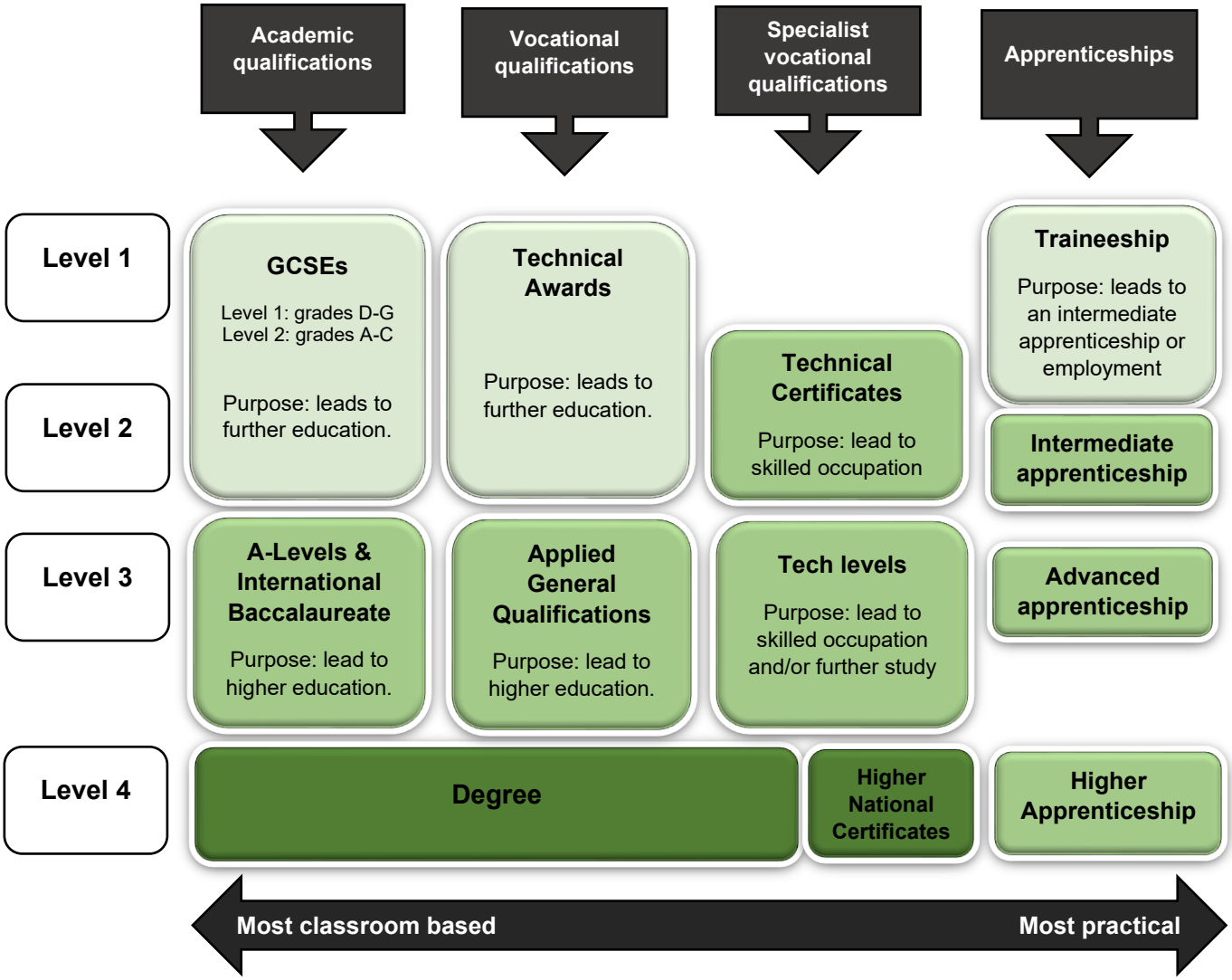
The education school system in the UK is currently divided into four stages: primary education (age 5-11), secondary education (aged 11-16), further education (post-16) and tertiary education (Department of Education, 2013). Presently, in England, there are up to nine qualification levels, with the higher levels being more difficult. Figure 1 below gives a brief overview of the different types of qualification pathways, as well as the first four levels of qualifications that students can attain during the four stages of education.

The first two stages are compulsory, and at the end of the second stage young people can gain level 1 or level 2 qualifications, depending on their grades. Once their secondary education is complete, a young person has to stay in either education or training – at least part-time – until they are 18 years old (Government Digital Service, 2011). 'Further Education' (FE) or 'Post-16 education' is a key stage in young people's educational journey as it enables them to gain Level 3 qualifications. The decisions at this stage can dictate which opportunities are available to them in the future. The final stage, Higher Education (HE), which coincides with Level 4 and above, will be discussed later in more detail, the main focus of this section will be the FE stage (Department of Education, 2013).

This thesis will focus on the students whose post-16 Level 3 qualifications enable them to progress into higher education and choose to continue with their studies, rather than taking pathways that lead only to employment. The time the students spend in their post-16 institutions can impact their choices and decisions regarding higher education. Examining this period of the students' educational journey can help give some insight into how they have developed and what skills and resources they have acquired and how these enable them to successfully enter into and progress within higher education.

It is important to note that access to post-16 education is determined by an individual's prior attainment. A young person's General Certificate of Secondary Education (GCSE) results are a gateway to progression and transition into post-16 education. They play a key role in determining – as well as limiting – a student's access to opportunities and qualifications at this level (Dilnot, 2016).

Figure 1: Level and types of qualifications as of September 2020.



Source: Government Digital Service (GDS), (2020)

2.3 Post-16 qualifications

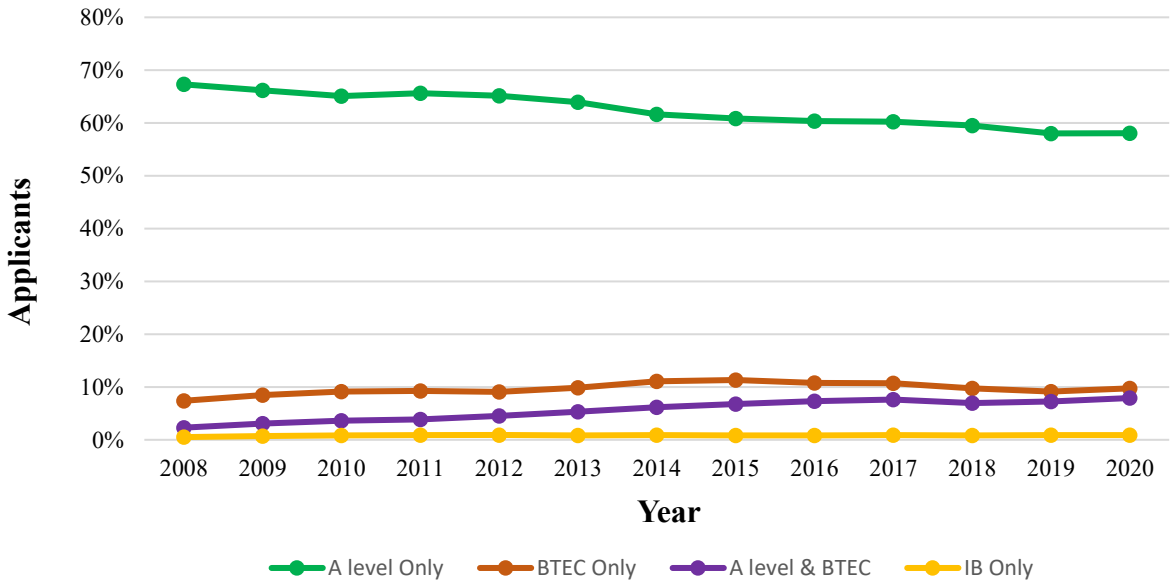
Currently there are a number of qualifications that students can undertake during their post-16 education. These qualifications serve a crucial role in helping students develop their literacy and numeracy levels and providing the students with a level of knowledge and skills within their chosen subjects (GDS, 2011).

Qualifications are designed with distinct purposes that enable students to progress into higher levels of study and/or employment (Department of Education, 2016). The different qualification options draw a distinct dichotomy: one offering an academic pathway, in which the majority of the activities are classroom-based; and the second providing an applied learning vocational pathway that offers some practical aspects as part of the learning (UCAS, 2019).

2.3.1 Academic qualifications

A distinguishing feature of 'academic' qualifications is their contribution to the students' specialised knowledge of a subject and not necessarily the application thereof. Since their introduction in 1951, A-Level qualifications have been designed to be academic qualifications, with students studying a variety of different subjects. A-Levels have since been the primary route into university, and (UCAS, 2020, 2021) data shows that 58% of applicants in 2020 held A-Level qualifications. Figure 2 below shows that between 2008 and 2020, the number of A-Level applicants remained more or less the same, with only slight increases and decreases.

Figure 2: Percentage of applicants holding qualifications combinations between 2008 and 2020.



NOTE: Students that hold students with Scottish Higher and other qualifications are not shown here

Source: End of cycle report 2019 and 2020 (UCAS, 2020, 2021)

Whilst the percentage of students entering with only A-Levels has decreased by 7% over the last decade, as demonstrated in Figure 2, we also observe an increasing number of students entering higher education with alternative qualifications (Gill, 2018). Alternative academic qualifications include the International Baccalaureate (IB) diploma and Cambridge Pre-Us. It should be noted that these alternative qualifications still only account for a very small proportion of students entering university, while the biggest increase in alternative qualification uptake has been for vocational qualifications or those with a combination of both academic and vocational qualifications.

2.3.2 Vocational qualifications

The vocational pathways, such as Business and Technology Education Council (BTEC) and Access courses introduced in the 1970s (Hayton and Paczuska, 2002) aimed to combine the development of knowledge and skills with practical learning. Vocational qualifications are made up of a variety of components, all aimed at one subject, and offer a more applied pathway to students than more academic qualifications, such as A-Levels. They are designed to equip students with the skills needed either to continue into higher education or go directly into employment (Pearson, 2021). Unlike some traditional academic pathways, vocational qualifications typically place a greater emphasis on continuous assessments throughout the course rather than one examination at the end. However, it is important to note that assessment methods vary across both academic and vocational qualifications. Many A-Levels now incorporate elements of continuous assessment and coursework alongside final examinations (Pearson, 2021).

Although A-Levels remain the most common qualification undertaken at Level 3 in England, the popularity of BTECs has risen over time. There was a 56% increase in the number of applicants holding only a BTEC qualification between 2008 and 2020, albeit from a low starting point (UCAS, 2021). The choice of qualifications offers some flexibility for students, and more recently, there has been an increasing number of students opting for a mixture of both academic and vocational qualifications (Shields and Masardo, 2018). This is demonstrated by an increase in the number of students holding a mixture of A-level and BTEC qualifications, which more than quadrupled between 2008 (5,615) and 2020 (22,905). Since vocational qualifications tend to have a practical aspect, the increase could be speculatively attributed to the fact that combining qualifications gives the student the opportunity to combine an academic qualification with a qualification focused on employment skills.

As part of the post-16 technical education reforms, a new type of vocational qualification, T-Levels, was introduced and made available from September 2020 (Department for Education, 2017). Aiming to be equivalent to three A-levels after the two-year course is completed, students doing T-Levels would combine classroom-based learning with industry placement(s) (Department of Education, Ofqual and Institute for Apprenticeships and Technical Education, 2019). The Department for Education (2021) has recently reported that there were 44 providers (including FE and Sixth form colleges, maintained schools and academies, as well as higher education institutions) across the country delivering T Levels; however, data on the number of students recruited onto the pathway has not yet been officially published. The introduction of T Levels is worth noting for future research, although since the first cohort would only graduate in summer 2025 it is beyond the scope of this thesis.

2.3.3 Academic vs vocational

Although both vocational and academic qualifications can aid in a young person's preparedness for a successful career, vocational qualifications are mostly likely to be taken by students who have not achieved good results at the GCSE level of the national curriculum (Bathmaker, 2015). Vocational qualifications are often characterised as being 'second best' to academic qualifications (Conlon, 2005), and this undervaluation may have contributed to the association of inferior ability with vocational qualification holders. Despite the "lack of prestige" associated with vocational qualifications in comparison to academic ones (Leathwood and Hutchings, 2005. p.144), there is currently an increasing number of students going to university with either vocational only or combination qualifications, which may indicate a shift in attitudes over the previous decade. This also reflects a shift in the HE sector more broadly with the inclusion of vocational qualifications in the entry criteria for some university courses.

Qualitative research undertaken in the UK used semi-structured interviews to explore what perceptions students (*n = 6)* and teachers (*n = 3)* had about the relative difficulty and content of vocational and academic media courses. The findings were that learning outcomes were similar. However, it was reported that the assessment of the courses was very different, with the vocational course having more focus on meeting deadlines and the academic focusing more on experimentation (Connolly, 2020). Based on this study, it could be argued that the academic pathway provides an environment that nurtures a more independent learner with the space to experiment more with their ideas.

A perceived dichotomy of A-Levels being more theory-based and BTEC being more practice-based was highlighted by participants (Connolly, 2020). This research speculated that the perception of a difference in difficulty between the two courses was generated by the institutions surrounding the students (the school/college, its culture, the exam board, the university) rather than the students themselves (Connolly, 2020).

Students expressed clear perceptions about the different skills and knowledge gained from the different courses; however, upon closer inspection of the interview comments, Connolly (2020) suggests that the distinction between theory and practice is more artificial than real (Connolly, 2020, p.12). This analysis reveals that while students perceived vocation BTEC courses as more practical and A-Level courses as more theoretical, in reality both pathways required students to develop theoretical understanding as well as practical skill, just with different emphases.

A mixed-method study *(n=64)* carried out in East Anglia aimed to understand whether doing an applied A-Level was perceived to be easier than doing an academic A-Level. The study

compared students' experiences on a business studies course during the 2008/09 academic year (Wilkins and Walker, 2011). Findings from the questionnaire showed that students' reasons for taking an applied business course over an academic business studies course were not linked to having lower GCSE grades but rather to the mode of assessment. Students reported a preference for coursework assessment rather than formal examination, with that being a key reason that they chose to take an applied business course (Wilkins and Walker, 2011). This was a more important factor in choosing a vocational course than the practical-based elements of the course. Students did not seem to consider the applied course as a 'soft' option, which further highlights the fact that the perception of qualifications may be generated by the institutions surrounding the students (Leathwood and Hutchings, 2005; Wilkins and Walker, 2011). This finding challenged the fallacy that students take vocational qualifications because they did not meet the required grades to take up the academic pathway (Wilkins and Walker, 2011).

2.4 Post-16 education institutions

Post-16 qualifications can be offered at different institutions, such as schools with sixth forms, sixth form colleges, general FE colleges and community learning institutions. Sixth form schools are an extension to secondary schools and tend to offer A-Level qualification pathways as their main post-16 education (UCAS, 2024). In contrast sixth form colleges often offer both academic and vocational qualification pathways to students. A defining characteristic is that the students who attend this type of institution will be aged between 16-19 years old (UCAS, 2024). FE colleges offer students a more adult learning environment as educational provision is also offered to those aged 19 and above. As such, there is an expectation for students to take more responsibility of their own learning (UCAS, 2024).

Using data from the Longitudinal Study of Young People in England (*n = 15,000)* conducted during the academic years 2003/04 to 2006/07, Meschi, Crawford and Vignoles (2010) reported that high achieving pupils are more likely to enrol on a sixth form-based provision than an FE provision. High achieving pupils were defined as those who achieved at least 5 GCSEs with grades A*-C. Implicit in the discussion above is the assumption that students always have a free choice of which institution they attend. In reality, this choice can be affected by different factors, such as geographical location, the choice of subjects on offer and other cultural factors. For example, 'family' has been found to play a role in determining which institution a student attends. Meschi, Crawford and Vignoles (2010) found that students whose parents had a 'routine job' – defined by the ONS as repetitive work with a basic labour contract and minimal employee discretion (Office for National Statistics, 2016) – were more likely to

attend FE colleges. Furthermore, parents having high educational aspirations for their child was associated with a higher chance of attending sixth form-based provision.

Students' access to qualifications and subjects could be further limited by the institution's capital, be it social, cultural or economic; for example, its monetary capabilities, staff expertise and so on (Abrahams, 2018). Abrahams's (2018) study, exploring opportunity structures in three English secondary schools, is critical of the 'notion' of choice as the opportunities young people are constrained by the institution they attend. The three secondary schools included one private, one state in a wealthy area and one state in a socio-economically disadvantaged area. He notes that the private school and the state school in a wealthy area had unrestricted GCSE and A-Level options. In addition to this, she reports the provision of support to equip the students with an understanding of the 'rules of the game' to compete for university places (Abrahams, 2018). On the other hand, the school in a socio-economically disadvantaged area is shown to be working with a timetable-blocked system, which creates more restrictive options (Abrahams, 2018, p.16). While Abrahams speculates this may be due to resource constraints, she notes it could also be a consequence of having fewer teachers or limited teacher expertise across subjects. As she clarifies that a school with less pupils and resources may have less teachers, impacting upon their flexibility around timetabling (Abrahams, 2018). These findings highlight the inequalities in the options presented to the students, and the differentiation in habitus further illustrates that not everyone 'plays the game' on equal terms.

Some differentiation has also been found when it comes to perceptions of the different institutions with a much more negative view of FE colleges. For example, Gartland and Smith's (2018) qualitative study reported students from both sixth forms and FE colleges viewing FE college as "being a bit shabby" and perceiving it as catering to less academic students, whereas sixth forms were perceived as catering to "smart" students with aspirations to learn (Gartland and Smith, 2018 *p.641*). This positioning can have an impact on the learner's identity and the perception of their own ability (Gartland and Smith, 2018).

Stoten (2014)' mixed method study (*n=49)* reported that students prioritised gaining a qualification over being motivated by learning when they were asked why they chose to attend a sixth form college. This seems to suggest that students tend to base their choice on the perceived benefits of the qualifications. This is further highlighted by Bell and Kent (2010)'s study, conducted in a school sixth form, which reported that students had shared beliefs towards academic values held within the institution. However, it was noted that the students had chosen to stay in education post-16, and therefore academic ambitions might already be something they value (Bell and Kent, 2010).

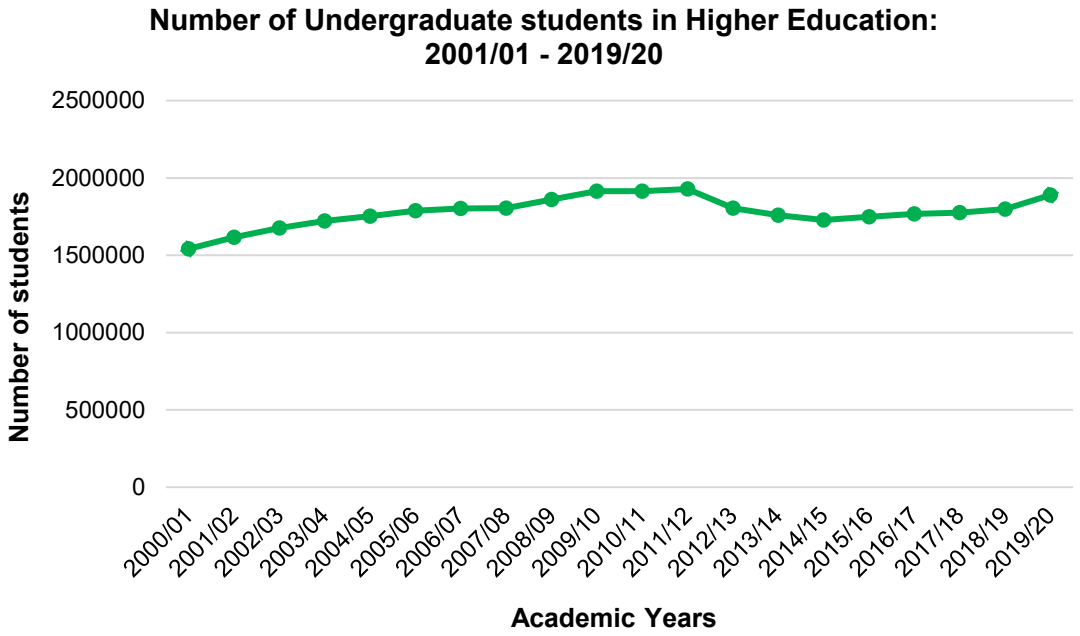
Gartland and Smith (2018)'s research, exploring the experiences of BTEC students from FE and Sixth Form colleges in low participation neighbourhoods, showed participants unanimously believed that their FE and Sixth Form colleges had supported their development of a sense of independence. There seems to be a spectrum of independence for the students depending on the institution they attend. Gartland and Smith (2018) break down independence into two orthogonal parameters: academic autonomy and administrative self-regulation. Academic autonomy refers to the extent to which a student can achieve the learning outcomes with minimal assistance. Administrative self-regulation measures how much control the student has over non-academic matters such as timekeeping and attendance (Gartland and Smith, 2018). This framework could be useful to identify the specific types of independence instilled in students from different types of institution and the particular aspects of independence that can be useful in a university setting. This may shed light on any gaps that exist between skills gained pre-university and skills required within a higher education environment.

2.5 Higher Education

Richardson *et al.* (2020) defined student participation as the number of students registered onto a higher education course. The figure below shows that since the 2000/01 academic year, the number of undergraduate students studying at UK higher education institutions has increased (HESA, 2020). It should be noted that this includes international students; however, they only account for an average of 15% of the student numbers between 2014/15 to 2018/19 (HESA, 2020), making UK students the majority of the student body.

There is a gradual increase of student numbers from 2000/01, with a slight plateau in 2007/08 interrupting the increase. From 2012/13 until 2014/15, a downward trend is also noted, with the number slowly increasing again after that. A possible explanation for the 2007/08 plateau could be the rise in the university fee cap in 2006/07 as a result of the Higher Education Act 2004, enabling universities in England to charge variable fees of up to £3,000. Likewise, the 2012/13 decrease could be explained by the controversial £9,000 fee increase in 2010 under the coalition government, following the Browne Review. (Burgess, Senior and Moores, 2018).

Figure 3: Number of undergraduate students in Higher Education: 2000/01 – 2019/20



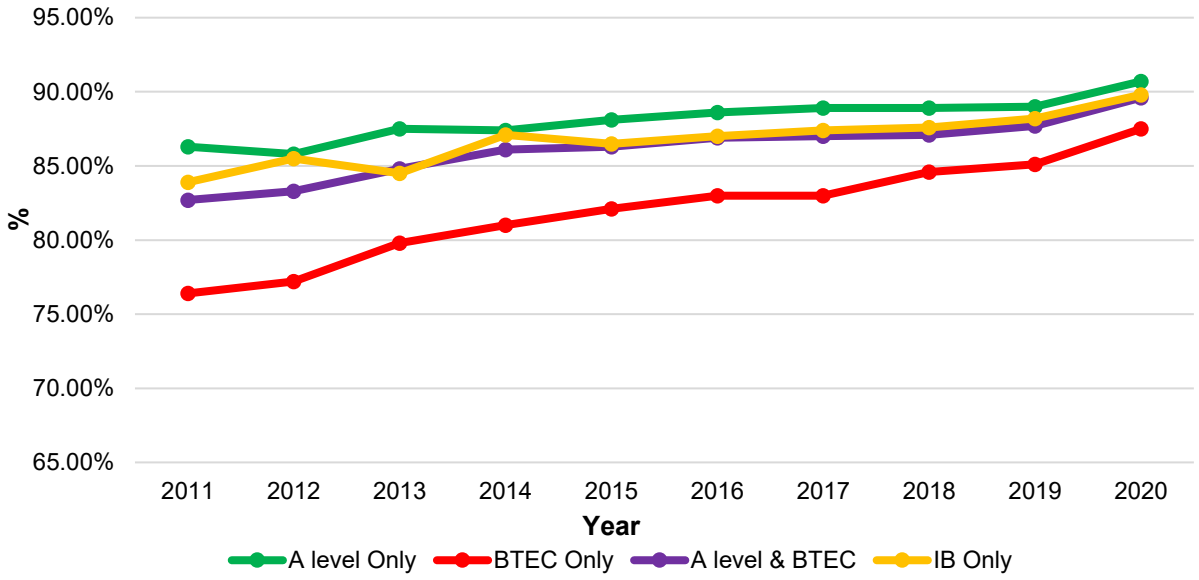
Source: HESA (2020)

2.6 Qualification type

2.6.1 Participation

According to UCAS (2021) data, students applying to HE with A-Level qualifications had the highest acceptance rate onto their programme of choice and those with BTEC qualification had the lowest, as shown in the chart below. While the number of students holding BTEC-only qualifications entering university is increasing, A-Level-only students are still the highest in terms of population and consistently have the highest acceptance rate of all the qualifications. BTEC students consistently have the lowest acceptance rate across the years whilst A-Level and BTEC combination students' acceptance rate has consistently increased each year, and in 2020, matched that of IB students. The differences in acceptance rates between A-Level-only and BTEC-only qualifications slowly decreased between 2011 and 2020. Nonetheless, the chart below demonstrates that there are still disparities in acceptance rates of students with different qualifications and that the majority of entrants continue to be drawn from the traditional academic A-Level pathways.

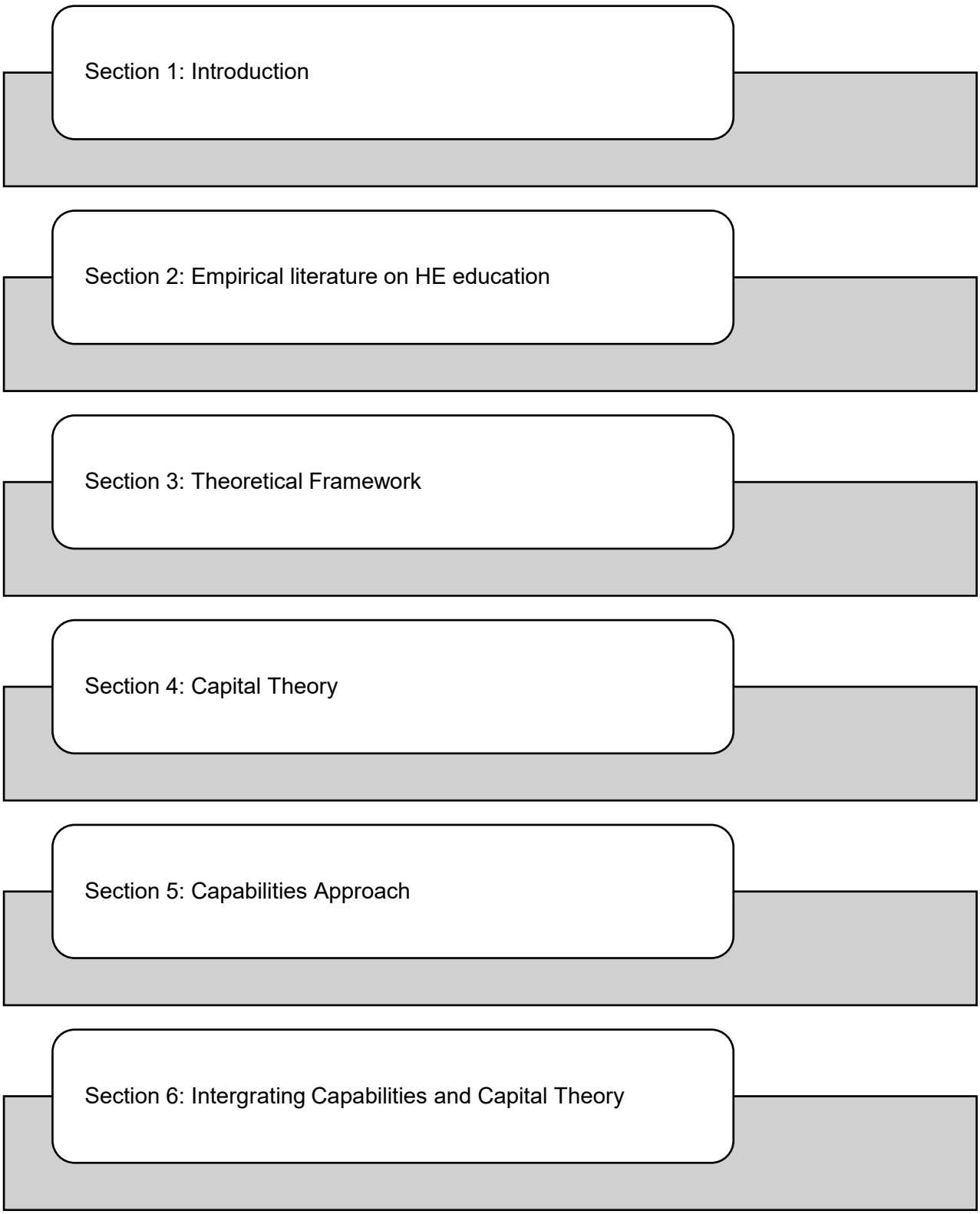
Figure 4: Percentage of student acceptance rates by qualification type



NOTE: Students that hold students with Scottish Higher and other qualifications are not shown here

Source: (UCAS, 2020, 2021)

3. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK



3.1 Introduction

This chapter begins with an examination of higher education attainment highlighting the fact that some students are not attaining the desired degree outcome of a first-class or upper second-class classification. Research has shown attainment disparities between students with academic qualifications, such as A-Levels, and students with vocational qualifications, such as BTEC (Shields and Masardo, 2018). A closer inspection of socio-demographic characteristics will reveal where such disparities exist. This section illustrates that various factors contribute to education inequalities among different student populations.

Following this empirical foundation, the theoretical framework underpinning this study will be presented. Firstly, an examination into capital theory with a particular focus on social and cultural capital will be done. Within this section, an outline of how these forms of capital significantly impact widening participation and education outcome within an HE context will be discussed. Following this, an exploration of Amartya Sen's capabilities approach will be examined, including its application within an HE context. The chapter will then combine the two theoretical perspectives, demonstrating how integrating capital theory and the capabilities approach will be adopted and applied for this study and how it creates a robust framework for this research.

3.2 Empirical literature on HE education attainment

In the UK, degrees with honours are classified into first-class honours, second-class honours (split into upper and lower classifications), third-class honours and ordinary degrees (Stevenson, 2012). Within the literature, the most common measure of a 'good' degree outcome is obtaining a degree classified as a first or upper second-class (Stevenson, 2012).

Shields and Masardo's (2018) study used HESA data of all students who graduated from UK HEI between 2009 to 2013, to investigate the relationship between the type of entry qualifications and the probability of achieving a good degree outcome. Focusing on students who graduated between 2009 and 2013, their quantitative study revealed that students with academic qualifications are more likely than students with vocational qualifications to obtain 'good degrees' (Shields and Masardo, 2018). Taking a focus on students with Access qualifications, Smith et al. (2013) reported performance gaps between students who entered university via the 'traditional' route (i.e. school qualifications) and those with Access entry qualifications. Access courses are primarily designed for people who would like to study at university but left school without the necessary qualifications and tend to attract mature students (aged 21 and over) (Smith et al., 2013). It was noted that the performance gap did not close over the four years of the Speech Sciences undergraduate programme within the ten-year (2000 -2009) period they observed at a single HEI. It is important to note that general

success was reported by Smith et al. (2013) for non-traditional 'Access' route students in completing their degree and being able to secure employment afterwards. However, these students performed less well on written examinations and individual modules. Pairing the findings of the two studies noted above gives the impression that purely academic pathways provide better university preparation than purely vocational pathways.

Similar evidence that academic pathways provide better higher education preparation than purely vocational ones are reported in a study by Gill (2018), which focused on students' prior qualifications (including GCSEs) and compared their final degree outcomes. A logistic regression model was estimated using HESA data from students who graduated in 2013, and used data on GCSEs in 2009 and 2010 taken from the National Pupil Database. The study discovered that students with academic qualifications, such as A-Levels or IB, were more likely to achieve a 'good' degree than those with vocational qualifications. It should be noted that progress onto an academic pathway, such as A-Levels, is often contingent upon having good GCSE results (Dilnot, 2016), thereby creating a filtering process where students entering university with A-Levels are also generally equipped with better GCSE results.

A body of research has focused on observed attainment milestones at each end of the student's journey, for example, prior qualifications and final degree results (Gill, 2018; Shields and Masardo, 2018). This misses the opportunity to understand and observe any attainment results in the intermediate years – during the educational journey itself – that could highlight patterns of disparity and provide further insights. Furthermore, this could highlight actions that could be taken to close the gap in the intermediate stages of the student journey.

Rogaten and Rienties (2018) recently attempted to address this particular gap by looking at students' 'learning gains', which were defined as the difference in student performance between two points in their studies (Mcgrath et al., 2015). This is also sometimes referred to as the 'distance travelled' in the student's learning journey (Rogaten and Rienties, 2018). This particular study focused on the grade trajectory of students with different socio-demographic characteristics using multilevel modelling to analyse Open University (OU) data comparing semesters in one academic year. Like earlier studies, Rogaten and Rienties (2018) reported high academic achievement for students with A-Levels or above. Notably, the attainment gap between students with qualifications below A-Levels or no formal qualifications and those with A-Levels and above was reported to have increased over time (Rogaten and Rienties, 2018). It should be noted that the Open University (OU)'s open-entry policy allows anyone to enrol onto firth-years modules regardless of prior educational achievements and qualifications, why could explain having students with no previous formal qualifications as part of this study. An attainment gap between students who enter with different levels of qualifications is not

particularly surprising; however, the fact that this gap increased rather than decreased over time during the first year is something that can be further explored. In addition, it would be interesting to see what patterns are presented when comparing students who enter with the same level of qualification. A significant limitation of this study was that A-Level and equivalent non-A-Level (Level 3) qualifications were grouped into one, limiting the capabilities to make any comparisons between the different types of qualification. In addition, the dataset is based on part-time distance learning students, which is not representative of the majority of UK universities with a traditional face-to-face full-time learning format.

Student's degree classification achieved has been shown to be a significant strong predictor of post-graduation destination with higher earnings observed for graduates with first and upper second-class degrees in comparison to those with classifications of lower second-class and below (Walker and Zhu, 2011). This illustrates the importance of realising a good degree potential (Lessard-Phillips et al., 2018). Most of the studies looking at attainment disparities between students' entry qualifications have mainly focused on key milestone attainment points. To address this the gap, this doctoral study will review the entire student undergraduate journey. In addition, owing to a growing number of students with both A-Level and BTEC qualifications, this group will be separated in this study to understand whether there are disparities in attainment when A-Level and BTEC only students are compared to students with a combination.

The studies above, highlighting the disparities in the attainment levels of students with different entry qualifications, suggest that the transition from further education to higher education could play a significant role. Social and cultural factors such as socio-economic status relating to the students' backgrounds have been linked to academic performance (Hoare and Johnston, 2011). Pre-university education and performance seems to influence a young person's decision to enter higher education. However, the disparities in performance in higher education between students with different qualifications suggest that some students could be receiving better preparation for higher education than others. Therefore, an examination of the post-16 education environment could give further understanding as to whether social and cultural factors translate into gaps in the level of preparedness for HE.

3.2.1 Student characteristics

Research has shown that students holding vocational qualifications, such as BTEC, are more likely to be from a lower socio-economic group and from an ethnic minority background (Kelly, 2017). Therefore, controlling for student personal demographic characteristics will be essential when examining students' degree outcomes.

Regarding gender, female students had higher acceptance rates than male students in all qualification types, but this difference was not statistically significant. Research shows that female students are more likely to attain a good degree qualification than male students (Woodfield, 2019). This finding still appears to hold true as a recent study revealed a 5% difference in the percentage of women who gain a good degree over men (Richardson, Mittelmeier and Rienties, 2020). Although not the primary focus of this study, it would be interesting to understand whether this gender gap persists when focusing on performance differences of academic and vocational qualifications. The historical exclusion of women from universities has been reversed, with there now being a higher participation of female students than male students. Research shows that females students are more likely to attain a good degree qualification, and this has been the trend since the 1990s (Woodfield, 2019). In addition to the their lower participation rates, men are also less likely to complete their undergraduate degree courses (Jones *et al.*, 2017). Recent research showed a 5% difference in the percentage of women who gain a good degree over men; however, there was no explanation provided of this gap (Richardson, Mittelmeier and Rienties, 2020). Although not the primary focus of this study, it would be interesting to understand whether this gender gap persists when focusing on A-Level and Non-A-Level students.

Research has highlighted that aspiration for and participation in HE is higher amongst students from an ethnic minority background in comparison to White students when controlling for aspirations, expectation and achievement (Khattab, 2015; Berrington, Roberts and Tammes, 2016; Lessard-Phillips *et al.*, 2018; Richardson, Mittelmeier and Rienties, 2020). However, attainment disparities in regard to degree outcomes are observed between Black and Asian students when compared to their White peers. Research shows that White students are more likely to obtain good degrees, and in 2016/17, 82% were awarded good degrees compared to 75% from a mixed background, 72% Asian and 60% Black (Richardson, Mittelmeier and Rienties, 2020). Some research gave lower prior attainment as the reason for lower degree outcomes (Leslie, 2005), and Richardson (2008)'s research explored this further, reporting that the likelihood of BME students obtaining good degrees increased by around 50% after the effect of entry qualifications was controlled for. Research around this has consistently reported lower attainment for non-White students, and knowing that students from an ethnic minority background are more likely than White students to have a non-A-Level qualification, it would be insightful to control for the effects of ethnicity when looking at entry qualifications (Hayward and Hoelscher, 2011; Atherton, 2021; Morgan, 2023).

Although there are higher participation rates of Asian and Black students in higher education compared to White students, there are significant disparities in terms of degree attainment between them and their White peers. Research shows that White students are more likely to

obtain good degrees, and in 2016/17, 82% were awarded good degrees compared to 75% from a mixed background, 72% Asian and 60% Black (Richardson, Mittelmeier and Rienties, 2020). Some research gave lower prior attainment as the reason for lower degree outcomes (Leslie, 2005), and Richardson (2008)'s research explored this further, reporting that the likelihood of BME students obtaining good degrees increased by around 50% after the effect of entry qualifications was controlled for. Research around this has consistently reported lower attainment for non-White students, and knowing that BAME students are more likely to have a non-A-Level qualification, it would be insightful to control for the effects of ethnicity when looking at entry qualifications.

To aid in the identification of areas in the UK where higher education participation rates are low, Participation of Local Areas (POLAR) was developed. Using the Index of Multiple Deprivation (IMD), the latest version – POLAR4 – divides the classifications into five quintiles based on the proportion of young people who have previously progressed into higher education. POLAR quintile 1 represents students from the lowest participation areas, and quintile 5 represents students from the highest participation areas (HESA, 2020). Research shows that students from Quintile 1 are more likely to have BTEC or A-Level/BTEC combination entry qualifications (Atherton, 2021; Morgan, 2023). A HEFCE data analysis reported attainment differences between the proportion of good degrees awarded to students from POLAR4 Quintile 5 (83%) and Quintile 1 (73%). A significant amount of disparity was attributed to the differences in entry qualifications and other characteristics. Once these characteristics were taken into account, the attainment disparities reduced to 2.3% from 10.1% (Richardson, Mittelmeier and Rienties, 2020). It would be interesting to assess whether similar disparities appear when specifically comparing the different types of entry qualifications.

3.3 Theoretical framework

This chapter presents an integrative theoretical framework utilised to analyse student academic performance in higher education within a UK context. The framework is interdisciplinary and focuses on integrating Bourdieu's sociological capital theory (Bourdieu, 1986) with Sen's (1985, 2001, 2004) human development capabilities approach (CA).

Bourdieu's framework will be used to provide a theoretical background for explaining differences in educational attainment between students with academic and vocational entry qualifications with a recognition of differences in influences between social groups have (Bourdieu, 1984). Bourdieu's framework can offer insights into the influence that the social and institutional capital particularly within educational institutions can have on students' capital (Rose et al., 2019). Considering the different forms of capital, such as social and cultural, the research in this thesis can provide greater nuance in understanding the disparities in students'

degree outcomes beyond findings discovered solely using quantitative methodology. The utilisation of this theory could help to understand how the different forms of capital can prepare the student for university and how that transition can affect the student's performance outcomes.

The integrative framework that has been developed for this doctoral study has been formulated to permit for a more holistic perspective than that which considers only capital theory or capabilities approach in isolation. This integrative approach addresses the role of conversion factors and the influence of individuals' preferences and values on educational opportunities and outcomes. Bourdieu's capital theory aids in understanding what resources one might have or not have access to but is limited in understanding an individual's ability to make use of the resources available to them. This is where the capability approach can fill that gap thereby making this a complementary integrative framework.

In the next sections will broadly look at two theoretical frameworks: the theory of capital and the capabilities approach. With regards to the theory of capital, social and cultural capital will be examined in more detail through the lens of widening participation and educational institutions. Within the capabilities approach, the concept of functioning and capabilities will be introduced, and its application to higher education will be examined. Finally, the strands of capital and capability will be woven together to form a more complete picture of the theoretical framework.

3.4 Capital theory – Bourdieu

This section outlines and assesses the theory of capital by examining social and cultural capital in more detail through the lens of and how this form of capital is relevant widening participation and educational institutions.

This doctoral study employs Bourdieu's theory of capital (Bourdieu, 1986), which examines the way people's positions were situated in a social space. Akin to Marx's theory of capital (Marx,1973), Bourdieu also believed that capital was currency that can buy one a higher position in society (Fine and Saad-Filho, 2016), and the more capital a person commands, the more powerful they are (Bourdieu, 1986). However, Bourdieu's (1986) conception of capital is more expansive than the monetary aspects and defines capital as 'accumulated labour in its materialised form or its incorporated embodied form' (Bourdieu, 1986 p.241). By way of further analysis, Bourdieu discussed three forms of capital that determine an individual's position: social, economic and cultural capital (Bourdieu, 1986). In addition, he highlighted that there was an interplay between the different types of capital as they can be converted from one into another, and the acquisition or use of one capital could depend on other types of capital (Bourdieu, 1986).

Bourdieu argued that possessing these types of capital determined people's dominance or in specific fields (Bourdieu, 1984). As defined earlier, a field is a specific social context, for example a school, in which specific power dynamics are at play. Some people would be better integrated into a given field than others and would have more of an idea on how to navigate it (Bourdieu, 1984). Crucially, from the point of view of this doctoral research with its focus on widening participation, having not only sufficient social and cultural capital but also the right combinations can be argued to be a predictor of success in the education system (Bourdieu, 1986).

Each type of capital, and the interplay between them, can be considered important to an individual's ability to be socially mobile within different fields (Häuberer, 2011). Building on this perspective, Häuberer (2011) identifies education as one of the components that can contribute to one's ability to be socially mobile; therefore, acquisition of the different types of capital is beneficial. Research within the UK context has shown that lack of access to forms of cultural and social capital, which are valued by the dominant social classes, can limit an individual's educational outcomes (Reay, 2006; Reay, Crozier and Clayton, 2010; Crozier, Reay and James, 2011). In this way, cultural and social capital can contribute to social mobility via education.

For this thesis, Bourdieu's framework provides part of the theoretical background for interpreting differences in educational attainment between students, contrasting those with an academic and others with vocational entry qualifications, recognising the differences in power between different social groups (Bourdieu, 1984). Given that research suggests that students with vocational qualifications, such as BTEC, are more likely to come from a low participation neighbourhood and/or from a lower socioeconomic group (Kelly, 2017), the acknowledgement of power can help to avoid an emphasis upon the 'deficit model' approach. The deficit model deems the individual responsible for their perceived failure and lack of capabilities and instead emphasises the resources available to the student. In this way, Bourdieu puts the focus on 'privilege' rather than 'inadequacy' (Hayton and Bengry-Howell, 2016). Furthermore, Bourdieu's framework can offer insights into the impact that the social structures within an educational institution can have on students' capital (Rose *et al.,* 2019). Considering the different forms of capital for the research undertaken for this thesis can provide greater nuance in understanding the disparities in student' degree outcomes beyond the quantitative findings. The utilisation of this theory can help to understand how the different forms of capital can prepare the student for university and how that transition can affect the student's learning outcomes.

The next section now turns to examine social capital with a particular focus on widening participation, education and how this form of capital is relevant within educational institutions.

3.4.1 Social capital

Social capital is a concept that has been applied in many sectors of sociological research, and in the simplest form, it is “who you know” and “what you have” (Whitty, Hayton and Tang, 2015). Social capital depends on one’s social network, and the quality of that network can play a key role. Being connected to many people is not necessarily advantageous; having a few connections with access to higher levels of social capital can be more advantageous than having a large number of connections with access to low levels of social capital. That is to say, social relations provide individuals with their social capital.

The many applications of social capital theory have led to a variety of definitions (Bourdieu, 1986; Coleman, 1990; Putnam, 1995, 2000). Bourdieu defines social capital as the “accumulation of actual and potential resources that one has that are linked to a network of institutionalised relationships” (Bourdieu, 1986).

Bourdieu’s definition is used to help frame the realities of social inequality and bring to light the idea of “it’s about who you know” (Whitty, Hayton and Tang, 2015). He believed social capital was derived mainly from an individual’s social position and status, as opposed to the collective situation. By contrast, other scholars, such as Coleman (1990), defined social capital as not belonging to a single individual but rather to a collective of individuals who can each access the shared capital. Coleman’s conceptualisation highlighted the benefits of membership of a group or community, and so in this thesis, an example of this could be a college, school or university.

Bourdieu’s concept looks at the analysis of power and the struggle for access to resources, highlighting the difficulty of changing the dominant patterns of social reproduction (Bourdieu and Passeron, 1977). In contrast, Coleman assumes that social capital is a resource that can be increased to improve opportunities and outcomes for individuals without any disadvantage to others (Webb *et al.*, 2017). In a similar vein to Coleman, Putnam defined social capital as having a collective dimension in which social organisations operate for the mutual benefit of their members and the community (Putnam, 1995, 2000). Therefore, the more social capital a community acquires, the more beneficial it is reasoned to be (Carpiano, 2006). However, this approach has been criticised for paying insufficient attention to power dynamics and how they can adversely affect social capital outcomes (Carpiano, 2006). Carpiano (2006) does highlight that high levels of social capital can sometimes create unfavourable effects, including exclusion of outsiders and restrictions on individual freedoms. These imbalances are particularly relevant when considering inequality within networks, as Bourdieu's

conceptualisation emphasises that social capital is not always equally accessible to all community members. This perspective is key when examining higher education contexts, where existing socioeconomic disparities and institutional structures may shape who can effectively utilise capital resources.

Putnam and Coleman's approaches highlight similar concepts that deal with social capital: resources, network topology, and the quality of relationships (Pinxten and Lievens, 2014a). Social capital is utilised both as a network-based and a collective feature in educational research. Many scholars have operationalised some of Bourdieu's concepts, which acknowledge the role power plays, to inspect its influence from a macro- and micro-perspective (Crozier and Reay, 2011; Bathmaker, 2015; Bathmaker *et al.*, 2016; Webb *et al.*, 2017). Applying Bourdieu's theory of social capital in this thesis, which emphasises the resources-based nature of social capital, may help to understand how educational institutions contribute to increasing students' social capital and effectively navigating the subsequent academic stages.

Coleman's studies observing the behaviour of groups, such as Catholic schools, concluded that social structures help to foster pro-social behaviours and reinforce social norms (Coleman, 1990). Putman's work expanded on the notion of community benefit, with claims that social capital is manifested in features of social organisation, such as networks, civic engagement, and norms (Putnam, 1995, 2000). Both Coleman and Putnam place value on social networks by emphasizing benefits such as trust, information, and reciprocity, suggesting the benefits stem from the help provided by the networks to the individuals to be able to solve problems more easily. The ideas of Putnam and Coleman may provide some insight when viewing a school or college as a collective. Therefore, Putnam and Coleman's approach can be used to understand what forms of social capital are generated for students by their prospective further education institutions through the opportunities offered and the information disseminated that aid in their preparation for higher education. Having said this, a limiting factor here is that these authors do not fully address social inequalities and power imbalances.

The definitions of social capital given by Bourdieu, Putnam and Coleman, whilst shining a light on certain aspects of the concept, are nonetheless limited when considered separately. Bourdieu rightly acknowledges the dominance or non-dominance an individual has within a specific field, that is, some students come with a 'fuller cup' than others. What Bourdieu's definition fails to recognise is the role of community and networks in contributing to social capital. Conversely, Coleman and Putnam's definitions incorporate an individual's membership of such collectives, but neglect the power dynamic at play within fields. In this

way, none of these definitions manage to fully encompass the factors contributing to social capital.

This study puts forward a more comprehensive definition which not only considers individual factors, but extends to include the role of community and networks. In this work, social capital will be defined as a combination of an individual's social position as well as the quality of the networks or groups of which they are a member. The quality of the network or group will determine the quality of the social capital gained therein, while the quantity of social capital accessed from the network or group is a function of the individual's social position. Furthermore, the individual's social position directly contributes to their social capital.

In the next section, the chapter turns to focus specifically on widening participation, social capital and education.

3.4.1.1 Widening participation: Social capital and education

Widening participation policy discourse has often highlighted a lack of aspiration or motivation as a reason as to why some students are traditionally excluded from higher education; however, this fails to take into account the many influences that can shape an individual's decisions and actions (Reed, 1999). Furthermore, this notion has been challenged by research showing an increasing number of students from underrepresented groups going into Higher Education, thus debunking some of the ideas around motivation and aspirational deficit (HESA, 2020).

In education research, particularly in relation to widening participation, Bourdieu's concepts have been drawn upon considerably (Webb *et al.*, 2017). According to Lin (2000), inequality of social capital happens when a particular group is in a disadvantageous socio-economic position and when individuals stay close to their own socioeconomic backgrounds. Research shows that education is one of the components that can contribute to one's ability or inability to be socially mobile (Häuberer, 2011). This is further supported by Putnam (1995, 2000) and Brehm and Rahn (1997), who thought of education as one of the determinants of social capital because it reflected a trajectory towards the future by strengthening human and social capital for economic and social advancement. Huang, Maassen van den Brink and Groot (2009)'s meta-analysis of 65 studies from 20 countries examining the effect of education on social capital reported a strong correlation between education and individual social capital. The findings suggest that disparities in education directly translate into social capital inequalities. With college (HE) education showing strong effects on social capital, Huang et al. 's research supports the importance of widening participation in higher education to promote a more equitable distribution of social capital.

Bourdieu presumed that capital was a resource employed in the power play of a field, thereby suggesting that students from disadvantaged backgrounds are not only limited by a lack of social capital or access to appropriate networks, but moreover by a hegemon's efforts to resist change to the system or parts of the system to enable others to access it (Webb *et al.*, 2017). Irrespective of what can be negotiated and achieved through education, (Reay, 2006) highlighted that there are still vast differences in trajectory patterns for working-class individuals in comparison to middle-class individuals. Using the Office for National Statistics, (2016) social and economic classifications, working-class comes under categories L7 (intermediate occupations that offer clerical positions with no supervisory responsibilities) to L14 (individuals who have either been long-term unemployed or have never worked). Research has shown that students with non-A-Level qualifications, such as BTEC, are more likely to come from a lower socioeconomic group (Baker, 2020). Assessing why there might be disparities in attainment through the prism of social capital for this thesis gives insight into the access to opportunities and level of preparedness they are provided by the institutions from which they come.

Johnson, Bowden and Alonso (2020) draw on Lin (2000), who refers to "access to information from and influence in diverse socioeconomic strata and positions" (Lin, 2000 p.787) as access to 'resource-rich networks'. In contrast, the sharing of a relatively restricted variety of influence and information (Lin, 2000) is referred to as 'resource-poor networks'. In this way, access and availability to resources-rich networks becomes vital in improving an individual's social capital. Therefore, the support given to students by institutions becomes important in ensuring that the students not only have access to, but actively engage with the resource-rich networks. This conceptualisation gives understanding to how educational institutions can either perpetuate or mitigate social capital disparities.

Friend (2020) reported that social capital multiplied the effect of economic and cultural capital, which in turn was used by the middle class as a mechanism to retain power and advantage. This is in line with Bourdieu's view on social capital, which argues that social capital as a resource is used to garner more influence and power, creating more advantages for those already advantaged. This is highlighted in Friend's (2020) findings, which reported students from the poorest backgrounds having fewer social ties and networks. Often these students reported weak ties that were described as 'chance meetings' that helped broaden the students' social networks. These contacts provided more socially useful information in comparison to what they had received from their parents (Friend, 2020).

3.4.1.2 Social capital and education institutions

Educational institutions can provide social capital to students through the institution's internal networks, as well as external networks that link to the local community (Mcgonigal *et al.*, 2007). Furthermore, by proxy, the school can not only establish but also help students maintain networks that can facilitate university visits and work experience opportunities, demonstrating the vital role that educational institutions have in the development of social capital (Mcgonigal *et al.*, 2007).

The quality of interaction and communication amongst all stakeholders in a school, that is students, teachers, parents and the wider community, defines social capital. Values and norms at the institutional level, established by the school community, are forms of social capital that can contribute to students' educational outcomes (Gartland and Smith, 2018). Social capital has the potential to bond people together, bridge communities through wider networks and link individuals to structures of support. Educational institutions can play a significant role in the creation of bonds through shared identity and extend the student's network beyond their immediate environment, linking them to opportunities or formal structures for further education or employment (Gartland and Smith, 2018). However, research using Bourdieu's framework has highlighted that educational institutions can perpetuate existing social hierarchies (Reay, 2006; Reay, Crozier and Clayton, 2010). Students attending further education colleges tend to come from low socio-economic backgrounds and are generally destined for vocational pathways instead of the academic route. This differentiation in position can affect the preparation of students for higher education as they may internalise some of the more negative perceptions of the institution (Gartland and Smith, 2018).

Much of young people's social and cultural capital is tied to their family background (Basit, 2013). Educational institutions can help to compensate for students' absence of university-focused social and cultural capital due to their home background (Rose, Tikly and Washbrook, 2019). However, the non-static nature of social capital networks, which can also be content-specific and irregular, has been noted (Mcgonigal *et al.*, 2007). Therefore, the impact of an institution's social capital can vary in relation to the wider economic, political and cultural environment (Mcgonigal *et al.*, 2007).

Research by Gartland and Smith (2018) aimed to explore the experiences of BTEC students from further education and sixth form colleges and how those institutions supported students' progression into HE. The study found that participants interviewed from both institutions believed they had been supported to progress to university; however, some key differences between the institutions were highlighted. At the further education colleges, tutors appeared to be a key influence on the students and were the sole source of information on university

(Gartland and Smith, 2018). In contrast, in sixth form colleges, not only was there a concerted effort put towards informing students about their higher education options, but there were also a variety of channels, such as teachers and additional tutorials with mentors and recent graduates (Gartland and Smith, 2018). The students from the sixth form colleges benefited not only from their teachers' experiences but also the wider networks provided by their school, which helped in their decision-making process and higher education preparedness, thus increasing their social capital. This shows how important it is for schools to create practices and opportunities that facilitate access for students to relevant cultural and social capital.

However, provision and access to activities is insufficient, because active engagement from the individual is required to take full advantage of the opportunities and resources that could improve their own level of capital. A key component of Bourdieu's capital analysis is that social capital is merely a resource to be actioned, developing further with engagement (Mcgonigal *et al.*, 2007).

Rose, Tikly and Washbrook (2019) found that schools played a role in influencing the student's familiarity with university. Many participants, particularly those whose parents had had no HE experience, had limited social and cultural capital at home which limited their understanding of the diversity of HE opportunities. An instrumentalist view of education from the participants was reported, with HE seen as a facilitator for providing generic skills and training for a job rather than an environment in which to learn 'how to think'. Significant weight was placed on individual pieces of information they received, thereby highlighting the importance of the role school plays in ensuring students are informed. A key finding was that students' aspirations changed dramatically over the course of their sixth form career, with most students becoming confident in their understanding of what university would be like (Rose, Tikly and Washbrook, 2019)

Much of widening participation policy has focussed on access and increasing the number of students attending university. This creates an assumption that once a student has successfully reached university, they would have developed sufficient attributes and acquired a set of skills to utilise them. Crozier and Reay (2011) argue that at different stages of education, an individual might require not only different types but also different volumes of capital. This thesis aims to make a critical observation of the practices and interventions at an institution level that aim to enhance students' social capital and aid in their preparation for university. The acquisition of social capital comes through social interactions and networks (Rose, Tikly and Washbrook, 2019). A comparison between the different types of institution, such as further education and sixth form, could help to see if there are disparities in the type of information,

channels of communication and networks students have access to and how they utilise these skills to navigate the higher education environment.

3.4.2 Cultural capital

Bourdieu believed that cultural capital played a subtle but important role and refers to values and norms subconsciously held by individuals (Royal, 2011). He distinguishes between three forms of cultural capital: embodied, objectified and institutionalised. Embodied refers to an individual's knowledge, skills set, linguistic styles and mannerisms. It is believed that embodied capital is acquired passively and consciously over time through socialisation of traditions and culture (De Graaf, De Graaf and Kraaykamp, 2000). Objectified capital refers to material belongings that have cultural significance such as books or artwork. Institutionalised refers to symbols of cultural competence, such as educational attainment (Pinxten and Lievens, 2014).

Bourdieu argues that economically advantaged individuals, with the aid of their families, have better access to cultural capital in the form of high-status attributes, style and knowledge (Van De Werfhorst, Sullivan and Cheung, 2003). According to Royal (2011), values embedded in one's formative years shape an individual's understanding and influence their behaviour throughout life; in turn, their educational experiences might further inform them. The educational system is often governed by the norms of the privileged class, and cultural capital passed on through families can help children do better in school as the educational system values the knowledge and thinking they have developed (Van De Werfhorst, Sullivan and Cheung, 2003). In this way, individuals with high cultural capital are empowered to successfully navigate the educational system (Bourdieu and Passeron, 1977), rendering cultural capital a mechanism that preserves inequalities in education (Jaeger and Karlson, 2018).

