



Rapid review to support development of the Equality of Opportunity Risk Register (EORR)

Report to the Office for Students by TASO

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1. Executive summary

The Office for Students (OfS) intend to publish a sector-wide equality of opportunity risk register (EORR) which will identify key sector-level risks to equality of opportunity in higher education (HE). The Centre for Transforming Access and Student Outcomes in Higher Education (TASO) has produced this rapid evidence review to inform the development of the EORR. The review was guided by the following research questions:

1. How do the size and nature of the 'gaps' in student outcomes differ between groups and at different stages of the student lifecycle, in relation to English higher education?
2. What is the scale and nature of broader contextual issues which may affect outcomes across the student lifecycle, in relation to English higher education?

We conducted a rapid search of the academic and grey literature which was supplemented with sources gathered via a Call for Evidence and other sources identified during the review process. Given the rapid nature and broad scope of the review, we prioritised sources published in the last five years which related to inequalities measured at a national level and which captured quantitative gaps in outcomes (for example, gaps in attainment, entry to university or earnings). In total, 145 sources are used in this final report.

Presentation of the evidence is aligned with the student lifecycle, starting from the point of pre-16 attainment and tracking through to labour market outcomes. Within each student lifecycle stage, we segment the evidence by the type of gap it relates to (for example, gaps between students from higher and lower socioeconomic groups, or from different parts of the country) and for specific groups (for example, care-leavers).

As a rapid review, this report provides a snapshot of the evidence on equality gaps in HE. It does not seek to fully explain why these gaps occur or how to close them, although the latter is the primary focus for TASO's work outside this review. It is also important to note that the relative richness of the review on different groups and at different points in the student lifecycle reflects the availability of recent evidence, rather than the size or importance of different gaps.

The review clearly shows how outcomes throughout the student lifecycle are heavily patterned by demographic characteristics, with large differences by factors such as socioeconomic status, ethnicity, gender, and place as well as for specific disadvantaged and under-represented groups. One clear message from this review is that, from an early age, attainment itself is heavily patterned by these same factors, and this leaves an indelible mark on every stage in the journey explored here.

By identifying the role that prior attainment and demographic characteristics play in some of the patterns we observe, we do not seek to explain away inequalities. Rather we hope that this evidence can help the HE sector understand the nature of these gaps and potential solutions. Given that inequality in attainment is a persistent policy issue, the most appropriate approaches are likely to include both 'upstream' work to improve attainment but also 'downstream' approaches to improving outcomes for groups, regardless of their grade profile.

2. Introduction

The Office for Students (OfS) intend to publish a sector-wide equality of opportunity risk register (EORR) as part of a new approach to regulating equality of opportunity in higher education (HE) (Office for Students, 2022). TASO has undertaken a rapid evidence review to inform the development of the EORR.

As per the review protocol, the review was guided by the following research questions (RQ):

1. How do the size and nature of the 'gaps' in student outcomes differ between groups and at different stages of the student lifecycle, in relation to English higher education?
2. What is the scale and nature of broader contextual issues which may affect outcomes across the student lifecycle, in relation to English higher education?

For each RQ we focused on the national/sector level picture, rather than on local or institutional gaps in outcomes.

It is important to note that this review is constrained to reviewing the quantitative gaps in measurable outcomes; it is not within the scope of this review to describe the underlying causes of these gaps or how to address these gaps (although it should be noted that TASO continues to produce reports to answer these questions on specific topics).¹

As noted by Farquharson et al. (2022), the English education system is quite distinct from that in many other countries in that it involves high-stakes national exams at age 16, followed by another round of high-stakes exams just two years later for many students. This system is built on a process of narrowing down curriculum choices between those two points, so that the post-16 curriculum is typically focused on a maximum of three or four subjects and may not involve English or maths, if sufficient thresholds have not been met at GCSE. The post-16 transition is also a point at which the education pathways divide into academic versus a number of vocational qualifications, which differ widely in terms of structure, quality and status.

The performance of different groups at these different points – the grades they get, the qualifications they achieve, the subjects they choose to study and the pathways they enter – is instrumental in determining their propensity to enter HE, as well as their labour market outcomes further down the line. Therefore we review outcomes across the student lifecycle starting from the point of pre-16 attainment and tracking through to labour market outcomes. The way we segment this journey in our review is partly a product of the way in which we structured our searches (see [Section 3](#) for more information) but also reflects the nature of the evidence we've uncovered through this work.