Prior educational attainment, which is linked to institutionalised cultural capital, is often used as a determinant of an individual's higher educational attainment and of their post-graduation outcomes, but there is also evidence indicating that embodied cultural capital is relevant to one's degree outcome (Mcgonigal *et al.*, 2007). Using this framework, this research will explore how schools create cultural capital in the form of cultural norms and attitudes towards academic work through a combination of the curriculum and assessment structures.

3.4.2.1 Cultural capital and education

Previous research has reported and linked academic success to a high level of cultural capital (Jaeger, 2011). Using academic achievement as a measure, a direct effect of cultural capital on education success has also been reported (Jaeger and Karlson, 2018). It is argued that children with parents with high levels of economic capital can have access to better schools

and activities (De Graaf, De Graaf and Kraaykamp, 2000). Bourdieu argued that cultural capital embedded in early childhood and one's social position was in part established by other people's response to cultural capital (Dimaggio, 1982). Bourdieu's cultural capital hypothesis suggests that educational attainment is linked to one's family's social origin by dint of the greater quantity of cultural resources privileged parents have that aid their children master the curriculum (De Graaf, De Graaf and Kraaykamp, 2000). However, Dimaggio's (1982) study suggested a weaker tie of cultural capital to parental background traits within a United States context than Bourdieu's theory of class and culture suggested. However, the analysis still showed that cultural capital had a significant impact on the students' high school grades (Dimaggio, 1982).

Dimaggio's (1982) findings of cultural capital being positively correlated with educational attainment was further supported by (Crook, 1998; De Graaf, De Graaf and Kraaykamp, 2000; Cheadle, 2008; Jaeger and Karlson, 2018), who reported parental efforts to deliberately cultivate cognitive and social skills in their children gave an early academic advantage. Socio-economic status was another determinant in cultural capital's influence on educational inequality with children from a low socio-economic status receiving higher returns on cultural capital investments than their high socio-economic status peers. (Jaeger and Karlson, 2018).

Bourdieu's theoretical approach has also been utilised to gain an understanding of how cultural capital works in the maintenance and reproduction of educational inequalities (Read, Archer and Leathwood, 2003; Reay, Crozier and Clayton, 2010; Crozier and Reay, 2011; Bathmaker, 2015). The use of qualitative methodologies has given an insight into how underrepresented groups position themselves within a higher educational cultural setting. It has been reported that while students from lower socio-economic groups often have aspirations to go into higher education, they may face structural barriers and may have less access to the resources, information and social capital needed to navigate educational pathways effectively (Reay, David and Ball, 2005; Bok, 2010; Hayton and Bengry-Howell, 2016). Ball and Vincent (1998) credit this to the limited access from their social networks to 'hot' knowledge – which is defined as knowledge acquired "through the grapevine" as opposed to 'cold' knowledge obtained through official channels – about higher education, thus limiting their ability to make informed choices about university. Although there might be some validity with regard to the quality of networks students have access to, viewing students as having less developed capabilities could be interpreted as a deficit approach, which places the responsibility on the individual and neglects to fully highlight the structures in which the student operates that reproduce social inequalities (Hannon, Faas and O'Sullivan, 2017).

Research has revealed that some of the challenges young people face when pursuing higher education partly lie in the lack of available cultural and social capital within their family and community (Hannon, Faas and O'Sullivan, 2017; Bailey, 2021). Furthermore, the lack of access to forms of social and cultural capital that are valued by the dominant social classes has been shown to limit educational outcomes (Reay, David and Ball, 2005; Reay, Crozier and Clayton, 2010; Crozier, Reay and James, 2011; Hannon, Faas and O'Sullivan, 2017).

Habitus is defined as a set of learned preferences or dispositions by which a person navigates the social world (Edgerton and Roberts, 2014). According to Bourdieu, each class has a different habitus that informs their practices, beliefs and values (Bourdieu, 1977). It is argued that 'the educational norms of those social classes are capable of imposing the criteria of evaluation which are the most favourable to their children' (Bourdieu and Passeron, 1977, *p.495*). Therefore, by valuing the cultural capital of the dominant social classes, cultural capital reinforces social inequalities.

Within the widening participation sector, there seems to be a paradigm that views the optimal way of helping a student, particularly those from a low socioeconomic background, to be to equip them with the necessary social and cultural capital to transition to the habitus of the dominant culture (Hannon, Faas and O'Sullivan, 2017). However, this approach implies an illegitimacy and lack of recognition of the cultural and social resources given to students of low socioeconomic status (Hannon, Faas and O'Sullivan, 2017). Failing to acknowledge the role of structure in reproducing social inequalities can further perpetuate the deficit model, which places progression responsibility on the individual (Hannon, Faas and O'Sullivan, 2017).

3.4.2.2 Cultural capital and education institutions

Using qualitative methods, a study conducted twelve paired interviews and focus groups in FE and Sixth Form colleges from low participation neighbourhoods to explore experiences of BTEC students within their institutions and how they were supported to enable their progression into HE (Gartland and Smith, 2018). The findings show that participants from both institutions reported developing a sense of independence. The authors challenge the idea of BTEC courses not being sufficiently rigorous as it is far too simplistic and overlooks the positive academic and social development contribution to students. Gaining a post-16 qualification contributes to gaining some form of symbolic institutionalised capital that enables the student to progress into higher education (Gartland and Smith, 2018).

However, the clear distinction in the difference resources available at the two institutions suggests that the activities provided at Sixth form help students to understand their HE options and aid in envisioning themselves as HE students, thereby fostering embodied capital. This highlights the importance of facilitating activities to foster access for students to relevant

cultural, as well as social, capital that in turn could help them envision themselves as HE students (Gartland and Smith, 2018).

Macaro and Wingate (2004) examined how university course relevance and teaching methods affected the motivation of academically successful state-educated students. Their study, conducted in the early 2000s, involved nineteen semi-structured interviews with first-year university students who had previously attended comprehensive schools, with one participant from a sixth form college. Some participants had been offered a pre-university grammar course intervention designed to support their transition. However, the findings revealed that this support initiative sometimes had unintended negative consequences, with some students experiencing decreased self-efficacy. One student specifically reported feeling stupid for needing the course while still feeling underprepared compared to peers despite the intervention (Macaro and Wingate, 2004). This research is particularly relevant when considering how educational policy and support structures from that period approached the transition to higher education. More interestingly, the participant's references to feeling that they did not learn enough grammar related content and felt behind as a result suggests that previous studies at their school did not adequately prepare them for the demands at university (Macaro and Wingate, 2004). Furthermore, a lack of explicit grammar knowledge from previous institutions was reported, which in turn affected the students' confidence (Macaro and Wingate, 2004). There seems to be a clear mismatch in the language course from their previous school and the curriculum at their university they now attend (Macaro and Wingate, 2004). There is a general expectation that the transition from post-16 education to higher education will lead to a more challenging curriculum, however the reports from this study suggest that the students felt as though they had a significant skills gap between the two points and speaks to the level of preparedness they felt they had between the two points.

In this thesis, using qualitative methods we will explore students' experience during this key transition point and examine if this is in fact the same or different for students with different qualifications and coming from different institutions.

Rose, Tikly and Washbrook (2019)'s study aimed to identify institutional factors that influence the choice of university for high-attaining students from low-performing schools and colleges choice of university and what role is played by institutions to support their decisions. The findings reported that many of the participants did not have individuals at home to help them understand the range of HE opportunities, thereby showing that the students' school does play a role in influencing the student's familiarity with university as it is a point at which they can become informed (Rose, Tikly and Washbrook, 2019). There were reports of the student's aspirations changing dramatically over the course of their sixth form career, with most students

becoming confident in understanding what university might be like. This further illustrates the significant role school/colleges can play to create opportunities that give students access to social and cultural capital (Rose, Tikly and Washbrook, 2019). An examination of the type of activities or opportunities to which students were given access to aid in their preparedness for higher education will be conducted as part of the research for this thesis. In this way, it can be seen if this differs for students with different qualifications and also if whether it differs varies by the different post-16 education institutions from which they come.

Bell and Kent's (2010) mixed methods study examined students' perceptions of school culture. Using surveys (N = 240) and semi-structured interviews, the study was conducted in a non-denominational boys' grammar school in the West Midlands in the UK. Students within grammar schools are more likely to take A-Levels than vocational qualifications. The results revealed a strong academic culture within the school, and students seemed to share the academic values of the school. Having said that, it should be noted that this particular set of students had chosen to stay in post-16 education, therefore academic ambition might already be something they valued. The strong academic culture did create some pressure, with some students discussing the idea of being 'shunned' and not being accepted if they did not conform or achieve as expected.

Academic values being part of the school culture is not necessarily a surprising finding given that sixth forms are expected to be more academic; however, the dominance of these values and the fact that they are embedded within the culture is noteworthy. It would be interesting to examine whether this strong academic dominance is mirrored within other sixth form schools, and whether it differs from other post-16 education institutions. Furthermore, an exploration of what influence the students' previous institution's culture had on their approach to education after they leave would be perspicacious.

It is interesting to reflect on the fact that the dominant culture was one of 'academic values'. Being a sixth form, which is more associated with academic learning than FE colleges, this finding is not a surprise, but it is interesting that is they were so embedded within the culture.

Research within the UK context has shown that lack of access to forms of cultural and social capital, which are valued by the dominant social classes, can limit an individual's educational outcomes (Reay, 2006; Reay, Crozier and Clayton, 2010; Crozier and Reay, 2011)(Reay, 2006; Reay, Crozier and Clayton, 2010; Crozier and Reay, 2011). In this way, cultural and social capital can contribute to social mobility via education. Social and cultural factors such as socio-economic status relating to the students' backgrounds have been linked to academic performance (Hoare and Johnston, 2011). Crucially, from the point of view of this doctoral research with its focus on widening participation, having not only sufficient social and cultural

capital but also the right combinations was argued as a predictor of success in the education system (Bourdieu, 1986).

3.5 Capabilities approach - Sen

Conceived by Amartya Sen (Sen, 1985), the capability approach, also known as the human development approach. The framework's two normative claims are that freedom is being able to 'be and do' as you choose and that well-being should be understood in terms of people's capabilities and functioning (Sen, 2001, 2004; Pukacki, 2002). It has been applied as a framework in several fields including development, disability, gender and education studies. It has been used as a way to assess well-being, justice and freedoms. The capabilities approach focuses on individuals' choices and options based on the resources that were available to them, therefore seeing people as active agents (Sen, 1999, 2001).

The approach has a clear recognition that people are diverse and emphasises the complementarities of the various capabilities for the same person. Sen argues that simply measuring resources, does not give a true understanding of an individual's ability to actually use or partake in activity that uses the resource (Sen, 2001, 2004; Madikizela-Madiya, 2021). For this reason, Sen's capability approach focuses on measuring functioning rather than available resources.

The approach argues that we need not only to consider the amount of resources one has but also what one is able to do and be with those resources. The capabilities approach recognises that there is diversity in people's ability to be able to convert resources and goods into real opportunities and achievements. The approach has key concepts that can guide analysis or evaluation such as opportunities, functioning, capabilities, choices, values and quality of life. Evaluating capabilities, rather than resources or outcomes, shifts the axis of analysis to establishing and evaluating the conditions that enable individuals to take decisions based on what they have reason to value and can do. When evaluating inequality, the approach maintains that it is people's capabilities that ought to guide the evaluation rather than how much money and educational resources they are able to command.

Bourdieu's social and cultural capital theory is limited in this way as it mostly considers a person's access to resources or their position or proximity to power but fails to consider one's capabilities to use resources. The capabilities approach views resources as the means but not the intrinsic end. The influence of other factors such as gender and ethnicity can have an influence on people's action. The capabilities approach allows for the consideration of such diversity. This, in turn, can allow a more holistic approach that considers more facets of an individual and how that can impact or influence their navigation in the field of higher education.

3.5.1 Functioning and capabilities

Functioning is described as a state of 'being and doing' with a focus on 'achieved outcomes', for example, being calm or happy, reading a book or speaking a language which is distinct from the commodities employed to achieve them. That is to say, being able to ride a bike is distinguished from 'having a bike' (Nussbaum and Sen, 1993; Nussbaum, 2002; Sen, 2004; Alexander, 2021).

Capabilities is the set of valuable functioning that an individual has effective access to, for example reading a book or riding a bike. Therefore, capabilities can be seen as the real opportunities, or choices, that are available to an individual, whereas functions should be seen as the realization of capabilities (DeCesare, 2017). Sen also refers to capabilities as freedoms (Sen, 2001) and notes these freedoms as being the basic necessities a person requires in life, as well as the ability to obtain those necessities. Freedoms can include where an individual lives and their ability to engage and act on what matters to them under their own agency (Sen, 1985, 2001; Nussbaum, 2012).

Simply maximising a person's choices is not a true reflection of freedom without regard to the quality of choices and the person's values. The realisation of capabilities is known as functioning and in turn, functioning can itself become a resource that could lead to more freedoms (Sen, 1985, 2001; Nussbaum, 2012). The capabilities approach aims to move away from a merely formal sense of freedom to do or be something towards having a substantial opportunity to realise that freedom.

To understand the impact social arrangements can have on an individual, the concept of conversion is crucial in the capability approach. The inclusion of conversion factors acknowledges individual differences in the ability to convert resources into capabilities and functioning. Simply equalizing resources or providing more does not account for the variations in conversion of resources into freedom and conversion factors may impact an individual's fulfilment of functioning. The capabilities approach values the connection between the resources available and the capacity of the individual to translate them. Particularly for this thesis, conversion factors offer a way in which some insight can be gained to understand what is needed by students to achieve desired outcomes.

3.5.2 Capabilities approach and higher education

The capabilities approach framework has been used to explore issues related to equality in education (DeCesare, 2017). The framework rejects the idea that equal resources are an adequate measure of equal opportunity and demands that attention is given to the various factors that can affect a person's ability to convert those resources into valued outcomes (Decesare, 2014). The capabilities approach offers a fair lens in the context of education,

because its concerns with achieving the ‘being and doing’ that an individual ‘has reason to value’ accounts for individuals’ various circumstances and social structures (Walker and Mkwananzi, 2015; Madikizela-Madiya, 2021).

Decesare (2014) noted that educational performance should not only be measured in terms of qualification results but also by the broader impact that the skills conferred by education can have on an individual’s life. Additionally, it has been highlighted that the capability approach should not only focus on education academic performance on individual students but rather widen its scope to include questions of opportunity and policy (Gale and Molla, 2015). Furthermore, Hayter and Cahoy (2018) advocate that this approach could be used to shine a light on the varying needs of students and their communities.

Forming part of the capabilities approach, the conversion principle states that, given exactly the same educational resources, any two students may not achieve the same educational functioning. This will in large part be due to their differing personal and social circumstances which result in the students being able to convert the resources to a greater or lesser extent DeCesare (2017).

The capabilities approach provides a way in which to understand the nuances and complexities of student choice. In the context of higher education, it could shed a light on the reasons on why some students will either take up or gain more from opportunities offered to them while at university than others. It will be interesting to see whether some students who, for example, would benefit more from an academic writing seminar, may de-select themselves and not take up this opportunity. Moreover, even if they do access help, they may be less able to realise the same level functioning a student with higher levels of social and cultural capital.

In conclusion, what matters most in educational policy should not be limited to the resources offered, but even more so, the ability students have to access and make use of these resources. The complex factors at play in the process of converting resources into benefits need to be better understood and fed into provision and policy-making. Moreover, an emphasis needs to be placed on what the individual values, not what convention and society dictates should be valued.

3.6 Integrating capabilities and capital theory

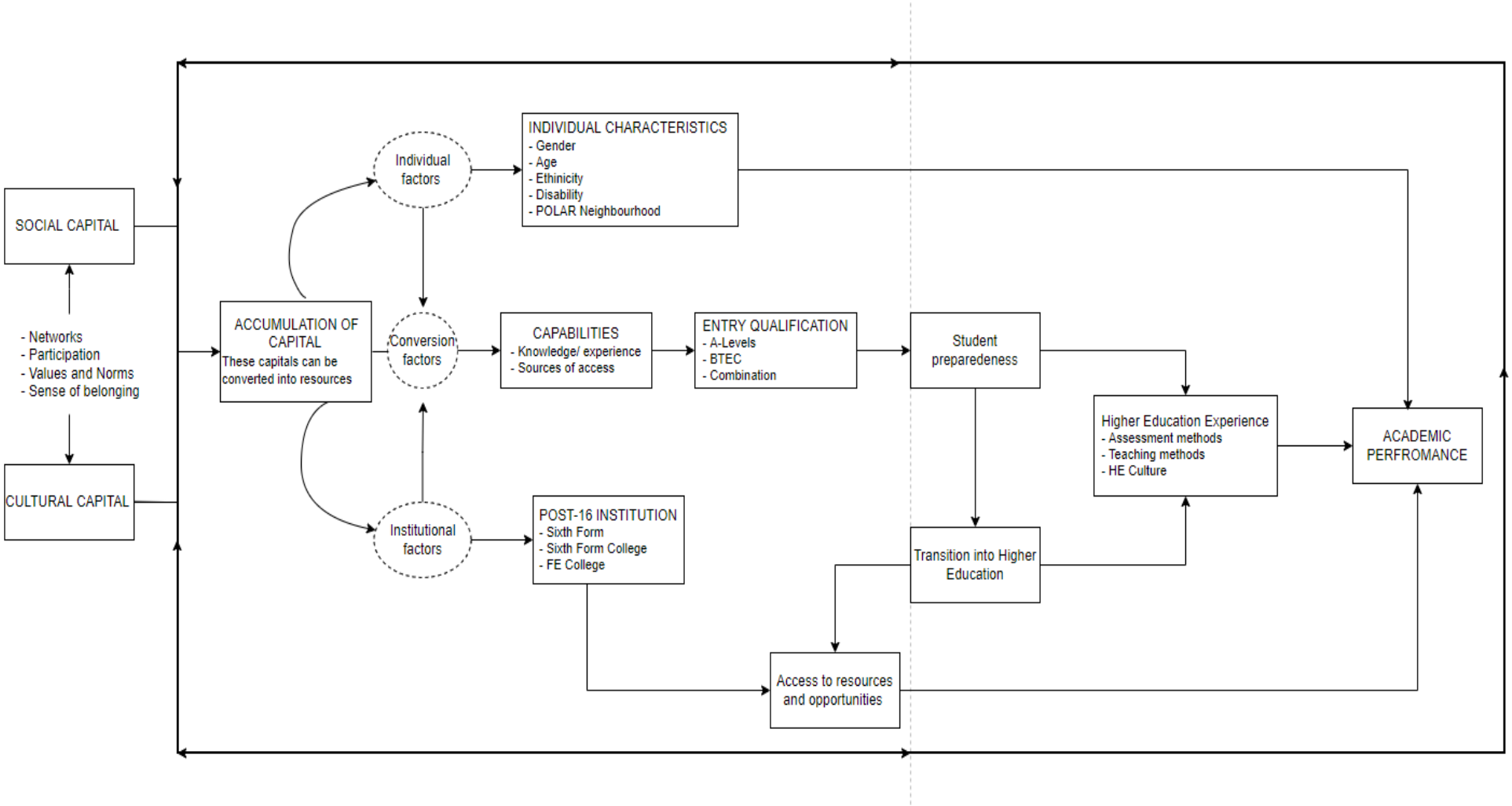
This study will draw on Bourdieu’s forms of capital (Bourdieu, 1986) and Sen’s capability (Sen, 1985) approach within a higher education context to understand how differences in student entry qualifications might lead to disparities in degree outcomes. The framework aims to show the interaction between people’s ownership of capital and their capabilities, and that an individual’s capital can enable material resources to be converted more effectively into

capabilities. Furthermore, the framework can be used to understand which resources are valued by students and why they choose to take up or not take up the resources provided.

The value of an individual's social and cultural capital in certain fields provides the individual with the opportunity to achieve their desired educational outcomes. The relationship between capital and capabilities helps to understand that by providing students with additional resources, although important, might not always reduce disparities in academic performance. But understanding the contexts in which certain forms of capital can act, or not act, to allow the person to convert resources into capabilities can enable further understanding of the contributing factors that enable these disparities to occur in the first place.

There is an emphasis on fostering individuals' freedoms and agency when looking at the capabilities approach, and its application can contribute to understanding educational outcomes within the field of education. The application of the capability approach should aim to promote individuals' freedom as well as agency, which is the individual's ability to freely pursue their own goals and generate change.

Figure 5: An Integrated Framework of Capital Theory and the Capabilities Approach



Source: Author's own conceptual framework, drawing on capital theories (Bourdieu, 1986; Coleman, 1990; Putnam, 1995, 2000) and Capabilities approach (Sen,1985, 1999, 2001).

The conceptual framework set out in Figure 5 reflects the purpose of this study, which aims to investigate if and why there are attainment disparities in degree outcomes between students with A-Level and non-A-Level vocational entry qualifications. This framework primarily draws on Bourdieu's forms of capital, specifically cultural and social capital. Key aspects that can affect and be affected by one's access to these forms of capital are an individual's network, their ability to participate, their values and norms and their sense of belonging. It is important to note that these forms of social and cultural capital can be converted into resources which an individual needs or requires. Lin (2000) argues that for an individual to improve their social capital, they would need access to resource-rich networks. Therefore, an individual's ability to access resource-rich networks can help them to accumulate capital, which in turn can influence their ability to turn resources into capabilities.

It is important note that a person's ability to turn resources into capabilities can be influenced by external factors. This is illustrated by the inclusion of conversion factors in the framework which can help to understand the effect that social arrangements have on individual's lives. Conversion factors have been considered in two different sections. Firstly, at an individual level, which includes individual characteristics such as socio-economic group, age, neighbourhood, gender, etc. For example, neighbourhood could have an affect on the amount of resources and opportunities available to you. Research has shown that students holding vocational qualifications, such as BTEC, are more likely to be from a lower socio-economic group and from an ethnic minority background (Kelly, 2017). In addition, research has shown a relationship between degree outcome and student characteristics, such as gender, ethnicity and socio-economic background (Richardson, 2008; Barrow *et al.*, 2009; Richardson, 2013; Woodfield, 2019; Richardson *et al.*, 2020). Therefore, controlling for students' personal demographic characteristics will be essential when examining students' degree outcomes. In addition, understanding how individual characteristics can become conversion factors may give further insight into why students might self-deselect from participating or from making use of resources available to them once in university.

The second conversion factor is institutional influence, with this research looking specifically at post-16 institutions. The literature on social and cultural capital shows that educational institutions are places where an individual can acquire and build more capital. However, the question remains whether there is a difference in the amount and quality of opportunities offered by different post-16 institutions to allow for better university preparation. If there is a difference in resources along either dimension? offered to students, then this could limit an individual's ability to convert them into capabilities. With that, it is clear that this framework also makes a link between post-16 institutions and access to resources and opportunities. Assessing any disparities in attainment through the prism of social and cultural capital for this

thesis could give insight into what access students have to opportunities and the level of preparedness provided by the institutions from which they come. Meschi *et al.* (2010) reported that high achieving pupils are more likely to enrol on a sixth form-based provision than an FE provision. Therefore, a quantitative analysis would need to be conducted to understand if there are any disparities in degree outcome when looking at the students' post-16 institution. This would inform the direction of the qualitative phase of the study to understand whether the institutions can act as a filtering process, with high-achieving students choosing or facing constraints in attending one institution over another. Secondly, we aim to establish whether the students' experience varies by institution, regarding what activities and opportunities are facilitated for students to foster access to relevant cultural and social capital that could help prepare them for university.

Returning to the notion of capital, and taking into consideration the conversion factors already covered, the question of a person's capability, which looks at the person's knowledge and experience and sources of access, may then contribute to their ability to acquire an entry qualification for university. Entry level qualifications can be grouped into academic, such as A-Level, or vocational, such as BTEC. There are also some students who take a combination of both academic and vocational qualifications. The qualification acquired will affect a student's level of preparedness for university; that is, the skills developed in the previous educational setting may lend themselves to a greater or lesser extent to a higher education setting. There is some research that has suggested that some qualifications prepare students better for the academic demands of higher education than others. Gaining a post-16 qualification contributes to a form of symbolic institutionalised capital that enables the student to progress into higher education (Gartland and Smith, 2018) and can aid in a young person's preparedness for a successful career (Bathmaker, 2015). Therefore, entry qualifications are the independent variable of interest, and the focus will be on comparing the A-Level qualification, as it is the primary entry route to university, to vocational qualifications, such as BTEC. Comparisons will also be made with students who entered HE with a combination of both academic and vocational qualifications.

An individual's level of preparedness can affect their transition into higher education and development over the course of their time in HE, thus affecting their ability to quickly adapt to their new environment. This in turn could have an effect on their higher education experience. HE experiences can include a variety of assessment methods, teaching methods, and different university cultures. For example, students may be presented with assessment methods that they are familiar with or that are completely new to them. All this can contribute to the student's sense of belonging or unbelonging, which can in turn affect their academic performance.

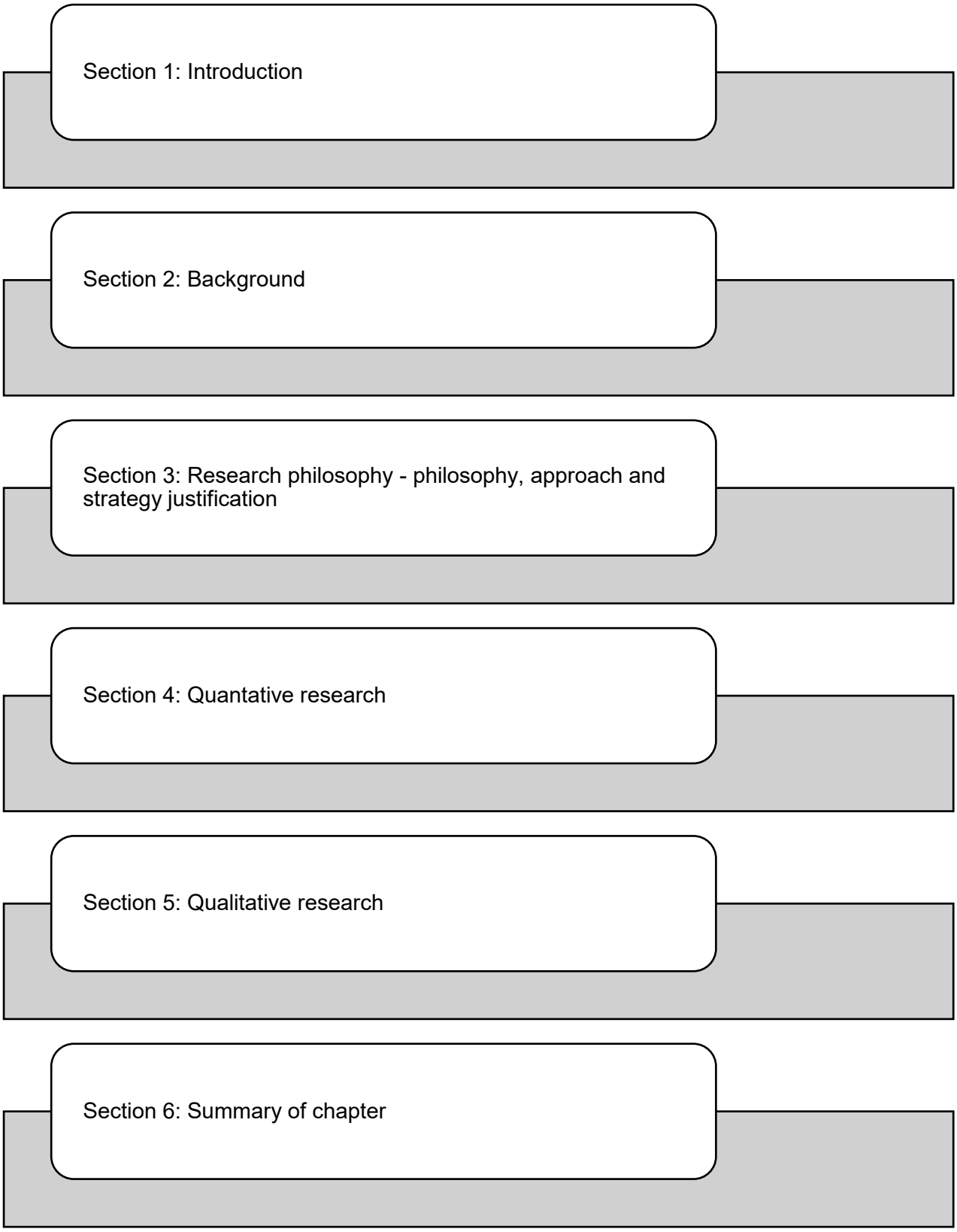
It should be noted that individual characteristics have been linked to academic performance, as well as the student's ability to access opportunities and resources. Encompassing the entire process in the framework diagram, social and cultural capital affects an individual all the way throughout their journey and in every aspect. Different forms and amounts of capital would be required at different parts of the student journey, and it could be that different types of capital would be needed at different points in different contexts.

To conclude, Bourdieu and Sen's perspectives provide conceptual tools to understand and analyse educational inequalities when looking at student's entry qualifications. Moreover, this integrated approach can provide a deeper insight into the impact an individual's capital and capabilities can have on their pursuit of good outcomes in higher education.

This study draws on Bourdieu's capital theory (Bourdieu, 1986) and Sen's capabilities (Sen, 1985, 2001) approach to explore how the differences in student entry qualification might lead to disparities in degree outcomes. The notion of social capital within this study is a combination of an individual's social position as well as the quality of the networks or groups of which they are a member. For example, when students are making decisions about going to university, for a student who has family members who may have previously gone to university this might give access to people who can give insights into expectations that inform their decisions, whereas for a student who the first in their family to go to university, they would need to actively seek out networks and opportunities that can give them those insights. Furthermore, institutionally generated capital (Bourdieu, 1986) could play an integral role to ensure both students become informed about their decisions and compensate for resource-poor networks. However, there is a need to access if this differs depending on the institution the student attends.

Cultural capital (Bourdieu, 1986) within this study will be employed to explore how educational institutions create cultural capital in the form of cultural norms and attitudes towards academic work. The use of qualitative methods can give some insights into what skills students they transferred from their post-16 qualifications into their Higher Education learning. Furthermore, the notion of preparedness (Gill, 2018) is explored to understand if the student's entry qualifications aided making their transition from post-16 education easier. The application of Sen's capabilities approach (Nussbaum and Sen, 1993; Sen, 2001, 2005) enables focus beyond available resources but their functioning and how and why students choose to use or use them. Using the capabilities lens, observations if students with different qualifications are using the resources around them to help with their progression.

4. METHODOLOGY



4.1 Introduction

In this chapter, an outline and critical assessment of the methods used for this study will be given in addition to the justification of why the chosen methods might be appropriate for answering the study's research questions. The chapter will begin with a brief background to the research. Subsequently, a discussion of the philosophical approach and strategy that underpins the study is provided, emphasising the pragmatic approach utilised in section 4.3. A description of the quantitative research design and how data was obtained will be outlined in section 4.4. An explanation of the inclusion and exclusion criteria for the study sample will be covered, as well as how the variables of interest in this study will be operationalise. Furthermore, an explanation of the rationale for the choice of outcome and control variables is given with particular focus on the socio-demographic and academic information for each student. An outline of how the data will be analysed as well as the ethical considerations of the research is also included within this section.

In section 4.5, the qualitative study is discussed and highlights how this approach can offer further insights as well as a complementary understanding to the quantitative investigation. The qualitative approach enables the examination of students' experiences within post-16 and HE education focusing on key transition points between and while at the two institutions. An outline of the methodological approach is given which provides details of the data collection strategies, the sample of participants including the inclusion and exclusion criteria and analysis plan. The chapter will be concluded with a summary of the chapter.

4.2 Background

An examination of empirical literature (Richardson, 2008, 2010, 2013; Gill, 2018; Shields and Masardo, 2018; Richardson et al., 2020) suggests that the factors that influence students' academic performance and attainment are complex, particularly for students who come into higher education under the auspices of WP. Although evidence suggests that some students from non-traditional academic backgrounds successfully graduate with degrees comparable to their A-level counterparts, there are some students with vocational qualifications still underperforming academically (Shields and Masardo, 2018). Despite this being offered as an equivalent route into HE, some students with non-traditional qualifications do not achieve equivalent results compared to those who enter with traditional A-Level qualifications.

Crucially, past research suggests that students' degree outcome does affect their post-graduation destination, as well as impacting their long-term employability and salary-earning potential (Lessar-Phillips et al., 2018). This illustrates that there is a clear and compelling need to understand the complex reasons for the attainment gaps between students with different

university entry qualifications. Accordingly, this study intends to understand to what extent having non-A-level qualifications impacts educational progress and degree outcome in comparison to having A-Level qualifications. Examining students' HE academic career – that is, their performance from the first year until graduation and their reflections on their experience – this study aims to address the following research questions:

- Are there performance differences at university between A-Level only students and students with BTEC, Access, or BTEC/A-Level combination entry qualifications throughout their undergraduate studies?
- What patterns emerge from the data in terms of the outcomes for each academic year?
- Does the type of entry qualification predict students' final undergraduate degree outcome when student characteristics, such as prior academic achievement, age, gender, ethnicity disability and POLAR4, are controlled for?
- To what extent does social and cultural capital generated for the student whilst at their post-16 education institution help with their preparedness for Higher Education?

4.3 Research philosophy - philosophy, approach and strategy justification

Most academic research lies along a spectrum that ranges from 'positivism' at one end to 'interpretivism' at the other end (Anderson, 2015). A positivist paradigm is associated with the belief that reality is fixed, measurable and external to people and, through systematic study, a description and explanation of the phenomenon can be given (Howe, 1988). This paradigm seeks to be objective through the use of tightly structured measures and looks for patterns or regularities that create 'universal rules' (Howe, 1988; Punch, 2005).

By contrast, an interpretivist viewpoint contends that reality is socially constructed by human actors and there are no universal truths and the possibility or likelihood of multiple truths (Howe, 1988). When working within this paradigm there is an assumption that reality is in a constant state of revision therefore negating the existence of an absolute truth. Instead, knowledge is deemed to be constructed and interpreted by human actors actively involved in the research process thus creating a new reality (Howe, 1988; Punch, 2005, 2013).

The current study employs a comparative approach between A-Level only and non-A-Level students and will be looking at students' performance differences at university depending on their university entry qualification. A positivist paradigm could be applied when looking at the student's undergraduate academic journey, because it has a distinct singular start and endpoint. The student's first year at university can be viewed as the start point and the final year as the endpoint. Using this paradigm, students' performance during their time at university can be observed from first year (start point) to their final year (end point). In addition,

observations on how performances differ between students can be made to identify patterns of performance. Students' reflections on their experiences also add insight into possible underlying mechanisms.

However, education could be argued not to have a singular start or endpoint as each student will navigate a path distinct to their own experiences, resulting in different realities. Each student's reality is constructed through their own learning experiences which are influenced by their past learning outcomes and experiences (Bergman, 2008, 2011; Punch, 2013). Rather than grouping and treating the students as one group with a singular learning journey with a definite beginning and end, which would be applying a positivist paradigm, a different approach is possible. Students' experiences whilst on this academic journey could be considered within an interpretive paradigm. The application of this paradigm in the current research will allow for the multitude of possible student experiences, rather than imposing the idea of a singular learning journey.

Having the students' subjective view of reality allows for the understanding of their current perception of their level of preparedness when they entered Higher Education and helps in identifying commonalities amongst their perspectives. The current study is not only investigating students' performance differences depending on their entry qualifications, but also students' reflections on their experiences transitioning into higher education and whether they identify any social and cultural capital generated prior to entering HE helps with their preparedness.

It can thus be seen that neither a positivism nor interpretivism approach on its own is adequate in the context of this study, and yet both have the potential to provide insight. An alternative paradigm that could be implemented is pragmatism which could help to facilitate a constant renegotiation of the reality as the study evolves (Creswell, 2018).

Due to the fact that it accommodates different perspectives, pragmatism is a commonly adopted epistemology within mixed methods research (Creswell and Plano Clark, 2011, 2018). Within this thesis, the application of a pragmatist paradigm allows for the use of both qualitative and quantitative methods and takes advantage of each type of method whilst offsetting the deficiencies and limitations of individual approaches (Creswell, 2015). Whilst quantitative and qualitative studies are associated with different epistemological approaches (Creswell and Plano Clark, 2011, 2018), a pragmatic approach is adopted in this thesis to allow either approach to be applied as when appropriate.

Pragmatism recognises the different paradigms that quantitative and qualitative research aims to address. Creswell and Plano Clark (2018) describe a pragmatistic research philosophy as one that acknowledges the existence of multiple realities and that a single viewpoint cannot

give an entire picture. It recognises the different ways in which research can be undertaken and interpreted (Tashakkori and Teddlie, 2015). This philosophical approach combines interpretivist and positivist ontologies into a single research study and puts the research question and research problem as the most important determinant (Greene, 2007; Tashakkori and Teddlie, 2015; Creswell and Plano Clark, 2018).

Essentially, a pragmatistic philosophy is one that views knowledge as relative and can be constantly redefined rather than absolute (Tashakkori and Teddlie, 2015). This approach enables the use of different methods to enhance and aid in the clarification of one set of results to another (Creswell and Plano Clark, 2018). Looking at the objectives for this thesis, the combined use of qualitative and quantitative methods to understand student attainment within an educational context is well suited for addressing the research questions. The quantitative approaches play an important role in measuring and showing disparities in degree attainment between students with different entry qualifications, and the qualitative approach can provide further insights into the experiences of students and how they transition into and navigate university. The use of both these approaches provides richer data and a greater understanding of degree attainment. It is clear that combining quantitative and qualitative methods is complimentary as it gives the researcher an opportunity to investigate further beyond a single dimension and understand the relationship between degree attainment and student experiences (Greene, 2007; Tashakkori and Teddlie, 2015)

The research for this doctoral thesis follows a convergent concurrent mixed methods design whereby equal priority is given to the collection and analysis of both quantitative and qualitative data in order to gain a more comprehensive understanding of the research problem. Quantitative and qualitative data are collected and analysed concurrently, and the findings are integrated during the analysis phase. Underpinned by a positivist position (Punch, 2005; Bryman, 2012b; Creswell, 2015), the quantitative phase examines performance differences between A-Level only students and students with alternative qualifications throughout their time at university and whether these differences persist even when students' demographic characteristics are controlled for. Furthermore, this phase seeks to test hypotheses and uncover any patterns or trends in outcomes difference between students. It can be argued that a positivist deductive approach that either accepts or rejects proposed hypotheses facilitates a level of neutrality and objectivity (Punch, 2005). This approach can help to give insight based on empirical evidence and its use in this thesis is needed to establish factors that appear to be associated with attainment in higher education. However, this approach is less likely to provide deeper insights into the possible reasons for the disparities between different types of students. It may not be able to provide further meaning about patterns or trends. On the contrary, one of the key strengths of qualitative methods is knowledge and

insight that can be provided to be able to answer ‘why’ and ‘how’ questions within different social contexts.

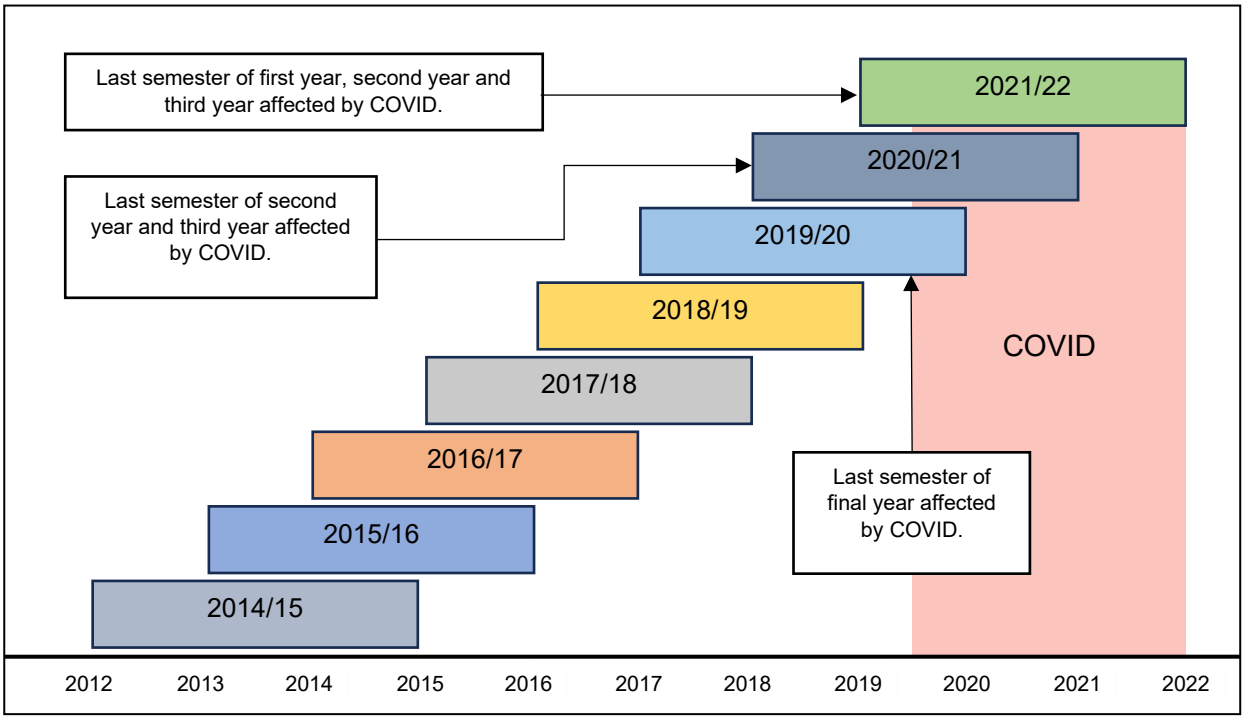
The use of mixed methodologies draws upon the strength of both quantitative and qualitative methods and gives a greater depth of outcome (Creswell and Creswell, 2018). Although the use of quantitative methodology can provide a higher volume of analysis, both in terms of larger sample sizes and greater representativeness that helps generalisability, the application of qualitative methods provides greater depth and richer data (Creswell and Plano Clark, 2018). Therefore, its use in this study will help to focus on specific areas that are highlighted by the broader findings of the initial quantitative research. The subsequent use of qualitative methods will help to elaborate on the elements that may have caused the observable data patterns. For this reason, mixed methods approach is supported as it can help gain a fuller complementary picture of the study while enhancing the strengths of the individual methods as minimizing the weaknesses (Bryman, 2012).

4.4 Quantitative research

To address the first three research inquiries, specifically, whether disparities in academic performance exist at the university level between A-levels students and non-A-Level students throughout their undergraduate studies, the patterns that emerge in the data with regard to yearly academic outcomes, and whether the type of entry qualification is a predictor of a student's final undergraduate degree outcome, while accounting for student attributes such as prior academic performance, age, gender, ethnicity, disability, and POLAR4, a quantitative research design is deemed most appropriate.

The initial use of quantitative data should provide clear objective data in regard to performance of specific cohorts of undergraduate students linked to their entry qualifications with some of their characteristics controlled for. The study specifically examines UK undergraduate students at the UEA who are classified as home students who graduated between the 2014/15 to 2020/21 academic years. It examines the eight student cohorts’ progress over a period of three years, thereby making this research a repeated cross-sectional study (Creswell and Creswell, 2018).

Figure 6: Cohorts overview



Source: Author's own classification of UEA undergraduate cohorts (2012 – 2020)

The table presented above provides an overview of the selected student cohorts categorised based on their academic year of graduation. By selecting these particular cohorts of undergraduate students, the study will utilise five cohorts' worth of student data unaffected by the COVID-19 pandemic, providing an adequate duration to identify potential patterns in student performance for students who graduated between 2014/15 and 2018/19. However, for students who obtained their degrees between 2019/20 and 2021/22, some aspects of their academic journey may have been impacted by the significant changes brought about by the COVID-19 pandemic. It is worth remarking that the degree disruption is different for the three cohorts who graduated in 2019/20, 2020/21 and 2021/22. The 2019/20 cohort only had the last semester of their final year disrupted. The 2020/21 cohort had the last semester of their second year and the entirety of their final year disrupted. The 2021/22 cohort had almost their entire degree disrupted, with the exception of the first two semesters of the first year. Therefore, it is imperative to separate the data prior to and after the pandemic to investigate whether there are any substantial variations or emerging trends resulting from the pandemic's influence on these students.

This study seeks to measure the differences in attainment and the progress of students with different entry qualifications, and so a hypothetico-deductive method is very compatible. The study is specifically looking at UK undergraduate students who graduated in the academic years 2014/15, 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, 2020/21 and 2021/22. Using longitudinal data, also referred to as panel data, brings with it the benefits of both cross-

sectional data and time-series data. Cross-sectional data is collected from participants at one point in time, whereas time-series data is collected over different points in time (Baltagi, 2005). The use of longitudinal data which collects data from multiple participants over more than one point in time, enables for the observation of trends and patterns between groups overtime which can provide insights into the factors that influence outcomes (Wooldridge, 2020). In the context of educational research, a particular advantage is that repeated observations over time for the same individual, allows the researcher to distinguish between the explanatory roles of any factors that remain unchanged over time (e.g. gender, ethnicity, social origins and prior educational background) and those that may change over time.

A non-experimental design is deemed to be more appropriate for this study because the observations made were within their natural context in order to understand how the predictor variables influenced the outcome variable with no possibility of any direct manipulation of the variables. A hypothetico-deductive method involves the postulation of hypotheses based on theory that explains a phenomenon, and the research then tries to test the hypotheses to determine where it is supported or refuted by the findings (Coolican, 2014).

An advantage of panel data analysis is that it lowers the risk of obtaining biased results in comparison to other approaches because it gives the ability to control for heterogeneity of individuals by accounting for unobservable factors such as student effort, ability and motivation which can be assumed constant for the same person (Frees, 2004; (Wooldridge, 2020). For this study, using panel data analysis with fixed effects estimation techniques will help to examine what effect the type of students' entry qualification has on their performance and overall degree outcome when student characteristics, such as gender and age, are controlled for. The data could also identify possible key points and changes over time, thereby highlighting areas for further investigation to determine the level of preparedness the specific entry qualification provides.

4.4.1 Sample

The study compares entry qualifications specific to the UK education context; therefore, participants of this study will need be UK undergraduate students who are classified as Home students. For the quantitative phase of the study, secondary data obtained from the university's Business Intelligence Unit (BIU) is used, a department that gathers and analyses student data from every stage of the student journey at the University of East Anglia (UEA). The data includes the students' university entry qualifications and their performance grades at the end of each year. The sample is limited to Undergraduate students the UEA enrolled on a full-time or part-time course and who graduated between 2014/15 and 2021/22 academic years. As previously stated, A-Levels are the most common university entry qualifications and

therefore are well represented in most courses. For this reason, in order to get a more balanced representation of students with different entry qualifications, the focus was finding schools within the UEA with a sizeable proportion of students with other qualifications particularly BTEC and Access qualifications. The schools identified were the School of Computing Sciences (CMP), School of Economics (ECO), School of Engineering (ENG), School of Education and Lifelong Learning (EDU), School of Health Sciences (HSC), Norwich Business School (NBS), School of Pharmacy (PHA), School of Psychology (PSY), and School of Social Work (SWK).

The data relates to the student's pre-university entry qualifications, their Year 1, 2 and 3 results, age at entry, gender, ethnicity, disability, POLAR4 neighbourhood and further education institution. This data includes students' demographic, socio-economic and academic information from the point of application, and data on academic attainment in each academic year to when they left or graduated from the university. To ensure that the selected cases help to answer the research questions, the research uses purposive sampling of UK undergraduate students at the UEA (Bryman, 2012a). The dataset is generated using pre-specified exclusion criteria to make comparisons between students as homogenous as possible. The pre-specified exclusion criteria include international students.

The decision to use secondary data in preference to primary data was taken due to the time-consuming effort that would be required to obtain data directly from students and the fact that the data had already been collected by the university itself as part of the application and grading processes, therefore significantly reducing any risk of recall bias. Furthermore, having data that has been collected from 'application' to 'graduation' over a seven-year period can provide much richer details and reveal patterns of change over time.

4.4.2 Quantitative: Ethical considerations

Ethics clearance for the quantitative data was obtained from the UEA Norwich Business School Research Ethics Committee, and documents are included in Appendix 5. A key ethical consideration was that the students in the dataset had given consent. When collecting data, the university asks students to consent to their data being used for further university research, which is covered by the student privacy notice. This research was conducted as part of a university-funded project, so a separate privacy notice was not necessary. The UEA research ethics policy recommends verifying with the data controller what consent is in place, and if further consent is needed, it should be obtained from the data subjects. To ensure this is indeed the case, confirmation was requested from the data protection team before proceeding.

Another ethical issue that arose was related to the type of data being collected. The data was on an individual level and included certain protected characteristics such as age, ethnicity,

disability, and gender. According to Section 36 of the England and Wales data protection legislation, the second data protection principle – purpose limitation – dictates that the purpose of the request should be clear from the outset, and any deviation from this would necessitate obtaining consent again. Therefore, it was ensured that any request for data from the BIU included a clear outline of exactly what data was required and why it was needed to answer the research questions. the research questions.

Furthermore, in England and Wales data minimization guidelines state that only data relevant to the current purpose should be requested. As sensitive data with protected characteristics was collected, it was essential to ensure that this data was anonymized to prevent the identification of students. Therefore, an effort was made not to request student names or ID numbers, which were unnecessary. A random number was assigned as an identifier for students instead of their names or student IDs. Additionally, when sharing findings, it will be necessary to request permission from the BIU team to clarify how the data can be used and with whom the results will be shared. Lastly, regarding confidentiality, the secure storage of data was ensured by consistently using password-protected files and a private, single-user device.

4.4.3 Measures: Academic performance

The students' academic performance is shown as a percentage indicating the average mark given to the student for each year of their degree. At the UEA, students' final year degree classification is based on the average marks from their second and final year. The marks are weighted at 40% for the second year and 60% for the final year. Students who achieve 70% and above are typically awarded a first-class degree, an upper second-class is awarded to those achieving between 60 to 69%, a lower second-class is awarded to those who achieve 50 to 59% and a third-class is awarded to students who achieve between 40 to 49%. The dataset for this study included the students' first year, second year and final year grades. To calculate each student's overall grade, the 40% and 60% weighting described above was applied to the second and final year grades.

4.4.3.1 Qualifications

Within the dataset, there was a variety of entry qualifications, with one student having up to twenty-two qualifications. Using SPSS, a frequency analysis was conducted, and the most common entry qualifications were A-Levels, BTEC, A-Level/BTEC combination and Access which were of particular interest in this study. Additional qualification categories were also incorporated, including International Baccalaureate (IB), prior Undergraduate or Postgraduate degrees (UG or PG), and an Other category for less common qualification types. A Missing category was included to account for cases where entry qualification data was unavailable,

ensuring the analysis maintained the complete sample population. Whilst for the purpose of categorising, all entry qualifications for each student were taken into account, only the top three qualifications in terms of grade were considered when categorising students into their relevant entry qualification type. This is due to the fact that the UEA only considers the top three qualifications in its admissions process. It should be noted that a General Studies qualification was always excluded, regardless of whether it sat in the top three.

4.4.3.2 POLAR4 neighbourhood

Participation of Local Areas (POLAR4) is a measure utilised within higher education to understand patterns of education disadvantage (OfS, 2019). POLAR4 is classified into five quintiles based on the number of young people who have previously progressed into higher education, with quintile 1 having the lowest participation rates and quintile 5 having the highest participation rates (OfS, 2019). The five quintiles and their corresponding level of participation are as follows: quintile 1 (very low), quintile 2 (low), quintile 3 (medium), quintile 4 (high), and quintile 5 (very high). To conduct the analysis for this study, dichotomous independent variables were needed. All five quintiles will be included in the analysis, with quintile 3 as the reference group.

4.4.4 Inclusion and exclusion criteria

The data used and included in this study relate to the student's pre-university entry qualifications, their Year 1, 2 and 3 results, age at entry, gender, ethnicity, disability, POLAR4 quintile, post-16 institution and degree subject category. This data includes students' demographic and socio-economic background at the time of entry and academic information from the point of application to when they left or graduated from the university.

To ensure that the selected cases helped to answer the research questions, the research used purposive sampling of UK undergraduate students at the UEA. The pre-specified exclusion criteria included international students. The dataset used was from 2014 to 2021, examining students who completed their studies in the academic years 2014/15, 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, 2020/21 and 2021/22. The dataset comprised 11,507 students, and the table below gives some descriptive data of the sample, including a breakdown by characteristic.

Table 1: Descriptive breakdown of sample characteristics for variables included in the study.

(N = 11,507)

Variables	N	%
Age:		
Under 21	8,721	75.8
Aged 21+	1,838	16.0
Aged 31+	948	8.2
Total	11,507	100
Gender:		
Female	6,953	60.6
Male	4,519	39.4
Total	11,472	100
Disability:		
Disability	2,092	18.2
No disability	9,374	81.8
Total	11,466	100
POLAR4 Quintiles		
1 (Lowest participation rates)	1,788	15.7
2	2,271	20.0
3	2,240	19.7
4	2,511	22.1
5 (Highest participation rates)	2,558	22.5
Total	11,368	100
Ethnicity		
Global Majority	2,196	19.3
White	9,102	79.8
Other	109	1.0
Total	11,407	100
Entry Year:		
2012/13	1,181	10.3
2013/14	1,096	9.5
2014/15	1,142	9.9
2015/16	1,543	13.4
2016/17	1,521	13.3
2017/18	1,482	12.9
2018/19	1,708	14.9
2019/20	1,805	15.7
Total	11,478	100
Entry Qualifications:		
A-Levels	6,275	54.5
BTEC	1,579	13.7
Access	1,276	11.1
A-Levels/BTEC combination	898	7.8
IB	145	1.3
UG or PG	216	1.9
Other	1,113	9.7
Total	11,502	100
Post-16 Institution:		

Sixth Form School (SFS)	5,169	46.7
Sixth Form College (SFC)	1,767	16.0
FE College	2,022	18.3
Other	2,116	19.1
Total	11,074	100
Degree Subject category:		
Computing	1,202	10.5
Economics	1,179	10.3
Education	751	6.5
Engineering	197	1.7
Health and Social Care	4,296	37.4
Business	1,487	13.0
Pharmacy	819	7.1
Psychology	1,358	11.8
Social Work	189	1.6
Total	11,478	100
	N	*(Mean)*
Grades:		
Level 4 (First Year)	9,183	*(62.37)*
Level 5 (Second Year)	8,365	*(64.14)*
Level 6 (Final Year)	7,016	*(66.66)*
Final Grade	6,516	*(66.21)*

Source: Author's own descriptive analysis of UEA undergraduate data (2012 – 2020)

4.4.5 Demographic characteristics

The demographic characteristics examined were students' age at entry, gender (female and male), disability, and ethnicity. The initial dataset divided ethnicity into fifteen different categories. Due to the small number of cases within some of these categories, ethnicity was grouped into two main categories—white and Global Majority—to obtain a sufficient number of cases to allow for statistical analyses.

4.4.6 Analysis plan: Hierarchical linear regression

The statistical package SPSS was used to draw out descriptive and inferential statistics for analysis. The descriptive statistics outlined the main characteristics of the data by giving a summary of the distribution and any patterns therein. Inferential statistics were obtained through the completion of bivariate or multivariate analyses. In quantitative research, 0.05 is the conventional level for determining statistical significance and so will be adopted within this study (Bryman, 2012a).

A hierarchical linear regression was adopted to answer the study research questions. Using this method, new predictor variables are entered successively in separate blocks (Field, 2018). An advantage to this approach is that the impact of each predictor variable or block of variables on the dependent variable can be seen when added to the model. The first model (Model 1)

included the demographic information of students, such as age, gender, disability, and ethnicity. In the next step (Model 2), higher education participation quintiles measure (POLAR4) as a proxy for socio-economic background are added while controlling for demographic variables. In Model 3, all variables in models 1 and 2 are controlled for, and the primary variable of interest, entry qualification, is added into the analysis. In Model 4, all variables in models 1, 2, and 3 were controlled for, and post-16 institution type variables were added. The fifth model adds degree subject categories while controlling for all previous independent variables. The final model includes degree-subject interactions with entry qualification type whilst controlling for all previous independent variables. Adding interaction terms to the regression model helps expand the understanding of relationships between certain variables in the model. It can provide insight into whether the effect a predictor variable has on the dependent variable changes according to the value of another predictor variable.

4.4.7 Missing data

Using the SYSMIS function, all cells with missing values were recorded as number '9999' and were defined as a discrete missing value. Available case analysis was chosen in order to avoid excluding valuable data points. For example, if a student did not progress onto Level 5 but had a grade for Level 4, excluding their Level 4 data would skew the results for the first-year analysis. Moreover, it is important to include results for students who do not complete their degree as there could be underlying reasons relevant to this study.

4.4.8 Reliability and validity

A key consideration when using secondary data is the reliability and validity of the data (Punch, 2005). The original data was collected in the students' naturalistic environments, thereby meeting ecological validity as the study reflects the normal students' experience (Krolak-Schwerdt *et al.*, 2018). Validity concerns the degree to which the data accurately represents the outcome being measured (Bryman, 2012). In this case, the variable reported in the original data is the students' grades, and since this is the same as the outcome variable in this study, the data can be considered to be valid.

The data was gathered from an existing reliable source; using another source to obtain the information might have jeopardised the validity of the findings. It is important to recognise that the data provided was obtained after the students had pursued all available appeals processes, thereby ensuring the accuracy of the recorded data. Other quantitative techniques, such as surveys, would be reliant on the student's response. Some students might give the information freely and honestly, whereas others may choose not to respond or give an inaccurate recall of their true grades.

It should be noted that although academic achievement was based solely on the student's grades, standardised tests are not always a true representation of the student's true ability as they do not consider other factors that may contribute to the student's attainment. Another limitation is that the University of East Anglia may not be representative of the broader higher education sector. In addition, different degree subject schools with the UEA may employ varying approaches to teaching and assessment which could influence the relationships observed in this study.