This review is designed to supplement separate data analysis undertaken by the OfS.² We have indicated where this analysis is relevant to each section of our review. We have also drawn on certain statistics from these data sources to scaffold some of the discussion but have not undertaken a duplicative process.

¹ See for example Ramaiah & Robinson (2022).

² The OfS is conducting in-house analysis of the Department for Education Widening Participation data, UCAS admissions data and OfS student characteristics data on access, participation (continuation), attainment and progression.

We start by outlining our methods ([Section 3](#)) and providing an overview of the evidence used in the report ([Section 4](#)). We then present the evidence for gaps in pre-16 attainment ([Section 5](#)) and post-16 pathways ([Section 6](#)). We briefly discuss HE aspirations and expectations ([Section 7](#)) before moving onto overall entry to HE ([Section 8](#)) and entry to selective HE providers (HEPs) as a specific type of HE destination ([Section 9](#)). We discuss subject choice in HE ([Section 10](#)) before moving onto continuation ([Section 11](#)), success ([Section 12](#)) and mental health ([Section 13](#)) in HE. Looking at post-HE outcomes, we present our findings on labour market outcomes ([Section 14](#)) and entry to postgraduate study ([Section 15](#)). Broader contextual risks, namely the COVID-19 pandemic and cost of living crisis are also covered ([Section 16](#)). We discuss the limitations relating to this review ([Section 17](#)) before providing a conclusion ([Section 18](#)).

3. Methods

The inclusion and exclusion criteria for the review are listed in [Annex A](#). Based on these criteria we sought evidence from the ERIC (Education Resources Information Center) and Google Scholar databases. We conducted our searches in December 2022 and our search strategy is provided in [Annex B](#). We also ran a call for evidence from 25 November to 23 December 2022 to gather further sources of evidence from the HE sector which fed into this review. Where appropriate, we conducted snowball searches on the reference lists of relevant papers to identify further important sources. We applied filters to our formal searches to focus on evidence developed in the last five years (2018-2022), but also included some other evidence through our snowball searches or call for evidence where this was especially relevant.

After completing our searches, we enacted a three-stage selection process.

Stage 1: Title review

- We read the title of each of the sources and marked it as 'relevant'/'not relevant'/'unclear' based on our inclusion criteria specified.
- All the sources were reviewed by a primary reviewer.
- All the sources which were marked as 'not relevant' were checked by a secondary reviewer.

Stage 2: Abstract review

- We retrieved abstracts for any sources marked as 'relevant' or 'unclear'.
- For all papers marked as 'unclear' a reviewer reviewed the abstract and confirmed them as 'relevant' or 'not relevant'.

Stage 3: Abstract/text review

- Full texts were retrieved for all texts marked relevant.
- Approximately 20% of the texts were dual-screened by both reviewers.
- The remaining texts were reviewed by a single reviewer and assessed against the inclusion/exclusion criteria.

A single reviewer then extracted information from the sources into a template. For each source, we recorded:

- Student groups studied (with reference to the groups listed in the inclusion/exclusion criteria)
- Geographical scope (e.g. national/regional/institutional)
- Sample size
- Student outcomes examined stage (with reference to the groups listed in the inclusion/exclusion criteria)
- Whether the source also relates to a broader contextual risk (e.g. COVID pandemic or cost of living crisis)
- Provenance
 - Peer-reviewed article
 - Non-peer reviewed article
 - Book chapter
 - Report

- Brief

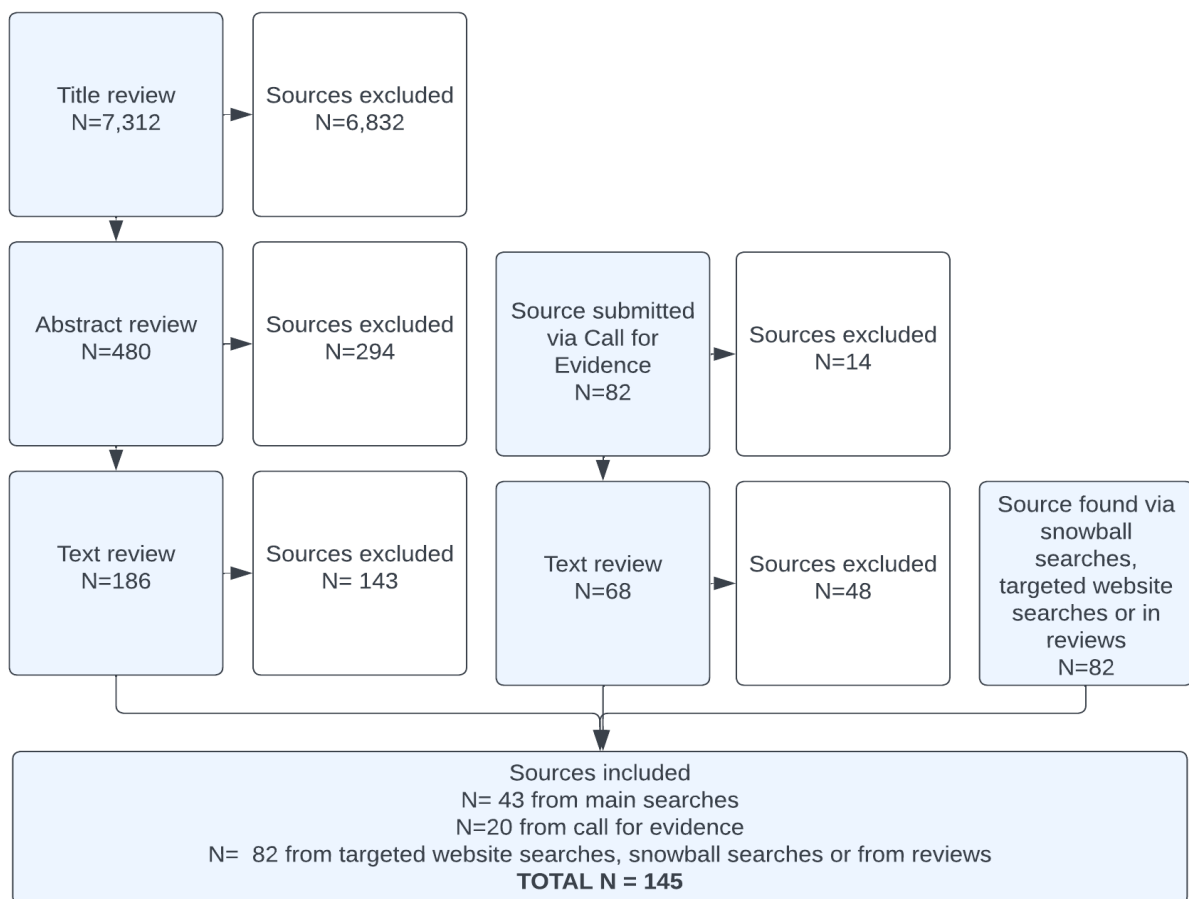
The information was inputted into a spreadsheet template to form a 'systematic map' of the evidence. We then critically appraised the sources for relevance and robustness and used the rating to identify the sources for inclusion in our review by ranking them and only selecting those which scored most highly; however, where there was a scarcity of evidence on a particular group/outcome we relaxed this criterion a little.

As the review covers a large number of student groups and outcomes, it is not appropriate to aggregate quantitative findings. Instead we conduct a narrative synthesis to draw together evidence which is relevant to each student group/outcome and summarise the nature and the extent of the gaps in outcomes faced by each group. An overview of the evidence included in the review is provided in the next section, before we move on to provide a narrative description of the evidence in the remainder of the report.

4. Overview of the evidence included

A flow diagram which shows the number of sources collected and reviewed at each stage is given below. It shows that of over 7,000 abstracts identified for review, 43 sources were chosen for inclusion via the main searches. Of 82 sources submitted to the call for evidence, 20 were suitable for inclusion. Finally, we used 82 sources which were found via targeted website searches, snowball searches or in reviews on relevant topics (note: where we cite the details of a study from a review we normally also cite that individual source). This yielded a total of 145 sources that were used in the body of this review.

Figure 1: Flow diagram showing sources of evidence for this review.



A summary of the characteristics of the sources is given in Table 1 below.