4.5 Qualitative research

This study aims to understand degree outcome disparities between students with A-Level only and alternative qualifications. The use of quantitative methods gives the benefit of being able to generate and analyse a more recent dataset and examine any patterns and trends when it comes to disparities in outcome for students with different qualifications. However, as established earlier in the chapter, although a quantitative approach allows for the testing of hypotheses that can provide some insights into what factors could be associated with degree attainment, it is not likely to provide deeper insights into the possible reasons for different types of students. The strength of a qualitative approach is from the insights it can provide in being able to explore 'why' and 'how' questions. The use of a mixed methods approach within this study enables the use of quantitative and qualitative to help give a fuller complementary picture for the study. This section will explore the qualitative phase of the study, giving an insight into how it was used to help answer the research questions. The aim of using qualitative methods is to help understand students' experiences at key transitional points in their academic journey. Initially, the focus will be on the students' pre-university experiences looking at their post-16 experiences. Subsequently, the focus will then shift to the students' transition into higher education looking at the at their experiences in first, second and final year.

4.5.1 Pilot study

The use of a pilot study aids in the enhancement of the quality and efficiency of the main study by conducting it first on a smaller scale. It assesses the feasibility and methodological approach before advancing to undertake data collection on a larger scale (Walby, Kevin, Marshall and Rossman, 2016). In qualitative research, the use of pilot studies allows the researcher to test and refine research methods and procedures before conducting the full-scale study (Marshall, Rossman and Blanco, 2021). This helps in identifying potential issues, ambiguities in data collection and analysis techniques. Furthermore, a pilot study can offer opportunities to understand potential challenges in participant recruitment and the refinement of interview protocols (Braun and Clarke, 2013). Lastly, the use of a pilot study can help to

identify potential threats to validity, such as ambiguous interview questions and insufficient data saturation (Braun and Clarke, 2013; Walby, Kevin, Marshall and Rossman, 2016).

The primary objectives of conducting a pilot study in the qualitative phase of this study were threefold. Firstly, it aimed to assess the validity of interview questions and their capability to adequately elicit the necessary data for addressing the research questions. Secondly, the pilot study was intended to examine and evaluate the various recruitment channels in order to determine their effectiveness and appropriateness. Lastly, it aimed to test and refine the recruitment and interviewing protocols, consequently enhancing the overall participant experience and facilitating a more streamlined process.

4.5.1.1 Participants and recruitment

A total of 10 students from different UEA faculty schools participated in the pilot phase. Participants were recruited for the study through two main strategies. The initial approach involved the dissemination of study information via email; specifically, an email advertising the study was sent to all undergraduate students enrolled on UG degrees in Norwich Business School. The second strategy involved utilizing personal connections, particularly within the basketball team, whereby direct communication with players was established to solicit their potential participation in the study.

Participation in the study was voluntary and, for their assent, participants signed consent form after reading through the information sheet. Out of the ten participants, eight were female and two were male. Six of the participants had A-Levels as their entry qualifications, two had a combination of A-Levels and BTEC, one had Access as their entry qualification and one student had A-Level qualifications and had also completed a Foundation year at UEA prior to starting on their course. Sixth Form Schools were the most common post-16 institution, with five of the participants having attended them. Aside from that, two attended sixth form colleges, one went to a private school sixth form, and one attended an FE college. Five of the students were in their first year, three in their second year and two were in their final year of study.

4.5.1.2 Data collection for the pilot study

Data collection occurred from 2 December to 30 December 2022 using semi-structured interviews. The format of the questions was structured into four sections to help the students to reflect on their academic journeys and experiences at key transition points. The first section – asking about experiences gained before university – aimed to help the student participants to reflect on their post-16 experiences, looking at what decisions they had made before university and why. In addition, the participant was encouraged to reflect on who helped them

with those decisions and in what way. The second section – starting university – had the participant look back at the start of their university journey, their first year and reflect on their expectations for higher education. The third section – second year – guided the student to reflect on their second year of study. Only students in their second and third year were asked to progress onto questions in this section. The last section – third year – was only relevant for students in their third year and gave them the opportunity to reflect on their third year of study.

Although there were some pre-prepared questions asked to participants, there was no set order in which those questions were asked. Additional follow-up questions were asked to participants if they mentioned something that was of interest and required some further elaboration.

Once a participant had agreed to participate in the study, a meeting schedule with different time slots was sent to them to choose the slot for the interview that was most convenient to them. Once a timeslot had been selected, prior to the interview an information sheet and consent form were sent to the participant to allow them the opportunity to read and ask any questions they may have. To ensure that the interview was uninterrupted and clear, a room was booked on campus and an invitation was sent to the participant with all the relevant information. For online interviews, a Microsoft Teams invitation was sent to the participant.

The average time for all the interviews was 33:02, with the shortest interview being 16:03 and the longest at 54:56. See the table below for the recorded time with each participant. All interviews were audiotaped and transcribed verbatim. Recordings were imported into the software programme, Otter, which is designed to transcribe audio and video files. Although a significant percentage of the transcript was correct, a review of each interview was required to rectify mistakes within the transcription of the data and ensure accuracy of the whole interview. Interview transcripts were imported into the software program NVIVO, which is designed for qualitative data, and analysed through reading, labelling, and developing themes. Data analysis occurred continuously as data accumulated, and tentative theories were explored.

Table 2: Pilot study participant summary

Participant Number	Age	Gender	Qualification	Post-16 institution	UEA School	Year of Study	Interview length
1	21	F	Access	FE College	NBS	2nd Year	22:11
2	19	F	A-Levels	Sixth Form	NBS	2nd Year	34:38
3	18	F	A-Levels	Sixth Form College	ECO	1st Year	16:03
4	18	F	A-Levels	Sixth Form	PSY	1st Year	35:20
5	20	F	A-Levels	Sixth Form (Private School)	CMP	2nd Year	43:02
6	18	F	A-Levels	Sixth Form	PSY	1st Year	21:36
7	18	F	A-Levels/BTEC	Sixth Form College	EDU	1st Year	35:12
8	20	F	A-Levels	Sixth Form	HSC	3rd Year	36:03
9	21	M	A-Levels/BTEC	Sixth Form	NBS	3rd Year	29:20
10	22	M	A-Levels with Foundation Year	Sixth Form	PPL	1st Year	54:56

Source: Author's own interview data (n=10, collected December 2022)

4.5.1.3 Reflections and modifications

Females formed the largest proportion of the sample. Consequently, it was decided that the full-scale study should be more evenly balanced in terms of gender. In addition, no BTEC students participated in the pilot study. Therefore, a focus on creating more representative sample of the student body in regard to entry qualifications would be key going forward with the main study. Furthermore, a similar approach regarding the year of study will also need to be applied in order to gain more data that gives a better comparison of those key variables. The capturing of participant demographic data such as age, gender and ethnicity was not prioritised during this process; however, it would be useful to have such data in order to observe particular diversities within the sample. In addition, key information such as participant entry qualification and post-16 institution was collected through details provided during the interview; therefore, as an adjustment for the main study, a preliminary brief survey will be created to capture key demographic data from participants.

Using personal connections was the most effective out of the two strategies used for participant recruitment. A multiple strategy approach will need to be used for the main study, using personal connections, as well sending advertising communication via email. Although advertising via email was not as effective, it will still be used for the main study as it does not require a lot of effort and can reach students directly. However, in addition to that, other

avenues will be explored to advertise the study, such as school newsletters and other forms of student communication. Furthermore, approaching lecturers and seeking to speak directly to students might give a more personal touch that could encourage more student sign-ups.

The administration required during the recruitment process was noteworthy as there was a good amount of back and forth between the researcher and participants. A reduction of the steps taken from when the participant expresses interest and when they have the interview is needed to help avoid some of the time lag between expressed interest and signing up for a slot. For the main study, a modification will be made on the advertisement to include all steps in one document; for example, the poster will include a link that will take participants to a brief explanation of the study and the criteria. If they fit the criteria, the participant can then immediately book an interview slot. The first contact with them will be an interview confirmation along with the documents, which takes away the back and forth between the researcher and the participants.

Another issue noted during the interview process was that some of the interviews were too short. The interviews that were most rich in data were on average about 40 minutes long, and so this will be a target for the main study in terms of interview length. In the interview brief, it is important to let the participant know that there is no right or wrong answer and to encourage them to explain their thoughts. Furthermore, some questions about skill development will be included and will be asked as part of the interview.

In summary, the pilot study provided an opportunity to refine recruitment strategies, polish interview questions and engage with participants before embarking on the main study phase.

4.5.2 Sample and recruitment of participants

The study participants were purposefully selected to be comprised solely of individuals who had entered university with A-Levels, BTEC, Access, or a combination of these qualifications, which are widely recognised as the most prevalent university entry qualifications. This sampling strategy was employed to achieve consistency in the qualification phase of the study and limit extraneous variance. The application of purposive sampling facilitated the selection of individuals with pertinent experiences and attributes aligned with the research objectives.

All study participants are currently enrolled students at the university at the point of data collection and were selected from nine specific schools that were deemed to have a diverse representation of students possessing the various entry qualifications under investigation. These schools align with the schools previously mentioned in the quantitative analysis section – namely, computing, economics, engineering, education, business, pharmacy, psychology, and social work.

The recruitment of participants in the study was carried out using diverse approaches and strategies. A key approach was employing snowball sampling using personal connections. Initially, students who had previously participated in the pilot study were approached to recommend friends who met the inclusion criteria. Other personal connections within societies and clubs, such as the Mature Student group and basketball club, were used to approach members and ask them to participate or recommend someone for the study. This involved speaking to members personally and also posting information about the study on social media platforms.

Moreover, another research recruitment tactic implemented was advertising in school faculty newsletters and sending general emails to students via faculty members. Additionally, university societies, such as the engineering, social work, and psychology societies, were approached to access potential participants who could satisfy the study's requirements. Communication about the study to prospective participants was achieved via an advertisement, which included a poster containing a hyperlink to a preliminary survey that gauged their eligibility for participation. Once eligible, participants could then select an interview slot that was convenient for them. For students who were referred to the study or contacted me directly, an initial email was sent containing relevant information and instructions on how to schedule an interview slot.

After a participant had scheduled an interview slot, they were contacted via email to confirm the interview time and location, and within the same email the study information sheet and participant consent form were also included. This gave participants the opportunity to read through the study information and understand what they were consenting to before the interview. The study information sheet included details that specified that participation was voluntary, and that anonymity would be maintained in the reporting of results. Furthermore, the option for participants to withdraw from the study at any time was outlined.

4.5.3 Procedure

In the preliminary survey, participants were given the opportunity to indicate their preference for an on-campus or online interview. The provision of on-campus interviews was a strategic measure aimed at facilitating students' convenience in scheduling appointments, given that most students would regularly be on campus for their studies. This approach ensured that students could align their interview schedules with their on-campus routines, thereby enhancing the feasibility of participation. Conversely, an online interview option was established to accommodate the needs of students who were unable to be physically present on campus due to various factors, including geographic distance or placement obligations.

This option expanded the inclusivity of the study by enabling remote participation, thus increasing the chances of capturing a diverse and representative sample.

On the day of the scheduled interview, participants received a reminder message with the time and location of the interview. For online interviews, the interview sessions were conducted via Microsoft Teams. This software was chosen because it is widely used within the university for remote meetings and integrated recording capabilities, which aided the process of capturing and analysing data. Participants were provided with a link to the Teams meeting, which enabled them to easily access the platform and initiate the interview process on the day of the session. For in-person interviews, a dedicated room was reserved to guarantee a confidential environment for the participants throughout the interview process. The selected location was carefully assessed to ensure that it was convenient for the participant and met the privacy requirements necessary for conducting the study. Additionally, the designated room was chosen to mitigate any possible disruptions that could affect the quality and accuracy of the recorded data. The exclusive use of this space enabled the participants to fully engage in the interview without any external disturbances and provided optimal conditions to capture comprehensive and reliable responses.

At the start of each interview, a brief overview of the study's aims and objectives was presented to the participants. This served to ensure that the participants had a clear understanding of the study's purpose. Subsequently, the information sheet that had been previously sent to the participants was reviewed in detail, and any inquiries or concerns were addressed. After resolving any questions or issues, participants were provided with the consent form and were requested to read through it thoroughly. Participants were then asked to sign the consent form, indicating their voluntary agreement to participate in the study and their compliance with the research procedures. It was clarified to the participants during the interview that the sessions were being recorded to facilitate the accurate documentation of their responses. Two recording devices were utilized to ensure that any unforeseen technological issues were avoided, thus providing a reliable backup in the event of any recording failures. This dual recording approach aimed to mitigate any risks of data loss and to ensure that the captured data was complete and valid.

4.5.4 Data collection

Data collection for this study was conducted from 8 March to 31 July 2023, using semi-structured interviews. The interview questions (appendix 1) were structured into four distinct sections, designed to facilitate the participants' reflections on their academic journeys. The first section focused on the participants' pre-university experiences, allowing them to reflect on the decision-making process that led to their enrolment into higher education, as well as

the factors and individuals that influenced those decisions. The second section focused on the participants' early university experiences, including their expectations and experiences during their first year of study. The third section was specifically targeted at participants in their second year of study and aimed to elicit reflections on their experiences during that academic year. Finally, the fourth section was exclusively for participants in their third year of study, enabling them to reflect on their experiences during that academic year. This structured approach to data collection aimed to provide a comprehensive understanding of the academic journeys of the participants in the study.

As with the Pilot Study, once a participant had agreed to participate in the study and a timeslot was confirmed, an information sheet and consent form (appendix 2 and 3) were sent to all participants prior to the interview to allow them the opportunity to read through both documents and ask any questions. In addition, the recordings were imported into the Otter software program, which is specifically designed to transcribe audio and video files. The average time for all the interviews was 44:33, with the shortest interview being 29:01 and the longest at 67:29. A summary of the interview participants is given in appendix 4. All interviews were audiotaped and transcribed verbatim. Recordings were imported into the software programme, Otter. Interview transcripts were then imported into the software program NVIVO, for analysis through reading, coding, and developing themes. Data analysis occurred continuously as data accumulated, and tentative theories were explored.

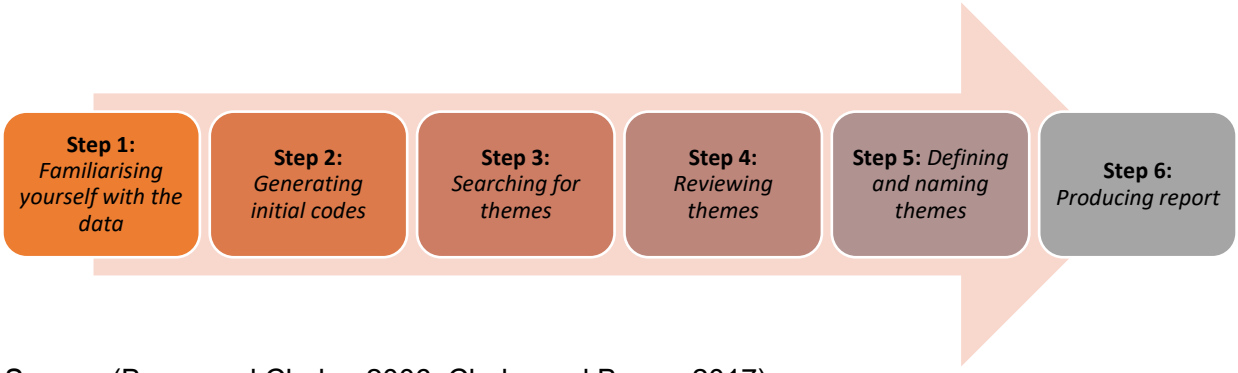
4.5.5 Data analysis: Thematic analysis

The transcripts were imported into Nvivo and examined to identify additional themes and patterns that could create categories. These categories were reviewed to ensure alignment with the themes that emerged from the data in a process called thematic analysis. Thematic analysis involves identifying patterns or themes within qualitative data and was chosen for its versatility across various theoretical frameworks to examine participant experiences (Braun and Clarke, 2006).

This study focused on themes at a semantic level, identifying them by the explicit statement expressed by participants. The data is then summarised and systematically organised to illustrate patterns in semantic content. This approach allows for interpretation while preserving and staying true to the participants' expressed views. Coding recurring patterns that address the research questions and organising these into themes provides insight while minimising researcher bias and over-interpretation (Braun and Clarke, 2006; Clarke and Braun, 2017).

Braun and Clarke (2006) provide a six-step framework that can be utilised when conducting thematic analysis. The table below gives a quick outline of the steps, and the following sections will give details on how this step-to-step guide was utilised for this study.

Figure 7: Six step framework for doing a thematic analysis



Source: (Braun and Clarke, 2006; Clarke and Braun, 2017)

4.5.5.1 Step 1: Familiarisation with the data

Familiarisation involves repeated reading of the interview. Although Otter was used to automatically transcribe the interviews, there were still errors in the data, so each interview was reviewed and transcribed, which helped me familiarise myself with the data. In addition, another method that was used was re-listening to interview audios, making notes, and identifying any meaningful patterns. This helped to start the process of thinking about potential codes.

4.5.5.2 Sep 2: Generating initial codes

Once the transcripts were uploaded into NVivo, they were examined to reveal any themes or patterns. Codes were created, and the initial categories were identified.

4.5.5.3 Step 3: Searching for themes

Generated codes were sorted into themes after considering the relationships between them. Participants were asked to reflect on their experiences in four distinct time-periods: pre-university, to look at experiences at their post-16 institutions; first year experience, to account for their transition from post-16 education to HE; second year; and finally, third year if it was relevant. For example, when students were talking about their experience in pre-university post-16 institutions, these were coded within that particular timeframe. At this stage, a top layer of code was created to account for the time periods, and the themes relevant within that period were added as subcodes. This approach helped to show any patterns across the different time periods.

4.5.5.4 Step 4: Reviewing themes

Within this phase the generated themes were reviewed, and any repetitious themes were merged together. Having split the codes by time period, at this point an exploration of the themes and how they aligned with the theoretical framework was carried out. This created three layers of code: level 1, looking at the time period; level 2, looking at the theme; and level

3, looking at how the code aligned with social and cultural capital, as well as capabilities approach. For example, if a student was speaking about going to attend statistics workshops provided by the university after struggling with statistics in lectures in their second year, the first layer would be adding this to the second-year code. Then, in the second layer, it would be added to the 'seeking support' theme. Finally, it would be added to the 'networks' and 'utilisation' codes in the third layer, which accounts for capital theory and the capabilities approach. Figure 8, below illustrates this.

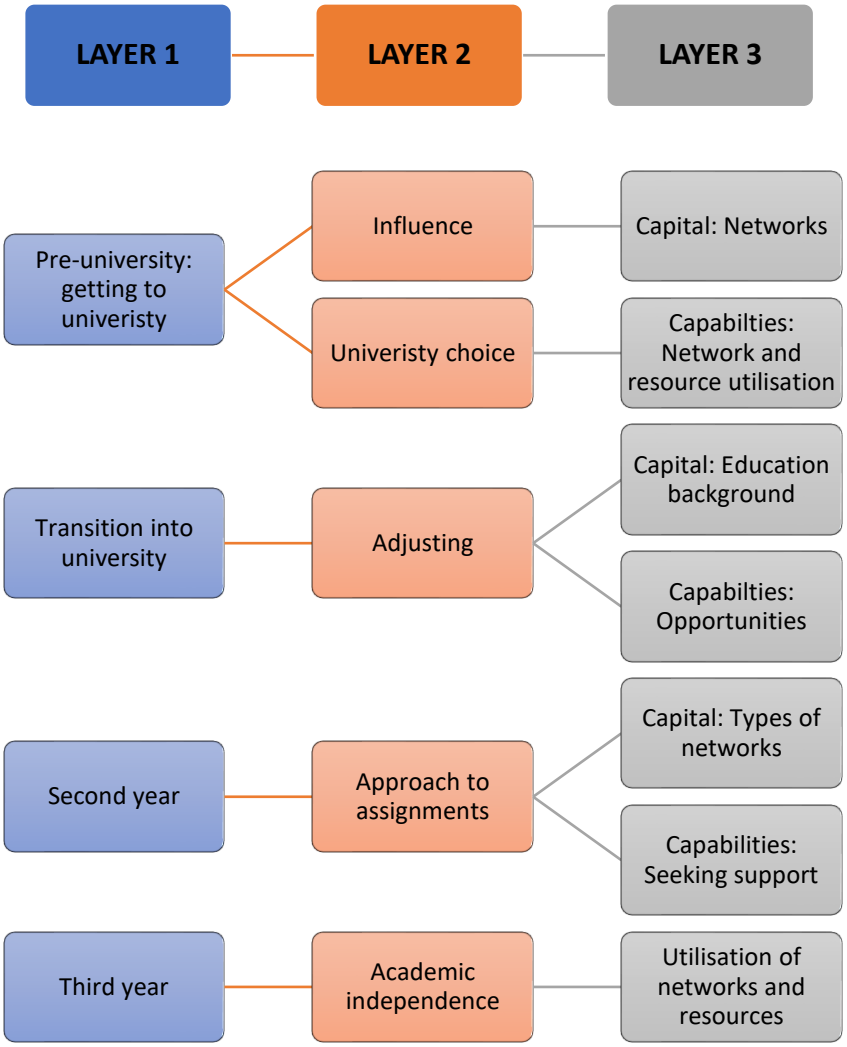
4.5.5.5 Step 5: Defining and naming themes

This step was used to refine each theme and clarify the overall narrative of the analysis.

4.5.5.6 Step 6: Producing report

The approach to this will be discussed in the methodology introduction.

Figure 8: Thematic analysis thematic map



Source: Author's own analysis using (Braun and Clarke, 2006; Clarke and Braun, 2017)

4.5.6 Ethical considerations: Qualitative data

Ethical approval for conducting research involving human participants was requested and granted by the Norwich Business School Ethics Committee. According to the ethical guidelines, obtaining informed consent from all interview participants was essential. I had complete control over the data collection process during this phase of the research, unlike with the quantitative data, which included how participants were informed. This process was repeated multiple times.

Participants were informed of the research through recruitment strategies and also when making contact for the first time to request an interview. This was done via various methods such as email, newsletters, posters, and face-to-face communication, which involved outlining the broad topics that would be discussed. The ethical review process addressed various concerns related to confidentiality, informed consent, and maintaining participant anonymity. Additionally, it acknowledged that this research does delve into subject matters that might be sensitive to participants. To tackle this issue, strategies were implemented to ensure participants felt no pressure to engage in the study. Therefore, the research topics and objectives were communicated to participants before the interviews using the participant information sheet, and a consent form was provided as confirmation that all information was understood. A briefing of this before the start of the interview was also given verbally, and participants were welcomed to ask any questions before proceeding. Furthermore, participants were reminded that they were not obligated to answer any questions they preferred not to, and they had the freedom to withdraw from the interviews at any time.

To maintain data security after interviews, audio recordings and transcripts were stored in a pseudonymized format (removing names and substituting them with participant numbers) on a password-protected, stored on the university secure OneDrive which requires two-factor authentication when logging in. During the transcription process, any personal names that could have identified interviewees were eliminated. Additionally, a file that connected participant numbers to names was saved in a separate folder, which was also password-protected with a distinct password.

4.6 Reflexivity

Reflexivity involves the researcher turning the lens back on themselves in order to recognise and take responsibility for their own position within the research, and its potential effects on the setting, the participants, the questions asked, the data collected and its interpretation (Berger, 2015). Acknowledging the researcher position serves as quality control with qualitative research, since it can improve credibility by accounting for the researchers' values,

beliefs, knowledge, biases and their relationship to the participants (Cutcliffe, 2003; Pillow, 2003; Berger, 2015).

Braun and Clarke (2021)'s conceptualisation of reflexivity, particularly when using thematic analysis, involved the researcher's conscious self-examination of their role in the research process. The researcher's subjectivity is viewed as an analytical resource, and there is a clear acknowledgement that themes do not simply emerge from data but are actively created and shaped by the researcher through their interpretation (Braun and Clarke, 2021).

My position and interpretation of the interviews were inevitably shaped by aspects of my own identity and personal experiences. This reflexivity was something I had to consider carefully throughout the research process. For instance, while conducting the interviews, I was mindful of the types of questions I posed to participants and the trust required for them to answer openly. Some participants described growing up in African households, where attending university was not so much a choice as it was an expectation. I personally related to these accounts, having also experienced the expectation that university would be the next step after Sixth Form, with few alternative options considered or explored. This shared experience allowed me to empathise with participants, particularly as a Black woman from Uganda who had faced similar pressures.

This connection sometimes made it easier to ask more in-depth questions about participants' experiences and the factors influencing their choices. Additionally, my identity appeared to create a sense of understanding; participants seemed comfortable sharing personal details, knowing they would be understood. This element of shared background was a considered aspect of the research, especially in building rapport.

There were also other ways in which my role intersected with the research. Some of the participants were recruited through networks that I was involved in, such as basketball teams where I played or coached. Entering interviews as a teammate often meant that rapport was already established, which helped participants feel at ease and made it easier to pursue follow-up questions. For those I coached, I was conscious of the need to separate my role as researcher from my position as coach. Recognising this difference from the outset was important for minimising any potential power dynamics, and my status as a fellow student further helped to balance this relationship, reducing the potential impact of hierarchy.

My various identities as researcher, teammate, coach, and student, all contributed to building rapport and finding common ground with participants. This, in turn, informed my interests and the lines of questioning I pursued. For example, when one participant shared their experience of being injured while playing sport, tearing their ACL, and how that affected their university decision-making and subsequent journey, I was able to relate directly, having faced a similar

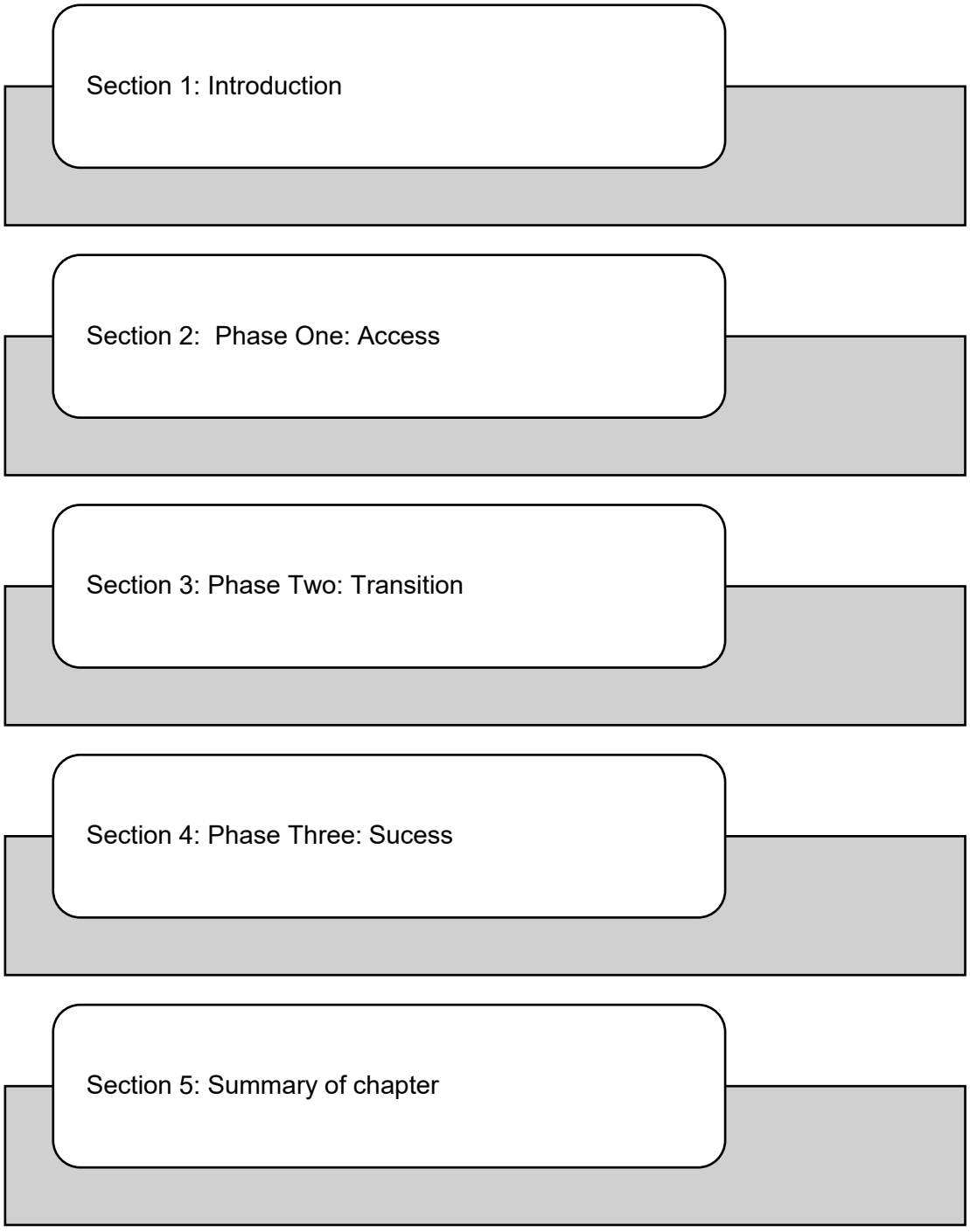
injury myself. This shared understanding enabled the participant to talk openly about their challenges, including the impact on their mental health. Having experienced the difficulties of rehabilitation, I was more able to empathise and ask relevant questions, which encouraged the participant to share more deeply.

These considerations demonstrate how my own experiences and identities influenced the research process. They shaped the way I built rapport, the questions I asked, and the information participants felt comfortable sharing. By reflecting on these factors, I was able to elicit richer, more nuanced insights into the participants' experiences, which ultimately contributed to a fuller understanding of their journeys through university.

4.7 Conclusion and summary of chapter

In this chapter, we examined the strategies employed and the methods adopted to address the research questions and gather data. It discusses the overall advantages of the approaches chosen and includes a comprehensive overview of the analytical methods used for data analysis for both the quantitative and qualitative data. This leads to the presenting of the results in the next chapter.

5. RESULTS AND FINDINGS



5.1 Introduction

This chapter presents the results and findings from the quantitative and qualitative analysis conducted to address the study's objective, outlined in chapter 1, which is to understand to what extent different entry qualifications impact educational progress and degree outcome in comparison to having A-Level only qualifications.

The typical duration of a student's higher education journey spans approximately three to four years, this forms the academic journey studied using quantitative data in this chapter. However, to gain deeper understanding into students' experiences, it is imperative to examine their pre-university encounters as well. Understanding the student experience during this pivotal decision-making phase can provide valuable insights into their transition into higher education. Therefore, this chapter explores an academic journey from that initial exploration to graduation. A student's experiential trajectory can be conceptualized as a chronological sequence encompassing different touchpoints of engagement, information dissemination, and incremental choices. In the context of this study's analysis, the student journey will be disaggregated into three distinct phases.

Firstly, Phase One focus on 'Access' and will delve into the pre-university experiences of students getting into university and their deliberations regarding academic program selection. Phase Two will concentrate on the pivotal 'Transition' period from Further Education (FE) to Higher Education (HE), primarily focusing on the students getting started with university in their first year. The findings will be presented focusing on both non-COVID affected and COVID affected cohorts at Level 4, primarily using quantitative data while incorporating relevant insights from the qualitative interviews. Lastly, once students are settled, phase three focuses on 'Success' and examines the subsequent years of the student's academic journey, encompassing second year, third year and final degree outcome and also will be presented focusing on both pre-COVID and COVID affected cohorts.

Throughout these delineated phases, students engage with diverse individuals via assorted communication channels, seeking specific types of support at each stage. Analysing these interactions through such a lens promises to furnish profound insights into the intricate dynamics governing the relationships between students and their networks as they navigate through the university landscape. An advantage of employing this analytical approach lies in its capacity to uncover disparities and discrepancies in experiences among students with varying entry qualifications.

5.1.1 Sample: Secondary institutional data

The table below gives a description of the sample (N = 11,507) broken down by the students' entry qualification types (A-Level only, BTEC only, A-Level/BTEC combination and Access).

Table 3: Descriptive table of a breakdown of students by qualification type (N = 11,507)

	A-Level only		*BTEC only*		*A-Level/BTEC combination*		*Access*		*Total*	
	n	%	n	%	n	%	n	%	N	%
Gender										
Female	3484	50.1	874	12.6	508	7.3	996	14.3	6953	84.3
Male	2787	67.1	704	15.6	390	8.6	280	6.2	4519	97.5
Disability										
No disability	5317	56.7	1221	13.0	745	7.9	937	10.0	9374	87.6
Disability	951	45.5	357	17.1	150	7.2	339	16.2	2092	86.0
POLAR4										
Quintile 1	621	34.7	331	18.5	167	9.3	333	18.6	1788	81.1
Quintile 2	998	43.9	352	15.5	207	9.1	346	15.2	2271	83.7
Quintile 3	1164	52.0	332	14.8	184	8.2	272	12.1	2240	87.1
Quintile 4	1559	62.1	346	13.8	183	7.3	189	7.5	2511	90.7
Quintile 5	1874	73.3	210	8.2	152	5.9	130	5.1	2558	92.5
Ethnicity										
White	4907	53.9	1221	13.4	664	7.3	1096	12.0	9102	86.6
Global Majority	1276	58.1	329	15.0	217	9.9	165	7.5	2196	90.5
Other	58	53.2	21	19.3	17	15.6	6	5.5	109	93.6
Entry Year										
2012/13	730	61.8	117	9.9	59	5.0	115	9.9	1181	86.6
2013/14	621	56.7	130	11.9	47	4.3	146	13.3	1096	86.2
2014/15	570	49.9	139	12.2	100	8.8	166	14.5	1142	85.4
2015/16	762	49.4	192	12.4	112	7.3	195	12.6	1543	81.7
2016/17	753	49.5	250	16.4	160	10.5	181	11.9	1521	88.3
2017/18	767	51.8	244	16.5	160	10.8	146	9.9	1482	89.0
2018/19	1002	58.7	236	13.8	114	6.7	170	10.0	1708	89.2

2019/20	1070	59.3	271	15.0	146	8.1	157	8.7	1805	91.1
School										
Computing	672	55.9	274	22.8	128	10.6	43	3.6	1202	92.9
Economics	1069	90.7	15	1.3	39	3.3	8	0.7	1179	96.0
Education	289	38.5	230	30.6	107	14.2	41	5.5	751	88.8
Engineering	123	62.4	23	11.7	17	8.6	16	8.1	197	90.8
Health and Social Care	1384	32.2	653	15.2	293	6.8	973	22.6	4296	76.8
Business	942	63.3	235	15.8	185	12.4	29	2.0	1487	93.5
Pharmacy	680	83.0	52	6.3	33	4.0	18	2.2	819	95.5
Psychology	1058	77.9	66	4.9	79	5.8	92	6.8	1358	95.4
Social Work	58	30.7	31	16.4	17	9.0	56	29.6	189	85.7
Post-16 Institution										
Sixth Form School	4346	84.1	196	3.8	459	8.9	7	0.1	5169	96.9
Sixth Form College	1041	58.9	350	19.8	208	11.8	112	6.3	1767	96.8
FE College	156	7.7	659	32.6	130	6.4	928	45.9	2022	92.6
Other	714	33.7	374	17.7	100	4.7	229	10.8	2116	66.9
Age at Entry										
Under 21	5865	67.3	1394	16.0	857	9.8	194	2.2	8721	95.3
21+	369	20.1	176	9.6	40	2.2	725	39.4	1838	71.3
31+	41	4.3	9	0.9	1	0.1	357	37.7	948	43.0
Grades										
M = Mean	*n*	*M*	*n*	*M*	*n*	*M*	*n*	*M*	*N*	*M*
Level 4 (First Year)	5301	63.66	1253	56.07	733	59.28	1099	64.25	9183	62.37
Level 5 (Second Year)	4941	65.65	1011	59.55	668	60.95	950	63.87	8365	64.14
Level 6 (Final Year)	4028	67.99	782	62.91	516	63.82	763	66.50	7016	66.66
Final Grade	3871	67.42	759	62.09	508	63.14	748	66.16	6516	66.21

Source: Author's own descriptive analysis of UEA undergraduate data (2012 – 2020)

The full sample shows 60.6% female students and 39.4% male students in total, which reflects a higher female representation from the dataset and HE more generally. A-Level only qualifications were the most common pathway for both genders and male students (67.1%) had a slightly higher tendency to pursue only A-Levels compared to female students (50.1%). The distribution for BTEC only qualifications is fairly similar between the genders with 12.6% being female students and 15.6% of male students. 7.3% of female students and 8.6% of male students had a combination of both A-Level and BTEC. Access courses appear to be more popular among female students (14.3%) compared to the 6.2% of male students.

The overall sample showed that 81.8% students did not report a disability and 18.2% reported having a disability. Students with disabilities were more likely to enter HE with BTEC qualifications (17.1%) than those who reported no disabilities (13%). Students with no disabilities were more likely to have entered university with A-Level only (56.7%) qualifications than disabled students (45.5%). With both groups showing similar percentages (7.9% for no disability and 7.2% or disability) for students who chose to take A-Level/BTEC combinations, this could suggest that disability status does not seem to impact the likelihood of choosing mixed qualifications. There is a notable higher proportion of students with disabilities (16.2%) who chose to take an Access qualification, compared to students with no disabilities (10%). Overall students with disabilities seem to have more diverse qualification choices.

Examining the POLAR4 quintiles which categories young people entering higher education with quintile 5 showing the highest participation rates and quintile 1 showing the lowest participation rates (OfS, 2019). Quintile 5 had the largest representation at 22.2% of student, followed by quintile 4 at 21.8%. Quintiles 3 and 2 had similar percentages of 19.5 and 19.7% respectively. Quintile had the smallest proportion of students at 15.5%. This is quintile hierarchy in line with Office for Students (Ofs) data. In regard to entry qualifications, there is a clear upward trend from 34.7% in quintile 1 to 73.3% in quintile 5 for A-Level only qualifications. The opposite was seen for BTEC only qualifications, where there was a downward trend from 21% in quintile 1 to 8.2% in quintile 5. There is a slight downward trend from 9.3% for quintile 1 to 5.9% for quintile 5 for students with A-Level/BTEC combination qualifications. And lastly a clear downward pattern from 18.6% for quintile 1 to 5.1% for quintile 5 when it came to Access students. Students from quintiles 4 and 5 (least disadvantaged) strongly favoured the traditional A-Level pathway, whereas students from lower quintiles 1 and 2 (most disadvantaged) show more diversity in their entry qualifications.

The overall sample showed that White students represented majority at 79.8% and the percentage of students from ethnic minority background was at 19.3%. For A-Level only qualifications, White students account for 78.6% and ethnic minorities account for 20.4% in

the sample. BTEC only qualification, 20.9% of students were from ethnic minorities while 86.5% were White students. Ethnic minorities had their highest representation with A-Level/BTEC combination qualifications (25.2%), while White students account for 86.5% of Access students and ethnic minorities accounted for 13.0%.

There is a general increase in student numbers over time from 1,181 in 2012/13 to 1,805 n 2019/20, with the most noteworthy growth occurring between 2014/15 and 2015/16 (from 1,142 to 1,543 students). The percentage of students A-Level only shows fluctuation, with a high in 2012/13 (61.8%), dips to around 49-50% from 2014-2017, then increases again to 59.3% by 2019/20. For BTEC only, there is a gradual increase from 9.9% in 2012/13 to peak at 16.5% in 2017/18, then slight decline. A-Level/BTEC combination qualifications increased from 5.0% in 2012/13 to peak at 10.8% in 2017/18 while Access qualifications increased from 9.9% in 2012/13 to peak at 14.5% in 2014/15, then gradually declined.

Overall, student distribution by degree subjects showed that Health and Social Care had the largest proportion with 37.4% of students (4,296). Business, Psychology, Computing, and Economics each had similar sizes with a range of 10-13% of students. Engineering and Social Work had the smallest enrolment with less than 2% each. With entry qualifications patterns, Economics recruited mostly students with for A-Level only with 90.7%, followed by Pharmacy students at 83.0% and Psychology at 77.9%. Education has the most balanced distribution across entry qualification types. Health and Social Care had the highest percentage of Access qualifications at 22.6%, and Social Work had the second-highest Access qualification rate at 29.6%. However, it should be noted that there were small student intakes. An interesting pattern showed that different academic disciplines tend to attract students from different qualification backgrounds, with traditional academic subjects drawing primarily from A-Level pathways while more vocational fields attract a more diverse range of qualification backgrounds.

The overall sample showed that Sixth Form Schools were the most common post-16 institution, representing 46.7% of students (5,169) and the remaining three categories (Sixth Form College, FE College, Other) were fairly evenly distributed at 16-19% each. Sixth Form Schools had an overwhelming preference for A-Level only qualifications (84.1%). FE Colleges showed much lower A-Level only rates (7.7%) and much higher BTEC qualifications (32.6%) and Access qualifications (45.9%). Sixth Form Colleges have moderate A-Level provision at 58.9% with significant BTEC representation at 19.8%. These patterns demonstrate how distinct post-16 institutional types serve different qualification pathways, with traditional sixth forms focusing almost exclusively on A-Levels while FE Colleges provide the primary access route for alternative qualifications. This institutional stratification likely reflects different

institutional missions, resources, student populations, and historical roles within the education system.

5.1.2 Sample: Interview participants

A total of 42 participants were interviewed and the table below provides a descriptive summary of participants.

Table 4: Summary of interview participants, (N=42)

Student interviews	**Number of participants**
Qualifications:	
A-Levels	*19 (45.24%)*
BTEC	*9 (21.43%)*
Access	*5 (11.90%)*
A-Levels/BTEC	*8 (19.05%)*
Other	*1 (2.38%)*
Year of Study:	
Level 4 (1st Year)	*8 (19.05%)*
Level 5 (2nd Year)	*23 (54.76%)*
Level 6 (Final Year)	*11 (26.19%)*
Foundation year completed: (percentage of qualification total)	
BTEC	*2 (22.22%)*
A-Levels/BTEC	*3 (37.50%)*
Foundation year completed: (percentage of total participants)	
BTEC	*2 (4.76%)*
A-Levels/BTEC	*3 (7.14%)*
Gender:	
Female	*26 (61.90%)*
Male	*16 (38.10%)*
Post-16 Institution:	
Sixth Form School	*18 (42.86%)*
Sixth Form School (Grammar)	*3 (7.14%)*
Sixth Form College	*10 (23.81%)*
FE College	*9 (21.43%)*
Other	*2 (4.76%)*
Ethnicity:	
White	*21 (50.00%)*
Global Majority	*15 (35.71%)*
Mixed	*3 (7.14%)*
Other	*3 (7.14%)*
Age at time of interview:	
Under 21	*20 (47.62%)*
Aged 21+	*19 (45.24%)*
Aged 31+	*2 (4.76%)*
**Classified as Mature students at entry*	*9 (21.43%)*

Source: Author's own interview data (n=42, collected March – July 2023)

5.2 Phase 1: Access - Getting in and getting sorted

Phase one will entail an examination of participants' pre-university backgrounds with the aim of elucidating the factors that shaped their pathway prior to enrolling in higher education. Additionally, this phase seeks to comprehend the source of support participants received while navigating the intricacies associated with gaining admission into higher education institutions.

This section will explore the influence of participants' social capital on their academic decisions following the completion of post-16 education. Specifically, it will examine the networks and resources that participants utilised and were aware of through their social connections, which facilitated their active engagement during this juncture of their academic journey.

5.2.1 Post-16 Qualification choice

The study identified a mixture of factors and motivations for the students' post-16 qualification choices. Opting for A-Levels was perceived as a natural progression by the majority of respondents, especially those electing to remain at their secondary school's Sixth Form, where pursuing A-Levels was frequently the sole viable option for university.

> *"That's what my sixth form was doing. And that's just what I thought would probably be the best."*
>
> *Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

> *"They were the ones that are most available to me, erm.....and having gone to grammar school, we weren't really given any information, I think at all on BTEC only A-Levels. I went to college, so BTECs were available, but I wasn't really aware of what courses you could even do in BTEC"*
>
> *Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College*

Individuals' social networks and relationships can influence their opportunities and access and Participant 29's experience exemplifies the impact family and peers can have on the selection of post-16 qualifications.

> *"To be honest, I didn't really explore any other options. I kind of just went with A-Levels because it was like, it was what like my parents expected me to do as well. My mates were doing. Like, I didn't really question doing like any other like, BTEC or anything."*
>
> *Participant 29, 19, Male, A-Levels, PSY, 2nd Year, Sixth Form College*

> *"Its definitely parents as well, ….. when they hear A-Levels they think that's the best…."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

From this, it can be deduced that some students may passively engage in their decision-making process when choosing to do A-Levels and perhaps unconsciously. Furthermore, the observations suggest a lack of knowledge of or restricted exposure to alternative options among some participants, thereby indicating that the more academic route of A-Level serves as the default choice for students. Individuals' social connections and networks provide them with resources and information that can shape their choices and behaviors. The limited exposure to diverse educational options could stem from the networks they are embedded in, where information about alternative pathways is not made available or valued.

> *"I did that because I actually wanted to do my three A levels which was biology, psychology, and PE, but my school didn't do PE but it wasn't enough students to hold a PE A level course. And I really wanted to do like a sport related kind of course for sixth form, so I scrapped biology and psychology and swapped it for the C tech level three extended diploma, and so that's why I did it."*
>
> *Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School*

The data additional provides valuable insights into the factors that influence some participants' decision to pursue a non-traditional post-16 route. It is evident that the selection of qualification was sometimes influenced by the absence of A-Level courses in subjects that align with the participant's interest, therefore prompting them to pursue an alternative option available at their post-16 institution.

> *"At the time, I wasn't really sure if I wanted to do sixth form. I wasn't really sure what I wanted to do. But I know I loved acting. So I thought, well, they weren't offering the subject at my school. So I was like, well, I'll go and do a BTEC instead." (Participant 11)*
>
> *Participant 11 (Mature), 22, Female, BTEC, EDU, 2nd Year, FE College*

> *"… the A-Levels that they sort of my school offered it was, wasn't really interested in them. And it wasn't really for me because I wasn't very academic…." (Participant 5)*
>
> *Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College*

For participants who did a combination of qualifications (A-Level and BTEC), the interviews highlighted a key motivator for participants' choices was the limited availability of appealing alternatives within a single qualification.

> *"Basically, the Sixth form that I did choose to go to, their only option for computing was with a BTEC. Previously, in the sixth form, they had done A-Levels, but for whatever reason, they stopped it. That's the only reason, in particular combination……why it chose the A-Levels, those are just the one I was just interested from secondary school. So I chose those."*
>
> *Participant 34, 20, Male, A-Levels/BTEC, CMP, 2nd Year, Sixth Form College*

"So I knew because I've done some research on the universities to know because I knew I roughly wanted to do pharmacy, something like that. And it was they all kind of said, to do science A-Levels. Okay, I did really well in chemistry GCSE…. So I chose chemistry….. I love music…… they didn't actually offer A-Level music. Otherwise, I probably would have done that instead. But I really wanted to do music. And that was the only option…."

Participant 28, 20, Female, A-Levels/BTEC, PHA, 1st Year, Sixth Form School

Participant 5 echoes a similar sentiment, indicating that the A-Level subjects offered at their school did not align with their interests. Additionally, the participant expresses a self-perception of not being academically inclined, reflecting prevalent assumptions within the research where A-Levels are typically regarded as more academically rigorous compared to qualifications like BTEC, which are often perceived as less academic due to their practical approach. The literature (Wilkins and Walker, 2011; Connolly, 2020) underscores a common perception of BTEC as an inadequate pathway to university, despite the reality being that many universities accept BTEC qualifications depending on the specific course of study. This misconception is further corroborated by the experiences of other students.

"So I chose to do A-Levels because I felt that that gave me a better position to get into uni. …… I felt like I got a real depth of knowledge by doing A-Levels and then it set me in the right path and gave me the right base amount of knowledge that I needed to be able to go on further into higher education."

Participant 35, 20, Male, A-Levels, PHA, 1st Year, Sixth Form School

"I thought, BTEC were a bit like a lower qualification, but I feel comfortable A-Level so I think I choose that."

Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

"…it was a running joke that BTEC was less than A-Levels. So yeah, that's why I took A-Levels. I should have done BTEC to be honest, because my understanding was probably the same level as them, but I don't know…"

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

Students who held an Access qualification as their entry qualification exhibited a more active decision-making process in their selection. Access qualification participants predominantly comprised mature students seeking to re-engage with education with the aim of using higher education. The motivation to re-engage with education stemmed from limited career opportunities and returning to academic pursuits was reported as a means to expand these opportunities and progress in their career. Another notable rationale for opting for the Access qualification over other alternatives was the cost implications as well as the duration of the program. The appeal of completing the course within a year, as opposed to the two-year timeframe typically required for A-Levels, was a significant factor in their decision-making process.

"I think that Access was the only way I knew, actually. So when I left school, I didn't want to do A-Levels at that point. I said, I'll, I'll come back to it. And when I came back to it, …..when I then decided that I wanted to go to uni…… I started to look at A-Levels that was going to be a route that I was going to take …… it was really expensive and it was time consuming and a lot harder than the access course."

"So those were the kind of only two routes I actually knew about, so I went for the access course, which was done in a year."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

5.2.2 Previous academic performance

Research has indicated that the selection of post-16 qualifications may be influenced by students' prior academic performance, with failure to meet specific grade criteria potentially determining the range of qualifications available for participants to pursue.

"I don't think I would have been able to do the maths A-Level because my grades I think you need a six or seven and I got a five at GCSE. Yeah, I did. Yeah, I did. I was predicted an eight, I think at GCSE, but I ended up getting a five, so I did slightly regret by that."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

For some participants, their subject choices and consequent qualification options were limited by their previous academic performance. This constraint on available choices may have a snowballing effect, influencing their subsequent decisions regarding university subject selection.

"I didn't get the grades required to do the standard biology chemistry or A level…., I got offered to do geography history, and something else and that would have blocked my scientific route….. so I had to go to this other school. And obviously they didn't let me have the biology, chemistry, physics, but they did offer me to do BTEC which had a combination of erm.... chemistry, physics and biology all together, which obviously not at that time, is not as like, this is not recognized so it doesn't weigh as much as A-Levels, but that was the only choice I had, so I went, I went to it"

Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College

"Well, my initial plan was not to do a BTEC. But when I did my GCSE is obviously like the grades were not enough to allow me to do A-Levels. Yeah. And I knew I wanted to do something like, it wasn't set in my head that I wanted to do pharmacy at that moment in time. But I wanted to do something like science based. Yeah. So I needed to like in order to them sciences, like I couldn't get to a level. So the closest thing was BTEC. And I knew they had like, the equivalent to like three A-Levels or something like that. That's what I went for. And then it helped me get into like, the course I wanted to do."

Participant 16, 20, Female, BTEC, PHA, 2nd Year, Sixth Form School

"I was planning on doing the medicine but obviously the grade didn't go for my GCSE. Obviously, I've got my BTEC results, they were fine, but my GCSE ones were not, so I couldn't go down the medicine path."

Participant 16, 20, Female, BTEC, PHA, 2nd Year, Sixth Form School

This can show a low level filtering effect that could happen at this point of students' academic journeys whereby the inability to meet minimum grade requirement limits some of their qualification and subject availability. Participant's 2 and 16 both enrolled in BTEC programs and navigated their journey to higher education by taking Pharmacy commencing with a Foundation year. Despite the inclusion of this preparatory year, both participants encountered challenges in grasping the course content. Although both participants opted for a science-focused BTEC in anticipation of facilitating their progression from Further Education to Higher Education, they found themselves required to undertake a foundation course before commencing their first year of study. This could be highlighting certain perceived inadequacies within BTEC qualifications. Although BTECs offer an alternative route for student to access higher education, they may not adequately prepare students for the academic rigors of university education, potentially leaving them with knowledge gaps that their A-Level counterparts would have covered in their post-16 education.

5.2.3 Institution choice

It was important to understand the reasons or motivation behind the preference for a particular education institution over another. Sixth form schools are an extension to secondary schools and tend to offer A-Level qualification pathways as their main post-16 education. Sixth form colleges usually tend to offer both academic and vocational qualification pathways to students. The key characteristic is that the students who attend this type of institution will be aged between 16-19 years old. FE colleges offer students a more adult learning environment with majority of the students being over 16 years old. There is an expectation for students to have more responsibility of their learning.

When participants were asked about their decision to remain at their secondary school sixth form, a majority of participants attributed their choice to familiarity and comfort. The participants expressed a sense of ease with teaching staff and appreciated the ability to immediately engage with their studies without the stress of having to adjust to a new environment. Furthermore, some participants indicated that the actions of their friends opting to stay on also played a role in influencing their decision to remain.

> *"I think it was more to do with the fact that that that it was familiar. So it was same teachers that taught me since Year 7, I didn't have to make many new friends, because all of my friends from secondary school stayed on. Even things like the building being familiar, but didn't have to worry about trying to find new classrooms, whatnot. And also, the fact that it was so close to home as well made it easier for me to get school."*
>
> *Participant 35, 20, Male, A-Levels, PHA, 1st Year, Sixth Form School*

> *"My friends and where I am and me knowing the teachers that made me more comfortable…."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

"It just felt easier and had my friends were and if it would, and I kind of knew the teachers already. It just felt like it easier transfer rather than looking for college."

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

This highlights the interconnectedness of participants' social networks in shaping their educational decisions. The participants' comfort and familiarity with their educational environment can be seen as a manifestation of cultural capital, where shared dispositions and habits influence their decisions. Aligning their choices with their peers could reflect the shared values and practices within their social groups.

A notable reason for one of the participants for choosing to go to an FE college was to distance themselves from the high-pressure academic environment of a grammar school, viewing a change in environment as a strategy to facilitate lowering their academic stress.

"I personally found that grammar school was a bit too academically focused for me and it was quite a high stress school to be at for me. And whilst that works, for some people, for me, it meant that I would get too stressed and then often underperform whereas some people perform really well under stress, but it didn't quite work for me too so I felt it'd be better to go to college as it's a bit of a more relaxed environment."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

In addition, FE college tend to offer a higher level of autonomy in comparison to sixth form schools and colleges, leading some participants to express a readiness for increased independence.

"It was quite positive for me because it allowed us to be a lot more independent, sort of, and the relationship with the teachers was also very different to in school…. You are treated sort of more as an adult than you were as a child."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

"it's funny, it's college was about 30 minutes away from where I lived. So it was like that independent getting, you know, getting the bus every day, you know, getting into college and just being free."

Participant 24, 22, Male, A-Levels/BTEC, EDU, 2nd Year, Sixth Form School

The decision to seek greater autonomy and transition to a different environment at an FE college can provide participants access to new social connections and support systems.

5.2.4 Higher Education aspirations

Examining the factors that impact individuals' decision to pursue higher education can provide valuable insight into their social and cultural capital, as well as their capabilities, by exploring their networks, social connections, available resources and potential opportunities. For some participants, going to university seemed to be a predetermined pathway.

"I always planned to go to university in one way or another. Um, I don't know. Pretty much throughout my whole childhood, and then later secondary school into college. I like I said, I always wanted to be a doctor and go into medicine. So it was kind of drilled into me at an early age if you want to do medicine, you have to go to university, you have to go to med school. So probably came from that, to be honest."

Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School

"Yeah that was basically always the plan."

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

"…..it's always been expected that I will go to university. So it's always been like a... yeah, it's always been like, oh, after A-Levels, I'll go to university. It was through school it was always the.. I don't think received any other information on alternate pathways apart from university at the grammar school.!

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

For some participants, the idea of attending university was unexpected and not pathway they had considered. Studies have shown that social capital within families and institutions such as schools can influence students' perceptions of academic goals which in turn influences their engagement with academic pursuits (Oranye, Ezeah and Ahmad, 2017). Participant 5, for example only contemplated pursuing higher education after achieving a high distinction on an assignment in their first year of college which indicates that the student's achievement served as a turning point in their consideration of university are a viable option.

"Yeah, so the first year I got a distinction for that first year. Then at the start of the second year, they were like, oh, if you keep this up, you can go to uni, and i was like oh okay, so that's when I really started to like, knuckle down and, you know, really work at it."

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

"….it's sort of like oh God moment. Yeah, its like I really need to do this because otherwise, what am I going to do, so I was going to like…., morning study things before school, obviously doing my lessons, studying at lunch, obviously going lessons after lunch, and then staying after school and doing more revising and revising."

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

In contrast to many A-Level students, especially those attending sixth form colleges, who are often strongly encouraged to consider university it is notable that for this BTEC student at an FE college, the notion of university enrolment was never a part of their plan until they demonstrated were capable of getting good results. The aspiration of entering university served as a significant motivator for the student to actively engage in their academics, prompting the question of, if university had been a feasible or encouraged option for them, would they have been more constantly engaged with their academic studies. This

demonstrates what the provision of support and encouragement can act as a catalyst to increasing access to opportunities.

Networks play a crucial role in participants' university decision making process. This section will explore the various types of networks and delineate the support and opportunities offered through these networks. Such analysis aims to shed light on the impact of participants' social connections on their decision-making processes. It is emphasized that participants' access to diverse networks significantly shapes their decision-making, with the type and efficacy of these networks conferring distinct advantages. From this it is evident that participants engage with different types of networks, namely familial, peer and academic. Each participant mentioned utilising at least one of these types of networks when navigating their post-16 education pathways.

5.2.5 Familial networks and influence

Some participant acknowledged the impact their familial networks had on their decision-making process, both consciously and unconsciously. Specifically, individuals whose parents had attended university often viewed attending university as the logical next step. This unconscious influence indicates that level of capital reproduction stemming from their familial network which led to these participants to predominantly focus on pursuing a university education without seriously considering alternative paths. It has been well established within the research that family background can significantly shape an individual's social and cultural capital (Kingston, 2001). Families with strong cultural capital are likely to possess socioeconomic resources that be transmitted to their children thereby positively influencing the educational aspirations and academic achievement of their children (Jaeger, 2011).

> *"My parents as well as all my like, siblings, and step siblings have gone to university. It's sort of been the .... yeah.*
>
> *Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College*

> *"I think my parents…., because both my parents have degrees. So for me, that was kind of the norm like, you go to primary school, secondary, sixth form and then uni and that was just like, it was just like for me uni was next in line."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

> *"…actually, it was quite common in my family to university actually. So my dad went to uni. And then I have an older brother who went to uni. So it was kind of like, oh, you're gonna go to uni as well, because that sort of thing. But it was never pressurized on me to like, go to uni, or sort of like my own choice. And obviously, the course that I wanted to do, I could only do it through uni."*
>
> *Participant 16, 20, Female, BTEC, PHA, 2nd Year, Sixth Form School*

Some participants highlighted the influence of parental expectations of going to university as a key determinant in their decision to go to university. They expressed a sense that the consideration of any other alternative is simply not acceptable. It should be noted that the participants reflecting this sentiment predominantly belong to minority groups, with some specifically mentioning their African heritage. Research supports this observation, with university Access rates of Black entrants in the most recent Office for Students data (Ofs, 2024) at 10.8% in 2022-23, which was above the population parity at 4% (ONS, 2021), illustrating that Black students having high rates of university enrolment. With a strong emphasis on the value of education within the communities for some these individuals, the idea of going to university is an inevitable fate.

> *"I guess being in an African household. There's no two ways about it. You have to."*
>
> *Participant 13, 22(Mature), Female, BTEC, PHA, 2nd Year, Sixth Form College*

> *"…..at first, I was thinking of doing an apprenticeship after finishing my college but if you live in African house if you try to do that, your seen as being disobedient, apparently. You have to go to uni, I just decided, well, I don't want to fight so I'm just gonna do what you want."*
>
> *Participant 12, 22, Female, BTEC, PHA, 2nd Year, FE College*

In addition, for some participants, the decision to opt to go to university was further shaped by collective impact of parental guidance and the broader family network.

> *"…it was just like, it was just like, what the other people did, they thought that was right. So a lot of people like their family friends because they've got kids like around my age, they went to sixth form. They went straight to university. And it was like a kind of like a traditional mindset of that. And anything out of those categories you were seen as just like, what's wrong with you kind of thing?*
>
> *Participant 33, 20, Female, A-Levels, ENG, 3rd Year, Sixth Form School*

Even for participants whose parents did not go to university, some level of encouragement and support was given from their parents to pursue higher education. While their family's educational background may have not directly resulted in the accumulation of capital, there is still a recognition of the value society places on education.

> *"Oh, I started talking about university when my sixth form was ending. Yeah, I'm, uh, I don't really plan for the future that much ahead throughout my whole life. So when it came to me, I didn't know what to do. So I was like, the next stage is theoretically university. My mom wanted me to go university as well. I was the first person in my family to go. So yeah, you know, might as well go uni see my luck, try my luck out."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

The impact of familial influence was not limited to parents, it extended beyond that to include siblings. For participants 10 and 21, despite none of their parents having gone to university, their sibling had attended university. Observing a sibling undertaking higher education played a significant role in their decision to go to university.

> *"Well, none of my parents had gone. My brother had but he'd stayed at home to do it. So it was different because I'm like the polar opposite to him, I'll go fly the nest, he'll stay at home, like, very different. But obviously him going to university kind of, I was able to ask him a few questions."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

> *"Yeah, so it could have been the plan, my oldest sister went to university. But other than that, my parents never went to any kind of uni or anything, so kind of were the first out of our family to go, but it was always kind of my plans after sixth form to go to uni."*
>
> *Participant 21, 20, Female, A-Levels, PSY, 2nd Year, Sixth Form College*

Additionally, familial networks played a supportive role for participants when thinking about career choices and subject selection. Participant 11 shared this insight into her experiences when making the decision to go to university.

> *"….me and my mum will go for long walks during lockdown on I've talked about this sort of stuff being like, oh should I become a PT, should I become like, a coach and stuff. And then she was like, well you can always look into universities."*
>
> *Participant 11 (Mature), 22, Female, BTEC, EDU, 2nd Year, FE College*

This illustrates the participant utilising their familial network with their decision-making process and seeking input from others helped in the identification of their strengths which in turn aids making an informed decision based on collective perspectives.

5.2.6 Peer network and influence

Peer networks were highlighted as influence factors in participants' decision making. Participants engaged with these networks in various ways, for some participants the decision of a friend going to university played a role in encouraging them to go university.

> *"My friend, my closest friend was going to uni, I was like I might as well follow him as well."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"And I think also just because probably my friends like they were doing it I think only have a couple of friends that I knew from back then who didn't go to university. And so it was just like, automatic…."*
>
> *Participant 29, 19, Male, A-Levels, PSY, 2nd Year, Sixth Form College*

Another function of peer networks was serving as a means of giving participants insight into passions. Friends helped to illuminate the blind spots and help in fostering self-awareness so

that participants can discover aspects of themselves. This process facilitated participants in identifying courses that resonated with their strengths which further elucidates how peer networks can serve as a valuable resource for individuals in navigating their educational and career pathways. Interestingly friends were also able to exert influence on participants virtually, through them sharing their experiences at university. Participant 10 reflects on seeing friends' online stories via social media platforms and that helped to give them some insight into university life.

> *"But I guess it was just more like at the time, like all people that I've gone to school with had all gone to university. So I've seen them live, like through social media, seeing them live like their university lives. And it made me go okay, like, I can ask them a few questions like, what do you think of this? And yes, that's kind of what I did just connect with people that I knew they'd gone, and then find out more.*
>
> *Participant 10 (Mature), 26, Female, Access, PSY, 2nd Year, FE College*

5.2.7 Academic networks and influence

Academic networks were also evident in the data and were utilised in various ways. Initially, academic connections such as teachers were utilised by participants to seek advice on university as well as being used as a way to gain insight into participants' interests.

> *"Yeah, it was just sort of my tutor said, you go to uni if you want, and I was like oh cool."*
>
> *Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College*

> *"It was one of my teachers talked a lot about university and what you want to do, and I thought, it's just a fun thing to do. And it's definitely, definitely helps you in your career. And I just thought it would be like the best thing for me."*
>
> *Participant 32, 19, Male, A-Levels, CMP, 1st Year, Sixth Form School*

> *"At the time,….my teacher inspired me, he was half, he was a PE teacher but he was also a physiotherapist. So he had that background….. I was inspired….to do physiotherapy. And I was like, I guess that's the route I had to go to go to uni."*
>
> *Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School*

Teachers are regarded as role models for participants and their perspective and knowledge is seen as valuable. This sentiment is further exemplified by participant 10 whose decision regarding their choice of degree as notably influenced by feedback they received from the teacher reflecting their passion and interests.

> *"I think it was that someone external could see what I was thinking. I was thinking that I'm not really sure that I wanted to do nursing. And it's a lot, a nursing degree is a lot. And for someone to see that observe that actually my heart really wasn't, I thought, oh, gosh, yeah, that's actually showing before I've even started."*
>
> *Participant 10 (Mature), 26, Female, Access, PSY, 2nd Year, FE College*

The teacher's influence can steer students into a particular direction and as demonstrated by participant 10 who was directed towards higher education based on their passion. Conversely, some participants indicated a contrasting experience where the teachers redirected them from their passion to a more career driven direction.

> *"I love history. That's like my passion. And I was like, if you're going to study history, but then so my teachers kind of made me choose Computer Science for career reasons. Computer science I don't mind I like like don't like have a passion for it."*
>
> *Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

It could be argued that the credibility of teacher's opinions stems from the social capital associated with their educational institution. Educational institutions can provide social capital to students through the institution's internal networks, as well as external networks that can not only establish but also help students maintain networks that can facilitate opportunities (Mcgonigal *et al.*, 2007) . Values and norms upheld at the institutional level, as established by the school community, can in turn contribute to students' educational decision making. This is reflected in the data with reports of participants mentioning university as the next step that was often strongly encouraged by their institution. This was often reported by students who attended sixth form within a school or sixth form college.

> *I think when I started my GCSEs, like, all my teachers would drill down into almost like, go to uni, go to uni. They didn't really say anything about alternatives.*
>
> *Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

> *"….like I said, at school, the university was the only pushed doctrine.*
>
> *Participant 23, 21, Female, A-Levels, SWK, 3rd Year, Sixth Form School (Grammar)*

> *They were very good at the push towards university in very much a sense of with that sixth form in particular, that students that want to go to so we're going to get into university in one way or another.*
>
> *Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School*

The difference within institutional approaches can be highlighted here, with participants who attended FE college reporting a more flexible approach where alternative pathways to university were introduced to be explored. In addition, there was some differences reflected in experiences even with the similar institutions. A comparison of two participants that both attended FE colleges but did two different qualifications (A-Level vs BTEC) revealed contrasting experiences. The A-Level student received encouragement to pursue university, along with resources to support their progress into higher education.

"it's always been expected that I will go to university. So it's always been like a..., after A-Levels, I'll go to university."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

"And yeah, we had in like, form time because we had I think, an hour every week or two weeks. I'm not sure, they would help us put together sort of a personal statement and, like, identify which paths you want to go down."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

However, the student with a BTEC reported that only when he was able to deliver a good grade of a distinction was when the notion of university was broached with them. From his experience university was not an option or even a goal until he demonstrated potential through a good performance. This links to the prevalent assumptions within educational institutions and academic literature where A-Levels are regarded as more academic in comparison to qualifications such as BTEC, which are often perceived as less academic due to their practical approach (Wilkins and Walker, 2011; Connolly, 2020). These perceptions are sometimes perpetuated by educators as well as policymakers, creating a hierarchical view of entry qualifications. This can in turn influence how students are treated even within comparable institutions; students with different qualifications can have differing experiences.

"Yeah, so the first year I got a distinction for that first year. Then at the start of the second year, they were like, oh, if you keep this up, you can go to uni, and i was like oh okay, so that's when I really started to like, knuckle down and, you know, really work at it."

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

I would say, yeah, they they definitely did help me but it wasn't as much as what you would think. Like it was a lot of just me. Like they're encouraging and they they they sort of there was like a very few, there's probably about two or three of us who were actually gonna go to uni….. and they would just give us these little, you know, extra bits of advice of how to just get through the last bit like change this, this could put your grade up. And so they were helpful in that point, but it was it was, can't think of the of the same saying that it was sort of like good pieces of information, but not very often.

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

The contrast in experiences shows an established anticipation of attending university for the A-Level student, resulting in the implementation of activities and support systems within their college to facilitate their university application process. However, the BTEC student's journey reveals a clear lack of expectation in regard to university attendance until the student excelled in their end of year assessment. The participant further notes that within his cohort of twenty students, only three, including himself, were planning on going to university. The level of support for their university aspirations is described as somewhat limited, with irregular instances of encouragement and provision of relevant information. This observation suggests a lack of established systems aimed to support students going to university.

The analysis further revealed the potential for differential treatment even within the same institution. One participant recounted their experiences whilst on the gifted and talented program, noting a significantly different experience in comparison to her peers not part of the program from the same exact institution.

> *"So people that weren't in gifted and talented, I guess they gave them more options, whereas people in gifted and talented it was always you're going to uni, you have to go to uni."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

> *"Yeah, I think the supervisors that was a big thing. So it was only people in gifted and talented that got supervisors, whereas everyone else who wasn't in gifted and talented, like they were given like, maybe leaflets, assemblies and things, but they didn't have someone directly that they could talk to you. So I guess that made it a bit harder for them."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

> *"Yeah, we also had like separate assemblies, too, but it was everything was very separate."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

The resources provided to the gifted and talented program students were not always extended to other students. This discrepancy highlights how students with the same qualifications even within the same institution may encounter differing experiences, thereby constraining some of the students' capacity to fully capitalise on the potential opportunities available within the institution, which could otherwise generate further social and cultural capital for its students.

5.2.8 University preparation and Institution support

As noted earlier, the influence of mentors and educators played a pivotal role in shaping some of the participant's academic decisions. Each participant had varying levels of engagement and interactions with an educator at their institution. Examples of support included activities such as personal statement assistance, assemblies, university events.

The participants who went to sixth form colleges reported an array of activities to help them of university. Participant 9 expressed satisfaction with the support provided.

> *"I think they covered it pretty well because they have some people, some students come in and talk about it. And I think they covered it pretty well."*
>
> *Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

Furthermore, reports of institutions engaging former students to deliver talks about their university experiences, helped current students gain insight into what they might experience at university.

Similar activities were noted among participants who attended sixth form schools. The existence of established in-built systems such as outreach programmes provided by the institution to give some prompts for students to start thinking about university was highlighted. With some participants highlighting the institutional university push, having such provisions and support structures is to be expected.

> *"Yeah, that was in, yeah, I think the beginning of the year 12. They sort of, our school got us to look at different like uni requirements as well and just to have a look at those and then kind of start thinking about what uni want to go to and what you want to study."*
>
> *Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

Participant 1, a member of the gift and talented programme offered at a Sixth Form School recalls being allocated a supervisor who supported and guided them through the university application process. It is elaborated that this privilege was exclusive to students within the program and not extended to all individuals at the institution. The participant also reflects that being on the program had been a somewhat stressful experience, yet beneficial, because having someone keeping them accountable through that process proved to be advantageous.

> *"So everyone was kind of like allocated someone [supervisor] that they could go to you and talk to you about like uni choices."*
>
> *"You're being pressured that you also have a supervisor who's on you to like come to uni where its like, you just do everything."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

An effective method through which post-16 institutions can support their students' higher education engagement is by creating opportunities to inform them. A student reported engaging in numerous open days at a local university that had established a partnership with their sixth form. Direct interaction with university-related activities enabled students to gain valuable insights into the university application process as well as firsthand experiences from a highly reliable source. Furthermore, taster sessions give the opportunity for students to experience university environment, thereby assisting in forming realistic expectations of what university life would be like.

> *"So I went to like a lot of open days uni in Liverpool. And then also, the sixth form I went to was in partnership with the University of Liverpool, and other universities in Liverpool. So we just went down went to like a lot of their programs, they would have like taster sessions for us to go to. So that was helpful as well."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

“Um, I would actually, there wasn't, I wouldn't say it was one specific person. I think if anyone it would have been, like our personal advisors, where they would let us know what the students they had before and where they are now, because some of the students would get back to them about the experience and how uni is so was mainly a personal advisors, no one else.”

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

“But no, they were good. They told us how to go through the UCAS application, sat us down, helped us build our CVs. Things like that. Well, they were really really good.”

Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School

“Oh yeh they tried to bring people that went to universities.”

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

It is important to highlight that a significant portion of the information provided was primarily focused on how to get into university. Some participants alluded to the lack of preparation of everyday living of university life and other key factors such as financial considerations that can significantly impact the overall university experience.

“Not really, not in the sense of the wider range. If you if you tune in on purely academics, yes. Because they taught you what you needed to know, to get to university, or at the end of the day is their job, but for the wider range of life and what goes on and what university is really like, instead of selling you a dream of aww it's lovely as you get up and you do what you want, you could plan for this. You have so much money and all of that, that they they don't tell you that the realisation three months in that you're skint. You're hungry and things like that. They don't they don't tell you.”

Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School

“Um, it was very like, what's the word? Minimal? Like minimal efforts to help. They were like, they will tell you which universities are good and stuff like that. They would help you through the application process, but don't really like guide you of what uni is like, or stuff like that. Oh, if there is any other like, options and stuff like that, so yeah.”

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

It should be noted that participant 7 reflects on their previous education, recognizing both its limitations and acknowledging their own accountability for not actively seeking support and fully utilizing the available services to aid in the preparation for university. This highlights elements of the capabilities approach, emphasizing that despite the presence of support, a lack of engagement in utilising the resources can still limit an individual’s ability to accumulate the benefits by their institution.

For individuals who attended FE colleges, some participants reported receiving inadequate support, implying a lack of substantial support provided by the institution in their efforts to get to university.

"I don't think I really got a lot. I think a lot of it was just from my own research, just looking through. I just, I think I just googled, how do I get to uni? Yeah. Yeah, I think I've tried there was something at the uni, which was this into program. And I contacted uni. And they said, No, that's, that's not for you. And I realized that that's, I think that's for international students. Yeah. I just don't know how to get into uni. Yeah. So I don't feel like there was any kind of one to talk to you about it. But I just I found it some how and applied and things just worked out."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

However, the participant does make references to their tutor running workshops to inform students about the various stages involved in getting to university as well as supporting them with their personal statements. This is interesting as the student distinguishes between the college wide resources and those offered by a specific tutor. Despite both being affiliated with the institution, this distinction implies that the college's support can be viewed differently from students' perspectives.

"I think, on the access course, that same tutor, he ran like a workshop where we kind of did things in stages. So we would write the personal statement together, and he would, you know, read through it, we will listen to so there was quite a lot of support with applications. And they said, you know, it needs to be done by this day. Yeah, I'll just with UCAS and everything."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

For some participants, the nature of their chosen course limited their university preparation. Participant 11 pursued a drama BTEC which is often a programme that has a different pathway for their participants and often students are more likely end up at a drama school rather than traditional university. Consequently, this participant had limited exposure to university preparation activity because pursing higher education was an unlikely progression next step.

"I mean, it was kind of brought up a little bit, it's more common for you to go to like drama school and stuff."

"I don't remember a lot of people from my course actually then going on to university or they just did like, the higher education course at my college. So it wasn't really like university set-up."

Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College

Unlike reports from students from sixth form institutions, in the case of FE colleges, there appears to be a relatively limited emphasis from the institution on encouraging students to go to higher education. Participant 5, who reported only being prompted about university being a possibility after he achieved a good grade shows the institution having somewhat low expectations for their students to go to university. This shows that the institution does not initially prioritize supporting the students to aspire for university. The participant further reflects:

> *"I thought that, you know, people will go to A-Levels, and they'll go to uni. Like, I've never heard of anyone going from being from a college type. So like, that's not gonna happen I'll just see what happens after this really. Yeah, it was just sort of my tutor said, you go to uni if you want, and I was like oh cool."*
>
> *Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College*

This illustrates that until their tutor had mentioned it, they had somewhat limited amount of information about access to university. In addition, the participant was under the assumption that only A-Level students go and certainly not from an FE college background. This speaks to participant's aspiration and motivation and could indicate a lack of an academic culture within the institution. The participant's perceived lack of support could be explained by some of the challenges they referenced during the interview such as behavioural issues among other students consuming the tutor's time, thereby restricting the support available. A general low level of motivation towards academic work could give some insight into why the participants had not previously considered university, especially considering that many of their peers shared similar dispositions. This somewhat reflects a deficiency in a supportive network. The tutor's intervention can symbolise a form of capital that is shared with the student, altering their aspirations and fostering an interest in going into higher education once they realized the opportunities available through the BTEC qualification and college.

Participant 8 who went to an FE college but studied A-Levels demonstrates differential support for students within same institution but studying for different qualifications. In contrast to participant 5, they indicate having access to career meetings. Although they chose not to utilize some of the services provided to them, they acknowledge being aware of the available resources and how to access them if needed. Participant 8's main support came from their form tutor, who helped with their personal statement as well as supplying a reference for them.

> *"My form tutor, I guess at college helped a lot with applications that he did my reference, and then he was there to help at any point. My stepbrother is like an A-Level history teacher so he's, I think he's pretty aware of the process. He also helped. And with regards to personal statement editing, and just general like questions about the process. I think that's it really."*
>
> *Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College*

For this the utilisation of social capital emerges as a valuable asset providing support, advice and access to opportunities that facilitate the navigation of decision-making about HE. This shows the deliberate and unintentional mobilisation of social connections and networks to gain information, guidance and assistance in educational pursuits. A good amount of support was given to participant 8 from their form tutor which is in contrast to participant 5's experience, who also attended an FE college but received limited assistance. This demonstrates the different experiences for students who study A-Levels than those who student BTECs.

In conclusion, when comparing institutions there were some similarities in term of activities provided to students to inform them about their university options such as having an advisor, getting help with personal statements and group talks. It was highlighted by some participants that many of the activities and support around university was focused on getting into university and not enough focus on what happens once you get there. Some students recalled having ex-students coming in to talk to them about their experiences at university however some of the participants did not feel this was sufficient. With most participants having gone to sixth form, there seems to be a general assumption that university is the next step, and students are geared towards that choice more than any other alternative.

A reference to the taster days attended as well as the utilisation of family networks such as siblings who had gone to university, enabled participants to get a good sense of what they might experience once they get to university. The workload transition from post-16 to higher education, being able to manage the academic responsibilities whilst living independently was a concern for many of the participants. Other concerns raised were mental health provisions, financial stability and university diversity. It is noteworthy that mature students, raised concerns about being older that typical students.

> *"I was worried that I wasn't going to like it because I knew that I was gonna be like three years older than like most people that were freshers. So I was worried about the age thing."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

Some participants actively made a choice to not have any expectations for university as a way to limit their concerns and not end up being disappointed by the workload that comes with the transition from post-16 to higher education.

The transition from post-16 education to university does present some challenges and both approaches represent coping mechanism for managing the anticipated academic intensity that comes with higher education, though it may not adequately prepare students for the realities they will face when transitioning to university level studies in Phase 2.

5.3 PHASE 2: Transition - Getting started

Phase two focuses on the pivotal transition period from Further Education to Higher Education, concentrating on the students getting started with their first year at university. This also includes some reflections for students who did a foundation year before moving onto first year.

This section will be presented using a mixed methods format starting with the regression results of students' Level 4 (first year) performances. This is supplemented by reflections from students from the qualitative interviews that add insights into the results.

5.3.1 Students' performance differences: Hierarchical Linear Regression

A five-stage hierarchical linear regression was performed to determine what relationship the predictor variables performance at Level 4. Variables were entered in six steps: demographics (Model 1), POLAR4 quintile groups (Model 2), Entry qualification type (Model 3), Post-16 Institution type (Model 4), degree subject pathways (Model 5) and degree subjects with entry qualification interactions (Model 6). Using a hierarchical regression enables the systematic testing of how each set of variables improve predictions beyond previously entered variables, showing the variable specific contributions while controlling for known factors. A summary of the six models is shown in table 5 and the results are split and presented into between two time periods pre-COVID cohorts in table 6 and COVID affect cohorts in table 7.

5.3.1.1 Pre-COVID cohorts (2012/13 – 2016/17)

Examining the factors influencing Level 4 performance for the pre-COVID cohorts (N = 5,145), a summary of the final model is shown in the table below. A full summary of all models are in Appendix 7 and all models were statistically significant.

Table 5: Summary of Level 4 Pre-COVID hierarchical linear regression analysis (Final Model).

Variable	*B*	*SE b*	*β*	*t*	*p*
(Constant)	65.405	0.639		102.353	<.001
Age at Entry: 21+	2.686	0.630	0.083	4.260	<.001
Age at Entry: 31+	2.130	0.844	0.045	2.523	0.012
Gender	-1.191	0.395	-0.047	-3.014	0.003
Ethnicity	-3.231	0.421	-0.100	-7.666	<.001
Disability	-2.063	0.395	-0.065	-5.226	<.001
Quintile_1	0.644	0.519	0.019	1.241	0.215
Quintile_2	0.538	0.476	0.018	1.130	0.259
Quintile_4	-0.054	0.461	-0.002	-0.116	0.907
Quintile_5	-0.862	0.465	-0.030	-1.853	0.064
POLAR4 Missing	-6.173	1.649	-0.047	-3.744	<.001
BTEC	-15.633	1.308	-0.433	-11.955	<.001
Access	-0.199	3.834	-0.006	-0.052	0.959
A-Level_BTEC	-9.267	1.384	-0.203	-6.695	<.001
IB	-4.019	2.261	-0.041	-1.777	0.076
UG or PG	-0.983	1.220	-0.012	-0.806	0.420
Other	-5.635	2.803	-0.106	-2.010	0.044
Sixth Form College	0.282	0.450	0.009	0.628	0.530
FE College	0.362	0.582	0.012	0.622	0.534
Post_16 Other	0.004	0.544	0.000	0.007	0.994

Post_16 Missing	-6.304	2.311	-0.036	-2.728	0.006
Computing (CMP)	1.328	0.960	0.026	1.384	0.166
Economics (ECO)	-1.240	0.680	-0.033	-1.824	0.068
Education (EDU)	-0.682	1.094	-0.014	-0.623	0.533
Engineering (ENG)	-1.741	1.859	-0.014	-0.937	0.349
Health and Social Care (HSC)	5.353	0.674	0.219	7.944	<.001
Pharmacy (PHA)	-2.181	0.799	-0.045	-2.729	0.006
Psychology (PSY)	-3.359	0.707	-0.091	-4.750	<.001
Social Work (SWK)	-3.557	1.984	-0.041	-1.793	0.073
BTEC_CMP	3.358	1.907	0.035	1.761	0.078
Access_CMP	-19.954	5.559	-0.061	-3.590	<.001
ALevelBTEC_CMP	-1.120	2.437	-0.007	-0.460	0.646
Other_CMP	0.864	4.214	0.003	0.205	0.838
BTEC_ECO	7.188	5.451	0.017	1.319	0.187
Access_ECO	-14.986	7.194	-0.030	-2.083	0.037
ALevelBTEC_ECO	2.036	2.679	0.011	0.760	0.447
IB_ECO	1.802	3.572	0.008	0.505	0.614
Other_ECO	-1.540	4.687	-0.005	-0.329	0.743
BTEC_EDU	4.939	1.868	0.061	2.643	0.008
Access_EDU	-6.200	4.471	-0.034	-1.387	0.166
ALevelBTEC_EDU	0.342	2.235	0.003	0.153	0.879
IB_EDU	3.744	4.964	0.011	0.754	0.451
Other_EDU	-3.014	3.654	-0.017	-0.825	0.410
BTEC_ENG	17.857	7.790	0.029	2.292	0.022
Access_ENG	-2.484	5.607	-0.008	-0.443	0.658
ALevelBTEC_ENG	2.652	7.811	0.004	0.340	0.734
Other_ENG	10.939	6.950	0.022	1.574	0.116
BTEC_HSC	10.665	1.450	0.217	7.355	0.000
Access_HSC	-3.509	3.817	-0.092	-0.919	0.358
ALevelBTEC_HSC	5.994	1.655	0.087	3.621	<.001
IB_HSC	5.993	3.727	0.025	1.608	0.108
Other_HSC	4.256	2.938	0.066	1.449	0.148
BTEC_PHA	-1.260	10.666	-0.001	-0.118	0.906
Access_PHA	-25.677	6.531	-0.059	-3.932	<.001
ALevelBTEC_PHA	2.645	4.032	0.009	0.656	0.512
IB_PHA	4.695	4.633	0.014	1.013	0.311
Other_PHA	-0.270	4.536	-0.001	-0.060	0.953
BTEC_PSY	-1.732	2.776	-0.009	-0.624	0.533

Access_PSY	-9.937	4.211	-0.067	-2.360	0.018
ALevelBTEC_PSY	4.817	2.393	0.031	2.013	0.044
IB_PSY	1.114	3.513	0.005	0.317	0.751
UG_PSY	1.666	10.645	0.002	0.157	0.876
Other_PSY	-4.829	4.271	-0.019	-1.130	0.258
BTEC_SWK	1.499	3.384	0.007	0.443	0.658
Access_SWK	-6.849	4.643	-0.043	-1.475	0.140
ALevelBTEC_SWK	1.554	4.234	0.005	0.367	0.714
UG_SWK	-11.567	10.805	-0.013	-1.071	0.284
Other_SWK	11.470	4.764	0.042	2.407	0.016
R2	0.492				
ΔR^2	0.242				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

The first model explored the impact of socio-demographic information (age, gender, disability and ethnicity) on the students' Level 4 outcome. The model explained 7.8% of total variance and was significant, *F (5, 5139) = 87.24, p<.001.* In the second model, which uses the higher education participation quintiles measure (POLAR4) as a proxy for socioeconomic background as additional predictors after controlling for the effect of the socio-demographic variables. The model was not significant and only explained a small increase of 0.2% of total variance, *F (5, 5134) = 1.75, p = .120.* The third model included entry qualifications as a predictor after controlling for the socio-demographic characteristics and participation quintiles. The model explained an additional 3.8% of total variance and was significant, *F (6, 5128) = 36.65, p<.001.* Controlling for effects of socio-demographic characteristics, participation quintiles and entry qualifications, the fourth model included Post-16 Institution type as predictors. The model explained a small but significant increase of 0.1% of total variance, *F (4, 5124) = 1.93, p<.001.* In the fifth model, degree subjects variables were added and explained 21.9% of variance, *F (8, 5116) = 82.05, p<.001, which was the largest improvement across model.* The final model included degree subject interactions with entry qualification type, whilst controlling for all previous independent variables. The model explained 24.2% of total variance and was significant, *F (39, 5077) = 3.97, p<.001.*

The ANOVA results confirm that all model except Model 2 and Model 4 were statistically significant and improved prediction of Level 4 outcomes. The addition of degree subject emerged as the strongest predictor (10% variance added) followed by entry qualifications (3.8% variance added).

5.3.1.2 COVID affected cohorts (2017/18 – 2019/20)

Examining the factors influencing Level 4 performance for the pre-COVID cohorts (N = 4,023), a summary of the final model is shown in the table below. A full summary of all models are in Appendix 8 and all models were statistically significant.

Table 6: Summary of Level 4 COVID affected cohorts hierarchical linear regression analysis (Final Model)

Variable	*B*	*SE b*	*β*	*t*	*p*
(Constant)	65.458	0.719		91.023	<.001
Age at Entry: 21+	2.425	0.748	0.067	3.242	0.001
Age at Entry: 31+	3.123	1.135	0.050	2.752	0.006
Gender	-2.752	0.438	-0.118	-6.287	<.001
Ethnicity	-4.114	0.419	-0.153	-9.816	<.001
Disability	-1.887	0.436	-0.064	-4.327	<.001
Quintile_1	0.668	0.572	0.021	1.168	0.243
Quintile_2	0.030	0.545	0.001	0.055	0.956
Quintile_4	-0.129	0.523	-0.005	-0.248	0.805
Quintile_5	-0.138	0.517	-0.005	-0.267	0.790
POLAR4 Missing	3.759	1.753	0.032	2.144	0.032
BTEC	-11.022	1.179	-0.338	-9.345	<.001
Access	-6.234	2.952	-0.162	-2.112	0.035
A-Level_BTEC	-4.120	1.278	-0.100	-3.224	0.001
IB	-3.679	3.790	-0.034	-0.971	0.332
UG or PG	-1.866	1.872	-0.016	-0.997	0.319
Other	-13.327	2.116	-0.275	-6.298	<.001
Sixth Form College	-0.628	0.499	-0.020	-1.259	0.208
FE College	0.426	0.670	0.014	0.636	0.525
Post_16 Other	1.174	0.639	0.035	1.836	0.066
Post_16 Missing	4.184	2.633	0.025	1.589	0.112
Computing (CMP)	4.887	0.870	0.127	5.618	<.001
Economics (ECO)	-0.813	0.747	-0.022	-1.087	0.277
Education (EDU)	-1.402	1.113	-0.031	-1.260	0.208
Engineering (ENG)	-0.088	1.577	-0.001	-0.056	0.955
Health and Social Care (HSC)	1.477	0.786	0.059	1.879	0.060
Pharmacy (PHA)	-1.728	0.868	-0.040	-1.992	0.046
Psychology (PSY)	-3.580	0.795	-0.103	-4.502	<.001
Social Work (SWK)	-5.694	2.166	-0.067	-2.628	0.009
BTEC_CMP	-0.412	1.740	-0.005	-0.237	0.813
Access_CMP	-3.965	4.269	-0.019	-0.929	0.353
ALevelBTEC_CMP	0.262	2.154	0.002	0.122	0.903

IB_CMP	6.971	5.797	0.023	1.203	0.229
Other_CMP	16.433	3.676	0.081	4.471	<.001
BTEC_ECO	-10.013	4.506	-0.033	-2.222	0.026
Access_ECO	-17.236	6.060	-0.047	-2.844	0.004
ALevelBTEC_ECO	-0.909	3.246	-0.004	-0.280	0.779
IB_ECO	5.722	5.209	0.023	1.099	0.272
Other_ECO	0.088	5.242	0.000	0.017	0.987
BTEC_EDU	1.838	1.905	0.022	0.965	0.335
Access_EDU	-1.781	4.166	-0.009	-0.428	0.669
ALevelBTEC_EDU	1.116	2.342	0.009	0.477	0.634
IB_EDU	10.584	11.302	0.014	0.936	0.349
Other_EDU	6.689	3.049	0.048	2.194	0.028
BTEC_ENG	-2.547	4.437	-0.009	-0.574	0.566
Access_ENG	-2.445	5.756	-0.007	-0.425	0.671
ALevelBTEC_ENG	-2.433	4.037	-0.010	-0.603	0.547
IB_ENG	15.161	11.366	0.021	1.334	0.182
Other_ENG	8.185	4.754	0.029	1.722	0.085
BTEC_HSC	0.506	1.433	0.010	0.353	0.724
Access_HSC	0.208	3.005	0.005	0.069	0.945
ALevelBTEC_HSC	-1.250	1.733	-0.017	-0.721	0.471
IB_HSC	7.186	5.538	0.026	1.298	0.195
Other_HSC	6.700	2.361	0.105	2.838	0.005
BTEC_PHA	5.185	2.713	0.032	1.911	0.056
Access_PHA	-10.742	6.074	-0.029	-1.768	0.077
ALevelBTEC_PHA	-4.336	3.267	-0.021	-1.327	0.185
IB_PHA	5.059	8.422	0.010	0.601	0.548
Other_PHA	15.060	5.744	0.041	2.622	0.009
BTEC_PSY	-0.707	2.343	-0.005	-0.301	0.763
Access_PSY	-3.997	3.522	-0.030	-1.135	0.257
ALevelBTEC_PSY	1.227	2.268	0.010	0.541	0.588
IB_PSY	-0.484	4.895	-0.002	-0.099	0.921
Other_PSY	2.147	4.000	0.009	0.537	0.591
BTEC_SWK	7.035	3.877	0.033	1.815	0.070
Access_SWK	4.043	4.311	0.024	0.938	0.348
ALevelBTEC_SWK	4.156	4.467	0.016	0.930	0.352
EntryQualOtherM_SWK	10.089	4.246	0.048	2.376	0.018
R2	0.422				
ΔR^2	0.178				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

The hierarchical multiple regression analysis was conducted to examine the predictive relationship between various demographic factors and Level 4 outcomes. Model 1, which included basic demographic predictors was statistically significant and explained 3.7% of the variance, *F (5, 4017) = 30.50, p < .001.* Model 2 added higher education participation quintiles (POLAR4) as a predictor, resulting in a minimal increase in explained variance, *F (5, 4012) = 1.717, p = .127*. This change was not statistically significant, suggesting that the quintiles added little explanatory power beyond demographics. The introduction of entry qualifications in model 3 demonstrated a substantial improvement in predictive power *F (6, 4006) = 61.53, p < .001*, explaining 12% of the total variance. The 8.1% increase change in variance is highly significant, suggesting that entry qualifications were a strong predictor. Model 4, which accounted for post-16 institutions showed a slightly small but significant improvement over Model 3, *F (4, 4002) = 2.68, p = .030.* The addition of degree subject variables in model 5 explained 16.3% of variance *F (8, 3994) = 24.26, p < .001*. The significant 4.1% increase in variance revealing degree subjects as the second largest improvement among models, suggesting them to be important predictors. The final model, which incorporated entry qualifications and degree subject interactions explained 17.8% of the variance, *F (39, 3955) = 1.84, p < .001,* which was statistically significant. This suggests that the relation between entry qualification and Level 4 outcomes varied across different degree subjects.

5.3.1.3 Entry qualifications effects

The addition of entry qualifications in model 3 after controlling for student's demographic characteristics and socioeconomic factors, revealed entry qualifications as a crucial predictor which presented interesting findings about the relationship between entry qualifications and students' academic performance for both the pre-COVID and COVID affected cohorts. The regression results showed that for the re-COVID cohorts, the addition of entry qualifications explained 3.8% of variance while the COVID affected cohorts explained 8.1% of variance. This is more than double the pre-COVID impact, suggesting that during the pandemic, prior academic qualifications became noticeably more important. A-Level only students consistently had better performances that most qualifications at Level 4. A-Level only students showed the best stability between the pre-COVID and COVID affected cohorts while other qualifications saw shifts in their performances during COVID.

For the pre-COVID cohorts, BTEC qualifications consistently showed the strongest negative effects on performance, with this impact becoming more pronounced in each subsequent model (β = -6.709 to -7.263 to -9.033 to -15.633). Model 6 used interaction terms and explored whether qualifications effects varied by degree subject. BTEC students performed less well on average compared to A-Level students. However, it should be noted that they did demonstrate strong subject-specific variations and performed well in subjects such as

engineering (+17.857) and health sciences (+10.665). A similar pattern is seen for the COVID affected cohorts where BTEC only qualifications were associated with the strongest negative effects, with more pronounced effects in model 5 (β = -9.268 to -9.527 to -10.651 to -11.022). However, amongst the COVID affected cohorts, when degree subject interactions were added, BTEC only students showed positive outcomes in computing (β = 4.887).

Students with A-Level/BTEC combination students also experienced significant negative effects, though not as severe as those with BTEC only qualifications for the pre-COVID cohorts. They showed consistent pattern of disadvantage and by the final model, the effects had doubled from (β = -4.651) in model 3 to (β = -9.267) in model 6. The disadvantage of students with A-Level/BTEC qualifications increased significantly when controlling for degree subjects and interactions, which was a similar pattern to BTEC only students. For the COVID affected cohorts, student with A-Level/BTEC combination qualifications showed moderate negative effects through model 3 to model 5 (β = -3.844 to -3.797 to -4.508 to -4.120) and has much less variation when controlling for additional variables. Overall, the gap between A-Level/BTEC students and A-Level only students was more than twice as large in the final pre-COVD model compared to the COVID affect model (β = -9.267 vs –4.120).

The impact of Access qualifications showed a clear contrast between non-COVID and COVID-affected cohorts. In pre-COVID cohorts, the first-year performance of having Access qualifications showed an initial negative effect which increased when controlling for degree subject choices but then substantially decreased and became statistically insignificant in the final model with interactions across models (β = -2.960 to -3.337 to -5.668 to -0.199). In the case of Access students, utilising a hierarchical approach allows for deeper exploration of factors influencing performance. The disadvantage for Access students becomes insignificant when degree subjects and interactions are controlled for, which suggests that Access students' lower performances could be mostly explained by their degree subject choices and how their qualification aligned with those subjects. In contrast, Access students in COVID-affected cohorts consistently performed less well across all models (β = -6.222 to -6.158 to -7.193 to -6.234) with these negative effects remaining statistically significant even after controlling all factors. This suggests that the COVID pandemic may have disadvantaged students with Access qualification students.

IB students showed different performance patterns between pre-COVID and COVID-affected cohorts. In pre-COVID cohorts, IB students consistently showed modest negative effects that grew slightly more negative across models (β = -2.446 to -2.538 to -1.504 to -4.019), though these effects became statistically non-significant in later models. In contrast, COVID affected IB students initially showed minimal or slightly positive effects which gradually shifted to a

negative effect (β = 0.324 to 0.007 to 0.256 to -3.679), though like their pre-COVID counterparts, these effects remained statistically non-significant. This suggests that while both groups of IB students showed some negative trends in their performance, neither group's effects were statistically significant enough to draw strong conclusions about IB qualification impact on 1st year performance. Overall, IB qualifications appear to provide academic preparation that is at least comparable to A-Levels in terms of university performance. The non-significant differences between IB and A-Level students in both the pre-COVID and COVID affected cohorts suggest these qualifications provide similarly effective university preparation. However, it should be noted that the sample size for IB students was relatively very small.

For students entering with a degree level qualification, there was no significant performance differences from A-Level only students within both the pre-COVID and COVID-affected cohorts. Pre-COVID undergraduate students showed positive effects in models 3 and 4, and by model 6 their performance showed a small insignificant disadvantage compared to A-Level only students (β = 0.564 to 0.280 to -2.623 to -0.983). For the COVID affected UG students showed remarkably different outcomes, with essentially no significant impact on performance across all models (β = -0.001 to -0.583 to -2.318 to -1.866). Subject-specific interactions for UG students in Model 6 were mostly non-significant, indicating that student with UG qualifications' performance relative to A-Level students did not vary substantially across different degree subjects. This suggests that students with UG qualifications perform similarly across disciplines regardless of their prior subject experience.

5.3.2 Model 6 simulations

To gain a deeper understanding of student performances within degree subject pathways and entry qualifications, a simulation model was created to illustrate average performances in school. The scenario considered the average student to be: age at entry<21, female, White, without disability, from quintile 1, attending an FE college. These remain the same and only the entry qualification and degree subject pathway changes. Table 7 given the output of the simulation.

Table 7: Level 4 model 6 simulation (Pre-COVID and COVID)

	Pre-COVID				COVID			
	A-levels	BTEC	Access	Alevel/BTEC	A-levels	BTEC	Access	Alevel/BTEC
Business	66.41	50.78	66.21	57.14	66.55	55.53	60.32	62.43
Computing	67.74	69.77	46.46	65.29	71.44	66.14	62.59	66.81
Economics	65.17	73.60	51.42	68.45	65.74	56.54	49.32	65.64
Education	65.73	71.35	60.21	66.75	65.15	68.39	64.77	67.67
Engineering	64.67	84.27	63.93	69.06	66.46	64.00	64.11	64.12

Health and Social Care	71.76	77.08	62.90	72.40	68.03	67.06	66.76	65.30
Pharmacy	64.23	65.15	40.73	69.06	64.82	71.74	55.81	62.22
Psychology	63.05	64.68	56.47	71.23	62.97	65.84	62.55	67.78
Social Work	62.85	67.91	59.56	67.96	60.86	73.59	70.59	70.71

Source: Author's own model simulation analysis of UEA undergraduate data (2012 – 2020)

For the pre-COVID cohorts, students in Health and Social Care consistently performed well across most entry qualification pathways, particularly A-levels (71.76) and BTEC (77.08). Students from Engineering with BTEC qualifications also excelled significantly (84.27). Health and Social Care students maintained a strong performance in both cohorts, and those with BTEC entry qualifications achieved the highest average performance during the COVID period (73.59). The lowest performances in both periods were seen among Access route students, with Pharmacy students struggling pre-COVID (40.73) and Economics students facing difficulties during COVID (49.32). A significant shift occurred in Engineering, which went from having the highest BTEC performance pre-COVID (84.27) to a notable decline during COVID (64.00), while Computing students showed consistent improvement across all entry routes during the transition to COVID.

5.3.2.1 Interview insights – A-Level only strong performance.

From the regression analysis of both the pre-COVID and COVID affected cohorts, entry qualifications emerged as a significant predictor of academic performance at Level 4, with the gap between A-Levels and alternative qualifications becoming more pronounced in the final model (Model 5), even when accounting for other variables. A-Level only qualifications demonstrated the most consistency when degree subject interactions were added, as they showed better performances across most subject areas.

These findings are further supported by the qualitative data about students' experience and how different entry qualifications affect student academic preparation and experiences at university. With A-Level only students consistently outperforming most of their peers, the data from the interviews revealed that some A-Levels only students felt academically prepared for university coursework, especially in subjects directly related to their A-Level studies. Participant 4, 14 and 32 noted:

> *"……the first semester for our course was all anatomy like physiology based and they will things I did at A-Level anyway. A lot of people on my course that are on my course that did BTECs so it's stuff that they hadn't covered, where I had already covered all of it. So, I was very relaxed, I was like, this is…, this is easy. "*
>
> *Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School*

"...even me for myself, you be like, Oh, I've done A-levels. We've done this before."

Participant 14, 21, Female, A-Levels, PHA, 2nd Year, Sixth Form School

"Yes, I think a lot of our content is repeated because you're not required to do a computer science A-Level as part of this course. And that means that quite a few people I think, at one point were raised hands in a lecture, maybe between a quarter and a third of people haven't done the A-Level. So that's an A lot of the content is repeated. So those people have maybe a slight disadvantage compared to the people that have because I did find a lot of the content quite easy because I have done the A-Level."

Participant 32, 19, Male, A-Levels, CMP, 1st Year, Sixth Form School

These participants felt their A-Level studies provided them with prior knowledge of certain topics, giving them some academic advantage and preparation for their first year at university. The perceived advantages that A-Level only students sometimes had in certain subjects was a point of frustration for some students with alternative entry qualifications.

"Yeah, like that was a lot during first year because first year is kind of like the foundation knowledge, but the knowledge from A-Level in it, but they have that knowledge. So that was another struggle and even to now like, when we do labs, and they're doing like…. the chemical structures, or like, mechanisms stuff like that, oh yeah you should have known this, this is A-Level stuff. My friends say, oh, yeah, I did this at A-Level so this is easy. I didn't do A-Level, I didn't."

Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College

Having said that, the data also revealed that this was not the case for all A-Level only students and some students still faced challenges adapting to the specific demand of university-level study. This perceived advantage created by having done for A-Levels sometimes resulted in a passive approach to studies for some of the A-Level only students.

"Yeah I was like oh, this is so easy, this is crazy. I just like you know do things send the night before and I guess for two grades I was like it must be like this. It's gonna be like this for like the rest of my degree."

" I assumed it would be easy when we're going through all the lectures like…….. I would leave things until like two nights before and then it dawned on me. Oh, my God, ….like a month's worth of work to catch up on in like two days, like I can't even start working on this because there's so much...."

"…..that was like a massive shock to me. …..looking back and it was obvious, but just coming from like, just cruising through first year, it was a shock to me…."

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

"You know, we all fell into the same trap……. they'll have extra stuff but then be like, if we haven't done A-Levels then you might want to have to look at this to consolidate your knowledge. So it was more of even though I was in the "advantage" part of the group, I still felt like, it wasn't helping neither groups, because you're telling the A-Level people, they've already done it and, in my head, I'm already thinking I've done it, I've done it so I don't need to look back at it."

"I've seen my friends who have gotten into the groove of…… they thought because I've done it before I am at an advantage. But am thinking no they made us at a disadvantage as they telling us you've done this before."

Participant 14, 21, Female, A-Levels, PHA, 2nd Year, Sixth Form School

Participant 6's reflection showed that having had easy experiences with the first couple of assignments that had content that was similar to their A-Levels, they believed this pattern will continue and doing this last-minute would not significantly affect them. However, they experienced significant shock when they realised this approach was not viable anymore. This complacency is also seen in participant 14's reflection, despite being the supposedly advantaged group, being advised to skip over material with the assumption that A-Level students already knew it, lead to them missing opportunities to review and fully consolidate this knowledge. The lecturer's guidance made the participant feel they did not need to engage with extra work, which created passivity in their first-year learning approach. This highlights the importance of how interventions are communicated to students and the assumptions educators may make that can have unintended negative consequences. Importantly, A-Level students' preparation varies significantly - some have directly relevant post-16 subjects for their degree course, while others encounter the content for the first time. For an intervention to be accessible to all students, the judgment should be left to them to assess, based on their experience, whether they need to use it.

This is further illustrated by some students expressed feeling like their A-Levels had not adequately prepared them for the independent research and coursework style required at university.

"I think just because of the way that you learn a level was just like, you get given some content, you remember it, and then you regurgitate it, like onto the page. And in a little like, you know, kind of four- or five-minute question like a timed exam, you don't really get taught the patience and like, the broader, like, kind of persistence that you need to like, do a bigger piece of work."

Participant 29, 19, Male, A-Levels, PSY, 2nd Year, Sixth Form College

Although this participant had done an A-Level that directly linked to their degrees course subject, they felt that the writing and research skills required at university were not sufficiently developed through A-Levels and that their overall university experience was quite different from what they had anticipated based on their A-Level preparation.

5.3.2.2 Interview insights – Negative performances from BTEC only and A-Level/BTEC combination students.

The regression results revealed that BTEC qualifications consistently showed strong negative effects on first year performance for both the pre-COVD and COVID affected cohorts. Some reflections from the interviews showed that some BTEC only students having a feeling of

always having to ‘catch-up’ and seeing peers having easier time because course content is based on things covered at A-Level.

> *“So for example, BTEC students, when I first came to uni, they assumed that oh, yeah, everybody does A-Level, so you should all have covered this content back in A-Level, if you did like A-Level biology, chemistry, whatever, but I didn't, I did BTEC. So I found that along with me and other people who did BTEC were struggling more than the A-Level people, because there is a gap between A Level Biology and BTEC National Applied Science that is different, we don't cover the same thing they do.”*
>
> *Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College*

There were also reports of some BTEC only students feeling less confident in exam-based assessments compared to their A-Level only peers. However, it should be noted there were some positive reflections from BTEC only students that highlighted the transferable practical skills and experience with coursework that the qualification afforded them. For example, Participant 20 felt well-prepared for handling coursework assignments and meeting deadlines at university.

> *“Um, I think similar is, like the whole coursework side of it, like, I did a lot of coursework in sixth form, and I did, well I do sort of, like a lot of assignments in university. The difference is, like to how much you have to include, like, how specific you have to be, obviously, the reference inside of it..”*
>
> *Participant 20, 21, Female, BTEC, EDU, 2nd Year, Sixth Form College*

When degree subjects and entry qualification interactions were added to the model, BTEC only student showed positive performances in subjects such as engineering and health sciences for pre-COVID cohorts, and in computing for COVID affected cohorts. Similar to some of the A-Level only students, Participant 34’s reflection below highlights the advantages of having familiarity with a subject area, particularly when studied before university and the benefits it provides to ease the transition to related university course. This computing student found that their BTEC qualification provided them with a head start in some modules, easing their transition into university level work. This indicates that BTECs can also provide relevant knowledge that can give students a boost in certain modules at university.

> *“...there were definitely stuff that were previously covered doing a BTEC. So I have some familiarity from that. So, I had…...personally felt like I had a bit of a easier time during tests and stuff like that, since I already knew stuff. But this was like only during the first weeks, of course, where it was mostly covering. I think like just the fundamental stuff that needs to be known. Just because the course itself is made for if you've never taken in A-Levels or BTEC introduces to these fundamentals.”*
>
> *Participant 34, 20, Male, A-Levels/BTEC, CMP, 2nd Year, Sixth Form College*

The regression analysis also revealed a nuanced aspect regarding mixed qualifications - students with combined A-Level/BTEC combination qualifications performed better than those

with pure BTEC qualifications for all cohorts, suggesting that exposure to A-Level study provides some academic advantage. Like BTEC only students, A-Level/BTEC combination students showed strong performances in health sciences for pre-COVID cohorts and computing for COVID cohorts. Participant 28 who took a combination of A-Levels and BTECs found the mix of qualification helped her transition to university, particularly in managing the different types of assessments. Participant 1 viewed her choice to combine A-Levels (PE, Business and Biology) and a BTEC (Health and Social Care) as a strategic way for her to balance her workload and prepare for university life.

> *"I'd heard it was like a lot of essay writing, a lot of reading, whereas A-Levels, it's not really like that. It's more like just how to answer exam questions. So, it doesn't really prepare you much, like maybe in terms of content, but the actual, like practicality of uni, I don't think is the greatest. So, I just took that BTEC just to see and also cause health was related to what I wanted to do."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

However, even this mixed qualification approach did not fully bridge the gap with A-Level only performance.

5.3.2.3 Interview insights – Access students

The quantitative analysis showed that Access students had mixed academic performance outcomes, shifting from initial negative effects to a slight positive effect in later models for pre-COVID cohorts. Though these positive effects were not statistically significant. The typical profile of Access students being more mature students or those returning to education after a break was reflected in the profile of participants that undertook this qualification. Access students found that their course helped them prepare for university in different ways such as introducing them to academic writing and referencing as well as offering them different types of assessments methods such as essays and presentations. This could explain their improved performance, which shifted from negative to an almost positive.

> *"I feel like the access course really prepared us quite well, for that. So, we'd learned how to do referencing things like that. …. I felt really lucky on my access course, we learned a lot of stuff that were applicable to uni. Just writing assignments, researching topics, articles, I think, actually on Access course, we had the UEA come in the library, and they talked about finding articles and stuff that was really helpful. So yeah, actually, I felt quite well prepared."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

Having said that, there is a stark difference between the performance of pre-COVID cohorts and the COVID affected cohorts. For the COVID affected cohorts, Access students consistently performed poorly in comparison to A-Level only students and maintained strong negative effects throughout all models. This suggest that Access students were particularly vulnerable to COVID-related disruptions. The COVID-19 pandemic created multifaceted

challenges for students including distrusted first year experiences of university, the switch from practical coursework to online formats, difficulties of being able to access in-person support and general anxiety of contracting the virus which had an effect on student losing out on crucial learning time. Some of the mature Access students reported difficulty retaining information during online learning, feeling disconnected from university life, and missing the social aspects of education.

> *"Online learning, it was really hard. I felt like I didn't retain anything."*
>
> *"So I think in the first semester, I got through it by doing a lot of my lectures at home online, which just kind of isolated myself. And then in the second semester, I thought I would try that more to come in, and I made friends. That just made the biggest difference."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

Participant 10 speaks about the challenges they faced with online learning during the COVID-19 lockdowns, and feeling isolated and disconnected from the university experience in their first year. The transition to in-person learning showed an improvement, highlighting the importance of physical presence and social interaction for them. This indicates that the pandemic may have created additional barriers for Access students, possibly due to disrupted learning environments, reduced support systems, or other pandemic related challenges that particularly impacted this group of mostly mature students.

5.3.2.4 Conclusion: Entry qualifications effects

In conclusion, empirical analysis demonstrated that entry qualifications emerged as a significant predictor of academic achievement in the first year, with the disparity between A-Level only qualifications and alternative qualifications remaining pronounced in the final model, controlling for other variables. A-Level only students consistently had better academic outcomes at the end of their first year across the majority of disciplines, indicating that this qualification pathway may have provides more preparation and facilitated an effective transition into higher education compared to BTEC-only, A-Level/BTEC combination, or Access qualification routes.

BTEC only and A-Level/BTEC combinations both showed weaker performances in comparison to A-Level only students; however, A-Level/BTEC combination students performed slightly better than BTEC only students, demonstrating some advantages of having an A-Level. Access students showed the most complex results when comparing pre-COVID and COVID affected cohorts. They showed improved performance for pre-COVID cohorts; however, they experienced the strongest negative effects among the COVID cohorts.

This research reveals a persistent qualification hierarchy in higher education performance, with traditional A-Levels remaining the strongest predictor of academic success in the

transition phase. While combination qualifications offer some benefits over vocational only pathways, they still do not match the academic advantages of A-Levels alone. The COVID-19 pandemic exacerbated these disparities, particularly for Access students, suggesting that crisis situations may amplify existing educational inequalities.

5.3.2.5 POLAR4 effects

For both the pre-COVID and COVID affected cohorts, the addition of the POLAR4 quintiles had minimal impact and none of the quintile variables were statistically significant. Interestingly for all cohorts, quintile 1 showed small but insignificant positive effects for both , whereas quintile 5 maintained negative effective, though not significant. Overall, the analysis suggests that socioeconomic background, as measured by POLAR4 quintiles, had minimal direct impact on academic performance, with effects being relatively small compared to other demographic variables. The consistent non-significance of quintile effects across models indicates that socioeconomic factors may not be as influential on academic outcomes as other variables in the study.

5.3.2.6 Post-16 institution effects

The addition of post-16 institution types revealed minimal impact on Level 4 performances for both the pre-COVID and COVID-affected cohorts. Sixth Form College attendance showed no significant effect on academic outcomes in either period compared to Sixth Form Schools suggesting that students from Sixth Form Colleges performed similarly to those from other institution types when controlling for demographic factors and entry qualifications. Further Education (FE) College attendance also showed no significant effect for both periods. These findings suggest that once student demographics and entry qualifications are considered, the specific post-16 institutional students attended played a relatively minor role in determining first-year university performance.

5.3.2.7 Demographic characteristics

Gender showed consistent significant effects across all models in both time periods. Male students performed significantly worse than female students, although gap narrowed during the pandemic. The effect remained significant even after controlling for all other factors, suggesting a persistent gender-based difference in academic outcomes. Ethnicity was a significant predictor in all models, with students from the Global Majority performing worse than White students in both periods. The negative effect was stronger within the COVID affected cohorts compared to the pre-COVID cohorts. This suggests that the pandemic may have exacerbated ethnicity-based educational disparities. Student who reported a disability consistently had a lower academic performance in comparison to their non-disabled peers for both periods. The persistence of this effect across all models indicates ongoing barriers for

disabled students regardless of other factors. Age showed interesting patterns, with mature students (21 and over) performing significantly better than the under 21 group.

5.4 PHASE 3

Phase Three ‘getting Settled’ focuses on student progress and success during their second and third years of academic study. During this time, students interact with various people through different communication channels, seeking different types of support as their needs evolve. The analysis of these interactions can provide valuable insights into how students develop and maintain relationships within their university networks. The impact of first year performance and experience must be considered at this phase as it can influence students’ trajectories. Students may find the transition from Level 4 to Level 5 more academically challenging, which can affect their support requirements and support seeking behaviours.

This section also utilises a mixed-methods approach to analyse student progression. First, it presents regression analyses of academic performance across three measures: Level 5 (second year) results, Level 6 (final year) results, and overall final grades (combining second- and final-year performance) for both pre-COVID and COVID affected cohorts. These quantitative findings are then complemented by qualitative data from student interviews, providing deeper insights into their lived experiences during these academic stages.

5.4.1 Regression Level 2, 3 and Final grade: pre-COVID

A five-stage hierarchical mixed regression was performed to determine what relationship the predictor variables performance at level 5, 6 and final grade. A summary of the final model is shown in the table below and full results will be presented in Appendix 9.

Table 8: Summary of Level 5, 6 and Final Grade Pre-COVID cohorts' hierarchical linear regression analysis (Final Model)

Variable	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*
(Constant)	69.782	0.558		125.138	0.000	71.547	0.516		138.788	0.000	70.601	0.434		162.623	0.000
Age at Entry: 21+	1.245	0.554	0.047	2.248	0.025	-1.336	0.484	-0.057	-2.760	0.006	1.107	0.440	0.053	2.515	0.012
Age at Entry: 31+	2.512	0.753	0.063	3.337	0.001	0.234	0.653	0.007	0.359	0.720	2.451	0.601	0.078	4.080	0.000
Gender	-1.811	0.349	-0.088	-5.187	0.000	-1.827	0.322	-0.095	-5.674	0.000	-1.687	0.276	-0.103	-6.113	0.000
Ethnicity	-4.391	0.370	-0.167	-11.873	0.000	-3.939	0.343	-0.159	-11.476	0.000	-3.985	0.297	-0.190	-13.431	0.000
Disability	-2.372	0.354	-0.091	-6.699	0.000	-2.085	0.333	-0.084	-6.253	0.000	-2.090	0.284	-0.100	-7.352	0.000
Quintile_1	-0.337	0.461	-0.012	-0.730	0.465	-0.589	0.416	-0.023	-1.417	0.156	0.042	0.365	0.002	0.116	0.908
Quintile_2	-0.338	0.420	-0.014	-0.805	0.421	-0.509	0.383	-0.022	-1.331	0.183	-0.066	0.332	-0.003	-0.198	0.843
Quintile_4	-0.568	0.406	-0.024	-1.399	0.162	0.044	0.373	0.002	0.118	0.906	0.045	0.320	0.002	0.140	0.888
Quintile_5	-0.717	0.411	-0.031	-1.743	0.081	0.227	0.379	0.010	0.598	0.550	0.015	0.323	0.001	0.048	0.962
POLAR4 Missing	-1.989	1.420	-0.019	-1.401	0.161	-3.025	1.266	-0.033	-2.389	0.017	-2.840	1.096	-0.036	-2.592	0.010
BTEC	-6.826	1.223	-0.221	-5.580	0.000	-4.720	1.147	-0.159	-4.114	0.000	-5.294	0.957	-0.214	-5.532	0.000
Access	-4.213	2.925	-0.145	-1.440	0.150	-7.629	2.719	-0.271	-2.806	0.005	-7.302	2.256	-0.313	-3.237	0.001
A-Level_BTEC	-5.259	1.206	-0.140	-4.360	0.000	-5.349	1.153	-0.148	-4.640	0.000	-4.865	0.955	-0.162	-5.097	0.000
IB	-6.057	2.000	-0.077	-3.029	0.002	-3.080	1.906	-0.042	-1.617	0.106	-3.513	1.576	-0.057	-2.229	0.026
UG or PG	-2.639	1.098	-0.037	-2.404	0.016	-0.899	0.910	-0.016	-0.988	0.323	-2.386	0.858	-0.043	-2.779	0.005
Other	-7.123	1.916	-0.169	-3.718	0.000	-3.921	1.816	-0.129	-2.159	0.031	-4.147	1.573	-0.124	-2.637	0.008
Sixth Form College	-0.356	0.398	-0.013	-0.895	0.371	-0.340	0.372	-0.013	-0.914	0.361	-0.437	0.314	-0.020	-1.391	0.164
FE College	-0.591	0.523	-0.023	-1.129	0.259	-0.874	0.486	-0.037	-1.798	0.072	-0.942	0.416	-0.047	-2.264	0.024
Post_16 Other	0.412	0.483	0.017	0.854	0.393	1.169	0.440	0.051	2.654	0.008	0.300	0.382	0.016	0.785	0.432
Post_16 Missing						-7.448	0.898	-0.159	-8.295	0.000					
Computing (CMP)	-4.674	0.825	-0.110	-5.663	0.000	-2.501	0.757	-0.063	-3.304	0.001	-1.854	0.673	-0.052	-2.754	0.006
Economics (ECO)	1.097	0.593	0.035	1.850	0.064	-1.173	0.552	-0.040	-2.126	0.034	-0.209	0.461	-0.009	-0.454	0.650
Education (EDU)	-2.512	0.931	-0.066	-2.699	0.007	-2.535	0.863	-0.072	-2.937	0.003	-2.076	0.720	-0.070	-2.883	0.004
Engineering (ENG)	-3.961	1.746	-0.037	-2.268	0.023	-6.138	1.953	-0.054	-3.143	0.002	-4.337	1.615	-0.046	-2.685	0.007

Health and Social Care (HSC)	0.481	0.586	0.024	0.821	0.412	1.437	0.543	0.078	2.645	0.008	1.392	0.456	0.088	3.053	0.002
Pharmacy (PHA)	-2.755	0.698	-0.070	-3.950	0.000	-4.595	0.653	-0.123	-7.037	0.000	-3.676	0.544	-0.120	-6.760	0.000
Psychology (PSY)	-6.298	0.614	-0.212	-10.258	0.000	-4.778	0.574	-0.169	-8.326	0.000	-5.150	0.478	-0.221	-10.778	0.000
Social Work (SWK)	-4.345	1.827	-0.060	-2.379	0.017	-1.693	1.700	-0.024	-0.996	0.320	-2.726	1.407	-0.048	-1.937	0.053
BTEC_CMP	1.087	1.848	0.012	0.588	0.556	1.260	1.722	0.014	0.732	0.464	1.661	1.503	0.021	1.106	0.269
Access_CMP	-15.157	5.955	-0.039	-2.545	0.011	-11.606	8.774	-0.018	-1.323	0.186	-12.495	7.260	-0.024	-1.721	0.085
ALevelBTEC_CMP	-0.049	2.143	0.000	-0.023	0.982	5.058	2.095	0.041	2.414	0.016	4.473	1.843	0.040	2.428	0.015
EntryQualOtherM_CMP	4.753	2.964	0.029	1.604	0.109	2.328	2.734	0.016	0.852	0.394	-0.607	2.391	-0.005	-0.254	0.800
BTEC_ECO	-3.993	5.313	-0.010	-0.751	0.452	3.751	4.950	0.010	0.758	0.449	0.279	4.094	0.001	0.068	0.946
ALevelBTEC_ECO	0.409	2.568	0.002	0.159	0.874	0.010	2.465	0.000	0.004	0.997	0.502	2.039	0.004	0.246	0.806
IB_ECO	4.763	3.141	0.026	1.516	0.130	1.657	2.898	0.010	0.572	0.568	2.429	2.443	0.018	0.994	0.320
Other_ECO	-4.049	3.554	-0.018	-1.139	0.255	-0.599	3.211	-0.003	-0.187	0.852	-4.240	2.789	-0.025	-1.520	0.129
BTEC_EDU	-0.063	1.674	-0.001	-0.038	0.970	-1.379	1.568	-0.022	-0.880	0.379	-1.457	1.304	-0.029	-1.117	0.264
Access_EDU	-4.457	3.473	-0.033	-1.283	0.199	3.948	3.292	0.029	1.199	0.230	1.294	2.724	0.012	0.475	0.635
ALevelBTEC_EDU	-1.622	1.929	-0.017	-0.841	0.400	-1.926	1.815	-0.021	-1.061	0.289	-2.777	1.503	-0.037	-1.847	0.065
IB_EDU	3.843	4.241	0.014	0.906	0.365	0.496	3.970	0.002	0.125	0.901	0.756	3.283	0.004	0.230	0.818
UG_EDU						1.644	8.404	0.003	0.196	0.845					
Other_EDU	2.384	2.781	0.017	0.857	0.391	-2.172	2.349	-0.022	-0.925	0.355	-0.433	2.210	-0.004	-0.196	0.845
BTEC_ENG	8.267	5.563	0.021	1.486	0.137	4.643	6.294	0.010	0.738	0.461	5.609	5.205	0.015	1.078	0.281
Access_ENG	3.765	4.750	0.015	0.793	0.428	8.300	4.734	0.032	1.753	0.080	5.222	3.916	0.025	1.334	0.182
EntryQualOtherM_ENG	7.188	5.760	0.018	1.248	0.212						3.655	4.558	0.012	0.802	0.423
IB_ENG						-22.715	8.764	-0.036	-2.592	0.010					
Other_ENG						6.435	5.484	0.018	1.174	0.241					
BTEC_HSC	0.689	1.349	0.017	0.511	0.609	-0.365	1.268	-0.009	-0.288	0.773	-0.111	1.060	-0.003	-0.104	0.917
Access_HSC	-0.037	2.910	-0.001	-0.013	0.990	4.855	2.711	0.158	1.791	0.073	3.156	2.244	0.124	1.407	0.160
ALevelBTEC_HSC	-0.651	1.451	-0.011	-0.448	0.654	0.312	1.388	0.006	0.225	0.822	-0.446	1.155	-0.010	-0.386	0.699
IB_HSC	8.170	3.285	0.042	2.487	0.013	4.786	3.011	0.027	1.589	0.112	5.436	2.551	0.036	2.131	0.033

Other_HSC	2.727	2.062	0.051	1.322	0.186	0.521	1.920	0.015	0.271	0.786	0.216	1.685	0.005	0.128	0.898
BTEC_PHA	-22.809	9.042	-0.034	-2.523	0.012										
Access_PHA	7.052	9.417	0.010	0.749	0.454	7.787	8.769	0.012	0.888	0.375	6.587	7.252	0.013	0.908	0.364
ALevelBTEC_PHA	-1.764	3.628	-0.007	-0.486	0.627	2.912	3.391	0.012	0.859	0.390	0.168	2.804	0.001	0.060	0.952
IB_PHA	1.639	3.966	0.006	0.413	0.679	0.621	3.931	0.002	0.158	0.875	1.050	3.250	0.005	0.323	0.747
Other_PHA	0.977	3.575	0.004	0.273	0.785	0.410	3.491	0.002	0.117	0.907	-1.012	2.924	-0.006	-0.346	0.729
BTEC_PSY	-5.446	2.974	-0.027	-1.832	0.067	2.806	3.361	0.012	0.835	0.404	3.455	2.978	0.016	1.160	0.246
Access_PSY	-0.692	3.275	-0.006	-0.211	0.833	6.241	3.061	0.056	2.039	0.042	3.587	2.532	0.040	1.417	0.157
ALevelBTEC_PSY	3.101	2.046	0.025	1.516	0.130	2.999	1.944	0.026	1.543	0.123	2.635	1.608	0.028	1.639	0.101
IB_PSY	4.437	3.084	0.025	1.439	0.150	2.534	2.902	0.015	0.873	0.382	2.423	2.400	0.018	1.010	0.313
UG_PSY	1.304	9.016	0.002	0.145	0.885	5.613	8.385	0.009	0.669	0.503	3.832	6.943	0.007	0.552	0.581
Other_PSY	5.643	3.231	0.029	1.747	0.081	2.274	3.114	0.012	0.730	0.465	2.057	2.616	0.013	0.786	0.432
BTEC_SWK	2.578	3.346	0.013	0.770	0.441	-2.006	3.118	-0.011	-0.643	0.520	-0.455	2.581	-0.003	-0.176	0.860
Access_SWK	-1.819	3.762	-0.014	-0.484	0.629	4.454	3.516	0.036	1.267	0.205	2.312	2.908	0.023	0.795	0.427
ALevelBTEC_SWK	-4.137	3.810	-0.017	-1.086	0.278	-2.733	3.729	-0.011	-0.733	0.464	-3.719	3.084	-0.019	-1.206	0.228
UG_SWK	-2.13	9.179	-0.003	-0.232	0.817	-0.519	8.536	-0.001	-0.061	0.952	-1.036	7.068	-0.002	-0.147	0.883
Other_SWK	7.244	3.662	0.037	1.978	0.048	3.468	3.427	0.019	1.012	0.312	3.184	2.872	0.021	1.109	0.268
R2	0.43					0.417					0.473				
ΔR^2	0.185					0.174					0.224				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

For Level 5 outcomes, the first model explained 5.6% of total variance and was significant, *F (5, 4707) = 55.403, p<.001.* Model 2 only explained a small increase of 0.2% of total variance, producing a small but significant improvement *F (5, 4702) = 2.335, p = .040.* Model 3 explained 11.1% of total variance was significant, *F (6, 4696) = 46.726, p<.001.* The fourth model explained a small and non-significant increase of 0.1% of total variance, *F (3, 4693) = 2.324, p=.073.* Model 5 explained 17.5% of total variance, *F (8, 4685) = 44.580, p<.001.* The final model explained an additional 10.0% of total variance and was significant, *F (44, 4648) = 1.549, p= .018.* All five models accounted for 18.5% of the variance in Level 5 performances.

For Level 6 performances, the first model explained 5.1% of total variance and was significant, *F (5, 4869) = 52.764, p<.001.* The second model, only explained an additional 0.7% of total variance and was also significant, *F (5, 4864) = 7.112, p<.001.* The third model explained 9.3% of total variance was significant, *F (6, 4858) = 31.233, p<.001.* Model 4 explained 11.3% of variance and was significant, *F (4, 4854) = 27.502, p<.001.* Model 5 explained 16.6% of variance and was significant, *F (8, 4846) = 38.534, p<.001.* The final model included degree subject interactions controlling for all previous independent variables. The model explained 17.4% of total variance and was not significant, *F (38, 4808) = 1.156, p= .235.*

The final degree classification is calculated using a weighted average of Level 5 (40%) and Level 6 (60%) results. From the regression results, the first model explained 7.5% of total variance and was significant, *F (5, 4462) = 72.301, p<.001.* The second model only explained a small but significant increase of 0.5% of total variance, *F (5, 4457) = 4.530, p<.001.* Model 3 explained 13.6% of total variance was significant, *F (6, 4451) = 48.073, p<.001.* The fourth model explained a small but significant increase of 0.2% of total variance, *F (3, 4448) = 4.132, p=.006.* The fifth model explained 21.5% of total variance and was significant, *F (8, 4400) = 54.718, p<.001*. The final model explained accounted for 22.4% of the variance in final grade performances and was not significant, *F (43, 4404) = 1.288, p= .117.*

The hierarchical regression models demonstrated varying levels of explanatory power across different academic stages. For Level 5 performance, the models collectively explained 18.5% of the total variance, while for Level 6, they accounted for 17.4%. The models showed the strongest explanatory power for final grade outcomes, explaining 22.4% of the total variance.

The addition of degree subject pathways emerged as the most influential factor. These added 6.3% to the explained variance at Level 5, made a substantial contribution to the 5.3% total variance at Level 6, and added 7.7% to the explained variance in final grades. The addition of entry qualifications in model 3 also proved to be a significant predictor, contributing 5.3% additional variance at Level 5, 9.3% total variance at Level 6, and 5.6% to the explained variance in final grades.

Demographic factors demonstrated a consistent influence across all academic levels, explaining 5.6% of variance at Level 5, 5.1% at Level 6, and 7.5% for final grades. In contrast, socioeconomic background showed minimal impact, adding only 0.2%, 0.7%, and 0.5% to the explained variance at Level 5, Level 6, and final grades respectively.

Post-16 Institution type also demonstrated limited influence on academic performance. Its contribution was particularly modest at Level 5, adding just 0.1% to the explained variance and notably being the only non-significant predictor in the analysis. While it contributed to reaching 11.3% variance at Level 6, its impact on final grades remained small at 0.2% additional variance.

The analysis ultimately reveals that degree subject pathways and entry qualifications serve as the strongest predictors of academic performance, while socioeconomic background and institution type play relatively minor roles in explaining academic outcomes. All models demonstrated statistical significance, with the exception of Post-16 Institution type at Level 5 and degree subject and entry qualifications interactions at Level 6 and Final Grade.

5.4.1.1 Entry qualifications effects

A-Level only students consistently demonstrated stronger academic performance throughout their degree journey. The academic advantage of A-level entry qualifications was evident at Level 4 and maintained through Levels 5 and 6, ultimately resulting in the strongest final degree outcomes compared to all other entry qualification routes. This consistent pattern of superior performance suggests that A-Level preparation provides students with a robust foundation for university study.

BTEC only students faced significant academic challenges throughout their degree journey. For Level 5, the negative effect fluctuated but remained substantial (β = -6.041 to 6.826 in the final model). For Level 6, the negative effect stayed relatively consistent (β = -4.072 to 4.720). For Final Grade, BTEC students performed substantially lower than A-Level only students (β = -4.694 to -5.294). The consistency of this disadvantage across models, even when accounting for various control variables, indicates persistent structural challenges in the transition from BTEC to university study and is maintained beyond first year into second and third year.

Students entering university with a combination of A-Levels and BTECs also experienced academic challenges throughout their degree studies. At Level 5, the effect was relatively stable (β = -5.276 to -5.259). The pattern of academic challenges continued at Level 6, where A-Level/BTEC combination students maintained a consistent negative performance gap. Starting with a -4.055 point difference in Model 3 to before widening to -5.349 points in the

final model. The persistent statistical significance of these results across all models indicates consistent challenges faced by students with combined qualifications. In terms of final degree outcomes, A-Level/BTEC combination student did not appear to mitigate the disadvantages associated with BTEC qualifications. The results showed a negative effect that remained fairly consistent (β = -4.344 to -4.865). The consistency of this effect, suggests that combining A-Levels with BTECs did not successfully bridge the performance gap compared to students with A-Levels alone.

At Level 5, Access students initially faced notable academic challenges and showed an initial negative effect which increased when controlling for degree subject pathways and interactions and remained statistically significant throughout across all models (β = -4.584 to -3.882 to -4.824 to -15.157). This suggests that Access students did not close the performance gap with their A-Level peers at Level 5.

The Level 6 results revealed a more complex pattern. Access students began with a moderate disadvantage of -2.186 points, which showed some improvement to -1.858 points when controlling for institution type. However, the fifth model revealed a decline in performance, with the gap widening to -2.770 points. The decline continues in the final model with -7.629, with all models being statistically significant.

The final degree outcomes painted a concerning picture for Access students. Initially showing a substantial statistically significant disadvantage of -4.208 points comparable to BTEC students, they saw some improvement to -3.336 points when institutional factors were considered and was statistically significant. The fifth model showed a decline in performance to -4.267 and was statistically significant. And the decline in performance continued in the final model with the performance gap more than doubling to -12.495 points but was not statistically significant. This marked the largest negative effect among all qualification types, suggesting that Access students faced the most substantial challenges in achieving competitive final degree outcomes compared to their A-Level peers.

International Baccalaureate (IB) students showed a consistent but complex pattern of academic challenges throughout their degree studies. At Level 5, they demonstrated a modest disadvantage that started at -2.199 points and increased to -6.057 points in the final model. Their Level 6 performance showed similar trends, with the negative effect strengthening from -1.586 to -3.080 points, though was not statistically significant. In terms of final degree outcomes, their initial moderate disadvantage of -1.428 points more than doubled to -3.513 points in the final model, becoming statistically significant. This pattern suggests that while IB students generally faced moderate challenges, these difficulties were particularly pronounced

in specific subject areas like Engineering. It should be noted that there were very small number of students with IB entry qualifications with Engineering.

The study reveals a clear hierarchy in university academic performance based on entry qualifications. A-Level students consistently demonstrated superior performance across all study levels, establishing this as the most effective preparation route for university study. Among alternative qualifications, BTEC students faced persistent challenges throughout their degree, with significant performance gaps that were not mitigated even when combined with A-Levels. Access students showed the most variable pattern ultimately experiencing the largest negative effect in final outcomes however this was not statistically significant.

These findings highlight a persistent qualification hierarchy where A-Levels remain the strongest predictor of academic success, while alternative qualification routes generally show consistent disadvantages, though these vary in magnitude and consistency across different study levels and degree subject pathways.

5.4.2 Model 6 simulation – Level 5, 6 and Final Grade

Continuing their positive performance from Level 4, BTEC students within engineering had strong performances across all levels; however, they had the poorest overall performance for Level 5 in pharmacy. This is shown in Table 9 below. They did show improvements in their final grade, suggesting initial adjustment challenges were overcome. Access students showed progressive improvements from Level 5 to Final Grade, while A-Level/BTEC combination students showed a more consistent performance across the levels. These results suggest that BTEC students tended to excel more in degree subjects favouring practical approaches.

Table 9: Model 6 Simulation - Level 5, 6 and Final Grade (Pre-COVID)

PRE-COVID				
	LEVEL 5			
	A-levels	BTEC	Access	Alevel/BTEC
Business	68.85	62.03	64.64	63.59
Computing	64.18	69.94	53.70	68.80
Economics	69.95	64.86	68.85	69.26
Education	66.34	68.79	64.40	67.23
Engineering	64.89	77.12	72.62	68.85
Health and Social Care	69.33	69.54	68.82	68.20
Pharmacy	66.10	46.05	75.91	67.09
Psychology	62.56	63.41	68.16	71.95
Social Work	64.51	71.43	67.03	64.72
	LEVEL 6			

	A-levels	BTEC	Access	Alevel/BTEC
Business	70.08	65.36	62.45	64.73
Computing	67.58	71.34	58.48	75.14
Economics	68.91	73.83	70.08	70.09
Education	67.55	68.70	74.03	68.16
Engineering	63.95	74.73	78.38	70.08
Health and Social Care	71.52	69.72	74.94	70.40
Pharmarcy	65.49	70.08	77.87	73.00
Psychology	65.31	72.89	76.32	73.08
Social Work	68.39	68.08	74.54	67.35
	FINAL GRADE			
	A-levels	BTEC	Access	Alevel/BTEC
Business	69.70	64.41	62.40	64.84
Computing	67.85	71.36	57.21	74.18
Economics	69.49	69.98	69.70	70.20
Education	67.63	68.24	71.00	66.92
Engineering	65.36	75.31	74.92	69.70
Health and Social Care	71.09	69.59	72.86	69.26
Pharmarcy	66.03	69.70	76.29	69.87
Psychology	64.55	73.16	73.29	72.34
Social Work	66.98	69.25	72.01	65.98

Source: Author's own model simulation analysis of UEA undergraduate data (2012 – 2020)

5.4.3 Regression Level 5, 6 and Final Grade: COVID

A five-stage hierarchical mixed regression was performed to determine what relationship the predictor variables performance at level 5, 6 and final grade for the COVID affected cohorts (2017/18 – 2019/20). A summary of the five models is shown in the table below and the full results will present in appendix 10.

Table 10: Summary of Level 5, 6 and Final Grade COVID-affected cohorts' hierarchical linear regression analysis (Final Model)

(Constant)	69.128	0.647		106.854	0.000	68.752	0.725		94.879	0.000	68.826	0.623		110.419	0.000
Age at Entry: 21+	3.294	0.703	0.104	4.688	0.000										
Age at Entry: 31+	1.546	1.000	0.033	1.546	0.122										
Age_21plus_Dummy						2.984	0.784	0.112	3.804	0.000	2.578	0.693	0.110	3.718	0.000
Age_31plus_Dummy						3.061	1.117	0.084	2.741	0.006	2.691	0.996	0.077	2.703	0.007
Gender	-2.291	0.402	-0.113	-5.701	0.000	-2.190	0.459	-0.124	-4.771	0.000	-1.965	0.398	-0.127	-4.933	0.000
Ethnicity	-2.823	0.396	-0.118	-7.128	0.000										
Ethnicity Group Dummy BAME						-3.444	0.461	-0.162	-7.469	0.000	-3.167	0.401	-0.171	-7.903	0.000
Disability	-1.419	0.400	-0.056	-3.550	0.000	-0.616	0.471	-0.027	-1.307	0.191	-0.409	0.410	-0.021	-0.997	0.319
Quintile_1	0.373	0.523	0.014	0.713	0.476	0.572	0.599	0.024	0.954	0.340	1.088	0.524	0.052	2.076	0.038
Quintile_2	0.459	0.499	0.018	0.918	0.359	0.299	0.567	0.014	0.528	0.598	0.458	0.495	0.024	0.926	0.355
Quintile_4	0.937	0.483	0.039	1.942	0.052	0.900	0.549	0.043	1.638	0.102	1.036	0.478	0.056	2.168	0.030
Quintile_5	0.304	0.475	0.013	0.639	0.523	0.511	0.543	0.025	0.942	0.346	0.658	0.473	0.037	1.390	0.165
POLAR4 Missing	1.256	1.643	0.012	0.765	0.445	0.529	2.136	0.005	0.248	0.804	1.861	1.822	0.021	1.021	0.307
BTEC	-7.783	1.070	-0.264	-7.275	0.000	-4.436	1.242	-0.172	-3.572	0.000	-5.731	1.060	-0.257	-5.408	0.000
Access	-4.028	2.769	-0.117	-1.455	0.146	-3.209	2.966	-0.106	-1.082	0.279	-2.865	2.531	-0.109	-1.132	0.258
A-Level_BTEC	-3.728	1.100	-0.106	-3.391	0.001	-1.576	1.272	-0.051	-1.239	0.215	-2.316	1.084	-0.088	-2.136	0.033
IB	-4.618	3.302	-0.047	-1.398	0.162	-4.757	3.633	-0.055	-1.309	0.191	-5.812	3.453	-0.074	-1.683	0.092
UG or PG	-2.710	1.726	-0.027	-1.570	0.116	-1.002	1.628	-0.015	-0.616	0.538	-2.945	1.551	-0.044	-1.899	0.058
Other	-5.917	1.874	-0.160	-3.157	0.002	-4.021	2.183	-0.134	-1.842	0.066	-5.312	1.862	-0.194	-2.853	0.004
Sixth Form College	-0.112	0.462	-0.004	-0.243	0.808	-0.595	0.550	-0.025	-1.083	0.279	-0.737	0.474	-0.035	-1.555	0.120

FE College	-0.215	0.621	-0.008	-0.347	0.729	-2.020	0.700	-0.090	-2.883	0.004	-1.398	0.602	-0.072	-2.321	0.020
Post_16 Other	1.050	0.581	0.037	1.805	0.071	-0.311	0.688	-0.012	-0.452	0.652	0.238	0.597	0.011	0.399	0.690
Post_16 Missing	0.165	1.553	0.002	0.106	0.915	-4.497	1.506	-0.088	-2.986	0.003	-1.179	1.564	-0.020	-0.754	0.451
Computing (CMP)	-2.176	0.804	-0.062	-2.709	0.007	1.512	1.003	0.044	1.507	0.132	0.501	0.873	0.017	0.574	0.566
Economics (ECO)	-2.298	0.676	-0.071	-3.396	0.001	1.576	0.751	0.058	2.097	0.036	-0.395	0.661	-0.016	-0.598	0.550
Education (EDU)	-3.640	0.960	-0.099	-3.793	0.000	-2.461	1.033	-0.079	-2.382	0.017	-3.049	0.886	-0.114	-3.441	0.001
Engineering (ENG)	-3.513	1.675	-0.040	-2.098	0.036	-3.172	2.736	-0.031	-1.159	0.247	-1.894	2.333	-0.021	-0.812	0.417
Health and Social Care (HSC)	-0.031	0.707	-0.001	-0.044	0.965	1.632	0.797	0.090	2.048	0.041	0.871	0.685	0.055	1.271	0.204
Pharmacy (PHA)	-4.298	0.834	-0.103	-5.154	0.000	-0.366	1.031	-0.009	-0.355	0.722	-1.845	0.882	-0.052	-2.092	0.037
Psychology (PSY)	-6.791	0.687	-0.242	-9.879	0.000	-2.404	0.778	-0.098	-3.089	0.002	-4.215	0.669	-0.198	-6.303	0.000
Social Work (SWK)	-5.754	1.999	-0.079	-2.878	0.004	-2.635	2.157	-0.043	-1.222	0.222	-3.759	1.839	-0.072	-2.044	0.041
BTEC_CMP	5.251	1.773	0.063	2.962	0.003	-0.452	2.397	-0.005	-0.188	0.851	-0.315	2.087	-0.004	-0.151	0.880
Access_CMP	-9.938	4.303	-0.047	-2.310	0.021	1.249	5.062	0.006	0.247	0.805	1.315	4.320	0.008	0.304	0.761
ALevelBTEC_CMP	2.308	1.953	0.024	1.182	0.237	-0.643	2.491	-0.007	-0.258	0.796	-0.896	2.131	-0.011	-0.420	0.674
IB_CMP	3.676	6.309	0.011	0.583	0.560										
Other_CMP	4.011	2.981	0.028	1.346	0.179										
EntryQualOtherM_CMP						3.521	3.374	0.029	1.044	0.297	4.230	2.883	0.041	1.467	0.143
BTEC_ECO	3.995	9.311	0.007	0.429	0.668	-2.590	8.159	-0.007	-0.317	0.751	0.226	6.958	0.001	0.033	0.974
Access_ECO	-4.345	7.082	-0.010	-0.614	0.540										
ALevelBTEC_ECO	3.706	3.300	0.019	1.123	0.262	0.932	3.553	0.006	0.262	0.793	2.260	3.033	0.016	0.745	0.456
IB_ECO	0.814	4.829	0.004	0.169	0.866	6.435	5.443	0.032	1.182	0.237	7.049	4.888	0.042	1.442	0.149
Other_ECO	-3.088	4.242	-0.013	-0.728	0.467	-1.327	4.606	-0.007	-0.288	0.773	-1.465	3.930	-0.009	-0.373	0.709

BTEC_EDU	0.668	1.683	0.010	0.397	0.691	-1.592	1.931	-0.025	-0.824	0.410	-0.595	1.648	-0.011	-0.361	0.718
Access_EDU	-2.664	3.973	-0.015	-0.671	0.503	1.076	4.472	0.007	0.241	0.810	0.376	3.814	0.003	0.099	0.921
ALevelBTEC_EDU	-1.867	1.972	-0.020	-0.947	0.344	-3.909	2.180	-0.051	-1.793	0.073	-3.451	1.860	-0.053	-1.855	0.064
IB_EDU	14.969	9.845	0.025	1.520	0.128	17.490	8.873	0.044	1.971	0.049	17.525	7.716	0.052	2.271	0.023
Other_EDU	-1.444	2.765	-0.012	-0.522	0.602	-3.100	3.178	-0.029	-0.975	0.330	-2.564	2.712	-0.028	-0.945	0.345
BTEC_ENG	-0.943	5.667	-0.003	-0.166	0.868	6.531	6.410	0.023	1.019	0.308	1.963	7.299	0.006	0.269	0.788
Access_ENG	10.351	6.194	0.030	1.671	0.095	-0.449	8.977	-0.001	-0.050	0.960	-5.828	7.653	-0.017	-0.761	0.446
ALevelBTEC_ENG	-9.583	5.675	-0.028	-1.689	0.091	-0.085	8.577	0.000	-0.010	0.992	0.040	7.312	0.000	0.006	0.996
IB_ENG	18.069	9.946	0.030	1.817	0.069	10.393	9.228	0.026	1.126	0.260	12.473	8.015	0.037	1.556	0.120
Other_ENG	3.716	5.225	0.012	0.711	0.477	23.956	8.784	0.060	2.727	0.006	19.972	7.490	0.059	2.666	0.008
BTEC_HSC	-1.116	1.319	-0.025	-0.846	0.397	-2.293	1.476	-0.063	-1.554	0.120	-1.650	1.264	-0.053	-1.305	0.192
Access_HSC	-2.492	2.820	-0.064	-0.884	0.377	-1.211	3.023	-0.035	-0.401	0.689	-1.809	2.581	-0.061	-0.701	0.484
ALevelBTEC_HSC	-2.304	1.550	-0.035	-1.486	0.137	-3.405	1.747	-0.063	-1.949	0.051	-2.743	1.492	-0.059	-1.838	0.066
IB_HSC	1.431	5.306	0.005	0.270	0.787	7.060	5.140	0.040	1.373	0.170	9.220	4.885	0.054	1.887	0.059
Other_HSC	-1.701	2.094	-0.037	-0.812	0.417	-0.599	2.411	-0.017	-0.248	0.804	-0.872	2.083	-0.026	-0.418	0.676
BTEC_PHA	5.533	2.757	0.035	2.007	0.045	-3.695	3.879	-0.021	-0.953	0.341	0.383	3.308	0.003	0.116	0.908
Access_PHA	-0.957	9.646	-0.002	-0.099	0.921										
ALevelBTEC_PHA	-0.956	3.504	-0.005	-0.273	0.785	-1.457	4.893	-0.006	-0.298	0.766	0.943	4.173	0.005	0.226	0.821
IB_PHA	0.213	7.345	0.001	0.029	0.977	5.061	8.857	0.013	0.571	0.568	7.414	7.704	0.022	0.962	0.336
Other_PHA	-4.806	6.820	-0.011	-0.705	0.481	2.570	8.374	0.006	0.307	0.759	2.483	7.140	0.007	0.348	0.728
BTEC_PSY	-2.108	2.236	-0.017	-0.943	0.346	-2.196	2.583	-0.020	-0.850	0.395	-1.260	2.204	-0.013	-0.572	0.568
Access_PSY	-3.542	3.259	-0.031	-1.087	0.277	-0.993	3.498	-0.011	-0.284	0.777	-0.782	3.011	-0.009	-0.260	0.795

ALevelBTEC_PSY	0.956	1.998	0.009	0.478	0.632	-1.016	2.300	-0.011	-0.442	0.659	0.166	1.962	0.002	0.085	0.933
IB_PSY	-5.353	4.427	-0.028	-1.209	0.227	1.722	5.465	0.009	0.315	0.753	1.856	4.904	0.011	0.378	0.705
Other_PSY	-4.422	3.132	-0.028	-1.412	0.158	-0.406	3.975	-0.003	-0.102	0.919	-0.130	3.391	-0.001	-0.038	0.969
BTEC_SWK	0.626	3.652	0.003	0.171	0.864	3.194	4.066	0.020	0.786	0.432	2.805	3.466	0.020	0.809	0.418
Access_SWK	4.975	4.010	0.034	1.241	0.215	5.255	4.385	0.042	1.198	0.231	3.959	3.739	0.037	1.059	0.290
ALevelBTEC_SWK	1.532	3.942	0.007	0.389	0.698	0.296	4.082	0.002	0.073	0.942	0.381	3.480	0.003	0.110	0.913
EntryQualOtherM_SWK	2.502	3.956	0.013	0.632	0.527	3.455	4.454	0.021	0.776	0.438	4.037	3.798	0.029	1.063	0.288
R2	0.389					0.396					0.446				
ΔR^2	0.152					0.157					0.199				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

The first model for Level 5 outcomes explained 2.5% of total variance and was significant, *F (5, 3632) = 18.288, p<.001.* In the second model only explained a small increase of 0.4% of total variance, producing a small but significant improvement *F (10, 3627) = 3.550, p<.001.* The third model explained 8.3% of total variance was significant, *F (6, 3621) = 35.487, p<.001.* The fourth model included Post-16 Institutions as predictors and explained a small and non-significant increase of 0.1% of total variance, *F (4, 3617) = .900, p= .463.* The fifth model explained 13.6% of total variance was significant, *F (8, 3609) = 26.854, p<.001* and the final model accounted for 15.2% of the variance in Level 5 performances and was significant, *F (39, 3570) = 1.736, p= .003*. Overall, the hierarchical regression revealed that while all models were statistically significant, the most substantial improvements in explaining Level 5 outcomes were associated with the addition of entry qualifications (Model 3) and degree subject pathways interactions (Model 5). Demographic characteristics and POLAR4 indicators, while significant, explained relatively little variance in the outcome.

For Level 6, the first model explained 2.7% of total variance and was significant, *F (5, 2122) = 11.867, p<.001.* Model 2 only explained an increase of 0.7% of total variance, producing a small but significant improvement *F (10, 2117) = 7.503, p= .009.* The third model explained an additional 10.6% of total variance was significant, *F (6, 2111) = 28.311, p<.001.* The fourth model explained a small but significant increase of 0.6% of total variance, *F (4, 2107) = 3.763, p=.005.* The fifth model explained 14.4% of total variance was significant, *F (8, 2099) = 9.797, p<.001* and the final model accounted for 15.7% of the variance in Level 6 performances and was not significant, *F (39, 2063) = .859, p= .707*. Similar to Level 5, the hierarchical regression revealed that all models were statistically significant and the most substantial improvements in explaining Level 6 outcomes were associated with the addition of entry qualifications (Model 3) and degree subject pathways (Model 5).

For the final degree classification, the first model explained 2.9% of total variance and was significant, *F (5, 2030) = 12.149, p<.001.* The second model only explained a small but significant increase of 0.9% of total variance, *F (10, 2025) = 3.740, p= .002.* The third model introduction the addition of entry qualifications and explained an additional 9.1% of total variance was significant, *F (16, 2019) = 35.380, p<.001.* Model 4 explained a non-significant increase of 0.4% of total variance, *F (4, 2015) = 1.994, p=.093.* The fifth model explained 18.3% of total variance was significant, *F (8, 2007) = 15.489, p<.001* and the final model accounted for 19.9% of the variance in Final Grade outcomes and was not significant, *F (36, 1971) = 1.058, p= .377*.

Overall, entry qualifications and subject-specific interactions emerged as the strongest predictors of academic performance across all study levels. Entry qualifications alone explained 8.3% of variance at Level 5, 10.6% at Level 6, and 9.1% for final grades, while degree subject pathways contributed an additional 5.2%, 3.2%, and 5.0% respectively. In contrast, demographic characteristics and socioeconomic factors (POLAR4) showed relatively modest effects, together explaining only about 3% of variance across all levels. Post-16 institution type had minimal impact, explaining less than 1% of variance at each level. The final models accounted for 15.2% of variance at Level 5, 15.7% at Level 6, and 19.9% for final grades, suggesting that entry qualifications and degree subject pathways are crucial determinants of academic success throughout the degree program, with their influence became most pronounced in final degree outcomes.

5.4.3.1 Entry qualifications effects

Overall A-Level only qualifications emerged as the benchmark for academic success, consistently outperforming other qualification types across all levels. For the COVID affected cohorts, A-Level only students maintained relatively high performance but with slightly lower constants compared to pre-COVID. Level 4 constants ranged from 64.793 to 65.458. Level 5 showed an increase across models (65.992 to 69.128) and also increased slightly in Level 6 constants increased from 68.054 to 69.097. Overall, A-Level students still demonstrated high performances despite pandemic challenges. These patterns indicate that while A-Levels generally provide strong academic preparation, their effectiveness varies by subject area, highlighting the importance of considering subject-specific factors in understanding academic performance.

BTEC students demonstrated level-to-level improvement, though with a different pattern to the Pre-COVID cohorts. They started with a wider gap at Level 4 (β = -9.268 to -11.022) compared to pre-COVID. This gap decreased at Level 5 (β = -6.191 to -7.783) and narrowed substantially by Level 6, where the final model showed a much smaller and non-significant difference (β = -1.576). This suggests that BTEC students made considerable progress in closing the performance gap as they advanced, with their Level 6 performance approaching that of A-Level students during the pandemic period. This level to level improvement pattern could imply that BTEC students develop more effective academic strategies over time, potentially overcoming initial disadvantages through adaptation and growing familiarity with higher education requirements.

A-Level/BTEC students displayed a more consistent pattern across levels. The coefficients at Level 5 (β = -3.358 to -3.728) and Level 6 (β = -3.554 to -4.436) were less negative than pre-COVID cohorts. Their final grade coefficients improved across models (β = -3.423 to -2.316),

suggesting that by the end of their studies, A-Level/BTEC students had narrowed the performance gap considerably. While there isn't a clear linear improvement from level to level as seen with BTEC-only students, A-Level/BTEC students maintained more consistent performance throughout their academic progression, especially during COVID. This suggests that their mixed qualification background may provide a more balanced foundation that helps them maintain relatively stable performance across different academic levels.

Access students initially showed significant disadvantages at Level 5, performing approximately 5 points below A-Level students. However, a crucial change occurred in Model 6, where this performance gap not only diminished but also became statistically non-significant, suggesting that factors other than qualification type might better explain these performance differences (β = -5.043 to -4.752 to -5.961 to -4.028). There is similar pattern at Level 6, with Access students showing substantial negative effects in early models that lost statistical significance in Model 6 when controlling for additional variables. (β = -4.245 to -3.260 to -3.791 to -3.209). For their final grade, Access students showed a decline in performance gaps with the effect reducing from -4.064 in Model 3 to -3.086 in Model 4, slightly increasing to -3.864 in model 5 and decreasing to -2.865 in model 6 and losing statistical significance. This improvement when controlling for institutional factors suggests that institutional context seems to play an important role in their outcomes. Overall, while early models showed substantial negative effects, the loss of statistical significance when controlling for other factors suggests a more complex relationship between Access qualifications and academic success. Overall, Access students demonstrated the most volatile progression pattern pre-COVID, with dramatic swings between levels, but showed a clearer improvement trajectory during COVID. This suggests that while Access students may face substantial initial challenges, many develop stronger academic skills over time, with their distinctive educational background potentially becoming an advantage at higher academic levels once they've fully adapted to the university environment.

The analysis reveals that qualification type was a crucial predictor of academic performance both before and during COVID, with A-Level students consistently outperforming other qualification groups. The negative effects associated with BTEC qualifications intensified during COVID, suggesting these students faced greater challenges during the pandemic. The performance gap for combined A-Level/BTEC students narrowed slightly during COVID, particularly for Final Grades. Access students showed more variable performance, with many effects becoming non-significant during COVID, possibly due to smaller sample sizes or greater variability in performance during the pandemic.

5.4.4 Model 6 Simulation – Level 5, 6 and Final Grade (COVID)

Table 11 below shows the model 6 simulation for the COVID affected cohorts n Level 5, 6 and final grade. Access generally performed best and maintained a consistently strong performance across all levels particularly within Social Work.

Table 11: Model 6 Simulation – Level 5, 6 and Final Grade (COVID)

COVID				
	LEVEL 5			
	A-levels	BTEC	Access	Alevel/BTEC
Business	69.29	61.50	65.26	65.56
Computing	67.11	74.54	59.35	71.59
Economics	66.99	73.28	64.94	72.99
Education	65.65	69.95	66.62	67.42
Engineering	65.77	68.34	79.64	59.70
Health and Social Care	69.25	68.17	66.79	66.98
Pharmacy	64.99	74.82	68.33	68.33
Psychology	62.49	67.18	65.74	70.24
Social Work	63.53	69.91	74.26	70.82
	LEVEL 6			
	A-levels	BTEC	Access	Alevel/BTEC
Business	67.30	62.87	64.09	65.73
Computing	68.82	66.85	68.55	66.66
Economics	68.88	64.71	67.30	68.24
Education	64.84	65.71	68.38	63.39
Engineering	64.13	73.83	66.85	67.22
Health and Social Care	68.94	65.01	66.09	63.90
Pharmacy	66.94	63.61	67.30	65.85
Psychology	64.90	65.11	66.31	66.29
Social Work	64.67	70.50	72.56	67.60
	FINAL GRADE			
	A-levels	BTEC	Access	Alevel/BTEC
Business	68.52	62.79	65.65	66.20
Computing	69.02	68.20	69.83	67.62
Economics	68.12	68.74	68.52	70.78
Education	65.47	67.92	68.89	65.07
Engineering	66.62	70.48	62.69	68.56
Health and Social Care	69.39	66.87	66.71	65.77
Pharmacy	66.67	68.90	68.52	69.46
Psychology	64.30	67.26	67.73	68.68
Social Work	64.76	71.32	72.48	68.90

Source: Author's own model simulation analysis of UEA undergraduate data (2012 – 2020)

5.4.5 University learning curve: adapting with progression

The results from the regression analysis revealed that for most qualifications, there was an improvement in performance as students progressed from first into their final year. For the pre-COVID cohorts, BTEC only students appear to catch-up with students who enter with A-levels with the gaps in performance in the final models narrowing from first year to the final year (-15.633 to -6.826 to -4.720) and ultimately the overall final grade (-5.294). This suggests that BTEC only students do make progress as they move through levels, showing an improvement pattern and narrow the performance gap between them and A-Level only students, however the achievement gap is persistent, and they do not close it.

Students with A-Level/BTEC combination qualifications also show a similar pattern of improved performance as they progress through all the levels (-9.267 to -5.259 to -5.349). However, their final grade (-4.865) performance reveals that gap between them and A-Level only students does not close. but the smaller gap at later levels indicates successful adaptation.

The performance of students with Access entry qualifications appears to be more variable across levels. Students start with small non-significant negative effects in the first year (-0.199), followed by a significant decline in performance in second year (-15.157). In their final year, there is an improvement in their performance (-7.622), however, there is a sharp and decline for the final degree outcome (-12.495 respectively) but this is not statistically significant.

5.4.5.1 Interview insights – adapting with progression

Overall, the regression analysis suggests that while alternative qualification pathways show some capacity for improvement over time, none fully close the performance gap with A-Level only students. Each pathway displays unique challenges at different stages, with BTEC students showing the most consistent year to year improvement despite starting with the largest disadvantage

Insights from the interviews revealed that across all the different entry qualifications, participants generally found the transition into university teaching and independent learning challenging. Common challenges highlighted were adapting to less structured learning environments, managing time effectively between social activities and academic work, adjusting to different assessment styles and expectations, taking ownership of their learning and dealing with larger class sizes and less personal interactions with lecturers. The level of preparation for independent learning seemed to vary among students, regardless of their entry qualifications.

Nevertheless, the quantitative data showed improvements in the means for most entry qualification across levels. This upward trend for most of the entry qualifications could be attributed to students adjusting to the independent learning and university environment from year to year, which is then reflected in their performance.

Many of the participants, spoke about the challenge of balancing social life with academic responsibilities as well the level of independence required at university and also struggling with time management and prioritising assignments.

> *Because it's like, I didn't expect uni to be so independent as it is, like, obviously, it's beautiful independently, but has the drawbacks. Like, no one's there to look after you. No one. No one's there to look after you, so you're there by yourself.*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"Initially, it was really good, because everyone's in the same boat, you're all meeting people... It was then when the degree started properly, that it was very hard to balance."*
>
> *Participant 28, 20, Female, A-Levels/BTEC, PHA, 1st Year, Sixth Form School*

> *"At university, you also left your own devices, aren't you? Like there is nobody there telling you what to do or how you can improve."*
>
> *Participant 41, 29 (Mature), Female, Access, SWK, 1st Year, Other*

Over time students had to learn how to manage their schedules independently, adapt to managing their own learning and seek out support when needed which is different from the structured environments at their pre-university institutions. Many of the participants also highlighted the difference in learning styles between their post-16 learning and university.

> *"A-Levels is for exam based. So you're learning, everything you're learning was to remember for the exam kind of thing was I feel like university is you're just learning just to learn really."*
>
> *Participant 21, 20, Female, A-Levels, PSY, 2nd Year, Sixth Form College*

> *"I've started planning a lot more... I've started handwriting my notes again."*
>
> *Participant 21, 20, Female, A-Levels, PSY, 2nd Year, Sixth Form College*

Participant 21's reflections above show that she had to adapt to more self-directed learning approaches which included pre-reading, post-lecture notes and preparation for formative tasks to allow for opportunities for feedback. Although this participant initially struggled with the transition from A-Levels, they seem to have developed new study habits as they progressed through university which shows their ability to adapt to university-level work and the development of more effective study strategies.

The quantitative data revealed that the performance gap between A-Level only and BTEC only student was sustained. However, BTEC only students showed the most improvement in their performance year to year. Participants 30 and 34 reflect on experiencing growth in their academic engagement which led to improvement in performance in the second year.

> *" Last year, like it was like, I barely got through last year. Because like I said, I was doing like, the minimum amount of effort. Yeah, the work was harder. And it was really testing like my actual intelligence…… My second year has been better, more focused approach and better grades compared to the first year."*
>
> *Participant 30, 21, Male, BTEC, Foundation, CMP, 2nd Year, FE College*

> *"One of them was giving myself just more time to do stuff. Just leave it for a week or two later, then I will allow myself time to check over the work and stuff like that. ….I could add more stuff for just simple little mistakes here and there, I can improve them. Another thing was using your resources to learn so it was during my first year I leaned more towards the lecture slides and the materials that the university provides…. Well, now….. I literally use anything, that I feel like can help me, so that can be from the YouTube videos to sort of online forums, and a mixture with the lecture slides.*
>
> *Participant 34, 20, Male, A-Levels/BTEC, CMP, 2nd Year, Sixth Form College*

This indicates growth by taking studies more seriously and utilising a variety of resources to support learning and enable them to adapt to university expectations.

The data highlighted how students across the different entry qualifications can adapt and improve their learning. Common themes included developing better time management skills, adjusting study techniques and becoming more self-aware learners. The ability to adapt seem to be a crucial factor in the students' academic improvement and success.

Access students' performance showed a pattern initially adapting well seemed to have faced increasing difficulties as they progressed which lead to them having the largest performance gap with the final degree outcome. Insights from the interview highlighted the increased academic jump from first year to second year which can add pressure. Participants reflected on the increased workload and pace of assessments from first year into second year and that being very challenging, leading to some of them consistently relying on getting extensions.

> *I noticed one thing the workload massively increased..... massively increase.*
>
> *Participant 39, 32 (Mature), Female, Access, Foundation, BIO, 2nd Year, FE College*

> *"The pace was absolutely different. It was really hard in second year, I think so in our first year, we had four summatives, spread out every year. And then in the second year, we had kind of eight, and I was just a huge step up and people said it, so kind of anticipated it, it was double and then plus them of formatives, that were really kind of important. And it was so much. So I handled that by getting extensions actually best how I handled it."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

Access students are more likely to be classed as mature students and often may have additional responsibilities outside of university such as family commitments or employment. With the increased workload in second year, it may become more challenging juggling all the different aspects of life and responsibilities more efficiently which could explain the decline in performance as they progress.

> *"….I think it was just like, time management was an issue, like I haven't been used to getting up commuting, doing uni, coming home sorting out the kids doing swimming lessons, trying to find time to hoover, trying to see my grandparents. Juust like the sheer amount of stuff that I had to cram into a week. Took some doing so I'd always be the one that was like, the night before an essay was due like madly trying to do it. I still do that. I still haven't got the hang of doing stuff in advance."*
>
> *Participant 41, 29 (Mature), Female, Access, SWK, 1st Year, Other*

> *"So in the first year, I was working four days a week. And for the first semester, the second year, I was working four days a week, and that became impossible. In the first year, it was okay, because everything was online, so I could work around stuff, but having to go in and juggle, like four days a week work, and have the work ramped up a bit longer essays and all this that was really difficult. So I dropped down to three days a week and second semester. It was still quite tough."*
>
> *Participant 42 (Mature), 42, Female, Access, Other, 3rd Year, Other*

And for students on courses with practical components such as placements, the additional responsibilities added some further challenges. The time burden of placements seemed to create significant pressure for some Access students, especially as requirements increase substantially from year to year.

> *"I've done an eight day shadowing placement in my first year, and then you have a 70 day in your second year, and then 100 day in your third year. So I think that is one of the more difficult things for those of us that have come through access, because often you have, like the family ties and the job, that is a necessity. But then you're expected to go into what is effectively a full time job, that you don't choose where it is or when it is. And so I don't really know what that is going to bring. Luckily, like I have people around me that can help out. But I think that can be quite prohibitive because yeah, we don't know what we're doing. Yeah."*

> *"It was only eight days, but it seemed to take up so much time. Because I was driving like one day I was in Lincolnshire for an entire day. One day, I was somewhere else. Sometimes. I was in Yarmouth. Sometimes I was in Northridge and my placement kind of lady that I was shadowing, only worked part time. She only works Monday to Wednesday. So I had to reorganize everything so that I could drop whatever I was doing. If there was something interesting that was coming up or if she wanted me to go in on that day. Like I managed it and she was really lovely. But where some people did it in the course of two weeks and mine took, literally forever. I've not long finished it way after the deadline that they gave us just because I wanted to see it through."*
>
> *Participant 41, 29 (Mature), Female, Access, SWK, 1st Year, Other*

This reflection from participant 41 shows the struggle for Access students having to balance competing responsibilities like families and necessary employment against mandatory full-

time placements with limited control over placement locations and timings which further complicates students' ability to manage their other commitments effectively.

The decline in performance among access students could attributed to the multitude of commitments they must juggle simultaneously. When balancing family responsibilities, employment obligations, and potentially mandatory studies or placements, students are left with severely limited time for their academic work. The mental and physical exhaustion from managing these competing demands can inevitably affects their ability to focus on coursework, meet deadlines, and maintain consistent academic performance.

5.4.5.2 Interview insights – approach to assignments

Many students, regardless of their entry qualifications, found the transition to university-style assignments challenging. Common difficulties included adapting to new referencing styles, managing time effectively, and dealing with more independent work. Students often developed better strategies for approaching assignments as they progressed through their courses. This included seeking help from peers, utilising university resources, and improving time management skills.

Students' approaches to assignments tended to evolve as they progressed through university, with some noticeable differences between students with different entry qualifications. In the first year, many students reported struggling with the transition to university-level assignments. Students often underestimated the workload and complexity of university assignments.

> *"I remember getting literally a 40, I had just got 40. And I was so shocked because I was thinking, like, I put my blood sweat and tears into this, like, why isn't good enough? But then I realized I didn't know how to reference, even just the structure of like my essays and was terrible. But again over time to kind of learn how to like, do that I also emailed my lecturer and I had a meeting with her. So she kind of explained everything for me"*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

Participant 1's reflection highlighted the jump in requirement needed for assignments in post-16 qualification to university level. Many students reflected on having to adapt to consistently referencing their work and having to work at higher academic standard.

Those with BTECs reported initially feeling more comfortable with coursework based and practical assignments but struggled with theoretical aspects and exams.

> *"I think that was really hard. And like, it got a bit overwhelming with the amount of content that I had. But I feel like it got worse. From like, foundation, that was like, whoa."*
>
> *Participant 16, 20, Female, BTEC, PHA, 2nd Year, Sixth Form School*

> *"…it was very, very different to college and, yeah, I didn't understand. I think this is the thing about uni, it doesn't matter what you know, it's how you write it. It's the most frustrating thing*

for me, …. like in sport that's it, like, I know what I know. And, like, this is my thing like, I know it, you know, inside and now I've studied this since I was even younger, just by myself. But it's frustrating because then when you come here, it's, they want you to reference it's like, go find out what someone else knows. And it's like, well, what's the point of me knowing it if all you're asking me to do is, you know, prove that someone else did it. That's the most frustrating thing to me and I can't write properly. I can't like, write the way they want me to write this, I struggled with was like, just writing like, I'm better at just explaining what I know."

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

"I also feel like Foundation, your workload made me feel easier because it was online. So maybe like, people don't take it as seriously, because everything's online. So they're sort of like, okay, I'll just learn this. You know, it's online anyway. So I can have like, it's an open book, whatever. But once I got into year one, it was like, we actually had in-person exams that we had to sit. So everyone was a lot more serious in like learning the content. So I feel like there was a lot more pressure in first year."

Participant 16, 20, Female, BTEC, PHA, 2nd Year, Sixth Form School

As students move into their second year, they seem to develop more effective strategies. Many reports of students being more proactive, planning ahead and seeking support from lecturers and peers.

"Basically…, I joined all the computer science group chats, I started chatting to people asking what modules they were doing. …..I made sure I had like, people to speak to with their work. Also, all my lectures, were in person stuff. So I could actually talk to my lecturers and stuff as well, I'm building relationships with them. So it was just like, night and day the difference."

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

Students often reported improving their time management and research skills which was often coupled with a shift towards more independent learning and critical thinking.

"I started things like weeks beforehand. Also, one of the most strategies was to the first thing I will do is to look at the summary of briefs, I'll just like try to plan for it from day one and not wait for like lectures to cover it which I find really useful."

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

By the third year, students generally reported more creative approaches and tended to be more focused on building valuable skills rather than just achieving high grades. In addition, students often also reported feeling more confident in handling complex material and applying what they've learned.

"So I've been using my study group, which was really helpful in second year, but also just started writing a lot more like I came to uni I was like, yeah, no paper, iPad laptop. I've started writing mind mapping, teaching my content to other people. And just trying to make it part of my living experience. Like always quizzing myself as I go through the day, rather than leaving it at the end."

Participant 18, 22, Female, A-Levels, PHA, 3rd Year, Sixth Form School

"So like, on Monday, my supervisor wasn't in the lab so I very much had to just do everything by myself. Which at first was a bit like scary, because it's like, if I mixed the wrong chemical, if I did the wrong thing, like that's it. But I feel like after a while, I kind of just got the hang of it. So now this whole week, I've just been doing everything by myself. And I haven't thought about things twice. I've just kind of gone with the flow. And it's actually helped, like I'm doing it right. There's no mistakes being made or anything. I think that kind of helped build my confidence up as well."

Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School

5.4.5.3 Interview insights – COVID Impact

The regression results showed that A-Level only student consistently outperformed other qualification types across all levels. The A-Level only COVID affected cohorts maintained relatively high performance but with slightly lower constants compared to pre-COVID. Overall, A-Level students still demonstrated high performances despite pandemic challenges. BTEC only students with the COVID affected cohorts had an improvement in their performance from year-to-year and had similar final grade performances to their pre-COVID peers. A-Level/BTEC combinations students displayed a pattern here the COVID affect cohorts performed better than their pre-COVID peers but both groups improved their performances as they progressed through the years. Access students presented more complex findings with pre-COVID cohorts outperforming their COVID affected peers in the first year but had their performance worsen year-to-year and unable sustain this advantage in the second and third year which let to COVID affected Access students having a better performance than pre-COVID cohorts.

The COVID affected results present mixed findings with students with some qualifications having better performances with the pandemic conditions, some showing improvement in their performance but still having differences to their pre-COVID peers and with some students facing challenges that impact performance as they progressed. COVID-19 pandemic significantly disrupted university education in many ways, with most institutions shifting to online learning and having to adapt teaching, assessment methods and student services to accommodate for fully remote access. It is worth noting that this was new for everyone, so it was a significant shift for lecturers and seminar leaders who might also be managing home schooling. Some of these disruptions are reflected in the interviews with students that give an insight into what they experiences and how that affected their learning.

"It was a weird time to be fair. Yeah, it was just weird because I just remember going to lectures one day and then next thing is there's no more lectures. There's no more anything. So for months, like we actually didn't have any lectures, nothing was online. We were supposed to do exams, they ended up just giving us like, just passes like compensated passes. So yeah, it was just cut short like very abruptly, like, I didn't actually do anything. For the rest of my first year."

Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School

Students reflected on the challenges they faced when adjusting to online learning, highlighting struggles with distractions during lectures and difficulties in maintaining focus during lectures, indicating challenges associated with remote learning environments. For some students the COVID restrictions denied them the benefits of having first year experience and feeling settled with their university environment before making the transition into the second year.

> *Yeah. I felt like it was way different. It's just different for me personally, it just felt weird not having face to face contact with people.*
>
> *Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

> *"Yeah. It was hard. It's really hard. to motivate yourself when you're just sitting on a computer trying to listen, they're kind of talking at you. It's so hard."*
>
> *Participant 10 (Mature), 26, Female, Access, PSY, 2nd Year, FE College*

> *"And first year was just some lectures were online which was the worst because most of the time, I didn't go to them. Because I, the first few weeks, I actually sat down in my room trying to listen to the lecture, but then I was like, I get so distracted by things around me, and I'm just like, hearing friends in the kitchen talking. I'm like, okay, go socialize instead. Oh, I'm hungry. I'm gonna make food and watch the movie. Like, yeah, there's just other stuff that could distract me easily from...."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"It was more common into second year, like everything had transitioned online. So that was hard again, because it's like you're just adapting to first year. And then not when you're finally like cruising. It's like, oh, I have to adapt to something else again. Yeah, being online wasn't like the greatest, but it was kind of good at the same time, because you didn't have to come in and stuff but it's like trying to find routines and trying to actually like, stick to the times and stuff."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

> *I didn't really know many people on my course, just thinking my flatmates.*
>
> *Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

Instead, they had to adjust to the new way of learning once everything was online and not being able to further expand their network and make meaningful connections with classmates and academics. The lack of physical interactions in lectures and seminars made participant 1 more hesitant to ask questions, resulting to a more passive learning experience.

> *"I guess content was a bit harder to pick up because it's different when you're interacting in a lecture theater, like being able to go to seminars, but when it's all online, and I guess you're a bit more less reluctant to like ask questions. You're just it's very passive, so you kind of just do everything passively."*
>
> *Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School*

“I guess I didn't really make many friends from first year. So I didn't really have anyone to work with kind of, and ask questions, that I did on A-Level because i knew my whole class. So I could ask any of them. I didn't really know any of the lecturers because it was all on like an online screen now, so I don't have any relationship with them.”

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

There was also an effect for those who had experiences their first year in COVID lockdown restrictions and transition to their second year with reduced or no restrictions and having to go on to campus. Participant 3 below reflects on their experience, due to COVID, their second year felt like their first year as everything was a new experience, therefore not fully getting the advantage you get coming into second year and you are a little more familiar with your environment.

“Was literally very different all new.”

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

First week was I remember there was a lot more like I said face to face. Like going into lectures with the schedule was a lot different, which I liked. I felt more comfortable just using campus in general, like using different facilities and getting to know even just our building in general, like queens, not realizing how much we can actually use and getting more comfortable like the lectures as well.

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

Challenges were present for the practical aspect of university learning such as group work or lab work. Insights from the interviews reveal that adapting practical learning, such as lab work, and replacing these with online videos which were imperfect replacements and not adequate for effective learning and the interviewees felt that physical presence in the lab was still essential to understanding practical work. A similar sentiment is felt when students were working on group projects, not being able to see their teammates, expressing the difficulties they faced in having effective conversations about the work in breakout room when nobody had their camera turned on.

“Yeah. So labs. So the first half of the semester, it was just first half of the year was recorded labs online. And then I think after a while, they started to realize that doing that isn't the most helpful, I think with labs, you actually need to be in there. Just to understand even if you don't know exactly what's happening, it's just helpful to be in the lab, because you can pick up certain things.”

Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School

“I think it was doing like group work assignments and stuff. Online, it was kind of hard to, cos sometimes it's really hard to even because you don't even know who you're talking to you. So you didn't know how to approach things or you don't know, erm... how to like, sometimes it's when we, when we get into our rooms you tend to be always the first one to say something like

this, those little things was just the most hardest challenging part I would think, and we actually had to do a group assignment that contributed to actual grade summative wise. I think that was the hardest part really."

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

For students with placements as part of their studies, the COVID restrictions led to skills gaps when they transition in higher years where the expectation of their knowledge was higher but they were unable to meet them. The student below reflects on placements in their first year being conducted online as group work rather than patient interactions and sometimes having weeks of inactivity without the patient interactions which are an integral part of the placement. This format limited the development of certain skills that would be expected for future placements which was a point of stress in their second year when they started in-person placement with higher expectations but with little experience.

"Yeah, it's very. And obviously, there's always expectation, you have a little bit more responsibility in the second year, kind of thing. And I think an also in placement is just is is quite stressful it's never an easy part of the year, basically. And having that step up, is just adds even more stress to it. And just the nature of how placement is just every day, Monday to Friday and obviously, all my placements mainly wasn't even in Norwich. So I was away from uni. I was away from home. I've been around all over Norwich, basically. So because in first year, I was in Ipswich. And, and my first placement was online. I didn't mention that. And that was even a placement was basically some sort of group work like we did like a it wasn't we didn't meet patients we didn't the person that was leading or placement didn't really contact us. So we didn't do anything for two weeks and certain skills that they wanted us to think work on first year, we didn't but were expected to know, in the next placement, so there was that stress too."

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

There was also the added stress of contracting COVID, which created additional difficulty and often prevented students being able to fully engage with their academic work.

"So it was tougher, but also, I was ill for like, the first two weeks, I don't know if it was COVID. …. I just couldn't do any studying."

Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

5.4.1 Evolution of support networks

Support systems and networks play a key role in the student experience as they progress through university. Both formal and informal form of networks that students had access throughout their academic journey were highlighted from the data. Informal support systems included family support during transitional phases and in addition the influence peers had on students' experiences. Formal institutional support manifested through structured interactions with academics and university service staff. How students engaged with and leveraged the available resources is key to capturing and assessing the networks they were utilising. There

was an interesting phenomenon of some students not seeking support, which highlighted instances where individuals avoided or failed to utilise support systems despite having needs, sometimes even when they know where to get the support. Understanding these dynamics provided valuable insight into the complex landscape of student support structures. Through this section an examination of how students were able to utilise their social and cultural capital to tap into their networks of family members, professionals, and peers who were able could provide knowledge about higher education as well as support throughout university.

5.4.1.1 Phase 1: Pre-university networks

Students' pre-university experiences primarily focused on their decision to progress into higher education, which was explored earlier in phase 1. Students seemed to utilise various support networks throughout this critical period. Formal networks included their post-16 institutions, where teachers provided guidance and direction. Some institutions offered established support structures such as outreach programs and dedicated advisors that students could access. Informal networks, consisting mostly of family members and friends, also played a significant role in influencing students' university decisions. This showed that there was a mix of formal and informal support systems demonstrates how students leveraged both their social and cultural capital during the university selection process.

In the pre-university experiences, their post-16 institution and in turn teachers were often highlighted as significant formal points of support. Some institutions provided extensive support such as workshops on personal statements and assemblies. Teachers played also played a crucial role in providing advice, helping with personal statements and mock interviews.

> *"So they offered that, and just generally going through the interview, like he could suggest to you like, or try and act as an interviewer, and you can practice with him. Or like there was this other teacher too, that would help out with that."*
>
> *Participant 25, 23 (Mature), Female, A-Levels, HSC, 1st Year, Sixth Form School*

> *"well, we had I don't know what they called it, me maybe a tutor session once every two weeks and our timetable we had a group that was completely random people from other courses, just like with an advisor or something….. And …like helped us do like our cover letters and stuff and practiced it and how they should look like and everything like that."*
>
> *Participant 38, 19, Male, BTEC, HSC, 2nd Year, Sixth Form College*

> *"so it was partly my teacher. And I think there was one person that he brought who came into our school to talk to us about computer science at university, which was which was a previous student of his that was a good quite a while ago, so I don't really remember anything about it. But I remember being influenced slightly by it."*
>
> *Participant 32, 19, Male, A-Levels, CMP, 1st Year, Sixth Form School*

For some students, their university journey was informed by their informal networks such family members particularly siblings. A few students actively sought advice from their family members who had previously gone to university who were able to give insights into what they might experience but also help with personal statements.

> *"I'd ask people questions like my brother being like, what made you like this specific uni? Like, what was the vibe that like, made you go? That's the uni for me. So yeah, so I spent a lot of time and then when it came to my personal statement, I did ask people that I know, like my cousins that had gone to university, that were teachers and stuff like that to say, can you just check like everything's good in terms of like, how I'm spelling, grammar, all that stuff."*
>
> *Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College*

> *"So my older sister works in higher education, so she went to uni and then in the uni she went to she worked as a like student president representatives. She work as an SU officer, then worked in curriculum development. So she like was very into high education knew the pros, the cons knew what to look out for when choosing so I remember like, before I came to uni, she just sat me down on multiple occasions being like, hey, like this is what's going to be like, This is what a good uni actually was, is what it means when you need to be good, not what the league table says. But like, realistically what a good uni is. Speak to me about my course and everything. So she was definitely my source of like info."*
>
> *Participant 18, 22, Female, A-Levels, PHA, 3rd Year, Sixth Form School*

Furthermore, informal networks such as friends also were key informing students. Interestingly, some students reflected on seeing their friends' experiences through social media and how they gained beneficial insights into university life by witnessing the experiences of former schoolmates. This approach demonstrated how informal social networks, particularly through digital platforms, can also be utilised as information channels for students when making decisions.

> *"I guess it was just more like at the time, like all people that I've gone to school with had all gone to university. So I've seen them live, like through social media, seeing them live like their university lives."*
>
> *Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College*

> *"Also YouTube. I just watched lots of people on YouTube. So, I watched like 'Day in the Life' so like, what I wish I knew about pharmacy school before I got there, or like, why you should or not go to UEA or like stuff like that. I watched lots of videos like that to kind of help set my expectation."*
>
> *Participant 18, 22, Female, A-Levels, PHA, 3rd Year, Sixth Form School*

Overall, insights from the interviews revealed that effective decision making to go university typically involved students actively engaging with multiple support networks while navigating their individual educational journeys.

5.4.1.2 Phase 2: First year and establishing networks

In the first year of university, students leave established networks from their previous post-16 institutions and had the challenge of navigating a new environment and building new connections. Universities tend to provide formal support structures that students can immediately access, including academic advisors, student union representatives, and student services. These formal networks were highlighted in the interviews and were important for students' transition into university. Students also reflected on the informal networks they had prior to arrival and those they developed once at university. Existing informal networks often included family members who frequently provide crucial emotional support during this transition period. New informal networks developed naturally with peers, particularly housemates and course mates. A common pattern emerged in the first year where these peer relationships serve a dual purpose of providing social interaction as well as friendship while also functioning as helpful source for information about academic work and university procedures.

A key formal support network in first year for students is student services and this was highlighted in the interviews. Students demonstrated various ways of engaging with student services to enhance their university experience. Participants reflected on seeking out academic support when they were struggling with university work, one participant spoke about attending extra maths classes after failing an assessment. This highlights the targeted use of student services for specific educational needs.

> *"… for my education based I did go for like the maths one, which I failed I did go and seek out like maths, maths classes, extra extra support."*
>
> *Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College*

Another participant benefited from organised social connections facilitated by the Student Union and described how organised coffee meetings that helped facilitate and create new familiar faces among peers which in turn fostered connections.

> *"yeah, so he just got us all together, which was great. So we kind of went for a coffee and then we all had new familiar faces then. So that was that was really helpful. I can't think of, I can't think who else was helpful. Gemma at SU she was great. She posts a lot of kind of group things."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

These experiences suggest that student services can provide valuable support networks that provide academic assistance as well as social integration when students actively seek out and engage with them.

Another key formal network was academics who played a key role in supporting students in their first year through different interactions. Students approached lecturers directly with specific questions about their work, asking them to review assignments or clarify instructions. As one participant noted the utilisation of course reps showing how over time they confident and learn which resources are available to them and learning how to utilise it.

> *"More just my lecturers like just been like, can you just look over this? Have I done this right, like, and then as time has gone on, I've known that I can go to like this student information zone. And like we have a like rep that who's kind of like, involved in our course. So I'll go to her like, now I kind of got the hang of it. I don't need as much help. But like yeah, it was just like kind of learning who you can talk to and then utilising them."*
>
> *Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College*

> *"But my lectures are always there. I remember going to they have these activate sessions, which are, when lectures, just sit in a room, you can go and see them. So, you can go and chat to them. Show them a draft. And they'll be like, yeah, you're on the right tracks. They can't give you too much yeah. So they kind of just sit and like their presence is… that was quite reassuring as well, rather than having, oh, God, I have no idea what to do. You could go there, if you had a problem, it was quite good."*
>
> *Participant 24, 22, Male, A-Levels/BTEC, EDU, 2nd Year, Sixth Form School*

> *"Maybe, I think just the lectures because if you because they're good at like, just asking, answering questions, like if you watch a lecture and then you have a few questions about things you don't understand, and then I'll email them and then they'll give like a good response. Email is probably the most helpful."*
>
> *Participant 9, 22 (Mature), Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

Some lecturers took initiative to facilitate connections among specific student groups. Participant 10 below reflects on an academic who organised meetups specifically for mature psychology students. This targeted approach seemed to students with similar backgrounds form supportive networks early in their university experience. In addition, during lectures academic staff also facilitated effective icebreakers to support students getting to know each other at the start. One participant described a mini-olympics activity during their first day that, despite initial awkwardness, proved more effective than traditional lecture-style orientations for helping students become familiar with their peers before diving into academic content.

> *"There was a lecturer who facilitated the mature students. There was a meet up for mature students in psychology. So he was great."*
>
> *Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College*

> *"Yeah. So the first day, we had like a little mini Olympics activity, which was quite fun. It was a bit awkward because you're like, Oh, I've got to do all these like, I've got to like shoot a ball in the hoop. But it's like, if I don't what will people think of me like, it's a little bit dodgy. But I feel like it was just like a really good icebreaker rather than sit down in a lecture. And like, here's everything it was kind of like, oh, this is like fun, enjoy yourself. And on the second day we went*

in and they kind of went over everything, which is obviously a bit better because you kind of knew faces a bit more than it was... So yeah, it was not too bad, to be fair."

Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College

In addition, academic staff also functioned as an important gateway to other university support services. When students experience significant difficulties, advisors were able to refer them to appropriate wellbeing services.

"They spoke to me about the wellbeing services on campus. I didn't go through them because I was already getting support from the NHS at the time. But they signposted me to all the different help lines and things like that, what I was really grateful for. And they helped academically they gave me extensions and support where I needed it."

Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School

However, some students reported not contacting lecturers unless it was absolutely necessary and opted to use peer support and online resources instead. A student reported utilising online resources and not being able to utilise lab assistants due timetabling clashes. There were also further reports of students not being fully aware of the services available to support them during first year and for some the impact of COVID exacerbated this. Several students there was a delayed utilisation with reports of choosing not seeking out the support and waiting until later years when challenges became more apparent.

"So I used a lot of online sources, I use all of the lecture slides and stuff that we had been posted online. I obviously we weren't allowed to collude with that project. But we sort of generally talk things over in the computer science discord, there are a lot of people talking about general issues. With it there. And the Edit mostly online sources. There were the option to go to the labs to sort of talk to assistants, teaching assistants, as well, but I didn't go because it didn't match up match up with my timetable. So I wasn't able to."

Participant 32, 19, Male, A-Levels, CMP, 1st Year, Sixth Form School

"I didn't know I had to. I didn't know i could. Because COVID like, I didn't know where everything was. I didn't know at all if there was help or anything."

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

"So I think in the first semester, I got I got through it by doing a lot of my lectures at home online, which just kind of isolated myself."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

However, for some there seemed to be a reluctance and stigma around seeking extra help with some students feeling like they would be bothering people or even embarrassed to attend extra session to support their learning.

"I don't know am quite stubborn. I don't like asking people for help, so i just, I just sort of say I can do it. And it comes from like, a very old fashioned approach that I have. I don't know why, like,….it comes from my parents, really. So, you know, there was a time where it's so like, basically, the gist of it is like, when people are going through, like, tough times, they just sort of like get on with it…… like what I am complaining about. There are people in third world countries

who are worried about starving and am worried about this? If this sentence is right, like, just like, grow up! Just get on with it mate. That's sort of my approach to a lot of things in my life. Like, I just try not, like, complain about it. And also, it's a bit of like, I don't want to burden people like, I know, it's their job, but sort of, like, I don't want to, you know, I know they have a lot of stress on as well. So I don't want to add to that. So just sort of keep it to myself really."

Participant 5, 20, Male, BTEC, EDU, 1st Year, FE College

"…… and even when they're giving support, it's almost as if, if you haven't done this before, if you want, we can put extra support for you. So it was more of people didn't want to go to those extra support sessions, especially for calculations, because they're seen as they didn't do A-Level maths, or they haven't got great GCSE maths results, so they're doing those things in place. So people will be embarrassed, even if they wanted to seek help, they wouldn't, because they've said this is for people that aren't good with maths. If you haven't got great GCSE results, and you haven't done A-Level maths. And it's like even me, even if I've done maths A-Level and I wanted to go, I even said to myself, I've done maths, even though I've got good GCSE like math results. It became a norm of no one wanted to go to the sessions because you'll be too embarrassed, as you'll be seen as the person that went to the math extra sessions."

Participant 14, 21, Female, A-Levels, PHA, 2nd Year, Sixth Form School

Overall, while student services and academic staff were available, many of the students reported not fully utilising these formal networks due to hesitation or lack of awareness. But for those who did access the support, sometimes after a referral from academic staff, found it was helpful for both academic and personal challenges.

Various forms of informal networks are reported and accessed by students to support them in their first year. Several participants relied on their peers, flatmates and friends for both academic and emotional support. Participant 2 reflected on having support tailored to their specific feelings but did approach friends for help. Participant 11 credits support from students in upper years who were able to give insights from their experiences. Several students reported having flatmates particularly those who were also on their course extremely beneficial. Peer networks were utilised for several reasons, firstly as a form of knowledge and information transfer. Students with previous knowledge of content on their course helped to bridge the learning gaps such as terminology for those new to the subject, creating an informal teaching system.

"Personally for me, like the lectures have been very good. But my friends have probably all them have done economics before and they've helped not so much of the end but definitely at the start, they sort of were there to help me. And if in class, they would they would say, because quite often they would use terminology I didn't understand in class, and yeah, ask and they would be like oh, it's this. So they will, they're actually very supportive. And even in the first assignment, my friends were there like, if I need it, definitely and I think that's been quite good."

Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College

Peers also helped provide structural direction, whereby some participants adopted study habits and routines after observing others, sometimes even subconsciously. Interesting peers

also were utilised as a gateway to university support services as noted by participant 8 who went to statistics workshops after her friend mentioned they had been before and found it helpful.

> *"I asked friends and family how they've note taken as well. My closest friend, he said, he just went post it notes. Yeah, stuff like that always helped him. I met a friend in my course as well, he's just like, you're just typing the first thing thats in your head and what they are saying just try and type it."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"I went, Oh, I went to like a stats workshop, but not like, direct support, no.*
>
> *….. my friend who went to them every week and then she sort of said, oh, do you want to go to one and I never been before and I went, but I actually found it very helpful. I think I went to three after that."*
>
> *Participant 8, 20, Female, A-Levels, ECO, 1st Year, FE College*

> *"Um, I don't know, really, it just kind of happened. It just sort of got up. And I was like, I've got this, this and this. And then it got to that point, I was like, Well, this is working. So I don't really know why I picked it kind of fell into place maybe subconsciously through seeing other people do work who love one of my best mates he doesn't even go to university, he works, so his structure worked out was a nine to five. And then some of my friends who are now doing their masters said, they did things in a nine to five basis. So maybe subconsciously from that, but I didn't sit down and go, Okay, I'm gonna plan my day."*
>
> *Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School*

Peers were most referenced with students' social interactions. These were through participation in organised social activities and also through sports club and societies. Many students found their first week of university as a time for meeting new people and form friendships. Participant 17 reported enjoying living with flatmates and participating in social activities during the first week and also how social events organised in their halls helped in meeting new people.

> *"So we had a social event. And some of the flats came in and everyone was mingling and having fun. It was I was quite nervous."*
>
> *"And I kind of latched on to one of the people in my house. And I still live with her now. And w are good friends now. So yeah, that was that was really nice. She already had some friends from college that were at the uni. So she already knew people. So she introduced me to those people..."*
>
> *Participant 17, 20, Female, A-Levels, HSC, 3rd Year, Sixth Form School*

Some students intentionally attended activities organised for specific groups such as Mature students. Participant 10 speaks about feeling isolated in the first semester and specifically went to Mature students meet ups and as able to make friends by the second semester, which improved their experience. This highlighted the crucial role peer connections were in combating loneliness at university.

"I just felt really out of place. Yeah, it was a rough first week, I'd say the first semester was rough."

"So I think in the first semester, I got through it by doing a lot of my lectures at home online, which just kind of isolated myself. And then in the second semester, I thought I would try that more to come in, and I made friends. That just made the biggest difference."

"So the second semester was just completely different. I made friends who are mature students, they've been on access courses as well. Different ones to me, but yeah, that was that was so much better. And also I made an effort to go to mature student meetups kind of outside of uni. So they were they were really helpful."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

Peer social interactions created a sense of community which created a greater sense of belonging at university. These valuable networks were utilised beyond the simple social interactions. Participant 11 reflects on being a student athlete and interacting with older students on both the netball and basketball teams, who offered practical advice that often more related than formal guidance.

"I don't really know, to be honest, I'd say maybe like the upper year. So I looked at both netball and basketball. I'd say the Netball girls, I could ask them a lot of questions. And they'd like help out. And I was able to approach them quite easily. So yeah, I'd say sometimes it's like the older years in uni. They're the ones that kind of able to, like put it to you in a way that you're going to understand because they've been through it themselves."

Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College

Overall, peers appear to be crucial particularly at the start of their university journey. Peer networks not only help enhance social lives for students but also in their academic success and overall well-being.

Another vital informal network that students tapped into for support was family. Family emerged as critical support systems for students during this transition time and students heavily replied on family particularly for emotional support. Students maintained regular contact with family members and some occasionally going home as a coping strategy when feeling overwhelmed and needed to gain some form of stability and comfort when navigating the uncertainties that come with university life.

"I remember, like, my parents dropped me off and, like, sorting out my room."

Participant 20, 21, Female, BTEC, EDU, 2nd Year, Sixth Form College

"So first week,… mom drove me up literally, put my stuff outside and drove home. I moved on my stuff in. My oldest sister lives in Norwich, so she came and helped me like move my stuff in and she took me food shopping. So I kind of got everything sorted."

Participant 21, 20, Female, A-Levels, PSY, 2nd Year, Sixth Form College

"So my family actually, my mom, my family I was calling them like seven times a day, like I still do, well minimum now. Because at the start of that first year whenever I didn't have, the friends

that you have or not, you don't know if they're your friends for life yet or do you just I seasonal passive friends."

Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College

"Also family wise, because I would go home sometimes on the weekend after a break, just to get away from uni."

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

The data revealed that family support was key in students' transition into university ranging from the practical help provide when moving and settling in as well as providing ongoing emotional support in throughout the first year.

During phase two, the balance between formal and informal support systems tends to evolve throughout the university experience. While some students found helpful support from formal support networks such as academic and student services, many of the students opted out of fully utilising these networks due to hesitation or lack of awareness. Many students initially relying heavily on the informal family network for emotional support while gradually building stronger peer relationships. These peer connections often become increasingly important for both academic collaboration and emotional wellbeing as students' progress through their university journey.

5.4.1.3 Phase 3: Enhancing established connections

During phase 3 which is second year and third year, the data showed students formal and informal networks evolving. During this phase academics are mentioned a lot more and students generally reported receiving more support from academics. The findings show varied dynamics within this relationship for students, with some students having a more established rapport with their advisors and with the increased academic expectations and workload, students had more frequent interactions with academics.

"my academic advisor, she would call back every like two, three weeks to like, check on everyone just to make sure that we're all good."

Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School

I didn't really tell my advisor about my social life, but she helped me at my academic life, so I just didn't know exactly what she said but she was just like, Oh, if you need to talk am there, i was like cool.

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

"So the lecturer who kind of like is our point of contact, she was really helpful in second year, she, like was able to answer all my questions and helped me you know, with that, she's also been helpful in third year as well, like a lot more. And, you know, going forward with like a diagnosis and things like that and for some other things. And she has been really helpful,

Participant 17, 20, Female, A-Levels, HSC, 3rd Year, Sixth Form School

As students became more familiar with their environment, they were able to cultivate better relationships with academic which led an increase in their willingness to seek help. During phase 3, the findings reveal more help-seeking behaviours from students with academics in comparison to phase 3. This included proactively emailing academics, confidently asking questions in lectures and seminars.

> *"Um, well, like, I spoke to my advisor, a couple of times, but this year I've done that more. Not in my first year. I think, I don't know why, but yeah, this year I've seeked more support than I did in my first year. Yeah, I think because maybe I know that, like, you need to get the grades."*
>
> *Participant 20, 21, Female, BTEC, EDU, 2nd Year, Sixth Form College*

> *"I know what to seek help on when I don't need help."*
>
> *Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College*

A key aspect to this formal network's support was academic support. By monitoring students' performance, academics proactively checked in with students and helped to identify issues for students and appropriately intervened when student grades or attendance dropped. In addition to providing guidance on planning and workload management, some academics assisted in the decision-making process when students were thinking about the future.

> *"I think once they saw my grades and how far they dropped. I was like, hey, there's something wrong here."*
>
> *"I had a couple of advisory meetings of my advisor to talk about it and basically, she pointed the errors of my way and I said, Oh, my God. Yes"*
>
> *Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)*

> *" When my third year came up, I started talking to my advisor, only a few times, because she wanted to check up on me, because my attendance wasn't good as well, because my life at second year. So yeah, she's just came to check with me."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

Several students reported getting emotional support from advisors and utilised them as an outlet for stress when going through a difficult time. The emotional dimension of academics appears to be more prominent in this phase and could because students are becoming more comfortable and having more established relationships.

> *" My advisor, she has been great. Especially there's been a few teary days where I've like cried to her."*
>
> *" Sometimes just to talk to offload because like, she knows that I'm under a lot of more intense pressure and commitments this year, but also to offer advice that she's... and I think sometimes her words have like stuck with me when she's like, You need to give yourself some time. But also because she's my advisor, but also one of my lecturers, I can then talk to her about my*

workload and like, ask for advice and stuff. And she's very, like, we get on very, very well. And we've got a similar mindset. So I think yeah, that's definitely helped."

Participant 11(Mature), 22, Female, BTEC, EDU, 2nd Year, FE College

"Again, the tutor that helped me out with issues, really good at just being like, you ever need a minute you ever need anything, just take yourself away. Do like that it was very governed by me or most of you just lead it however you want to you take your time. "

Participant 4, 20, Male, A-Levels, EDU, 2nd Year, Sixth Form School

"Probably my supervisor, she's really helpful. She's also really reassuring, because she's like, Yeah, I was also in your position so I get how it feels. But she's always very encouraging to like, not be scared to ask questions as well."

Participant 1, 23, Female, BTEC and A-Levels, BIO, 3rd Year, Sixth Form School

For students where their degree programme had a practical element such as placement, a formal support network was embedded to ensure that students were able to develop the necessary practical skills and experience required in their fields. With students having to do multiple placements throughout their course, having the right support become crucial in dealing with challenging aspects of the placements. Therefore, having check-ins with their academic advisor was important in ensuring that the student was on track but also was able to point out any issues they had.

"we've got a tutor or something that, like were allocated. So when we get allocated placements, it's on like a spreadsheet, as where you're going, who your educator is, so the person you'll be working with in the hospital. And then you've got a university, normally one of our lecturers that we know reasonably well. And we have to do a halfway meeting on Zoom, or if it's close enough, they'll come and see you just to check in and make sure everything's all right. But they, they, they make sure to check in and everything like that if you've got any problems."

Participant 38, 19, Male, BTEC, HSC, 2nd Year, Sixth Form College

Some students reported experiencing challenges during their placements and their academic advisors stepped to support them to deal with the issues. Below, participant 23 speaks about having an overwhelming workload and having her placement manager disproportionately responding by involving occupational health and HR when she mentioned it. This led to negative feelings and decreasing her confidence and willingness to ask for help. The regular communication with her advisor proved to be valuable when matters had escalated, and her advisor was able to provide the support she needed.

"And I needed the cases to just chill out a little bit. I needed my caseload to just really stay where it was for a while to be manageable. You know, I was meeting all of my requirements that I needed to. It wouldn't have put me behind to not have any more cases, I really weighed that up before I said anything, because you don't want to be at a disadvantage. When it came to the end, and that was the management's way of going, well, we need to get occupational health and HR involved, and, you know, all of these way off the scale things that just weren't necessary. And have affected my way of now thinking professionally again, of can I ask for help? Am I just going to be beaten down? And you would be too belittled for asking for help? …… but I have been supported by the university and by the mentor

"my advisor, she got involved when the whole occupational health HR thing started kicking off in January. And she got she sort of entered into the conversation. Well, what have I missed?

What, what have I missed here, because I've got that relationship with my advisor to the point where I told everything that happened through from September to March, probably message over the next couple days. So just to let you know, this is happening. So then, I was lucky I did that. Because then when everything sort of kicked off in January with my placement management, she went, whoa, whoa, whoa, whoa, because she already knew what was going on. It wasn't it didn't leave her in a deer in the headlights kind of situation. It was a Okay, but what have I missed? Because I know everything."

Participant 23, 21, Female, A-Levels, SWK, 3rd Year, Sixth Form School (Grammar)

These highlight the importance of university support systems when navigating challenging placements and more importantly for the students' proactiveness in maintain contact with their advisors. Similarly for participant 25, being proactive in communication when on placement is illustrated. Participant 25 reports having a difficult and challenging placement in her first year. In her second year, she chooses to proactively disclose mental health concerns to advisor before placement. This illustrates the shift in her first-year experience where the participant endured her bad placement and now in her second year is being proactive about putting things in place that would support her.

"actually my advisor this time she, for this year, I have talked to her quite a few times before going on placement, because I've let her know, about like my mental health stuff. And although I wasn't going to, I realized that, like I should probably do it. Like I don't want it all to like, get really bad again. So I've let her know. And like, so I've already had some contact with her. And she was also the link lecturer for the placement. So I ended up contacting her again, about the, on the very, like on a pretty bad shift I had with my mentor because she was very mean, on that day. I emailed her and ended up having a meeting with her talking about my mentor. And yeah, as it turned out, like my advisor ended up, later on talking to other people and like, assured me that actually this mentor, it hasn't been bought to her as a pattern. There is a pattern. So yeah, and she kind of was just supporting me in a way just saying, like, actually, don't worry too much about it. Like, you know, like, trying to make the most of the situation and like, yeah, and I knew like, She's someone I can talk to and like she'll remain and she'll keep your confidentiality as well. Like, obviously until it would need to be broken."

Participant 25, 23 (Mature), Female, A-Levels, HSC, 1st Year, Sixth Form School

Both students above reflect on their experiences on placements and reported how academics stepped in to support them. The data also reveals the growth in trust between the students and academic advisors' relationship in their phase 3 experiences in comparison to phase 1. Students tended to display more proactiveness in this phase to ensure that their formal networks support them adequately and effectively in order to succeed academically.

Within this phase, peers still played a significant role in supporting students. This informal network appeared to have several functions, namely, information sharing, academic collaboration and motivation as well as emotional support. Students reported utilising their peer networks are information sources. Students reported learning about resources such as extensions firstly from their peers before moving forward to utilise the official channels.

"I think it might have been other students. I don't remember getting any extensions in first year. And then in second year, I think I found out about them from other students and maybe friends. Yeah. And then eventually from my advisor."

Participant 10 (Mature), 26, Female, Access, PHY, 2nd Year, FE College

" Mostly my friends, I guess, because we talk a lot of things over because I've a couple of good friends in my course. And whilst we do have like, teaching assistants, and obviously, our lectures, there are 250 of us. So it's not exactly as if it's the easiest thing to ask question. If we've all got different questions in the middle of a lab session, so mostly, I'd say it's my friends."

"…we sort of generally talk things over in the computer science discord, there are a lot of people talking about general issues."

Participant 32, 19, Male, A-Levels, CMP, 1st Year, Sixth Form School

Academic collaboration and motivation were more of a feature in this phase. Having established better relationship, many of the students reported using peer networks in different ways to support their learning. These included asking peers questions, going to the library with their peers, creating study group to help cover material together and also using peers to prep for examinations. The long-term relationships established within this phase helped to provide motivation and accountability for participants.

" Beth and Lisa obviously, last year, these are friends that I've been wanting since sixth form and I'm so glad that I met them….. we keep reminding each other what we have to do. And just helping each other out for exams and, and anything."

Participant 2, 19, Female, BTEC and A-Levels, PHA, 2nd Year, Sixth Form College

"My peers. So the second semester of my second year, I sort of formed a study group. I literally just went around, I was like, Hey, do you want to study with me? I just recruited people. And in my second semester, we started this study group that we meet every week and do content together. I didn't have that in the first semester, and the first semester was hell."

Participant 18, 22, Female, A-Levels, PHA, 3rd Year, Sixth Form School

Participant 6: Like forcing myself to talk to people in my lectures and making friends with them. I feel like kind of required it if I wanted to be successful. Because you will just run into things you don't understand.

Participant 6, 21, Male, A-Levels, CMP, 2nd Year, Sixth Form School (Grammar)

Participant 3: I would do it with like coursemates, tad more group work kind of vibe like instead of working on my own on like an assignment or whatnot.

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

Peers continue to provide some aspect of emotional support for participants in this phase. Participants reported turning to friends and housemates for opportunities to disconnect from the university work pressure and engage in activities that provided stress relief. Peers also provided a crucial element in helping participants recognise as well as manage mental health issues.

"I think flatmates as well I think it was just to stay away from uni, like go out go have fun kind of thing, like a stress reliever kind of thing… Like they kind of understood and they realize how stressful it was for me. Even said I look different."

Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School

"And then I also just in terms of like, my mental health and emotional health, because I was doing other stuff. I found like, more de-stressing things to do to like play basketball was really helpful in my second year, because it's like, even though pharmacy was stressing me out, I had that to look forward to my gym partner, like something to talk about someone to talk to you about other stuff. So I think my social network, and my peers were the most helpful thing in my second year."

Participant 18, 22, Female, A-Levels, PHA, 3rd Year, Sixth Form School

"I guess it all it was when I first started experiencing burnout. Physically, I felt very weak, I couldn't sleep very well and I was losing appetite which never happened before."

"….the first person was one of my housemates that was just like he saw me in the kitchen and was just like you don't look very good..."

"You look like a zombie and that was the first wake up call."

Participant 37, 22, Female, A-Levels/BTEC, HSC, 3rd Year, Sixth Form School

The peer informal network seemed to be key in supporting participants as it provided both emotional support but also academic support. The insights showed the importance of participants fostering and nurturing peer relationships beyond phase 2 as peers become influential in managing the pressures and stresses that come with navigating second and third year.

5.4.1.4 Non-support seeking-behaviours

There was a pattern identified from some students choosing to handle issues independently without seeking help, even when they were struggling. Some participants insisted on solving problem along and avoided asking for assistance. Participants reported suppressing problems until they became overwhelming which sometimes led to disengagements rather than gradually solving the problem.

Some of the reason identified as to why students might hesitate to seek support were previous negative experiences and normalisation of these negative experiences, communication and institutional barriers to support and personal

Some participants reported seeking help previously and having disappointing experiences which in turn led to their hesitation to seeking support. Participant 7 spoke about going to therapy and the therapist focusing on parents' issues rather than their own issues. Participant 7 continues to speak on their interactions with advisors being focused on academic performance than person issues which created a reluctance to feel comfortable to disclose their issues. Both these interactions show that the participants negative previous experiences created a scepticism about the level and value of help they would receive. Having bad

experiences can contribute to the normalisation of having adverse experiences even when they become extreme or overwhelming. Participant 25's reflection displays an assumption that negative experiences during placements are inevitable and when they were faced with a much more problematic situations, they continued to not seek support, despite having evidence suggesting they should.

> *"I don't look for no help which is bad in the sense, because when I was younger, I did therapy because that's when I was having issues with my dad. It didn't really help okay, it just came to a thing where my parents can just say their problems to them, and then they'll try and sort it out. I was like, there's not really focused on me then."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"Because i don't know, because I was reluctantly thinking to myself was like, if I push through, everything will be okay. If I push you everything will be okay. If I push through everything will be okay. And I feel like if I looked for help again, it was like it would add more, because like cool I have to tell someone else about my problem. I actually thought about cool you go there tell all your problems and you just sit and wait for the results. But then at that time when I was third year, I feel like, I feel like it is secondary school again, because I feel like all they cared about was just the academics side of things, not the personal side."*
>
> *Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School*

> *"I think my personality has to endure. And then after there's a certain period, like where I endure too much, and like, I don't, I avoid it and don't deal with it. And it's just kind of growing and growing. The pressure, then, I tend to completely escape and like, believe something really abruptly. Which is basically what happened. Because I although I felt the support from that lecture. I didn't feel like I can talk to him about my placement. And I feel like my placement experiences were rather negative. And especially now that I can compare it to a better placement experience. But at the time, because I had no knowledge of like, what my placement experience is meant to be like, I just thought it's normal. And even though other people told me that theirs was better, I still just presumed like, it may be the majority of placements are like mine."*
>
> *Participant 25, 23 (Mature), Female, A-Levels, HSC, 1st Year, Sixth Form School*

Some participants spoke about having difficulties accessing help due to advisors being unavailable or hard to reach. Institutional barriers to support meant that some students needs were to meet. Furthermore, with some more complex cases, the institutional support during their post-16 experience was unmatched to their new university environment where the level of support was not maintained and therefore insufficient.

> *"..like my personal advisors, she wasn't, she's not the best contact like she's quite MIA kind of thing like, she's quite hard to reach. So I think she was she would have been my first point of contact. But for support wise, but because we didn't have that relationship or doesn't communicate or she was always busy kind of thing, I didn't have I didn't seek to get that support as much as I could have looking back."*
>
> *Participant 3, 20, Female, Other, HSC, 3rd Year, Sixth Form School*

> *" I don't really think there'll be fully available, and I also feel like the reason why I need that little push is because when I grew up as well, I had all these social problems going on secondary*

school as well, I had a social worker. Yeah, they were literally by my side again just telling me stuff like set my mind right whatever everything. Here I was just by myself."

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

For participant 7, the contrast in their post-16 experiences where they had a social worker as part of their support package whilst at school and quoted 'literally by my side', we observe the participant viewing their current support structures as insufficient, resulting in them feeling they are 'by themselves'. This in turn leads to disappointment and disengagement.

Participants showed a self-reliance mindset and sometimes viewing seeking help as an additional burden to someone rather than a relief for them. Maintaining a façade of coping well meant that some participants compartmentalised their experiences and ended up not disclosing their challenges. For example, participant 14, whose birth order as an older child appears to have established for her that others depend on her and she seemed uncomfortable to reserve this dynamic where she would be the person in receipt of the support. This pattern of over self-reliance to problem solving reinforced avoidances for some students.

"….if I push through, everything will be okay. If I push you everything will be okay. If I push through everything will be okay. And I feel like if I looked for help again, it was like it would add more, because like cool I have to tell someone else about my problem."

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

"Nothing it was just me trying to trying to get through it. I didn't, I didn't disclose most of it. I was very good. I was like, just keeping face. Like If I was here, they wouldn't know my life there. If I was there, they will know my life here."

Participant 7, 21, Male, A-Levels, NBS, 3rd Year, Sixth Form School

"…me is asking, no matter what happens, I never asked for help. That's a big weakness, like people will be emailing staff, and I'm just too scared to ask staff members for help, even with, like, my friends, I never, I've never I feel like because, like, I'm an older child, I think it's a bad habit. I've always think that people rely people, people are more dependent on me than being dependent on them. So it's always been a thing of people are okay to ask me but I've never, I never feel comfortable asking other people for like, help, even if I was struggling to the most."

Participant 14, 21, Female, A-Levels, PHA, 2nd Year, Sixth Form School

5.5 Conclusion and summary of chapter

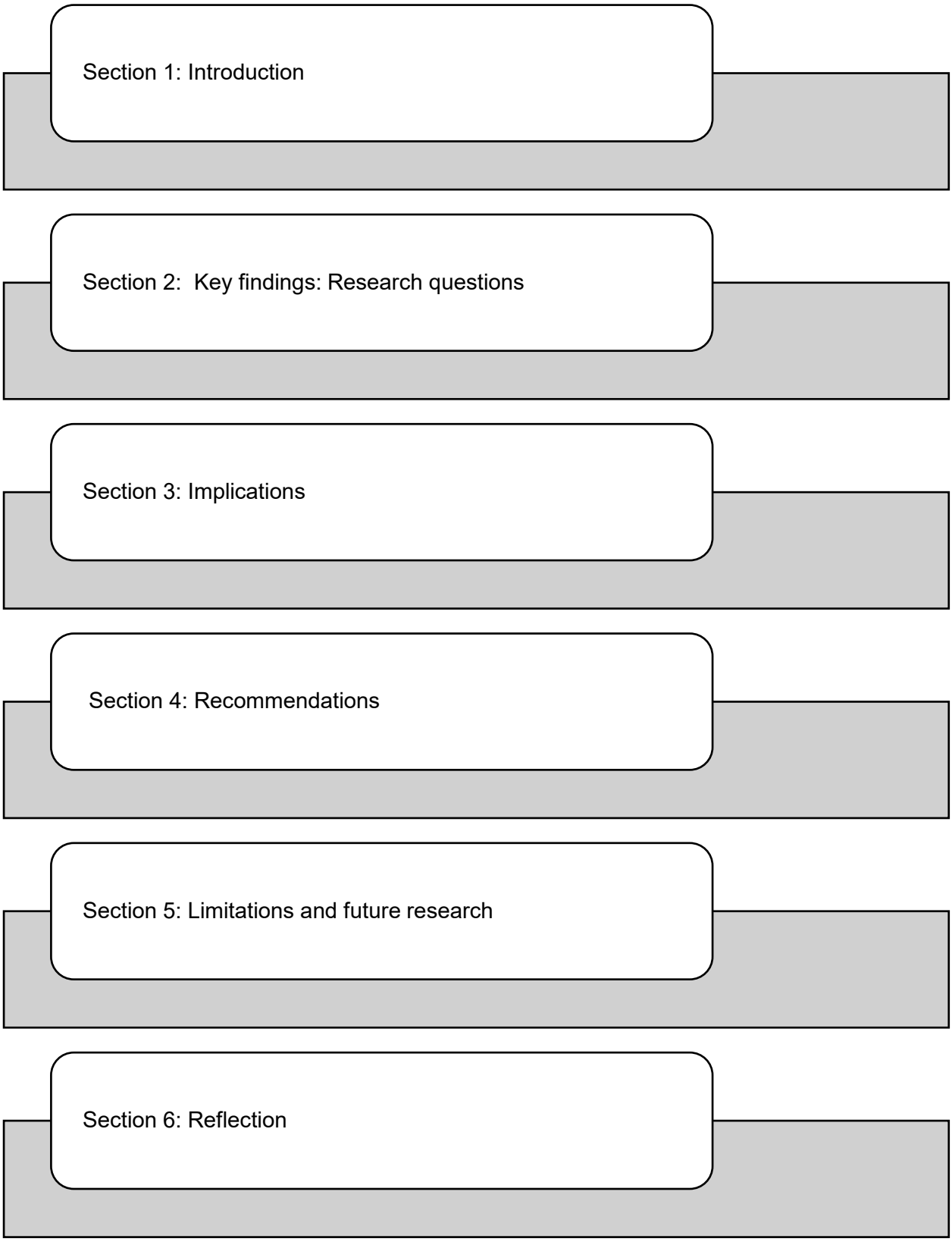
The findings from the mixed methods approach gave some interesting insights. In Phase 1, networks play a crucial role in participants pre-university decision making. It is highlighted that the levels of access to networks and their resources vary which in turn could impact engagement.

The transition from post-16 to university does present some challenges, and in Phase 2 it is revealed that entry qualification and subject degree pathways were strong predictors of student performance. A-Level only students showed the best performance for both the Pre-COVID and COVID affected cohorts. They also often reported finding transition to first-year university easier due to their familiarity with exam-based assessments and theoretical content. BTEC students tended to express having struggled more in the first year, often due to the shift from practical, coursework-based learning to more theoretical and exam-based university courses and this was reflected in their negative performance. Students with a combination of A-Levels and BTEC performed slightly better than BTEC student but were unable to close the performance gap between them and A-Level only students. Access students showed mixed performances with the COVID affected cohorts that hold this qualifications performing the worst.

Within Phase 3, the transition from first to second year could be viewed as a levelling of the playing field, with many students reporting a significant increase in difficulty regardless of their entry qualifications. However, A-Level only students maintained their strong performance throughout. There are improvements in performance for both BTEC and A-Level/BTEC students from level to level. Access students also show improved performances; however, this is only for the COVID affect cohorts and the pre-COVID cohorts show declining performances. Overall, the findings show most students adapting to university learning as they progress which could be credited to the better study strategies reported. Within this phase, there also an increase in support seeking behaviours as well as an evolution of how students utilised their formal and informal networks.

These findings will be discussed in the next chapter.

6. DISCUSSION



6.1 Introduction

The main aim in this thesis was to investigate and understand to what extent different entry qualifications impact educational progress and degree outcomes in comparison to having A-Level only qualifications. Underpinned by widening participation as a central theme, the thesis sought to understand the student's undergraduate academic journey from first to final year. It explored whether attainment disparities are present from the start of their first year, and if so, whether they develop or narrow as they progress, or whether they arise at a different point in their studies. As discussed in Chapter 4, this thesis follows a convergent concurrent mixed methods design whereby equal priority is given to the collection and analysis of both quantitative and qualitative data in order to gain a more comprehensive understanding of the research problem. The quantitative approach played a vital role in measuring and showing disparities in degree attainment between students with different entry qualifications, and the qualitative approach provided further insights into the experiences of students, and how they transition into and navigate university. The use of mixed methods allowed for the complementary approach that helped to not only understand if there were degree performance differences between students with different entry qualifications, but also offered some in depth insights into students' experiences which could not be achieved with one method in isolation.

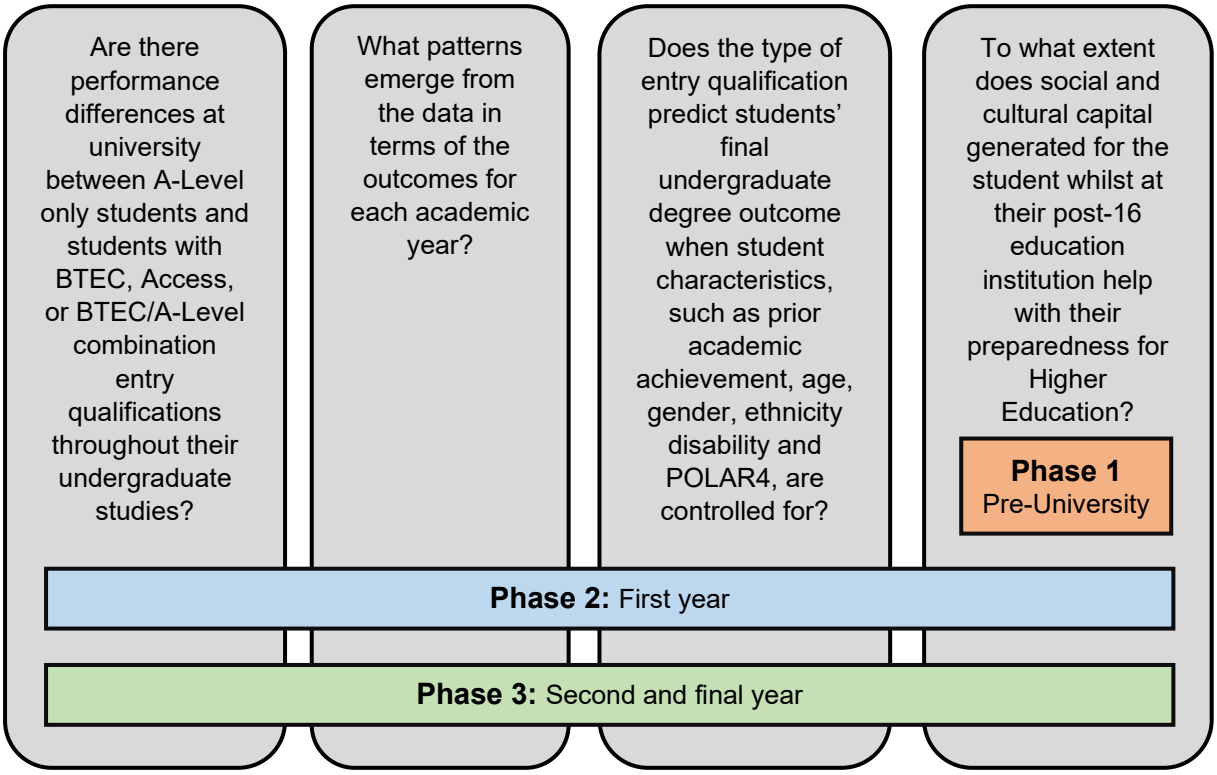
Previous research into entry qualification attainment disparities has included research utilising HESA data (Shields and Masardo, 2018) or data from non-traditional teaching institution (Gill, 2018). This research contributes to the field by analysis data directly gather by a mid-sized, dual-intensive, campus-based institution with a traditional method of delivery. Particularly relevant to this study, it is an institution which takes in a sizable number of non-A-Level entry qualifications.

This chapter presents the discussion from the results presented in the previous chapter to address the study's objectives, outlined in Chapter 1. The study in this thesis distinguishes between three distinct phases of the students' higher education journey which covers three to four years of study and is discussed in Chapter 5. This chapter reflects on the key findings across these three phases and how these relate to the existing literature on higher education attainment disparities between students with A-Level only entry qualifications and those with alternative qualifications. This discussion will include the implications of the findings, limitations and recommendations for future research. This chapter concludes with a discussion of the limitations of the study and areas for future research.

6.2 Key findings: Research questions

This section will discuss the findings in chapter 5 in relation to the research questions that were originally outlined in Chapter 1. The findings explored students' academic journey from that initial exploration of HE to graduation. This chronological sequence – from Phase 1: Access (Pre-university) to Phase 2 (First year): Transition and Phase 3 (Second and Third year): Success – encompassed the different touchpoints of engagement, information dissemination, incremental choices and barriers faced. In addition, the findings were presented separately for pre-COVID and COVID affected cohorts, in such a way to isolate and understand any implications of the significant disruptions to learning and assessment and changes in delivery brought about by the COVID-19 pandemic that impacted students' studies.

Figure 9: Research questions and phase alignment



Source: Author's own framework aligning research questions for the three-phase student journey model

6.2.1 Performance differences at university between A-Level only students' and students with BTEC, Access or BTEC/A-Level combination entry qualifications throughout their undergraduate studies.

The results from this study provide key insights into the relationship between entry qualifications and higher education academic performances, and provides further support to the body of research specific to the relationship between higher education entry qualification and subsequent attainment (Smith, Mahon and Newton, 2013; Gill, 2018; Shields and Masardo, 2018). The study revealed that students with A-Level only qualifications consistently outperformed their peers with alternative entry qualifications. During phase two, which is the pivotal transition period from Further Education to Higher Education, the analysis revealed that entry qualifications were a significant predictor of academic performance during the students' first year at university across all subject areas. This finding was demonstrated for both the pre-COVID and COVID cohorts with the effects more than double during within the COVID affected periods, suggesting that entry qualifications became an even stronger predictor during the pandemic.

Previous research has established that students with academic qualifications, such as A-Levels, are more likely to obtain a 'good degree' in comparison to students with more vocational qualifications, such as BTEC (Naylor and Smith, 2004; Smith, Mahon and Newton, 2013). More recent studies have also confirmed this pattern persists across various institutional contexts (Gill, 2018; Shields and Masardo, 2018). This thesis builds on this by examining whether and how the impact of differences in entry qualifications is manifested across all years of study, and spanning multiple degree disciplines. In addition, the quantitative analysis comparing these effects before and after the COVID-19 pandemic, offers valuable insights into how disruptions to academic delivery may have impacted the different student populations.

The performance gaps between A-Level only students and students with alternative qualifications (BTEC only, A-Level/BTEC combination and Access), remained even when controlling for other variables (demographics, socio-economic background, qualification type and post-16 educational establishment). This finding is in line with research by Murtagh *et al.*, (2017), whose study explicitly demonstrates that A-Level students outperformed those with other qualifications. Their analysis showed that even after controlling for demographic variables and induction attendance, A-Level students achieved higher marks than BTEC and Access students, confirming A-Levels as a stronger predictor of academic success. This could suggest that the A-Level curriculum may be preparing students better for the academic demands at a university level.

When degree subjects or disciplines were also controlled for in the regression model for this study, this advantage was still present across most disciplines, further strengthening the conclusion that A-Level only qualifications may provide more effective preparation for university than BTEC only, A-Level/BTEC combination and Access qualifications. More significantly, the study findings revealed that students with A-Level only qualifications continued to outperform their peers across all levels of study, suggesting that the initial advantage in the first year persist throughout the entire undergraduate journey. This pattern aligns with King and Aves (2012) who found that entry qualifications correlated with both first year and final performances, supporting the conclusion that A-Level qualifications are associated with better academic performance at university. This thesis' study however extends this understanding in two ways. Firstly, it demonstrates that these performance differences are also present in the intermediate (second) year of study for most qualifications. Secondly, it is established that this pattern is present across both pre-COVID and COVID affected cohorts, providing valuable insights into the persistence of entry qualification-based performance gaps despite significant disruptions to academic delivery.

The findings also revealed that BTEC only students consistently showed a strong negative performance in comparison to A-Level only students. This observation aligns with existing literature that has reported lower degree outcomes for BTEC students in comparison to their A-Level peers (Murtagh *et al.*, 2017; Shields and Masardo, 2018). Insights from the interviews highlighted reports from some BTEC only students feeling they always are having to 'catch up', and perceiving their A-Level only peers to have an easier time because the overlap in course content between A-Level and the first year the degree. It is also worth noting that evidence suggests that students taking BTEC qualifications typically have lower prior attainment at GCSE level compared to those who follow the A-Level pathway (Gicheva and Petrie, 2018; Atherton, 2021; Morgan, 2023). Findings from the interviews show evidence of phenomenon, where some of the students who initially to study medicine ended up doing pharmacy instead. This may mean that any sample of A-Level only and BTEC only students would have already undergone a certain amount of filtering, with the A-Level only group being likely to contain a higher proportion of academic higher achievers. While A-Level/BTEC combination students performed slightly better than BTEC only students, they still showed weaker performances when compared with A-Level only students. This intermediate performance could suggest that having at least an A-Level qualification provides some advantages, although not equivalent to the full advantages and benefits of having A-Level only qualifications.

Access students' results presented the most complex pattern among the qualification types. The quantitative analysis for the pre-COVID cohorts revealed Access students' first year

performance trajectory shifted from a having statistically significant differences to A-Level only students to non-significant effects in the final model once all variables controlled for (demographics, socio-economic background, qualification type, post-16 educational establishment and degree subject pathway). Interview insights offered some contextual understanding of the Access results. Access students were typically older, returning to education and starting their degrees as mature students, and reported that their Access courses prepared them for university in specific ways that aligned with critical skills required at university such as academic writing, referencing and various assessment methods. This preparation could explain their improved performance during their first year (relative to students with other qualifications) in the pre-COVID cohorts. However, in their second year, Access students faced greater challenges with consistently negative and statistically significant performance gaps (compared to A-Level only students) across all models, culminating in a substantial disadvantage in the final model which controlled for subject studies. This pattern continued through the third year, with statistically significant performance gaps throughout. Most notably, Access students' final degree outcomes for the pre-COVID cohorts showed the largest negative effect compared with students with only A-levels among all qualification types (controlling for demographics, socio-economic background, qualification type, post-16 educational establishment), though this effect was not statistically significant once controls were included for degree subject studied. This suggests that despite progression through their programs, Access students were unable to close the achievement gap with their A-Level counterparts. However, once degree subject pathways were included in the analysis, this achievement gap disappeared, indicating that program choice rather than entry qualification may be the more influential factor in performance differences.

The pandemic created a distinctly different experience for all students, including Access students. Analysis of first-year performance showed consistently strong negative effects for students with Access rather than A-level only entry qualifications. These results suggest that during their critical transition period Access students were particularly disadvantaged during the pandemic. Interestingly, while initial models showed significant disadvantages in second and third year, these gaps diminished and lost statistical significance in final models. Similarly, final degree outcomes showed that once controls were included for institutional factors, there was no longer a statistically significant difference between students with A-level only or Access entry qualifications.

This contrasting pattern suggests that while the pandemic initially amplified challenges for Access students, they demonstrated resilience in adapting to remote learning environments as they progressed. Access students are more likely to be mature students and often may have additional responsibilities outside of university such as family commitments or

employment. The pandemic lockdown meant that all teaching was remote, and most people were either working from home or furloughed and parents faced additional pressures and challenges of having to home school their children. The mandate for non-essential workers to stay at home could have benefited mature students with multiple responsibilities. Not having to travel to university and/or work could have helped with the time management pressures that come with juggling several commitments. This could suggest that the traditional in-person university structure might have unintentionally disadvantaged some mature students with several responsibilities. The flexibility of remote learning could have helped Access students manage their time better and in turn aided their academic performance.

This research demonstrates that entry qualifications are strongly related to academic performance throughout undergraduate studies, with A-Level only qualifications providing the strongest foundation for university success. The findings reveal a persistent qualification hierarchy where traditional A-Levels remain the strongest predictor of academic achievement, while alternative qualification routes generally show consistent disadvantages, though these vary in magnitude across different study levels and subjects. Previous literature has consistently revealed a strong academic for A-Level students at university in comparison to students with alternative qualifications and this study provided further evidence that aligns with this finding (King and Aves, 2012; Dilnot, 2016; Murtagh *et al.*, 2017; Shields and Masardo, 2018). In addition, this thesis builds on this and gives valuable insights that shows that these effects were present even when cohorts were split to account for the impact of the COVID-19 pandemic.

6.2.2 What patterns emerge from the data in terms of the outcomes for each academic year?

The finding from the analysis revealed interesting performance patterns across academic levels for students with different entry qualifications, with evidence of both persistent gaps and progressive adaptation as students advanced through their studies. As already discussed, A-Level only students consistently outperformed their peers. They showed a steady performance pattern across academic levels and an upward trajectory as they progressed through the years. There was more variation in the gap between those with A-levels and students with alternative qualifications at different stages. Whilst the gap in performance between students with A-levels and those with BTEC qualifications was widest in the first year, BTEC students showing the most consistent and noticeable improvement through academic levels. A-Level/BTEC students also closed the performance gap to students with A-levels and maintained a relatively consistent performance gap as they advanced.

Whilst both BTEC and A-Level/BTEC combination students showed evidence of learning gains overtime – defined as the difference in student performance between two points in time during their studies (Mcgrath *et al.*, 2015), – the achievement gaps between them and A-Level only students were persistent and did not close entirely. The year by year improvement pattern could indicate that students developed more effective academic strategies over time, potentially overcoming initial disadvantages through adaptation and growing familiarity with university workload requirements. Alternatively, it could be speculated that A-level only students may have found it easier to develop these new academic skills because they were not simultaneously trying to catch up during their first year. Katartzi and Hayward (2020) in their examination of the transition to higher education with a particular focus on students with vocation qualifications, discuss the concept of transitional friction which describes the ongoing challenges students face. Their research shows that students with vocational backgrounds often initially struggle but can improve over time as they adapt to academic environments (Katartzi and Hayward, 2020; Black, 2022), which aligns with this thesis' finding of year to year improved performance from BTEC and A-Level/BTEC students. The year to year increase in average marks for most of the entry qualifications could be attributed to students adjusting to the independent learning and university environment from year to year, which is then reflected in their performance. This adaptive trajectory suggests that with appropriate time and support, students from diverse qualification backgrounds can develop effective strategies to navigate higher education demands, though at different rates and with varying degrees of success.

It is noteworthy that there were smaller gaps for some subjects, and utilising the model 6 simulation indicated that BTEC students particularly excelled and performed well across the levels in more practically oriented degree pathways such as Engineering and Health and Social Care. Moreover, Health and Social Care had a higher proportion of students with alternative qualifications. This suggests that in disciplines where vocational alternative entry qualifications are predominant, the performance gaps were narrower. The ability to adapt seems to be a crucial factor in the students' academic improvement and success. These findings suggest that institutions might benefit from more targeted support interventions that help foster these adaptive capacities earlier in students' academic journeys. This could potentially accelerate the closing of performance gaps between entry qualifications.

Access students did not show a clear pattern of improvement across academic levels. Instead, they demonstrated a pattern of declining performance relative to those with A-levels across levels, particularly in the pre-COVID period, when analysing the final regression model that controls for all variables including degree subject. The gap in performance could be attributed to the multitude of commitments they must juggle simultaneously. When balancing family responsibilities, employment obligations, and potentially mandatory studies or placements,

students could find that their time for their academic work is very squeezed. Having these competing demands could inevitably affect their ability to focus on coursework, meeting deadlines, and maintaining their academic performance (Black, 2022). Katartzi and Hayward (2020), in their study of mature students who face multiple life commitments alongside their studies and reported students feeling 'old' compared to peers and struggling with confidence issues despite having practical experience. These findings raise crucial questions about how institutions might better accommodate and support the complex lives of mature students who gain entry via the Access pathways. This could offer some explanation as to why the gap in performance between Access and A-Level only students might not narrow overtime and could suggest that the traditional support for academic progression offered by universities may inadequately serve this group of students.

6.2.2.1 Impact of COVID

The findings from the analysis revealed interesting performance patterns across entry qualifications for COVID affected cohorts. A-Level only students demonstrated a pattern of high performances despite pandemic challenges, however, there is a gap in performance for those with A-level qualifications before and during COVID.

Interestingly for BTEC only students within the COVID cohort, any gaps in performance were eliminated when controlling for subject studied. The much smaller and insignificant differences in performance at Level 6, suggest that BTEC only students were closing the performance gap as they advanced, with their Level 6 performance very close to that of A-Level only students during the pandemic period. A-Level/BTEC has a similar pattern where the COVID affected cohort generally had better performances than pre-COVID cohorts. Research by Morgan (2023) which explored how students with entry qualifications were impacted by COVID-19, shows evidence of BTEC student having more diverse learning experiences and greater familiarity with digital platforms prior to the pandemic. With this in mind, the forced shift to online learning meant that BTEC might have had some advantages adapting this some aspects of this new learning environment. Alternatively, it could be suggested that the closure of institutions and the shift to online learning, A-Level only students may have not been able to accumulate the same forms of social and cultural capital that earlier cohorts benefited from through their post-16 institutions, potentially levelling the field.

Students displayed a more consistent pattern across levels and performed better and the performance gap narrowed considerably. This positive trajectory was also demonstrated by Access students. Unlike their pre-COVID cohort peers, students with Access qualifications showed a trajectory of improvement during the COVID period, suggesting that pandemic-related adjustments in teaching and assessment may have benefited these students. The

improvement could be attributed to the several mechanisms, such as the shift to online learning, which could have potentially provided greater flexibility for students who often balance multiple responsibilities. In addition, the increased availability to recorded lecturers and digital resources may have allowed for a more self-paced learning experience.

6.2.3 Does the type of entry qualification predict students' final undergraduate degree outcome when student characteristics, such as prior academic achievement, age, gender, ethnicity disability and POLAR4, are controlled for?

The third research question aimed to investigate whether students' type of entry qualification predicted their final degree outcome when characteristics such as prior academic achievement, age, gender, ethnicity disability and socio-economic background were controlled for. In line with previous research, when socio-demographic characteristics were controlled for, students with BTEC, A-Level/BTEC and Access entry qualifications achieved lower final grades in comparison to the A-Level only students.

6.2.3.1 Socio-demographic characteristics

In line with the current literature, which shows that female students are more likely to gain a better degree outcome than male students (Woodfield, 2019), the findings within this study demonstrated the same pattern where female students outperformed their male counterparts in the final regression model that controls for all variables including degree subject across all levels of study and in the final degree outcome, both during the pre-COVID and COVID periods. The overall pattern shows a persistent female advantage that has become more pronounced during the COVID period.

Mature students often enter or return to higher education with clearer goals and stronger motivation, having made deliberate decisions to pursue their studies. In regard to age, students aged 21+ and 31+ consistently outperformed their younger under 21 counterparts across most years in both the pre-COVID and COVID affected cohorts. This suggests that mature students typically achieve higher academic outcomes. However, the relationship between age and Access qualifications provides a more nuanced insight. For the pre-COVID cohorts, while mature students generally outperformed younger students, students with Access qualifications (which is more common among mature learners) showed declining performance year-to-year. This suggests that despite mature students' advantages, those with Access qualifications faced challenges that potentially counteracted some of their age-related advantages. The COVID affected cohorts however reveals a notable shift, with mature students maintaining their performance advantage over younger students, but Access students also showing year to year improvements rather than declines. This further supports that the pandemic related adjustments to learning may have particularly benefited Access students.

The findings also revealed that disabled students had lower final grades in comparison to non-disabled students, regardless of entry qualification, suggesting that challenges faced by students with disabilities persist throughout their academic career. Interestingly, the performance gap between disabled and non-disabled students narrowed considerably during the COVID period. This improvement was most pronounced in the later years of study (third year) and in the final degree outcome, where the gap nearly disappeared during COVID periods. This suggests that perhaps some aspects of COVID-related adjustment, such as remote learning or alternative assessments, may have benefited students with disabilities. It would be interesting to break down the data by type of disability (e.g. physical or learning difficulty), to see if the results from the current study still hold bearing in mind that this could result to much smaller samples.

Existing literature shows that White students are more likely to obtain good degrees in comparison to the students from a Global majority heritage (John T. E. Richardson, 2008; Richardson, 2013; Richardson, Mittelmeier and Rienties, 2020) and these findings showed substantial and persistent pattern of White students outperforming their Global Majority counterparts at all levels for both the pre-COVID and COVID affected cohorts.

The addition of the POLAR4 quintiles had minimal direct impact and none of the quintile variables were statistically significant in the regression model. However, this does not necessarily mean that socioeconomic background has no influence on academic performance overall. Rather, it could suggest that POLAR4 quintiles may not independently explain variance in academic outcomes once other factors are controlled for in the model. The consistent non-significance of quintile effects across models indicates that socioeconomic factors may not be as influential on academic outcomes as other variables in this particular study. Alternatively, the POLAR4 as a measure may be inadequately capturing socio-economic effects.

This finding contradicts the conclusion from research by Richardson et al. (2020) were POLAR4 quintiles were utilised as a proxy for social class, and reported a lower likelihood of students from a working-class background obtaining a good degree in comparison to a middle-class student. The difference in findings may be attributed to several factors. Firstly, this study controls for a broader range of variables including demographics characteristics, entry qualifications, post-16 institution and degree subjects, which might capture variance that would otherwise be attributed to socioeconomic background. In addition, the context of this specific study may differ from the broader UK higher education landscape reviewed by Richardson et al. (2020), with potentially different support structures or student composition.

6.2.4 To what extent does social and cultural capital generated for the student whilst at their post-16 education institution help with their preparedness for Higher Education?

The connection between social and cultural capital accumulated during post-16 education and students' preparedness for higher education is complex. The findings from this study suggests that the availability and acquisition of different forms of capital during this period can influence students' transitions to university, though it can vary considerably based on institutional context, qualification pathway, and access to networks.

Post-16 institutions played a critical role in facilitating the development of academic, social, and cultural capital, though not consistently across all different institution types. The findings suggest that Sixth Forms, particularly those attached to secondary schools, cultivated an environment where progression to university was normalised and expected, consistent with Bourdieu's concept of habitus (Bourdieu, 1986). Access to institutional networks gave advantages in university preparedness by making the transition appear as a natural progression and in turn reducing some psychological barriers to entering university. Similarly, the research findings revealed that the progression to university was often assumed for A-Level students, however it was not always extended to BTEC where encouragement to progress to university only came after displaying a good performance. A-level qualifications function as an institutionalised cultural capital that is systematically validated within educational structures. The differentiated patterns of encouragement between A-Level and BTEC students illustrated how institutional networks function as sources of social capital that can be unequally accessed and distributed. For A-Level students, institutional assumption of university progression creates automatic access to information, guidance, and support networks related to higher education, which aligns with Coleman and Putnam's work on network and information channels (Coleman, 1990; Ball and Vincent, 1998; Putnam, 2000; Friend, 2020). Conversely, BTEC students must first prove their potential through a good performance in order to access similar encouragement and support, creating an additional barrier to social capital accumulation, creating an unequal access to capital. This observation powerfully plays out Bourdieu's theory of social reproduction in education. The institutional differentiation between qualification pathways reinforces existing hierarchies by making the accumulation of university relevant capital more automatic for students already positioned within traditional education pathways (Ball and Vincent, 1998; Reay *et al.*, 2001; Crozier and Reay, 2011).

The differential accumulation of academic capital across qualification pathways emerged as a particularly important source of preparation for higher education. Students with A-Level only qualifications consistently demonstrated academic advantages compared to peers with

alternative qualifications, with interview data revealing that A-Level only students feel better prepared for university coursework, especially in subjects aligned with their previous studies. This suggests that A-Levels confer specific forms of academic capital that align more closely with higher education expectations and with greater overlap in content.

Conversely, some students with BTEC qualifications reported a persistent sense of ‘having to catch up’, suggesting a misalignment between the academic capital developed through the BTEC pathway and university requirements. This misalignment raises questions about potential solutions, such as pre-enrolment interventions that might better prepare students for university academic demands.

Evidence from phases 2 (transition: first year) and 3 (success: second and third year) revealed that regardless of post-16 background, participants in general found the transition into university level teaching and independent learning challenging. Common difficulties expressed included adapting to less structured learning environments, managing time between social activities and academic work and adjusting to different assessment styles and expectations. This suggests a limit to which post-16 education can fully provide and develop the specific forms of capital required for immediate success in higher education. The gradual improvement in performance across the academic years suggests that students develop the necessary capital through university experience itself rather than through preparation during their post-16 education.

Networks were critical as they served as a mechanism through which students accrued social and cultural capital relevant to higher education. The research identified three primary network types: familial, peer, and academic, with each contributing differently to students' knowledge acquisition and social integration as they navigated higher education.

Findings revealed the importance of these networks and how they evolved significantly after university entry. Initially students reported relying heavily on the informal family network for emotional support while gradually building stronger peer relationships in phase 2. The transition into higher education required students to develop new networks, and these peer networks became increasingly important for both academic collaboration and emotional support as students progressed through their university journey. Students exhibited more sophisticated utilisation of networks and became more proactive by phase 3. This illustrates Amartya Sen’s capabilities framework and shows how students’ utilisation of capital contributes to their development throughout university. Students’ capabilities are expanded through their ability to adapt to less structured environments and taking ownership of their learning, thereby creating capabilities for independent functioning (Sen 1999; Nussbaum 2011; Gale and Molla, 2015). However, the findings also revealed patterns regarding capability

limitations, with some students electing to handle issues independently without seeking the necessary support, even when they knew they were struggling. This suggests that personal, social and environmental factors can influence how resources are utilised in order for them to translate into capabilities. The findings showed how these factors can limit some students' ability to convert available resources to benefit them for academic success. This suggests that for some students their previous experiences may not adequately prepare them or equip them with help-seeking behaviours and self-advocacy skills necessary for university success. This indicates a significant gap in the development of cultural capital related to academic resilience and appropriate utilisation of support resources.

In conclusion, while post-16 education contributes significantly to students' development of social and cultural capital relevant to higher education, this contribution appears more effective at facilitating university entry than ensuring university success. The challenges faced by students during transition, regardless of qualification pathway, suggest that post-16 institutions could more effectively prepare students by focusing on developing specific skills such as independent learning, academic resilience, and adaptive networking capabilities, that align more closely with higher education demands.

6.3 Implications

The research revealed that entry qualifications impacted degree outcomes, and the performance differences between students with A-Level only qualifications and students with alternative qualifications were present from the start of students' higher education journey. It is also shown that these performance gaps did not close by the end of the degree for most entry qualifications. Alternative vocational entry qualifications such as BTEC and Access play a crucial pathway for university access, particularly for students from disadvantaged backgrounds. The findings illustrate the impact vocational qualifications can have on students, compounding existing attainment gaps.

The data also showed that pre-existing educational inequalities can persist, or even widen, during university, with entry qualifications serving as a marker for deeper structural barriers. Additionally, T-Levels qualifications were introduced by the previous government as a replacement for BTEC qualifications. The decision to defund the latter was premature since T-Level are new and untested. Despite the limitations of BTEC qualifications, they serve an important role that supports widening participation efforts and any replacement would need to be shown to serve the same purpose.

The introduction of the Provider Access Legislation (PAL) in 2018, required schools to provide access for approved providers to inform their students about apprenticeships and technical education (Department for Education, 2018). The aim was to ensure that all post-16 and post-18 pathways are promoted equally to students, addressing the historic bias in schools toward academic routes (A-levels, university) and close the information gap between different pathways. In 2023, this was updated with a requirement for students to have at least six encounters with the aim of helping learners understand the opportunities and apply for both apprenticeships and a broad range of technical education options (Department for Education, 2023). Of the six encounters, where students engage directly with external providers through assemblies and careers fairs, the first four are mandatory for students between years 8-11 and must inform them about their post-16 options. The last two encounters are mandatory for schools to provide in years 12-13, informing students about their post-18 options, but are optional for students to attend. This means younger students have guaranteed exposure, while sixth formers have choice, which might lead to post-16 students having more varied engagement with these encounters, potentially not closing gaps in information at this level. It should be noted that under this legislation, colleges have different requirements compared to schools. The 2023 PAL mandate specifically obliges schools to ensure students in years 8-13 have encounters with technical education and apprenticeship providers and must invite external providers. However this is not a requirement for colleges, they need only operate under their existing legal duty to offer impartial career guidance, which includes information students about all available education and career pathways (Department for Education, 2023). This could lead to differences in information delivery, where school sixth formers get external providers coming in to talk about post-18 options as part of PAL requirement and college students rely on their college's internal careers guidance about post-18 options.

Findings from this thesis revealed gaps in information provided to students between different post-16 institutions. This difference in requirements for institutions could exacerbate the existing disparity in quantity and quality of information students receive about the different pathways. While students from schools would have verified – external - providers to inform them about the different choices, college students may not receive the same level of input, which could lead to reduced awareness. Colleges play a key role in delivering PAL for schools as they are among the providers, however they must ensure their own students receive balanced and quality guidance about their options to avoid significant information disparities within post-16 students.

6.4 Recommendations

The current government has paused the defunding of BTEC qualifications. This is a welcome move, and more research needs to be carried into the effectiveness of T-Levels or any other substitute before replacing BTEC. Furthermore, the benchmark for any new qualification should not only be a like for like replacement of BTEC but should have parity with A-Levels in regard to performance.

Higher education institutions have a responsibility to their students which goes beyond recruitment. To help bridge the gap between different entry qualifications experiences and expectations at university, the institution should prioritise pre-enrolment interventions such as a transition programme that is student tailored and recognises the diversity of prior learning experiences. Furthermore, post-16 institutions, should also aim to look beyond access and application at earlier stages to help students prepare for the university environment.

To help address some of the institutional and cultural biases against certain entry qualifications, staff training should be provided to ensure that university staff recognise that students arrive with different experiences based on their entry qualifications and empower to support students from diverse educational backgrounds.

Findings from this thesis highlighted that disparities in students' performance emerge as early as the first year, making the transition from post-16 education into HE a critical point for intervention. This suggests that institutions might benefit from more targeted support interventions that help foster these adaptive capacities earlier in students' academic journeys which could accelerate the closing of performance gaps between entry qualifications. This particularly would be beneficial to UEA's work towards Access and Participation Plan (APP) objectives related to continuation and completion, especially for identified target student groups that include both BTEC and Mature students.

Institutions should prioritise resources for pre-arrival and onboarding programmes for students and review existing pre-entry interventions to ensure that they meet student needs. The timing of these interventions is also crucial. Findings from interviews revealed some students felt overwhelmed at the start and struggled to absorb all the information provided. Some students reported accessing support only after recommendations rather than proactively seeking it. While most institutions already offer pre-arrival programmes – for example UEA has pre-arrival programmes available to student in years 12-13 – these are often short in duration. Additionally, incorporating multiple touchpoints throughout the student journey to re-introduce available support could improve uptake, as students may be at the point where these resources are more relevant once they have settled into their new environment.

The findings also revealed a gradual improvement in performance across the academic years with three key network types identified as familial, peer, and academic. These networks contributed differently to students' knowledge acquisition and social integration as they navigated higher education and evolved significantly over time. A notable shift between phase 2 and 3 is observed, where academic and peers' networks become more influential and are utilised more extensively by students in later years. A recommendation to support students in fostering these connections, particularly academic networks, earlier in their academic journey. Doing so could help cultivate a stronger sense of belonging, which in turn may build the rapport and trust students need to fully benefit from these networks. This practice could also advance UEA's APP objectives by promoting consistent inclusive practice that remove barriers and enables students to engage with opportunities supporting their continuation and completion.

Furthermore, intervention aimed at increasing student's sense of belonging, should also explicitly address qualifications related stigma. Findings from this research revealed that some students were reluctant to engage with academic support due to feelings of shame. Additionally, the way extra resources were communicated – such as academics directing only BTEC students to use them – reinforced as sense of separatism. This approach not only alienated BTEC students but also excluded other who might have benefited from those resources. Therefore, staff training on implicit bias related to entry qualifications, alongside guidance on inclusive communication of support activities and resources is recommended. This is particularly important for UEA as one of key target groups in its APP is students with vocational qualifications.

Findings from the research revealed variability in subject-related performance differences. A subject focused approach is recommended to identify knowledge gaps and inform good practice in disciplines where gaps are smaller. Tailored support should be provided for students with alternative qualifications who may struggle. Recognising that students enter HE with different levels of prior knowledge, institutions should develop subject specific preparation programmes that can help close these gaps. Additionally, a review of assessments is needed to ensure they are accessible and fair to all students with considerations for subject-focused requirements.

6.5 Limitations and future research

All the data was collected at one institution; therefore, the findings might not be applicable to all UK university institution such as Russell groups that tend to have a different student population.

The participants in this study were split into two groups to account for COVID affected cohorts. The COVID-19 pandemic created a unique set of circumstances might limit the long-term applicability of some the results especially given that most universities have reverted back to their primary source of delivery.

Some of the subject degree pathways were not able to be analysed due to the small number of non-A-Level students resulting in too small a sample size to give any meaningful findings.

Future research could aim to explore within one degree subject, looking at a more granular modular level. Furthermore, conducting this type of study in a different university context would be recommended, ideally drawing data from different types of institutions across the UK.

6.6 Reflection

My PhD journey has introduced me to new ideas and influential thinkers. It has sharpened my critical thinking and strengthened my technical research skills. While this journey has brought many positive outcomes, there are aspects I would approach differently in hindsight.

An initial aspect of the quantitative analysis was to incorporate UCAS tariff points to better understand the relationship between entry qualification and academic outcomes when tariff points were controlled for in the statistical models. However, there were some challenges when it came to the dataset, such as students having multiple qualifications, sometimes up to twenty-one records of pre-university qualifications. With UEA admissions only considering the top three qualifications, a custom formula to extract this information and recode the qualifications to match UCAS guidelines was required. In addition, the qualifications needed to be mapped to the UCAS points, which was a time-consuming task. However, the discovery of frequent duplications of qualifications ultimately made using this variable unreliable due to the inconsistencies. On reflection, based on the time it took to clean the variable before it was ultimately abandoned, a preliminary assessment of how essential each variable was to fully answer the research questions before committing to complex variable construction would have allowed for more efficient use of time and redirect the focus to more robust indicators of academic preparedness.

This study utilised a concurrent mixed methods design. While this approach provided and revealed rich insights, a sequential mixed methods approach may have been more effective

in exploring specific patterns in greater depth. For example, beginning with quantitative analysis would have allowed for the identification of specific patterns which could then be explored in the qualitative interviews. For example, if a particular school or qualification demonstrated unique performance patterns, follow-up interviews could provide more contextual understanding.

Using qualitative interviews, this study captured student experiences at various academic stages but did not follow individual students over time. Incorporating a longitudinal case study design for the qualitative aspect of the research would have added depth to the analysis. Tracking a small cohort of students from their first year through to graduation would allow for real-time reflections and comparations between initial expectations and final outcomes. This approach could give valuable insight into student development, transitions and the evolving impact of entry qualifications.

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8. APPENDICES

Appendix 1: Interview questions

PARTICIPANT QUESTIONS

BEFORE UNIVERSITY – this section aims to help the student reflect on their post-16 experiences.

- What qualification did you used as your entry to university?
- Why did you choose this type of qualification(s) over others?
- What are you studying a university?
- How did you find out about the idea of going to university?
- What were the key defining factors of you wanting to come to university?
- Did what you chose to do at university influence the entry qualification you did?
- Who helped you make decisions about university?
- Who were the key information sources about university and what you might experience?
- What type of institution attend before coming to university?
- What support from you school/college did receive to help with your decisions about university?
- Did you engage in any activities provided by university before making your decision?
- What were your expectations before going to university?
- Did anybody influence the expectations you had?
- Why did you choose to come to UEA?
- How does the reality compare to what you expected university would be like?
- What concerns did you have before coming to university?

STARTING UNIVERSITY – FIRST YEAR – students look back at the start of their university journey.

- Talk to me about your first week at university? How did you feel?
- What did you enjoy?
- What did you find most challenging?
- Who did you find to be the most helpful person(s) at the beginning of your first year?
- How did you find or feel about your transition from school/college to university socially?
- How did you find or feel about your transition from school/college to university academically?

- Did you seek any support from any university services?
- If yes who prompt/referred, you seek them out?
- What was the service(s) you used?
- How did you find your first assignment? Why if good or bad.
- Did you get any support with it?
- If bad and no support, did you try and get support after negative feedback
- Thinking back to your school/college experiences of assessments, what was different at university and what was similar?
- Are there skills you developed at school/college that we transferred to aid your university experience?
- What skills did you wish you had developed before coming into university?
- How did you feel at the end of your first year?
- What expectation did you have at the end of your first year for your second year?
- At what point did you feel settled?
- What made you feel like you were settled in?

Only ask If student is only first year

- Do you think your entry qualifications prepared you adequately for what you experienced at university so far?
- Do you think your school/college prepared you adequately for what you experienced at university so far?
- What would be a good outcome for you at the end of your studies?

NOTE: Only continue If student is either in their second or third year.

SECOND YEAR

- Talk to me about your first week in your second year.
- How did you find or feel about your transition from first year to second year?
- How was your first assignment in second year?
- How was your approach different to your first assignment in first year?
- How did your grades in the second year compare to those in the first year?
- Did you make any changes in the second year based on your experiences in the first year?
- If yes, why those specific changes.
- What did you find most challenging about second year?
- Who did you find to be the most helpful person(s) in your second year? Why?

- Did you seek any support from any university services?
- If yes who prompt/referred, you seek them out?
- What was the service(s) you used?

Only ask If student is only second year

- Do you think your entry qualifications prepared you adequately for what you experienced at university so far?
- Do you think your school/college prepared you adequately for what you experienced at university so far?
- What would be a good outcome for you at the end of your studies?

NOTE: Only continue If student is in their third year.

THIRD YEAR

- Talk to me about your first week in your third year.
- What were expectations when moving on to your third year from second year?
- How did you find or feel about your transition from second year to third year?
- How was your first assignment in third year?
- How was your approach different to your first assignment in second year?
- Have you made any changes in your final year based on your experience in the second year?
- If yes, why those specific changes.
- What did you find most challenging about second year?
- Who did you find to be the most helpful person(s) in your second year?
- Do you think your entry qualifications prepared you adequately for what you experienced at university so far?
- Do you think your school/college prepared you adequately for what you experienced at university so far?
- What would be a good outcome for you at the end of your studies?
- Are currently on track for this result?

Appendix 2: Participant consent form

University of East Anglia

Faculty of Social Sciences
Norwich Business School
University of East Anglia
Norwich Research Park
Norwich NR4 7TJ
United Kingdom

Email: l.nakibuuka@uea.ac.uk
Web: www.uea.ac.uk

Name of Researcher: Linda-Marie Nakibuuka

Research study title: Comparative study of higher education degree attainment between A-Level and non-A-Level students

Participant anonymised initials: _____

*Date:*_____

CONSENT FORM

Please initial box

1. I confirm that I have read the information sheet provided to me for the above study. I have had the opportunity to consider the information, ask questions and I am happy with the answers. ☐
2. I understand the purpose of the study, what I will be asked to do, and any risks/benefits involved ☐
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐
4. I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law. ☐
5. I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me unless I consent to being identified using the "Yes" checkbox below. ☐
   - ☐ Yes, I am happy to be identified.
   - ☐ No, I don't want to be identified. Please keep my identity anonymous.
6. I agree to take part in this study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

Appendix 3: Interview Participation Information Sheet

University of East Anglia

Faculty of Social Sciences
Norwich Business School
University of East Anglia
Norwich Research Park
Norwich NR4 7TJ
United Kingdom

Email: l.nakibuuka@uea.ac.uk
Web: www.uea.ac.uk

Name of Researcher: Linda-Marie Nakibuuka

Research study title: Comparative study of higher education degree attainment between A-Level and non-A-Level students.

PARTICIPANT INFORMATION SHEET - INTERVIEW

1. What is this study about?
You are invited to take part in a research study about attainment disparities in degree outcomes between students with A-levels and non-A-Level vocational entry qualifications. The study seeks to understand student's experiences transitioning into university and throughout their undergraduate academic journey. You have been invited to participate in this study because you are an undergraduate student whose entry to university was one or a combination of the following qualifications, A-Levels, BTEC, Access. This Participant Information Sheet tells you about the research study. Knowing what is involved will help you decide if you want to take part in the study. Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?
The study is being carried out by the following researcher: Linda-Marie Nakibuuka, Norwich Business School.

This study will take place under the supervision of Dr Jenny Fairbrass (J.Fairbrass@uea.ac.uk) and Professor Sara Connolly (Sara.Connolly@uea.ac.uk).

3. What will the study involve for me?
You will be interviewed about your university experiences, and this involve reflecting on key transition points. The interview will take place at (insert location) and will be 45mins and won't be longer than an hour.

Audio recording will be used in the duration of the interview to aid in the capturing of information. After the interview the recording will be transcribed.

4. Do I have to be in the study? Can I withdraw from the study once I have started?
Being in this study is completely voluntary and you do not have to take part. Your decision to withdraw will be respected and not questioned.

If you decide to take part in the study, you can withdraw your consent at any point.

5. What are the consequences if I withdraw from the study?
You are free to stop the interview at any time. Unless you say that you want us to keep them, any recordings will be erased and the information you have provided will not be included in the study results provided they have not yet been analysed. You may also refuse to answer any questions that you do not wish to answer during the interview. If you decide at a later time to withdraw from the study, any unanalysed information of yours will be removed from our records and will not be included in any subsequent analysis.

Please note that once data has been analysed it will not be possible to remove it.

6. Are there any risks or costs associated with being in the study?
You will be asked to think and talk about your experiences, and we are aware that as a student you may have faced/continue to face lived experiences of mental health issues, race/ethnicity issues, ability, gender or class issues that may be painful, unprocessed and resurface during the interview.

Where relevant/necessary, we will also encourage you to reach out to relevant mental health and well-being services at UEA and support groups at the Student Union.

University of East Anglia

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7. Are there any benefits associated with being in the study?
By participating in this study, you will have the opportunity to share and reflect on your experiences navigating university and your sharing will aid in giving insight to critical points of the student's academic journey that can be feedback to the university and its practices. You will offered a voucher of £15 for your participation and time on the study.

8. What will happen to information provided by me and data collected during the study?
Your personal data and information will only be used as outlined in this Participant Information Sheet, unless you consent otherwise. Data management will follow the Data Protection Act 2018 (DPA 2018) and UK General Data Protection Regulation (UK GDPR), and the University of East Anglia's Research Data Management Policy.

The information you provide will be stored securely and your identity will be kept strictly confidential, except as required by law. Study findings may be published. Although every effort will be taken to ensure that you identity is protected, there is a small unavoidable chance that you in certain cases you might be identified.

The study data may also be deposited with a repository to allow it to be made available for scholarly and educational purposes. The data will be stored indefinitely and will not be deleted after 10 years. The deposited data will not include your name or any directly identifiable information about you, but there is a risk that you might be identifiable due to the nature of the study and/or findings.

9. What if I would like further information about the study?
When you have read this information, Linda-Marie Nakibuuka (L.Nakibuuka@uea.ac.uk) will be available to discuss it with you further and answer any questions you may have about the study.

10. What if I have a complaint or any concerns about the study?
If there is a problem, please let me know. You can contact me at L.Nakibuuka@uea.ac.uk.

If you would like to speak to someone else, you can contact my supervisor: Jenny Fairbrass (J.Fairbrass@uea.ac.uk) or Sara Connolly (Sara.Connolly@uea.ac.uk).

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the Director of Postgraduate Research Students (Pinar Guven-Uslu - P.Guven@ac.uk).

11. How do I know that this study has been approved to take place?
To protect your safety, rights, wellbeing and dignity, all research in the University of East Anglia is reviewed by a Research Ethics Body. This research was approved by the NBS S-REC (Norwich Business School Research Ethics Subcommittee).

12. What is the general data protection information I need to be informed about?
According to data protection legislation, we are required to inform you that the legal basis for processing your data as listed in Article 6(1) of the UK GDPR is because this allows us to process personal data when it is necessary to perform our public tasks as a university.

13. OK, I want to take part – what do I do next?
You need to complete the consent form and return either via email or in person.

This information sheet is for you to keep

Appendix 4: Summary of interview participants

Participant ID	***Entry Qualification***	***Foundation course***	***School***	***Year of Study***	***Post-16 Institution***	***Age***	***Mature Student***	***Gender***	***Ethnicity***
Participant 1	*A-Levels/BTEC*	*No*	*BIO*	*Year 3/Final*	*Sixth Form School*	*23*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 2	*A-Levels/BTEC*	*Yes*	*PHA*	*Year 2*	*Sixth Form College*	*19*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 3	*Other*	*No*	*HSC*	*Year 3/Final*	*Sixth Form School*	*20*	*No*	*F*	*Mixed or multiple ethnic groups - White and Black African*
Participant 4	*A-Levels*	*No*	*EDU*	*Year 2*	*Sixth Form School*	*20*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 5	*BTEC*	*No*	*EDU*	*Year 1*	*FE College*	*20*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 6	*A-Levels*	*No*	*CMP*	*Year 2*	*Sixth Form School (Grammar)*	*21*	*No*	*M*	*Any other White background*
Participant 7	*A-Levels*	*No*	*NBS*	*Year 3/Final*	*Sixth Form School*	*21*	*No*	*M*	*Black, Black British, Caribbean or African - African*
Participant 8	*A-Levels*	*No*	*ECO*	*Year 1*	*FE College*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 9	*A-Levels*	*No*	*CMP*	*Year 2*	*Sixth Form School (Grammar)*	*22*	*Yes*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*

Participant 10	*Access*	*No*	*PSY*	*Year 2*	*FE College*	*26*	*Yes*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 11	*BTEC*	*No*	*EDU*	*Year 2*		*22*	*Yes*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 12	*BTEC*	*No*	*PHA*	*Year 2*	*FE College*	*22*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 13	*BTEC*	*No*	*PHA*	*Year 2*	*Sixth Form College*	*22*	*Yes*	*F*	*Black, Black British, Caribbean or African - African*
Participant 14	*A-Levels*	*No*	*PHA*	*Year 2*	*Sixth Form School*	*21*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 15	*A-Levels/BTEC*	*Yes*	*PHA*	*Year 2*	*Sixth Form School*	*22*	*No*	*M*	*Black, Black British, Caribbean or African - African*
Participant 16	*BTEC*	*Yes*	*PHA*	*Year 2*	*Sixth Form School*	*20*	*No*	*F*	*Asian or Asian British - Indian*
Participant 17	*A-Levels*	*No*	*HSC*	*Year 3/Final*	*Sixth Form School*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 18	*A-Levels*	*No*	*PHA*	*Year 3/Final*	*Sixth Form School*	*22*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 19	*A-Levels*	*No*	*HSC*	*Year 3/Final*	*Sixth Form College*	*20*	*No*	*F*	*Any other Mixed or multiple ethnic background*
Participant 20	*BTEC*	*No*	*EDU*	*Year 2*	*Sixth Form College*	*21*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 21	*A-Levels*	*No*	*PSY*	*Year 2*	*Sixth Form College*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 22	*A-Levels*	*No*	*PSY*	*Year 2*	*Sixth Form School*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*

Participant 23	*A-Levels*	*No*	*SWK*	*Year 3/Final*	*Sixth Form School (Grammar)*	*21*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 24	*A-Levels/BTEC*	*No*	*EDU*	*Year 2*	*Sixth Form School*	*22*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 25	*A-Levels*	*No*	*HSC*	*Year 1*	*Sixth Form School*	*23*	*Yes*	*F*	*Any other White background*
Participant 26	*A-Levels*	*No*	*CMP*	*Year 3/Final*	*Sixth Form College*	*20*	*No*	*M*	*Black, Black British, Caribbean or African - African*
Participant 27	*BTEC*	*No*	*EDU*	*Year 1*	*FE College*	*19*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 28	*A-Levels/BTEC*	*No*	*PHA*	*Year 1*	*Sixth Form School*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 29	*A-Levels*	*No*	*PSY*	*Year 2*	*Sixth Form College*	*19*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 30	*BTEC*	*Yes*	*CMP*	*Year 2*	*FE College*	*21*	*No*	*M*	*Black, Black British, Caribbean or African - African*
Participant 31	*A-Levels*	*No*	*PSY*	*Year 2*	*Sixth Form School*	*20*	*No*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 32	*A-Levels*	*No*	*CMP*	*Year 1*	*Sixth Form School*	*19*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 33	*A-Levels*	*No*	*ENG*	*Year 3/Final*	*Sixth Form School*	*20*	*No*	*F*	*Any other Asian background*
Participant 34	*A-Levels/BTEC*	*No*	*CMP*	*Year 2*	*Sixth Form College*	*20*	*No*	*M*	*Any other White background*

Participant 35	*A-Levels*	*No*	*PHA*	*Year 1*	*Sixth Form School*	*20*	*No*	*M*	*Asian or Asian British - Indian*
Participant 36	*A-Levels/BTEC*	*Yes*	*PHA*	*Year 2*	*Sixth Form College*	*21*	*No*	*M*	*Black, Black British, Caribbean or African - African*
Participant 37	*A-Levels/BTEC*	*No*	*HSC*	*Year 3/Final*	*Sixth Form School*	*22*	*No*	*F*	*Black, Black British, Caribbean or African - African*
Participant 38	*BTEC*	*No*	*HSC*	*Year 2*	*Sixth Form College*	*19*	*No*	*M*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 39	*Access*	*Yes*	*BIO*	*Year 2*	*FE College*	*32*	*Yes*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 40	*Access*	*No*	*PSY*	*Year 2*	*FE College*	*31*	*Yes*	*F*	*Mixed or multiple ethnic groups - White and Asian*
Participant 41	*Access*	*No*	*SWK*	*Year 1*	*Other*	*29*	*Yes*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*
Participant 42	*Access*	*No*	*Other*	*Year 3/Final*	*Other*	*42*	*Yes*	*F*	*White - English, Welsh, Scottish, Northern Irish or British*

Source: Author's own interview data (n=42, collected March – July 2023)

Appendix 5: Ethics approval - quantitative

Ethics ETH2122-0009 : Miss Linda-Marie Nakibuuka

Date Created	24 Aug 2021
Date Submitted	15 Sep 2021
Date of last resubmission	15 Oct 2021
Date forwarded to committee	15 Oct 2021
Researcher	Miss Linda-Marie Nakibuuka
Category	PGR
Supervisor	Dr Jenny Fairbrass
Faculty	Faculty of Social Sciences
Current status	Approved

Ethics application

Applicant and research team

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Name of Principal Applicant
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Norwich Business School

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Primary Supervisor

Name of Primary Supervisor
Dr Jenny Fairbrass

Primary Supervisor's school/department
Norwich Business School

Project details

Project title
Higher education degree attainment between A-Level and non-A-Level students.

Project start date
01 Nov 2021

Project end date

Appendix 6: Ethics approval - qualitative

Ethics ETH2122-1984 : Miss Linda-Marie Nakibuuka

Date Created	16 May 2022
Date Submitted	21 Jun 2022
Date of last resubmission	09 Sep 2022
Date forwarded to committee	28 Sep 2022
Researcher	Miss Linda-Marie Nakibuuka
Category	PGR
Supervisor	Dr Jenny Fairbrass
Faculty	Faculty of Social Sciences
Current status	Approved after amendments made

Ethics application

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Primary Supervisor's school/department
Norwich Business School

Project details

Project title
Comparative study of higher education degree attainment between A-Level and non-A-Level students

Project start date
24 Oct 2022

Appendix 7: Level 1 Pre-COVID regression results (Model 1-6)

Pre-COVID					
Model 1					
Variable	*B*	*SE b*	*β*	*t*	*p*
(Constant)	65.355	66.411		259.069	<.001
Age at Entry: 21+	4.313	0.442	0.133	9.749	<.001
Age at Entry: 31+	3.836	0.644	0.081	5.96	<.001
Gender	-4.125	0.345	-0.163	-11.96	<.001
Ethnicity	-3.837	0.436	-0.118	-8.797	<.001
Disability	-2.657	0.426	-0.084	-6.241	<.001
R^2	0.28				
ΔR^2	0.078				
Model 2					
(Constant)	65.338	0.416		157.145	<.001
Age at Entry: 21+	4.303	0.448	0.133	9.598	<.001
Age at Entry: 31+	3.835	0.649	0.081	5.91	<.001
Gender	-4.115	0.347	-0.163	-11.86	<.001
Ethnicity	-3.839	0.437	-0.118	-8.791	<.001
Disability	-2.671	0.426	-0.084	-6.268	<.001
Quintile_1	-0.169	0.562	-0.005	-0.301	0.763
Quintile_2	0.373	0.518	0.012	0.72	0.471
Quintile_4	0.127	0.502	0.004	0.253	0.800
Quintile_5	-0.084	0.503	-0.003	-0.168	0.867
POLAR4 Missing	-4.723	1.783	-0.036	-2.649	0.008
R2	0.282				
ΔR^2	0.08				
Model 3					
(Constant)	67.004	0.424		157.91	<.001
Age at Entry: 21+	4.808	0.587	0.148	8.192	<.001
Age at Entry: 31+	4.171	0.834	0.088	5.002	<.001
Gender	-4.14	0.34	-0.164	-12.162	<.001
Ethnicity	-3.656	0.429	-0.113	-8.523	<.001
Disability	-2.09	0.42	-0.066	-4.98	<.001
Quintile_1	0.347	0.553	0.01	0.627	0.531
Quintile_2	0.613	0.508	0.02	1.207	0.227
Quintile_4	-0.136	0.492	-0.005	-0.277	0.782
Quintile_5	-0.959	0.497	-0.033	-1.932	0.053
POLAR4 Missing	-5.684	1.753	-0.043	-3.242	0.001

BTEC	-6.709	0.499	-0.186	-13.457	<.001
Access	-2.96	0.682	-0.084	-4.34	<.001
A-Level_BTEC	-4.651	0.619	-0.102	-7.515	<.001
IB	-2.446	1.289	-0.025	-1.899	0.058
UG or PG	0.564	1.26	0.007	0.448	0.654
Other	-2.207	0.82	-0.042	-2.691	0.007
R2	0.343				
ΔR²	0.118				
Model 4					
(Constant)	66.791	0.443		150.901	<.001
Age at Entry: 21+	4.344	0.66	0.134	6.585	<.001
Age at Entry: 31+	3.838	0.884	0.081	4.342	<.001
Gender	-4.1	0.341	-0.162	-12.013	<.001
Ethnicity	-3.651	0.43	-0.112	-8.497	<.001
Disability	-2.125	0.42	-0.067	-5.061	<.001
Quintile_1	0.289	0.554	0.008	0.521	0.602
Quintile_2	0.58	0.508	0.019	1.141	0.254
Quintile_4	-0.115	0.492	-0.004	-0.233	0.816
Quintile_5	-0.946	0.497	-0.033	-1.905	0.057
POLAR4 Missing	-5.803	1.754	-0.044	-3.308	0.001
BTEC	-7.263	0.581	-0.201	-12.501	<.001
Access	-3.337	0.8	-0.095	-4.174	<.001
A-Level_BTEC	-4.858	0.63	-0.106	-7.712	<.001
IB	-2.538	1.291	-0.026	-1.966	0.049
UG or PG	0.28	1.276	0.003	0.22	0.826
Other	-2.437	0.851	-0.046	-2.864	0.004
Sixth Form College	0.42	0.478	0.013	0.879	0.380
FE College	1.015	0.618	0.033	1.643	0.100
Post_16 Other	1.139	0.576	0.038	1.978	0.048
Post_16 Missing	-3.111	2.455	-0.018	-1.267	0.205
R2	0.345				
ΔR²	0.119				
Model 5					
(Constant)	64.461	0.597		108.032	<.001
Age at Entry: 21+	2.385	0.628	0.074	3.801	<.001
Age at Entry: 31+	2.111	0.838	0.045	2.519	0.012
Gender	-1.494	0.396	-0.059	-3.776	<.001
Ethnicity	-3.172	0.424	-0.098	-7.478	<.001
Disability	-2.087	0.397	-0.066	-5.253	<.001

Quintile_1	0.634	0.523	0.019	1.213	0.225
Quintile_2	0.429	0.479	0.014	0.896	0.370
Quintile_4	-0.119	0.464	-0.004	-0.257	0.798
Quintile_5	-0.830	0.469	-0.029	-1.770	0.077
POLAR4 Missing	-6.099	1.655	-0.047	-3.685	<.001
BTEC	-9.033	0.571	-0.250	-15.808	<.001
Access	-5.668	0.764	-0.161	-7.423	<.001
A-Level_BTEC	-6.310	0.606	-0.138	-10.414	<.001
IB	-1.504	1.220	-0.015	-1.233	0.218
UG or PG	-2.623	1.210	-0.031	-2.169	0.030
Other	-3.457	0.807	-0.065	-4.286	<.001
Sixth Form College	0.075	0.452	0.002	0.166	0.868
FE College	0.224	0.585	0.007	0.384	0.701
Post_16 Other	-0.125	0.547	-0.004	-0.229	0.819
Post_16 Missing	-6.088	2.317	-0.034	-2.628	0.009
CMP_Dummy	0.967	0.756	0.019	1.279	0.201
ECO_Dummy	-0.141	0.619	-0.004	-0.228	0.820
EDU_Dummy	-0.809	0.742	-0.017	-1.090	0.276
ENG_Dummy	1.088	1.579	0.009	0.689	0.491
HSC_Dummy	8.227	0.568	0.337	14.485	<.001
PHA_Dummy	-1.330	0.744	-0.028	-1.787	0.074
PSY_Dummy	-2.800	0.631	-0.076	-4.434	<.001
SWK_Dummy	-3.003	1.196	-0.034	-2.512	0.012
R2	0.468				
ΔR^2	0.219				
Model 6					
(Constant)	65.405	0.639		102.353	<.001
Age at Entry: 21+	2.686	0.630	0.083	4.260	<.001
Age at Entry: 31+	2.130	0.844	0.045	2.523	0.012
Gender	-1.191	0.395	-0.047	-3.014	0.003
Ethnicity	-3.231	0.421	-0.100	-7.666	<.001
Disability	-2.063	0.395	-0.065	-5.226	<.001
Quintile_1	0.644	0.519	0.019	1.241	0.215
Quintile_2	0.538	0.476	0.018	1.130	0.259
Quintile_4	-0.054	0.461	-0.002	-0.116	0.907
Quintile_5	-0.862	0.465	-0.030	-1.853	0.064
POLAR4 Missing	-6.173	1.649	-0.047	-3.744	<.001
BTEC	-15.633	1.308	-0.433	-11.955	<.001
Access	-0.199	3.834	-0.006	-0.052	0.959
A-Level_BTEC	-9.267	1.384	-0.203	-6.695	<.001

IB	-4.019	2.261	-0.041	-1.777	0.076
UG or PG	-0.983	1.220	-0.012	-0.806	0.420
Other	-5.635	2.803	-0.106	-2.010	0.044
Sixth Form College	0.282	0.450	0.009	0.628	0.530
FE College	0.362	0.582	0.012	0.622	0.534
Post_16 Other	0.004	0.544	0.000	0.007	0.994
Post_16 Missing	-6.304	2.311	-0.036	-2.728	0.006
CMP_Dummy	1.328	0.960	0.026	1.384	0.166
ECO_Dummy	-1.240	0.680	-0.033	-1.824	0.068
EDU_Dummy	-0.682	1.094	-0.014	-0.623	0.533
ENG_Dummy	-1.741	1.859	-0.014	-0.937	0.349
HSC_Dummy	5.353	0.674	0.219	7.944	<.001
PHA_Dummy	-2.181	0.799	-0.045	-2.729	0.006
PSY_Dummy	-3.359	0.707	-0.091	-4.750	<.001
SWK_Dummy	-3.557	1.984	-0.041	-1.793	0.073
BTEC_CMP	3.358	1.907	0.035	1.761	0.078
Access_CMP	-19.954	5.559	-0.061	-3.590	<.001
ALevelBTEC_CMP	-1.120	2.437	-0.007	-0.460	0.646
Other_CMP	0.864	4.214	0.003	0.205	0.838
BTEC_ECO	7.188	5.451	0.017	1.319	0.187
Access_ECO	-14.986	7.194	-0.030	-2.083	0.037
ALevelBTEC_ECO	2.036	2.679	0.011	0.760	0.447
IB_ECO	1.802	3.572	0.008	0.505	0.614
Other_ECO	-1.540	4.687	-0.005	-0.329	0.743
BTEC_EDU	4.939	1.868	0.061	2.643	0.008
Access_EDU	-6.200	4.471	-0.034	-1.387	0.166
ALevelBTEC_EDU	0.342	2.235	0.003	0.153	0.879
IB_EDU	3.744	4.964	0.011	0.754	0.451
Other_EDU	-3.014	3.654	-0.017	-0.825	0.410
BTEC_ENG	17.857	7.790	0.029	2.292	0.022
Access_ENG	-2.484	5.607	-0.008	-0.443	0.658
ALevelBTEC_ENG	2.652	7.811	0.004	0.340	0.734
Other_ENG	10.939	6.950	0.022	1.574	0.116
BTEC_HSC	10.665	1.450	0.217	7.355	0.000
Access_HSC	-3.509	3.817	-0.092	-0.919	0.358
ALevelBTEC_HSC	5.994	1.655	0.087	3.621	<.001
IB_HSC	5.993	3.727	0.025	1.608	0.108
Other_HSC	4.256	2.938	0.066	1.449	0.148

BTEC_PHA	-1.260	10.666	-0.001	-0.118	0.906
Access_PHA	-25.677	6.531	-0.059	-3.932	<.001
ALevelBTEC_PHA	2.645	4.032	0.009	0.656	0.512
IB_PHA	4.695	4.633	0.014	1.013	0.311
Other_PHA	-0.270	4.536	-0.001	-0.060	0.953
BTEC_PSY	-1.732	2.776	-0.009	-0.624	0.533
Access_PSY	-9.937	4.211	-0.067	-2.360	0.018
ALevelBTEC_PSY	4.817	2.393	0.031	2.013	0.044
IB_PSY	1.114	3.513	0.005	0.317	0.751
UG_PSY	1.666	10.645	0.002	0.157	0.876
Other_PSY	-4.829	4.271	-0.019	-1.130	0.258
BTEC_SWK	1.499	3.384	0.007	0.443	0.658
Access_SWK	-6.849	4.643	-0.043	-1.475	0.140
ALevelBTEC_SWK	1.554	4.234	0.005	0.367	0.714
UG_SWK	-11.567	10.805	-0.013	-1.071	0.284
Other_SWK	11.470	4.764	0.042	2.407	0.016
R2	0.492				
ΔR^2	0.242				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

Appendix 8: Level 1 COVID regression results (Model 1-6)

COVID					
Model 1					
Variable	*B*	*SE b*	*β*	*t*	*p*
(Constant)	62.634	0.288		217.294	<.001
Age at Entry: 21+	0.700	0.569	0.019	1.231	0.218
Age at Entry: 31+	1.938	0.976	0.031	1.986	0.047
Gender	-1.779	0.366	-0.076	-4.856	<.001
Ethnicity	-4.187	0.422	-0.155	-9.921	<.001
Disability	-2.125	0.462	-0.072	-4.595	<.001
R^2	0.191				
ΔR^2	0.037				
Model 2					
(Constant)	62.480	0.455		137.352	<.001
Age at Entry: 21+	0.865	0.574	0.024	1.508	0.132
Age at Entry: 31+	2.162	0.984	0.035	2.197	0.028

Gender	-1.894	0.369	-0.081	-5.137	<.001
Ethnicity	-4.181	0.422	-0.155	-9.897	<.001
Disability	-2.146	0.463	-0.073	-4.637	<.001
Quintile_1	-0.394	0.604	-0.012	-0.653	0.514
Quintile_2	-0.298	0.580	-0.010	-0.514	0.607
Quintile_4	0.341	0.557	0.012	0.612	0.541
Quintile_5	0.823	0.549	0.030	1.499	0.134
POLAR4 Missing	3.055	1.843	0.026	1.658	0.097
R2			0.197		
ΔR^2			0.039		
Model 3					
(Constant)	64.793	0.458		141.367	<.001
Age at Entry: 21+	3.529	0.694	0.098	5.083	<.001
Age at Entry: 31+	4.952	1.112	0.079	4.454	<.001
Gender	-1.990	0.355	-0.085	-5.605	<.001
Ethnicity	-4.183	0.406	-0.155	-10.314	<.001
Disability	-1.701	0.444	-0.058	-3.830	<.001
Quintile_1	0.720	0.582	0.023	1.236	0.217
Quintile_2	0.164	0.556	0.005	0.295	0.768
Quintile_4	-0.171	0.534	-0.006	-0.319	0.749
Quintile_5	-0.228	0.529	-0.008	-0.431	0.667
POLAR4 Missing	2.727	1.768	0.023	1.543	0.123
BTEC	-9.268	0.512	-0.284	-18.100	<.001
Access	-6.222	0.797	-0.162	-7.810	<.001
A-Level_BTEC	-3.844	0.634	-0.093	-6.062	<.001
IB	0.324	1.623	0.003	0.199	0.842
UG or PG	-0.001	1.852	0.000	0.000	1.000
Other	-5.642	0.790	-0.116	-7.143	<.001
R2			0.346		
ΔR^2			0.120		
Model 4					
(Constant)	64.807	0.473		137.118	<.001
Age at Entry: 21+	2.741	0.756	0.076	3.626	<.001
Age at Entry: 31+	4.276	1.142	0.068	3.745	<.001
Gender	-1.970	0.356	-0.084	-5.542	<.001
Ethnicity	-4.208	0.407	-0.156	-10.341	<.001
Disability	-1.732	0.444	-0.059	-3.900	<.001
Quintile_1	0.735	0.583	0.023	1.261	0.208
Quintile_2	0.100	0.557	0.003	0.179	0.858
Quintile_4	-0.192	0.534	-0.007	-0.359	0.720

Quintile_5	-0.237	0.529	-0.009	-0.449	0.653
POLAR4 Missing	2.555	1.769	0.022	1.444	0.149
BTEC	-9.527	0.593	-0.292	-16.070	<.001
Access	-6.158	0.938	-0.160	-6.566	<.001
A-Level_BTEC	-3.797	0.638	-0.092	-5.955	<.001
IB	0.007	1.627	0.000	0.004	0.997
UG or PG	-0.583	1.877	-0.005	-0.311	0.756
Other	-6.418	0.856	-0.132	-7.496	<.001
Sixth Form College	-0.596	0.507	-0.019	-1.175	0.240
FE College	0.545	0.677	0.018	0.804	0.421
Post_16 Other	1.330	0.647	0.040	2.056	0.040
Post_16 Missing	5.449	2.651	0.032	2.056	0.040
R2	0.349				
ΔR^2	0.122				
Model 5					
(Constant)	65.166	0.656		99.404	<.001
Age at Entry: 21+	2.601	0.740	0.072	3.514	<.001
Age at Entry: 31+	3.880	1.120	0.062	3.466	0.001
Gender	-2.729	0.435	-0.117	-6.270	<.001
Ethnicity	-4.104	0.418	-0.152	-9.807	<.001
Disability	-1.885	0.436	-0.064	-4.326	<.001
Quintile_1	0.668	0.571	0.021	1.170	0.242
Quintile_2	0.088	0.545	0.003	0.161	0.872
Quintile_4	-0.102	0.522	-0.004	-0.195	0.845
Quintile_5	-0.132	0.518	-0.005	-0.254	0.799
POLAR4 Missing	2.731	1.730	0.023	1.579	0.114
BTEC	-10.651	0.599	-0.326	-17.795	<.001
Access	-7.193	0.932	-0.187	-7.718	<.001
A-Level_BTEC	-4.508	0.634	-0.109	-7.108	<.001
IB	0.256	1.592	0.002	0.161	0.872
UG or PG	-2.318	1.854	-0.020	-1.250	0.211
Other	-7.235	0.850	-0.149	-8.510	<.001
Sixth Form College	-0.711	0.498	-0.023	-1.429	0.153
FE College	0.280	0.665	0.009	0.421	0.674
Post_16 Other	0.978	0.635	0.029	1.540	0.124
Post_16 Missing	4.212	2.597	0.025	1.622	0.105
CMP_Dummy	5.377	0.684	0.140	7.863	<.001
ECO_Dummy	-0.855	0.669	-0.023	-1.279	0.201
EDU_Dummy	-0.434	0.787	-0.010	-0.551	0.581
ENG_Dummy	-0.066	1.267	-0.001	-0.052	0.959
HSC_Dummy	2.076	0.614	0.083	3.381	0.001

PHA_Dummy	-1.290	0.772	-0.029	-1.671	0.095
PSY_Dummy	-3.587	0.680	-0.103	-5.274	<.001
SWK_Dummy	-2.043	1.331	-0.024	-1.535	0.125
R2	0.403				
ΔR^2	0.163				
Model 6					
(Constant)	65.458	0.719		91.023	<.001
Age at Entry: 21+	2.425	0.748	0.067	3.242	0.001
Age at Entry: 31+	3.123	1.135	0.050	2.752	0.006
Gender	-2.752	0.438	-0.118	-6.287	<.001
Ethnicity	-4.114	0.419	-0.153	-9.816	<.001
Disability	-1.887	0.436	-0.064	-4.327	<.001
Quintile_1	0.668	0.572	0.021	1.168	0.243
Quintile_2	0.030	0.545	0.001	0.055	0.956
Quintile_4	-0.129	0.523	-0.005	-0.248	0.805
Quintile_5	-0.138	0.517	-0.005	-0.267	0.790
POLAR4 Missing	3.759	1.753	0.032	2.144	0.032
BTEC	-11.022	1.179	-0.338	-9.345	<.001
Access	-6.234	2.952	-0.162	-2.112	0.035
A-Level_BTEC	-4.120	1.278	-0.100	-3.224	0.001
IB	-3.679	3.790	-0.034	-0.971	0.332
UG or PG	-1.866	1.872	-0.016	-0.997	0.319
Other	-13.327	2.116	-0.275	-6.298	<.001
Sixth Form College	-0.628	0.499	-0.020	-1.259	0.208
FE College	0.426	0.670	0.014	0.636	0.525
Post_16 Other	1.174	0.639	0.035	1.836	0.066
Post_16 Missing	4.184	2.633	0.025	1.589	0.112
CMP_Dummy	4.887	0.870	0.127	5.618	<.001
ECO_Dummy	-0.813	0.747	-0.022	-1.087	0.277
EDU_Dummy	-1.402	1.113	-0.031	-1.260	0.208
ENG_Dummy	-0.088	1.577	-0.001	-0.056	0.955
HSC_Dummy	1.477	0.786	0.059	1.879	0.060
PHA_Dummy	-1.728	0.868	-0.040	-1.992	0.046
PSY_Dummy	-3.580	0.795	-0.103	-4.502	<.001
SWK_Dummy	-5.694	2.166	-0.067	-2.628	0.009
BTEC_CMP	-0.412	1.740	-0.005	-0.237	0.813
Access_CMP	-3.965	4.269	-0.019	-0.929	0.353
ALevelBTEC_CMP	0.262	2.154	0.002	0.122	0.903
IB_CMP	6.971	5.797	0.023	1.203	0.229
Other_CMP	16.433	3.676	0.081	4.471	<.001
BTEC_ECO	-10.013	4.506	-0.033	-2.222	0.026

Access_ECO	-17.236	6.060	-0.047	-2.844	0.004
ALevelBTEC_ECO	-0.909	3.246	-0.004	-0.280	0.779
IB_ECO	5.722	5.209	0.023	1.099	0.272
Other_ECO	0.088	5.242	0.000	0.017	0.987
BTEC_EDU	1.838	1.905	0.022	0.965	0.335
Access_EDU	-1.781	4.166	-0.009	-0.428	0.669
ALevelBTEC_EDU	1.116	2.342	0.009	0.477	0.634
IB_EDU	10.584	11.302	0.014	0.936	0.349
Other_EDU	6.689	3.049	0.048	2.194	0.028
BTEC_ENG	-2.547	4.437	-0.009	-0.574	0.566
Access_ENG	-2.445	5.756	-0.007	-0.425	0.671
ALevelBTEC_ENG	-2.433	4.037	-0.010	-0.603	0.547
IB_ENG	15.161	11.366	0.021	1.334	0.182
Other_ENG	8.185	4.754	0.029	1.722	0.085
BTEC_HSC	0.506	1.433	0.010	0.353	0.724
Access_HSC	0.208	3.005	0.005	0.069	0.945
ALevelBTEC_HSC	-1.250	1.733	-0.017	-0.721	0.471
IB_HSC	7.186	5.538	0.026	1.298	0.195
Other_HSC	6.700	2.361	0.105	2.838	0.005
BTEC_PHA	5.185	2.713	0.032	1.911	0.056
Access_PHA	-10.742	6.074	-0.029	-1.768	0.077
ALevelBTEC_PHA	-4.336	3.267	-0.021	-1.327	0.185
IB_PHA	5.059	8.422	0.010	0.601	0.548
Other_PHA	15.060	5.744	0.041	2.622	0.009
BTEC_PSY	-0.707	2.343	-0.005	-0.301	0.763
Access_PSY	-3.997	3.522	-0.030	-1.135	0.257
ALevelBTEC_PSY	1.227	2.268	0.010	0.541	0.588
IB_PSY	-0.484	4.895	-0.002	-0.099	0.921
Other_PSY	2.147	4.000	0.009	0.537	0.591
BTEC_SWK	7.035	3.877	0.033	1.815	0.070
Access_SWK	4.043	4.311	0.024	0.938	0.348
ALevelBTEC_SWK	4.156	4.467	0.016	0.930	0.352
EntryQualOtherM_SWK	10.089	4.246	0.048	2.376	0.018
R2	0.422				
ΔR^2	0.178				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

Appendix 9: Pre-COVID Level 2, 3 and Final Grade regression results

Level 2						**Level 3**					**Final Grade**				
Model 1															
Variable	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*
(Constant)	66.248	0.216		306.933	0.000	69.087	0.201		343.852	0.000	68.173	0.172		396.315	0.000
Age at Entry: 21+	0.613	0.381	0.023	1.610	0.107	-0.997	0.336	-0.042	-2.964	0.003	0.691	0.307	0.033	2.252	0.024
Age at Entry: 31+	1.557	0.571	0.039	2.727	0.006	-1.297	0.447	-0.042	-2.899	0.004	1.702	0.462	0.054	3.686	0.000
Gender	-1.574	0.297	-0.076	-5.296	0.000	-2.108	0.275	-0.109	-7.652	0.000	-1.652	0.239	-0.101	-6.909	0.000
Ethnicity	-3.204	0.372	-0.122	-8.604	0.000	-4.309	0.346	-0.174	-12.449	0.000	-4.343	0.304	-0.207	-14.304	0.000
Disability	-4.722	0.374	-0.179	-12.623	0.000	-2.361	0.348	-0.095	-6.776	0.000	-2.717	0.303	-0.130	-8.972	0.000
R^2	0.236					0.227					0.274				
ΔR^2	0.056					0.051					0.075				
Model 2															
(Constant)	66.433	0.356		186.823	0.000	69.174	0.325		212.870	0.000	68.094	0.282		241.139	0.000
Age at Entry: 21+	0.804	0.386	0.030	2.082	0.037	-0.642	0.341	-0.027	-1.880	0.060	0.906	0.311	0.043	2.917	0.004
Age at Entry: 31+	1.790	0.576	0.045	3.108	0.002	-0.893	0.452	-0.029	-1.976	0.048	1.947	0.465	0.062	4.190	0.000
Gender	-1.679	0.299	-0.081	-5.613	0.000	-2.277	0.277	-0.118	-8.231	0.000	-1.773	0.240	-0.109	-7.372	0.000
Ethnicity	-4.759	0.374	-0.181	-12.713	0.000	-4.376	0.346	-0.177	-12.662	0.000	-4.399	0.303	-0.209	-14.496	0.000
Disability	-3.251	0.373	-0.124	-8.727	0.000	-2.429	0.348	-0.098	-6.987	0.000	-2.770	0.303	-0.132	-9.156	0.000
Quintile_1	-1.019	0.487	-0.036	-2.093	0.036	-1.402	0.435	-0.055	-3.223	0.001	-0.689	0.389	-0.031	-1.768	0.077
Quintile_2	-0.530	0.446	-0.021	-1.189	0.234	-0.648	0.404	-0.029	-1.607	0.108	-0.284	0.356	-0.015	-0.797	0.425
Quintile_4	-0.131	0.431	-0.006	-0.304	0.761	0.230	0.394	0.011	0.584	0.559	0.288	0.344	0.016	0.838	0.402

Quintile_5	0.476	0.433	0.020	1.100	0.271	0.905	0.397	0.041	2.280	0.023	0.841	0.345	0.046	2.438	0.015
POLAR4 Missing	-1.118	1.491	-0.011	-0.750	0.453	-2.211	1.320	-0.024	-1.675	0.094	-2.024	1.163	-0.026	-1.741	0.082
R2	0.241					0.241					0.282				
ΔR^2	0.058					0.058					0.080				
Model 3															
(Constant)	68.046	0.359		189.287	0.000	70.287	0.332		211.866	0.000	69.347	0.284		243.772	0.000
Age at Entry: 21+	2.467	0.497	0.093	4.959	0.000	0.279	0.437	0.012	0.639	0.523	2.486	0.397	0.119	6.258	0.000
Age at Entry: 31+	3.830	0.724	0.097	5.289	0.000	0.595	0.607	0.019	0.981	0.327	3.915	0.583	0.124	6.709	0.000
Gender	-1.748	0.291	-0.085	-6.000	0.000	-2.281	0.272	-0.118	-8.385	0.000	-1.833	0.234	-0.112	-7.841	0.000
Ethnicity	-4.561	0.365	-0.173	-12.505	0.000	-4.345	0.340	-0.176	-12.786	0.000	-4.339	0.295	-0.206	-14.714	0.000
Disability	-2.754	0.364	-0.105	-7.570	0.000	-2.151	0.343	-0.086	-6.267	0.000	-2.365	0.295	-0.113	-8.023	0.000
Quintile_1	-0.458	0.475	-0.016	-0.965	0.334	-1.036	0.428	-0.041	-2.418	0.016	-0.209	0.379	-0.009	-0.550	0.582
Quintile_2	-0.238	0.434	-0.010	-0.549	0.583	-0.456	0.397	-0.020	-1.150	0.250	-0.023	0.346	-0.001	-0.067	0.947
Quintile_4	-0.446	0.419	-0.019	-1.064	0.287	0.025	0.387	0.001	0.066	0.948	0.037	0.334	0.002	0.112	0.911
Quintile_5	-0.388	0.424	-0.017	-0.914	0.361	0.358	0.393	0.016	0.912	0.362	0.170	0.337	0.009	0.505	0.614
POLAR4 Missing	-1.760	1.456	-0.017	-1.208	0.227	-2.616	1.304	-0.028	-2.007	0.045	-2.572	1.134	-0.032	-2.269	0.023
BTEC	-6.041	0.446	-0.195	-13.538	0.000	-4.072	0.425	-0.137	-9.569	0.000	-4.694	0.361	-0.189	-12.986	0.000
Access	-4.584	0.583	-0.157	-7.868	0.000	-2.186	0.528	-0.078	-4.139	0.000	-4.208	0.469	-0.180	-8.969	0.000
A-Level_BTEC	-5.276	0.531	-0.141	-9.929	0.000	-4.055	0.509	-0.112	-7.974	0.000	-4.344	0.429	-0.145	-10.115	0.000
IB	-2.199	1.089	-0.028	-2.019	0.044	-1.586	1.011	-0.022	-1.569	0.117	-1.428	0.859	-0.023	-1.663	0.096
UG or PG	-1.383	1.100	-0.019	-1.257	0.209	0.610	0.907	0.011	0.672	0.501	-0.793	0.869	-0.014	-0.912	0.362

Other	-4.127	0.680	-0.098	-6.066	0.000	-4.307	0.559	-0.141	-7.698	0.000	-3.461	0.546	-0.103	-6.341	0.000
R2	0.333					0.305					0.368				
ΔR^2	0.111					0.093					0.136				
Model 4															
(Constant)	68.104	0.376		181.341	0.000	70.237	0.344		204.366	0.000	69.379	0.298		233.170	0.000
Age at Entry: 21+	2.000	0.563	0.076	3.555	0.000	-0.284	0.484	-0.012	-0.586	0.558	1.972	0.451	0.094	4.375	0.000
Age at Entry: 31+	3.408	0.762	0.086	4.473	0.000	1.362	0.656	0.044	2.075	0.038	3.441	0.614	0.109	5.601	0.000
Gender	-1.721	0.292	-0.083	-5.892	0.000	-2.276	0.270	-0.118	-8.431	0.000	-1.809	0.234	-0.111	-7.725	0.000
Ethnicity	-4.578	0.365	-0.174	-12.545	0.000	-4.411	0.336	-0.179	-13.116	0.000	-4.356	0.295	-0.207	-14.777	0.000
Disability	-2.731	0.364	-0.104	-7.506	0.000	-2.253	0.340	-0.091	-6.628	0.000	-2.343	0.295	-0.112	-7.952	0.000
Quintile_1	-0.390	0.476	-0.014	-0.819	0.413	-0.761	0.426	-0.030	-1.788	0.074	-0.143	0.380	-0.006	-0.376	0.707
Quintile_2	-0.219	0.434	-0.009	-0.504	0.614	-0.438	0.393	-0.019	-1.116	0.265	-0.001	0.346	0.000	-0.003	0.997
Quintile_4	-0.422	0.419	-0.018	-1.007	0.314	0.048	0.383	0.002	0.126	0.900	0.055	0.333	0.003	0.164	0.870
Quintile_5	-0.381	0.425	-0.016	-0.898	0.369	0.314	0.389	0.014	0.807	0.420	0.180	0.337	0.010	0.534	0.593
POLAR4 Missing	-1.846	1.457	-0.018	-1.267	0.205	-2.806	1.291	-0.030	-2.174	0.030	-2.640	1.133	-0.033	-2.330	0.020
BTEC	-5.815	0.518	-0.188	-11.218	0.000	-4.004	0.488	-0.135	-8.207	0.000	-4.405	0.419	-0.178	-10.519	0.000
Access	-3.882	0.687	-0.133	-5.653	0.000	-1.858	0.620	-0.066	-2.998	0.003	-3.336	0.555	-0.143	-6.006	0.000
A-Level_BTEC	-5.170	0.540	-0.138	-9.571	0.000	-3.981	0.511	-0.110	-7.788	0.000	-4.211	0.436	-0.141	-9.664	0.000
IB	-2.328	1.091	-0.030	-2.133	0.033	-1.718	1.001	-0.023	-1.716	0.086	-1.550	0.859	-0.025	-1.804	0.071
UG or PG	-1.576	1.113	-0.022	-1.416	0.157	0.345	0.911	0.006	0.379	0.705	-0.993	0.879	-0.018	-1.130	0.258
Other	-4.276	0.705	-0.101	-6.066	0.000	-3.108	0.599	-0.102	-5.192	0.000	-3.603	0.565	-0.108	-6.379	0.000

Sixth Form College	-0.617	0.409	-0.023	-1.507	0.132	-0.375	0.380	-0.015	-0.988	0.323	-0.476	0.326	-0.022	-1.459	0.145
FE College	-0.609	0.537	-0.024	-1.134	0.257	-0.615	0.495	-0.026	-1.241	0.215	-0.774	0.431	-0.038	-1.796	0.073
Post_16 Other	0.561	0.495	0.023	1.133	0.257	1.524	0.448	0.067	3.404	0.001	0.643	0.396	0.033	1.623	0.105
Post_16 Missing						-6.006	0.886	-0.128	-6.778	0.000					
R2	0.335					0.337					0.372				
ΔR^2	0.112					0.113					0.138				
Model 5															
(Constant)	69.515	0.519		133.999	0.000	71.312	0.480		148.651	0.000	70.471	0.405		173.846	0.000
Age at Entry: 21+	1.317	0.549	0.050	2.398	0.017	-1.302	0.478	-0.055	-2.724	0.006	1.133	0.435	0.054	2.602	0.009
Age at Entry: 31+	2.756	0.741	0.070	3.719	0.000	0.291	0.643	0.009	0.452	0.651	2.551	0.591	0.081	4.313	0.000
Gender	-1.793	0.347	-0.087	-5.174	0.000	-1.772	0.319	-0.092	-5.555	0.000	-1.674	0.274	-0.103	-6.118	0.000
Ethnicity	-4.451	0.368	-0.169	-12.081	0.000	-3.953	0.341	-0.160	-11.578	0.000	-4.018	0.295	-0.191	-13.615	0.000
Disability	-2.347	0.353	-0.090	-6.656	0.000	-2.044	0.331	-0.082	-6.173	0.000	-2.084	0.283	-0.100	-7.376	0.000
Quintile_1	-0.227	0.460	-0.008	-0.493	0.622	-0.576	0.414	-0.023	-1.392	0.164	0.063	0.363	0.003	0.173	0.862
Quintile_2	-0.268	0.419	-0.011	-0.639	0.523	-0.498	0.381	-0.022	-1.306	0.192	-0.035	0.331	-0.002	-0.105	0.917
Quintile_4	-0.544	0.405	-0.023	-1.343	0.179	0.016	0.372	0.001	0.043	0.966	0.026	0.319	0.001	0.082	0.934
Quintile_5	-0.658	0.411	-0.028	-1.602	0.109	0.207	0.379	0.009	0.546	0.585	0.003	0.323	0.000	0.009	0.993
POLAR4 Missing	-2.124	1.408	-0.021	-1.508	0.132	-3.025	1.255	-0.033	-2.411	0.016	-2.887	1.085	-0.036	-2.662	0.008
BTEC	-6.394	0.521	-0.207	-12.277	0.000	-4.825	0.492	-0.162	-9.809	0.000	-5.242	0.417	-0.212	-12.573	0.000
Access	-4.824	0.671	-0.166	-7.187	0.000	-2.770	0.608	-0.098	-4.555	0.000	-4.267	0.537	-0.183	-7.949	0.000
A-Level_BTEC	-5.550	0.533	-0.148	-10.422	0.000	-4.678	0.506	-0.129	-9.251	0.000	-4.834	0.425	-0.161	-11.382	0.000

IB	-2.399	1.055	-0.031	-2.273	0.023	-1.562	0.974	-0.021	-1.603	0.109	-1.412	0.822	-0.023	-1.716	0.086
UG or PG	-2.926	1.080	-0.041	-2.709	0.007	-0.855	0.889	-0.015	-0.962	0.336	-2.390	0.844	-0.043	-2.832	0.005
Other	-4.578	0.684	-0.108	-6.695	0.000	-3.410	0.585	-0.112	-5.828	0.000	-3.961	0.542	-0.118	-7.303	0.000
Sixth Form College	-0.416	0.397	-0.015	-1.048	0.295	-0.354	0.371	-0.014	-0.956	0.339	-0.432	0.313	-0.020	-1.381	0.167
FE College	-0.612	0.521	-0.024	-1.176	0.240	-0.881	0.483	-0.037	-1.824	0.068	-1.004	0.414	-0.050	-2.427	0.015
Post_16 Other	0.361	0.481	0.015	0.751	0.453	1.216	0.437	0.054	2.784	0.005	0.283	0.380	0.015	0.743	0.458
Post_16 Missing						-7.408	0.868	-0.158	-8.537	0.000					
CMP_Dummy	-4.310	0.665	-0.101	-6.484	0.000	-1.559	0.617	-0.039	-2.526	0.012	-1.088	0.545	-0.031	-1.995	0.046
ECO_Dummy	1.242	0.538	0.040	2.308	0.021	-0.983	0.501	-0.034	-1.963	0.050	-0.129	0.419	-0.005	-0.307	0.759
EDU_Dummy	-2.943	0.635	-0.077	-4.634	0.000	-3.477	0.585	-0.099	-5.943	0.000	-3.039	0.494	-0.102	-6.147	0.000
ENG_Dummy	-2.109	1.453	-0.020	-1.452	0.147	-5.213	1.540	-0.046	-3.385	0.001	-3.062	1.296	-0.032	-2.363	0.018
HSC_Dummy	0.894	0.493	0.045	1.813	0.070	1.591	0.458	0.087	3.472	0.001	1.519	0.386	0.096	3.940	0.000
PHA_Dummy	-2.666	0.646	-0.068	-4.128	0.000	-4.331	0.606	-0.116	-7.141	0.000	-3.566	0.506	-0.116	-7.054	0.000
PSY_Dummy	-5.923	0.546	-0.200	-10.848	0.000	-4.250	0.512	-0.150	-8.297	0.000	-4.761	0.427	-0.205	-11.142	0.000
SWK_Dummy	-3.981	1.068	-0.055	-3.728	0.000	-1.758	1.002	-0.025	-1.755	0.079	-2.795	0.832	-0.049	-3.361	0.001
R2	.418[e]					0.408					0.464				
ΔR^2	0.175					0.166					0.215				
Model 6															
(Constant)	69.782	0.558		125.138	0.000	71.547	0.516		138.788	0.000	70.601	0.434		162.623	0.000
Age at Entry: 21+	1.245	0.554	0.047	2.248	0.025	-1.336	0.484	-0.057	-2.760	0.006	1.107	0.440	0.053	2.515	0.012
Age at Entry: 31+	2.512	0.753	0.063	3.337	0.001	0.234	0.653	0.007	0.359	0.720	2.451	0.601	0.078	4.080	0.000

Gender	-1.811	0.349	-0.088	-5.187	0.000	-1.827	0.322	-0.095	-5.674	0.000	-1.687	0.276	-0.103	-6.113	0.000
Ethnicity	-4.391	0.370	-0.167	-11.873	0.000	-3.939	0.343	-0.159	-11.476	0.000	-3.985	0.297	-0.190	-13.431	0.000
Disability	-2.372	0.354	-0.091	-6.699	0.000	-2.085	0.333	-0.084	-6.253	0.000	-2.090	0.284	-0.100	-7.352	0.000
Quintile_1	-0.337	0.461	-0.012	-0.730	0.465	-0.589	0.416	-0.023	-1.417	0.156	0.042	0.365	0.002	0.116	0.908
Quintile_2	-0.338	0.420	-0.014	-0.805	0.421	-0.509	0.383	-0.022	-1.331	0.183	-0.066	0.332	-0.003	-0.198	0.843
Quintile_4	-0.568	0.406	-0.024	-1.399	0.162	0.044	0.373	0.002	0.118	0.906	0.045	0.320	0.002	0.140	0.888
Quintile_5	-0.717	0.411	-0.031	-1.743	0.081	0.227	0.379	0.010	0.598	0.550	0.015	0.323	0.001	0.048	0.962
POLAR4 Missing	-1.989	1.420	-0.019	-1.401	0.161	-3.025	1.266	-0.033	-2.389	0.017	-2.840	1.096	-0.036	-2.592	0.010
BTEC	-6.826	1.223	-0.221	-5.580	0.000	-4.720	1.147	-0.159	-4.114	0.000	-5.294	0.957	-0.214	-5.532	0.000
Access	-4.213	2.925	-0.145	-1.440	0.150	-7.629	2.719	-0.271	-2.806	0.005	-7.302	2.256	-0.313	-3.237	0.001
A-Level_BTEC	-5.259	1.206	-0.140	-4.360	0.000	-5.349	1.153	-0.148	-4.640	0.000	-4.865	0.955	-0.162	-5.097	0.000
IB	-6.057	2.000	-0.077	-3.029	0.002	-3.080	1.906	-0.042	-1.617	0.106	-3.513	1.576	-0.057	-2.229	0.026
UG or PG	-2.639	1.098	-0.037	-2.404	0.016	-0.899	0.910	-0.016	-0.988	0.323	-2.386	0.858	-0.043	-2.779	0.005
Other	-7.123	1.916	-0.169	-3.718	0.000	-3.921	1.816	-0.129	-2.159	0.031	-4.147	1.573	-0.124	-2.637	0.008
Sixth Form College	-0.356	0.398	-0.013	-0.895	0.371	-0.340	0.372	-0.013	-0.914	0.361	-0.437	0.314	-0.020	-1.391	0.164
FE College	-0.591	0.523	-0.023	-1.129	0.259	-0.874	0.486	-0.037	-1.798	0.072	-0.942	0.416	-0.047	-2.264	0.024
Post_16 Other	0.412	0.483	0.017	0.854	0.393	1.169	0.440	0.051	2.654	0.008	0.300	0.382	0.016	0.785	0.432
Post_16 Missing						-7.448	0.898	-0.159	-8.295	0.000					
CMP_Dummy	-4.674	0.825	-0.110	-5.663	0.000	-2.501	0.757	-0.063	-3.304	0.001	-1.854	0.673	-0.052	-2.754	0.006

ECO_Dummy	1.097	0.593	0.035	1.850	0.064	-1.173	0.552	-0.040	-2.126	0.034	-0.209	0.461	-0.009	-0.454	0.650
EDU_Dummy	-2.512	0.931	-0.066	-2.699	0.007	-2.535	0.863	-0.072	-2.937	0.003	-2.076	0.720	-0.070	-2.883	0.004
ENG_Dummy	-3.961	1.746	-0.037	-2.268	0.023	-6.138	1.953	-0.054	-3.143	0.002	-4.337	1.615	-0.046	-2.685	0.007
HSC_Dummy	0.481	0.586	0.024	0.821	0.412	1.437	0.543	0.078	2.645	0.008	1.392	0.456	0.088	3.053	0.002
PHA_Dummy	-2.755	0.698	-0.070	-3.950	0.000	-4.595	0.653	-0.123	-7.037	0.000	-3.676	0.544	-0.120	-6.760	0.000
PSY_Dummy	-6.298	0.614	-0.212	-10.258	0.000	-4.778	0.574	-0.169	-8.326	0.000	-5.150	0.478	-0.221	-10.778	0.000
SWK_Dummy	-4.345	1.827	-0.060	-2.379	0.017	-1.693	1.700	-0.024	-0.996	0.320	-2.726	1.407	-0.048	-1.937	0.053
BTEC_CMP	1.087	1.848	0.012	0.588	0.556	1.260	1.722	0.014	0.732	0.464	1.661	1.503	0.021	1.106	0.269
Access_CMP	-15.157	5.955	-0.039	-2.545	0.011	-11.606	8.774	-0.018	-1.323	0.186	-12.495	7.260	-0.024	-1.721	0.085
ALevelBTEC_CMP	-0.049	2.143	0.000	-0.023	0.982	5.058	2.095	0.041	2.414	0.016	4.473	1.843	0.040	2.428	0.015
EntryQualOtherM_CMP	4.753	2.964	0.029	1.604	0.109	2.328	2.734	0.016	0.852	0.394	-0.607	2.391	-0.005	-0.254	0.800
BTEC_ECO	-3.993	5.313	-0.010	-0.751	0.452	3.751	4.950	0.010	0.758	0.449	0.279	4.094	0.001	0.068	0.946
ALevelBTEC_ECO	0.409	2.568	0.002	0.159	0.874	0.010	2.465	0.000	0.004	0.997	0.502	2.039	0.004	0.246	0.806
IB_ECO	4.763	3.141	0.026	1.516	0.130	1.657	2.898	0.010	0.572	0.568	2.429	2.443	0.018	0.994	0.320
Other_ECO	-4.049	3.554	-0.018	-1.139	0.255	-0.599	3.211	-0.003	-0.187	0.852	-4.240	2.789	-0.025	-1.520	0.129
BTEC_EDU	-0.063	1.674	-0.001	-0.038	0.970	-1.379	1.568	-0.022	-0.880	0.379	-1.457	1.304	-0.029	-1.117	0.264
Access_EDU	-4.457	3.473	-0.033	-1.283	0.199	3.948	3.292	0.029	1.199	0.230	1.294	2.724	0.012	0.475	0.635
ALevelBTEC_EDU	-1.622	1.929	-0.017	-0.841	0.400	-1.926	1.815	-0.021	-1.061	0.289	-2.777	1.503	-0.037	-1.847	0.065
IB_EDU	3.843	4.241	0.014	0.906	0.365	0.496	3.970	0.002	0.125	0.901	0.756	3.283	0.004	0.230	0.818
UG_EDU						1.644	8.404	0.003	0.196	0.845					
Other_EDU	2.384	2.781	0.017	0.857	0.391	-2.172	2.349	-0.022	-0.925	0.355	-0.433	2.210	-0.004	-0.196	0.845
BTEC_ENG	8.267	5.563	0.021	1.486	0.137	4.643	6.294	0.010	0.738	0.461	5.609	5.205	0.015	1.078	0.281

Access_ENG	3.765	4.750	0.015	0.793	0.428	8.300	4.734	0.032	1.753	0.080	5.222	3.916	0.025	1.334	0.182
EntryQualOtherM_ENG	7.188	5.760	0.018	1.248	0.212						3.655	4.558	0.012	0.802	0.423
IB_ENG						-22.715	8.764	-0.036	-2.592	0.010					
Other_ENG						6.435	5.484	0.018	1.174	0.241					
BTEC_HSC	0.689	1.349	0.017	0.511	0.609	-0.365	1.268	-0.009	-0.288	0.773	-0.111	1.060	-0.003	-0.104	0.917
Access_HSC	-0.037	2.910	-0.001	-0.013	0.990	4.855	2.711	0.158	1.791	0.073	3.156	2.244	0.124	1.407	0.160
ALevelBTEC_HSC	-0.651	1.451	-0.011	-0.448	0.654	0.312	1.388	0.006	0.225	0.822	-0.446	1.155	-0.010	-0.386	0.699
IB_HSC	8.170	3.285	0.042	2.487	0.013	4.786	3.011	0.027	1.589	0.112	5.436	2.551	0.036	2.131	0.033
Other_HSC	2.727	2.062	0.051	1.322	0.186	0.521	1.920	0.015	0.271	0.786	0.216	1.685	0.005	0.128	0.898
BTEC_PHA	-22.809	9.042	-0.034	-2.523	0.012										
Access_PHA	7.052	9.417	0.010	0.749	0.454	7.787	8.769	0.012	0.888	0.375	6.587	7.252	0.013	0.908	0.364
ALevelBTEC_PHA	-1.764	3.628	-0.007	-0.486	0.627	2.912	3.391	0.012	0.859	0.390	0.168	2.804	0.001	0.060	0.952
IB_PHA	1.639	3.966	0.006	0.413	0.679	0.621	3.931	0.002	0.158	0.875	1.050	3.250	0.005	0.323	0.747
Other_PHA	0.977	3.575	0.004	0.273	0.785	0.410	3.491	0.002	0.117	0.907	-1.012	2.924	-0.006	-0.346	0.729
BTEC_PSY	-5.446	2.974	-0.027	-1.832	0.067	2.806	3.361	0.012	0.835	0.404	3.455	2.978	0.016	1.160	0.246
Access_PSY	-0.692	3.275	-0.006	-0.211	0.833	6.241	3.061	0.056	2.039	0.042	3.587	2.532	0.040	1.417	0.157
ALevelBTEC_PSY	3.101	2.046	0.025	1.516	0.130	2.999	1.944	0.026	1.543	0.123	2.635	1.608	0.028	1.639	0.101
IB_PSY	4.437	3.084	0.025	1.439	0.150	2.534	2.902	0.015	0.873	0.382	2.423	2.400	0.018	1.010	0.313
UG_PSY	1.304	9.016	0.002	0.145	0.885	5.613	8.385	0.009	0.669	0.503	3.832	6.943	0.007	0.552	0.581
Other_PSY	5.643	3.231	0.029	1.747	0.081	2.274	3.114	0.012	0.730	0.465	2.057	2.616	0.013	0.786	0.432
BTEC_SWK	2.578	3.346	0.013	0.770	0.441	-2.006	3.118	-0.011	-0.643	0.520	-0.455	2.581	-0.003	-0.176	0.860
Access_SWK	-1.819	3.762	-0.014	-0.484	0.629	4.454	3.516	0.036	1.267	0.205	2.312	2.908	0.023	0.795	0.427

ALevelBTEC_SWK	-4.137	3.810	-0.017	-1.086	0.278	-2.733	3.729	-0.011	-0.733	0.464	-3.719	3.084	-0.019	-1.206	0.228
UG_SWK	-2.13	9.179	-0.003	-0.232	0.817	-0.519	8.536	-0.001	-0.061	0.952	-1.036	7.068	-0.002	-0.147	0.883
Other_SWK	7.244	3.662	0.037	1.978	0.048	3.468	3.427	0.019	1.012	0.312	3.184	2.872	0.021	1.109	0.268
R2	0.43					0.417					0.473				
ΔR^2	0.185					0.174					0.224				

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)

Appendix 10: COVID Level 2, 3 and Final Grade regression results

Level 2						Level 3					Final Grade				
Model 1															
Variable	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*	*B*	*SE b*	*β*	*t*	*p*
(Constant)	64.851	0.258		251.456	0.000	66.793	0.285		234.307	0.000	66.021	0.252		262.306	0.000
Age at Entry: 21+	1.661	0.525	0.053	3.165	0.002	1.497	0.579	0.056	2.585	0.010	1.280	0.522	0.054	2.451	0.014
Age at Entry: 31+	-0.847	0.787	-0.018	-1.077	0.282	0.182	0.791	0.005	0.230	0.818	0.535	0.773	0.015	0.692	0.489
Gender	-0.968	0.337	-0.048	-2.875	0.004	-0.909	0.388	-0.051	-2.344	0.019	-0.691	0.345	-0.045	-2.005	0.045
Ethnicity	-2.603	0.396	-0.109	-6.576	0.000	-2.790	0.460	-0.132	-6.068	0.000	-2.630	0.409	-0.142	-6.427	0.000
Disability	-2.255	0.418	-0.089	-5.392	0.000	-0.911	0.487	-0.040	-1.873	0.061	-0.848	0.434	-0.043	-1.954	0.051
R^2	0.157					0.165					0.17				
ΔR^2	0.025					0.027					0.029				
Model 2															
(Constant)	64.283	0.411		156.478	0.000	66.177	0.456		145.005	0.000	65.217	0.404		161.277	0.000
Age at Entry: 21+	1.983	0.531	0.063	3.737	0.000	1.812	0.585	0.068	3.099	0.002	1.563	0.527	0.066	2.964	0.003
Age at Entry: 31+	-0.426	0.795	-0.009	-0.536	0.592	0.691	0.801	0.019	0.863	0.388	1.007	0.781	0.029	1.289	0.198
Gender	-1.116	0.338	-0.055	-3.301	0.001	-1.050	0.389	-0.059	-2.702	0.007	-0.823	0.345	-0.053	-2.384	0.017

Ethnicity	-2.585	0.395	-0.108	-6.538	0.000	-2.764	0.459	-0.130	-6.018	0.000	-2.606	0.408	-0.141	-6.382	0.000
Disability	-2.259	0.418	-0.090	-5.402	0.000	-0.933	0.487	-0.041	-1.916	0.055	-0.883	0.434	-0.045	-2.035	0.042
Quintile_1	-0.477	0.546	-0.018	-0.872	0.383	-0.248	0.620	-0.010	-0.400	0.689	0.326	0.555	0.016	0.588	0.556
Quintile_2	0.307	0.525	0.012	0.584	0.559	0.019	0.590	0.001	0.033	0.974	0.203	0.526	0.011	0.386	0.699
Quintile_4	1.273	0.507	0.052	2.509	0.012	1.272	0.573	0.060	2.220	0.027	1.369	0.510	0.075	2.688	0.007
Quintile_5	1.326	0.497	0.057	2.667	0.008	1.529	0.561	0.075	2.726	0.006	1.711	0.500	0.096	3.420	0.001
POLAR4 Missing	0.888	1.718	0.009	0.517	0.605	1.284	2.227	0.012	0.577	0.564	2.803	1.944	0.032	1.442	0.149
R2	0.171					0.185					0.195				
ΔR^2	0.029					0.034					0.038				
Model 3															
(Constant)	65.992	0.420		157.100	0.000	68.054	0.469		145.037	0.000	67.129	0.412		162.918	0.000
Age at Entry: 21+	4.121	0.656	0.131	6.284	0.000	3.242	0.713	0.122	4.545	0.000	3.180	0.644	0.135	4.941	0.000
Age at Entry: 31+	2.277	0.939	0.048	2.423	0.015	2.499	0.962	0.069	2.599	0.009	3.136	0.913	0.090	3.436	0.001
Gender	-1.270	0.330	-0.063	-3.844	0.000	-1.301	0.376	-0.073	-3.458	0.001	-1.090	0.331	-0.070	-3.296	0.001
Ethnicity	-2.721	0.386	-0.114	-7.059	0.000	-2.925	0.444	-0.138	-6.588	0.000	-2.780	0.390	-0.150	-7.119	0.000
Disability	-1.805	0.408	-0.072	-4.421	0.000	-0.537	0.471	-0.024	-1.142	0.254	-0.512	0.415	-0.026	-1.234	0.217
Quintile_1	0.389	0.535	0.014	0.726	0.468	0.469	0.600	0.020	0.781	0.435	0.980	0.531	0.047	1.845	0.065

Quintile_2	0.594	0.511	0.023	1.164	0.245	0.251	0.570	0.011	0.440	0.660	0.403	0.502	0.021	0.802	0.422
Quintile_4	0.974	0.495	0.040	1.969	0.049	0.768	0.554	0.036	1.386	0.166	0.862	0.487	0.047	1.768	0.077
Quintile_5	0.539	0.487	0.023	1.107	0.268	0.557	0.546	0.027	1.020	0.308	0.736	0.481	0.041	1.528	0.127
POLAR4 Missing	0.834	1.675	0.008	0.498	0.619	0.213	2.152	0.002	0.099	0.921	1.673	1.857	0.019	0.901	0.368
BTEC	-6.191	0.496	-0.210	-12.487	0.000	-6.456	0.561	-0.251	-11.506	0.000	-6.433	0.489	-0.289	-13.144	0.000
Access	-5.043	0.754	-0.147	-6.688	0.000	-4.245	0.822	-0.140	-5.166	0.000	-4.064	0.737	-0.155	-5.514	0.000
A-Level_BTEC	-3.358	0.579	-0.095	-5.795	0.000	-3.554	0.651	-0.116	-5.462	0.000	-3.423	0.563	-0.130	-6.083	0.000
IB	-4.434	1.582	-0.045	-2.803	0.005	0.160	1.802	0.002	0.089	0.929	0.191	1.633	0.002	0.117	0.907
UG or PG	0.541	1.705	0.005	0.317	0.751	0.652	1.551	0.009	0.420	0.674	-0.781	1.505	-0.012	-0.519	0.604
Other	-5.255	0.697	-0.142	-7.543	0.000	-4.622	0.787	-0.154	-5.870	0.000	-4.830	0.702	-0.177	-6.882	0.000
R2	0.288					0.326					0.36				
ΔR^2	0.083					0.106					0.129				
Model 4															
(Constant)	65.939	0.434		151.939	0.000	68.321	0.485		140.831	0.000	67.334	0.426		158.158	0.000
Age at Entry: 21+	3.631	0.711	0.115	5.105	0.000	3.550	0.769	0.134	4.616	0.000	3.038	0.689	0.129	4.412	0.000
Age at Entry: 31+	1.867	1.009	0.039	1.850	0.064	3.713	1.096	0.102	3.387	0.001	3.152	0.990	0.090	3.184	0.001

Gender	-1.281	0.331	-0.063	-3.867	0.000	-1.407	0.377	-0.079	-3.729	0.000	-1.176	0.332	-0.076	-3.542	0.000
Ethnicity	-2.722	0.387	-0.114	-7.036	0.000	-3.075	0.446	-0.145	-6.902	0.000	-2.870	0.392	-0.155	-7.322	0.000
Disability	-1.821	0.409	-0.072	-4.458	0.000	-0.554	0.470	-0.025	-1.179	0.239	-0.489	0.415	-0.025	-1.178	0.239
Quintile_1	0.399	0.536	0.015	0.744	0.457	0.594	0.601	0.025	0.988	0.323	1.095	0.532	0.053	2.057	0.040
Quintile_2	0.557	0.512	0.022	1.088	0.277	0.294	0.570	0.013	0.516	0.606	0.434	0.504	0.023	0.861	0.389
Quintile_4	0.946	0.495	0.039	1.912	0.056	0.776	0.553	0.037	1.403	0.161	0.883	0.487	0.048	1.813	0.070
Quintile_5	0.544	0.487	0.023	1.117	0.264	0.542	0.544	0.027	0.996	0.319	0.736	0.481	0.041	1.529	0.126
POLAR4 Missing	0.763	1.678	0.007	0.455	0.649	0.178	2.147	0.002	0.083	0.934	1.587	1.857	0.018	0.855	0.393
BTEC	-6.297	0.576	-0.213	-10.931	0.000	-5.453	0.668	-0.212	-8.167	0.000	-5.740	0.583	-0.258	-9.849	0.000
Access	-4.752	0.897	-0.138	-5.295	0.000	-3.260	0.973	-0.108	-3.351	0.001	-3.086	0.861	-0.118	-3.583	0.000
A-Level_BTEC	-3.347	0.583	-0.095	-5.741	0.000	-3.315	0.656	-0.108	-5.052	0.000	-3.206	0.568	-0.122	-5.640	0.000
IB	-4.645	1.586	-0.047	-2.928	0.003	0.086	1.802	0.001	0.048	0.962	0.066	1.635	0.001	0.040	0.968
UG or PG	0.028	1.741	0.000	0.016	0.987	0.580	1.599	0.008	0.363	0.717	-0.889	1.548	-0.013	-0.574	0.566
Other	-5.550	0.780	-0.150	-7.119	0.000	-3.525	0.859	-0.117	-4.102	0.000	-4.419	0.771	-0.162	-5.731	0.000

Sixth Form College	0.001	0.471	0.000	0.002	0.999	-0.663	0.549	-0.027	-1.207	0.228	-0.841	0.480	-0.040	-1.753	0.080
FE College	0.013	0.634	0.000	0.021	0.983	-2.039	0.695	-0.090	-2.933	0.003	-1.384	0.606	-0.071	-2.284	0.023
Post_16 Other	1.014	0.591	0.036	1.714	0.087	-0.550	0.686	-0.022	-0.802	0.422	-0.012	0.603	-0.001	-0.019	0.985
Post_16 Missing	0.858	1.528	0.011	0.562	0.574	-4.229	1.465	-0.083	-2.886	0.004	-1.148	1.538	-0.020	-0.746	0.456
R2	0.29					0.335					0.365				
ΔR^2	0.084					0.112					0.133				
Model 5															
(Constant)	69.098	0.596		115.987	0.000	69.097	0.666		103.763	0.000	69.047	0.575		120.089	0.000
Age at Entry: 21+	3.448	0.694	0.109	4.970	0.000	3.341	0.762	0.126	4.383	0.000	2.873	0.674	0.122	4.264	0.000
Age at Entry: 31+	1.531	0.986	0.032	1.553	0.121	3.297	1.086	0.090	3.035	0.002	2.755	0.969	0.079	2.844	0.004
Gender	-2.296	0.399	-0.114	-5.755	0.000	-2.240	0.452	-0.126	-4.957	0.000	-2.030	0.393	-0.131	-5.171	0.000
Ethnicity	-2.791	0.395	-0.117	-7.074	0.000	-3.311	0.455	-0.156	-7.280	0.000	-3.044	0.396	-0.165	-7.689	0.000
Disability	-1.440	0.399	-0.057	-3.608	0.000	-0.568	0.465	-0.025	-1.221	0.222	-0.394	0.406	-0.020	-0.972	0.331
Quintile_1	0.381	0.523	0.014	0.730	0.466	0.652	0.592	0.028	1.102	0.270	1.111	0.518	0.053	2.144	0.032
Quintile_2	0.569	0.499	0.022	1.140	0.255	0.379	0.562	0.017	0.675	0.500	0.515	0.491	0.027	1.050	0.294
Quintile_4	1.030	0.482	0.042	2.137	0.033	0.913	0.545	0.043	1.677	0.094	1.054	0.474	0.057	2.221	0.026

Quintile_5	0.379	0.475	0.016	0.797	0.426	0.505	0.537	0.025	0.940	0.348	0.655	0.469	0.037	1.397	0.163
POLAR4 Missing	0.795	1.633	0.008	0.487	0.626	0.339	2.115	0.003	0.160	0.873	1.571	1.807	0.018	0.869	0.385
BTEC	-7.421	0.579	-0.251	-12.823	0.000	-5.687	0.677	-0.221	-8.405	0.000	-6.376	0.584	-0.286	-10.920	0.000
Access	-5.961	0.885	-0.173	-6.733	0.000	-3.793	0.968	-0.125	-3.917	0.000	-3.864	0.848	-0.147	-4.555	0.000
A-Level_BTEC	-4.218	0.579	-0.120	-7.289	0.000	-3.332	0.659	-0.109	-5.057	0.000	-3.576	0.564	-0.136	-6.341	0.000
IB	-4.441	1.544	-0.045	-2.877	0.004	0.035	1.776	0.000	0.020	0.984	0.013	1.593	0.000	0.008	0.994
UG or PG	-2.059	1.709	-0.021	-1.204	0.229	-0.545	1.590	-0.008	-0.343	0.732	-2.397	1.522	-0.036	-1.575	0.115
Other	-6.753	0.768	-0.183	-8.792	0.000	-4.032	0.855	-0.134	-4.715	0.000	-5.235	0.759	-0.192	-6.896	0.000
Sixth Form College	0.094	0.460	0.003	0.205	0.838	-0.542	0.543	-0.022	-0.997	0.319	-0.677	0.469	-0.032	-1.443	0.149
FE College	-0.089	0.618	-0.003	-0.144	0.886	-2.063	0.687	-0.092	-3.002	0.003	-1.450	0.592	-0.074	-2.448	0.014
Post_16 Other	1.059	0.576	0.037	1.838	0.066	-0.447	0.676	-0.018	-0.662	0.508	0.113	0.587	0.005	0.193	0.847
Post_16 Missing						-4.696	1.449	-0.092	-3.241	0.001	-1.629	1.502	-0.028	-1.085	0.278
Post16M_Dummy	0.014	1.492	0.000	0.009	0.993										

CMP_Dummy	-1.051	0.644	-0.030	-1.633	0.103	1.685	0.807	0.049	2.086	0.037	0.769	0.701	0.025	1.098	0.273
ECO_Dummy	-2.290	0.614	-0.071	-3.728	0.000	1.272	0.680	0.047	1.871	0.061	-0.518	0.601	-0.021	-0.863	0.388
EDU_Dummy	-3.864	0.691	-0.105	-5.591	0.000	-3.378	0.767	-0.109	-4.406	0.000	-3.708	0.658	-0.139	-5.636	0.000
ENG_Dummy	-2.730	1.406	-0.031	-1.942	0.052	-0.486	2.121	-0.005	-0.229	0.819	-0.346	1.874	-0.004	-0.185	0.854
HSC_Dummy	-0.800	0.556	-0.038	-1.438	0.150	0.622	0.620	0.034	1.004	0.316	-0.016	0.533	-0.001	-0.031	0.975
PHA_Dummy	-4.105	0.755	-0.099	-5.435	0.000	-0.892	0.941	-0.022	-0.949	0.343	-1.961	0.806	-0.055	-2.432	0.015
PSY_Dummy	-7.180	0.595	-0.256	-12.069	0.000	-2.881	0.673	-0.118	-4.282	0.000	-4.460	0.579	-0.210	-7.697	0.000
SWK_Dummy	-3.389	1.225	-0.046	-2.766	0.006	-0.349	1.338	-0.006	-0.261	0.794	-1.629	1.144	-0.031	-1.425	0.154
R2	0.368					0.38					0.428				
ΔR^2	0.136					0.144					0.183				
Model 6															
(Constant)	69.128	0.647		106.854	0.000	68.752	0.725		94.879	0.000	68.826	0.623		110.419	0.000
Age at Entry: 21+	3.294	0.703	0.104	4.688	0.000										
Age at Entry: 31+	1.546	1.000	0.033	1.546	0.122										
Age_21plus_Dummy						2.984	0.784	0.112	3.804	0.000	2.578	0.693	0.110	3.718	0.000
Age_31plus_Dummy						3.061	1.117	0.084	2.741	0.006	2.691	0.996	0.077	2.703	0.007

Gender	-2.291	0.402	-0.113	-5.701	0.000	-2.190	0.459	-0.124	-4.771	0.000	-1.965	0.398	-0.127	-4.933	0.000
Ethnicity	-2.823	0.396	-0.118	-7.128	0.000										
Ethnicity Group Dummy BAME						-3.444	0.461	-0.162	-7.469	0.000	-3.167	0.401	-0.171	-7.903	0.000
Disability	-1.419	0.400	-0.056	-3.550	0.000	-0.616	0.471	-0.027	-1.307	0.191	-0.409	0.410	-0.021	-0.997	0.319
Quintile_1	0.373	0.523	0.014	0.713	0.476										
Quintile_2	0.459	0.499	0.018	0.918	0.359										
Quintile_4	0.937	0.483	0.039	1.942	0.052										
Quintile_5	0.304	0.475	0.013	0.639	0.523										
Quintile_1 Dummy						0.572	0.599	0.024	0.954	0.340	1.088	0.524	0.052	2.076	0.038
Quintile_2 Dummy						0.299	0.567	0.014	0.528	0.598	0.458	0.495	0.024	0.926	0.355
Quintile_4 Dummy						0.900	0.549	0.043	1.638	0.102	1.036	0.478	0.056	2.168	0.030
Quintile_5 Dummy						0.511	0.543	0.025	0.942	0.346	0.658	0.473	0.037	1.390	0.165
POLAR4 Missing	1.256	1.643	0.012	0.765	0.445										
BTEC	-7.783	1.070	-0.264	-7.275	0.000										
Access	-4.028	2.769	-0.117	-1.455	0.146										

A-Level_BTEC	-3.728	1.100	-0.106	-3.391	0.001										
IB	-4.618	3.302	-0.047	-1.398	0.162										
UG or PG	-2.710	1.726	-0.027	-1.570	0.116										
Other	-5.917	1.874	-0.160	-3.157	0.002										
Sixth Form College	-0.112	0.462	-0.004	-0.243	0.808										
FE College	-0.215	0.621	-0.008	-0.347	0.729										
Post_16 Other	1.050	0.581	0.037	1.805	0.071										
Post_16 Missing	0.165	1.553	0.002	0.106	0.915										
POLARM						0.529	2.136	0.005	0.248	0.804	1.861	1.822	0.021	1.021	0.307
BTEC_dummy						-4.436	1.242	-0.172	-3.572	0.000	-5.731	1.060	-0.257	-5.408	0.000
Access_dummy						-3.209	2.966	-0.106	-1.082	0.279	-2.865	2.531	-0.109	-1.132	0.258
ALevel_BTEC_dummy						-1.576	1.272	-0.051	-1.239	0.215	-2.316	1.084	-0.088	-2.136	0.033
IB_Dummy						-4.757	3.633	-0.055	-1.309	0.191	-5.812	3.453	-0.074	-1.683	0.092

UG_Dummy						-1.002	1.628	-0.015	-0.616	0.538	-2.945	1.551	-0.044	-1.899	0.058
Other_Dummy						-4.021	2.183	-0.134	-1.842	0.066	-5.312	1.862	-0.194	-2.853	0.004
Sixth Form College_Dummy						-0.595	0.550	-0.025	-1.083	0.279	-0.737	0.474	-0.035	-1.555	0.120
FE College_Dummy						-2.020	0.700	-0.090	-2.883	0.004	-1.398	0.602	-0.072	-2.321	0.020
Post16Other_Dummy						-0.311	0.688	-0.012	-0.452	0.652	0.238	0.597	0.011	0.399	0.690
Post16M_Dummy						-4.497	1.506	-0.088	-2.986	0.003	-1.179	1.564	-0.020	-0.754	0.451
CMP_Dummy	-2.176	0.804	-0.062	-2.709	0.007	1.512	1.003	0.044	1.507	0.132	0.501	0.873	0.017	0.574	0.566
ECO_Dummy	-2.298	0.676	-0.071	-3.396	0.001	1.576	0.751	0.058	2.097	0.036	-0.395	0.661	-0.016	-0.598	0.550
EDU_Dummy	-3.640	0.960	-0.099	-3.793	0.000	-2.461	1.033	-0.079	-2.382	0.017	-3.049	0.886	-0.114	-3.441	0.001
ENG_Dummy	-3.513	1.675	-0.040	-2.098	0.036	-3.172	2.736	-0.031	-1.159	0.247	-1.894	2.333	-0.021	-0.812	0.417
HSC_Dummy	-0.031	0.707	-0.001	-0.044	0.965	1.632	0.797	0.090	2.048	0.041	0.871	0.685	0.055	1.271	0.204
PHA_Dummy	-4.298	0.834	-0.103	-5.154	0.000	-0.366	1.031	-0.009	-0.355	0.722	-1.845	0.882	-0.052	-2.092	0.037

PSY_Dummy	-6.791	0.687	-0.242	-9.879	0.000	-2.404	0.778	-0.098	-3.089	0.002	-4.215	0.669	-0.198	-6.303	0.000
SWK_Dummy	-5.754	1.999	-0.079	-2.878	0.004	-2.635	2.157	-0.043	-1.222	0.222	-3.759	1.839	-0.072	-2.044	0.041
BTEC_CMP	5.251	1.773	0.063	2.962	0.003	-0.452	2.397	-0.005	-0.188	0.851	-0.315	2.087	-0.004	-0.151	0.880
Access_CMP	-9.938	4.303	-0.047	-2.310	0.021	1.249	5.062	0.006	0.247	0.805	1.315	4.320	0.008	0.304	0.761
ALevelBTEC_CMP	2.308	1.953	0.024	1.182	0.237	-0.643	2.491	-0.007	-0.258	0.796	-0.896	2.131	-0.011	-0.420	0.674
IB_CMP	3.676	6.309	0.011	0.583	0.560										
Other_CMP	4.011	2.981	0.028	1.346	0.179										
EntryQualOtherM_CMP						3.521	3.374	0.029	1.044	0.297	4.230	2.883	0.041	1.467	0.143
BTEC_ECO	3.995	9.311	0.007	0.429	0.668	-2.590	8.159	-0.007	-0.317	0.751	0.226	6.958	0.001	0.033	0.974
Access_ECO	-4.345	7.082	-0.010	-0.614	0.540										
ALevelBTEC_ECO	3.706	3.300	0.019	1.123	0.262	0.932	3.553	0.006	0.262	0.793	2.260	3.033	0.016	0.745	0.456
IB_ECO	0.814	4.829	0.004	0.169	0.866	6.435	5.443	0.032	1.182	0.237	7.049	4.888	0.042	1.442	0.149
Other_ECO	-3.088	4.242	-0.013	-0.728	0.467	-1.327	4.606	-0.007	-0.288	0.773	-1.465	3.930	-0.009	-0.373	0.709
BTEC_EDU	0.668	1.683	0.010	0.397	0.691	-1.592	1.931	-0.025	-0.824	0.410	-0.595	1.648	-0.011	-0.361	0.718

Access_EDU	-2.664	3.973	-0.015	-0.671	0.503	1.076	4.472	0.007	0.241	0.810	0.376	3.814	0.003	0.099	0.921
ALevelBTEC_EDU	-1.867	1.972	-0.020	-0.947	0.344	-3.909	2.180	-0.051	-1.793	0.073	-3.451	1.860	-0.053	-1.855	0.064
IB_EDU	14.969	9.845	0.025	1.520	0.128	17.490	8.873	0.044	1.971	0.049	17.525	7.716	0.052	2.271	0.023
Other_EDU	-1.444	2.765	-0.012	-0.522	0.602	-3.100	3.178	-0.029	-0.975	0.330	-2.564	2.712	-0.028	-0.945	0.345
BTEC_ENG	-0.943	5.667	-0.003	-0.166	0.868	6.531	6.410	0.023	1.019	0.308	1.963	7.299	0.006	0.269	0.788
Access_ENG	10.351	6.194	0.030	1.671	0.095	-0.449	8.977	-0.001	-0.050	0.960	-5.828	7.653	-0.017	-0.761	0.446
ALevelBTEC_ENG	-9.583	5.675	-0.028	-1.689	0.091	-0.085	8.577	0.000	-0.010	0.992	0.040	7.312	0.000	0.006	0.996
IB_ENG	18.069	9.946	0.030	1.817	0.069	10.393	9.228	0.026	1.126	0.260	12.473	8.015	0.037	1.556	0.120
Other_ENG	3.716	5.225	0.012	0.711	0.477	23.956	8.784	0.060	2.727	0.006	19.972	7.490	0.059	2.666	0.008
BTEC_HSC	-1.116	1.319	-0.025	-0.846	0.397	-2.293	1.476	-0.063	-1.554	0.120	-1.650	1.264	-0.053	-1.305	0.192
Access_HSC	-2.492	2.820	-0.064	-0.884	0.377	-1.211	3.023	-0.035	-0.401	0.689	-1.809	2.581	-0.061	-0.701	0.484
ALevelBTEC_HSC	-2.304	1.550	-0.035	-1.486	0.137	-3.405	1.747	-0.063	-1.949	0.051	-2.743	1.492	-0.059	-1.838	0.066
IB_HSC	1.431	5.306	0.005	0.270	0.787	7.060	5.140	0.040	1.373	0.170	9.220	4.885	0.054	1.887	0.059
Other_HSC	-1.701	2.094	-0.037	-0.812	0.417	-0.599	2.411	-0.017	-0.248	0.804	-0.872	2.083	-0.026	-0.418	0.676

BTEC_PHA	5.533	2.757	0.035	2.007	0.045	-3.695	3.879	-0.021	-0.953	0.341	0.383	3.308	0.003	0.116	0.908
Access_PHA	-0.957	9.646	-0.002	-0.099	0.921										
ALevelBTEC_PHA	-0.956	3.504	-0.005	-0.273	0.785	-1.457	4.893	-0.006	-0.298	0.766	0.943	4.173	0.005	0.226	0.821
IB_PHA	0.213	7.345	0.001	0.029	0.977	5.061	8.857	0.013	0.571	0.568	7.414	7.704	0.022	0.962	0.336
Other_PHA	-4.806	6.820	-0.011	-0.705	0.481	2.570	8.374	0.006	0.307	0.759	2.483	7.140	0.007	0.348	0.728
BTEC_PSY	-2.108	2.236	-0.017	-0.943	0.346	-2.196	2.583	-0.020	-0.850	0.395	-1.260	2.204	-0.013	-0.572	0.568
Access_PSY	-3.542	3.259	-0.031	-1.087	0.277	-0.993	3.498	-0.011	-0.284	0.777	-0.782	3.011	-0.009	-0.260	0.795
ALevelBTEC_PSY	0.956	1.998	0.009	0.478	0.632	-1.016	2.300	-0.011	-0.442	0.659	0.166	1.962	0.002	0.085	0.933
IB_PSY	-5.353	4.427	-0.028	-1.209	0.227	1.722	5.465	0.009	0.315	0.753	1.856	4.904	0.011	0.378	0.705
Other_PSY	-4.422	3.132	-0.028	-1.412	0.158	-0.406	3.975	-0.003	-0.102	0.919	-0.130	3.391	-0.001	-0.038	0.969
BTEC_SWK	0.626	3.652	0.003	0.171	0.864	3.194	4.066	0.020	0.786	0.432	2.805	3.466	0.020	0.809	0.418
Access_SWK	4.975	4.010	0.034	1.241	0.215	5.255	4.385	0.042	1.198	0.231	3.959	3.739	0.037	1.059	0.290
ALevelBTEC_SWK	1.532	3.942	0.007	0.389	0.698	0.296	4.082	0.002	0.073	0.942	0.381	3.480	0.003	0.110	0.913
EntryQualOtherM_SWK	2.502	3.956	0.013	0.632	0.527	3.455	4.454	0.021	0.776	0.438	4.037	3.798	0.029	1.063	0.288
R2	0.389					0.396					0.446				

ΔR^2	0.152	0.157	0.199

Source: Author's own hierarchical linear regression analysis of UEA undergraduate data (2012 – 2020)