Table 1: Overview of student groups covered by sources used in the review

Attribute	Description
Student group	<ul style="list-style-type: none"> • Many sources focused on more than one student group, so there is some overlap in the groups of sources we outline below • Based on the categories we used to structure our searches, the coverage of student groups was:³ <ul style="list-style-type: none"> ○ Socio-economic status (59 sources) ○ Ethnicity (34 sources) ○ Gender (22 sources) ○ Care experience (15 sources) ○ LGBTQ+ (13 sources) ○ Deprived areas (13 sources) ○ Low participation areas (7 sources) ○ Disability (7 sources) ○ Vocational learners (5 sources) ○ Mature students (5 sources) ○ Estrangement (5 sources) ○ Carers (3 learners) ○ Refugees (4 sources) ○ Local/commuter students (2 sources) ○ First generation learners (2 sources) ○ Learners from military families (2 sources) ○ Part-time/flexible learners (1 source) ○ Learners with a criminal record (1 source) • 27 sources also simply related to all groups (i.e. not focused on specific characteristics)

Most of the sources were peer reviewed articles (~35% of the total) or reports from government, charities or other organisations (~48%). The remainder were working papers (4%), briefing notes (3%), book chapters (<1%) or ‘other’ including websites and articles (10%). The vast majority of the sources relate to the national context (97%) with a handful of regional studies (2%) and a small number of institutional studies which are relevant to the national context (1%). Nearly all of the sources used samples containing more than 500 people (92%). The national studies either draw on national administrative data and relate to the whole population of interest (e.g. the whole cohort of HE entrants in a particular year) or they use large nationally representative samples, typically drawn from longitudinal studies. There are a number of large national administrative datasets which are commonly used in research and policy to explore education outcomes, for example the National Pupils Database (NPD) and Higher Education Statistics Agency (HESA) datasets. Because the sort of evidence we review often links several large datasets we do not provide detail of the dataset(s) used for each study; rather we refer to ‘national administrative data’ throughout this report to indicate that the researcher has drawn on large-scale data held by government departments and agencies. Where a study uses a whole cohort of students, we do not state the size of this cohort, but if they have combined cohorts or used partial cohorts we provide detail on the size of the sample.

³ Note that we developed this typology via a sector engagement exercise as part of another project.

Another common data source in the evidence cited is the Next Steps survey, previously known as the Longitudinal Study of Young People in England (LSYPE).⁴ Next Steps follows the lives of around 16,000 people in England born in 1989-90. The study began in 2004 when the cohort members were aged 14, with an original sample of almost 16,000 people. Cohort members were surveyed annually until 2010, and the next sweep after this was when they were aged 25, in 2015-16. Different sources in this review use different subsets of data from this study, and we have indicated this throughout. Where the original source cites the study as LSYPE we have also done so.

It is worth noting that the sources normally report on 'raw' gaps, 'conditional' gaps or a combination of the two. Raw gaps are the difference in outcomes between groups, normally reported as the difference in meeting a threshold (such as the proportion of pupils getting certain GCSE grades, or the proportion going into HE). Conditional gaps are those which still exist when we take into account (or 'control') for other things we know about students (typically demographic data, such as socio-economic status (SES), ethnicity and gender, prior attainment and other factors about their circumstance). A further discussion of how we should interpret raw and conditional gaps is given in [Section 18](#).

Gaps can be presented in percentage point (pp) terms (e.g. 10% compared to 11% would mean 1pp more likely to meet the standard we are considering) but can also be translated into how much more likely one group are to meet that standard – so in our example the higher performing group are 1.1 times more likely to meet the standard (11% divided by 10%). Both the absolute gap (10% compared to 11%) and the relative gap (1.1 times more likely) are important to quantify the inequality, because we also need to understand the baseline for any comparison.

It is also worth touching on some definitions. When we talk about individuals in pre-16 education we refer to them as 'pupils', while individuals in later stages of education are 'students'. We use 'learners' in a more generic sense. Throughout the report we discuss measures of SES drawn from the individual data sources, and note that different sources operationalise this in different ways. The appropriateness of different SES markers is subject to debate, but we do not provide a review of this here; instead we make clear where different approaches have been used. Similarly, for some specific groups of learners covered by the review there are multiple different subgroups of interest (for example, 'care-experienced' actually represents multiple different groups based on their experiences). The full complexity of this issue is not explored in this review. Instead, we use the terminology used in individual sources, seek to make clear when we are talking about specific subgroups, and present our findings under the general umbrella of 'care experience' to provide indicative findings for this group while noting that this may belie the complexity of the picture. We take the same approach for all specific groups mentioned. It is also important to note that this report generally seeks to follow ONS guidance when discussing data on ethnicity. However, the various sources cited in the report do not all use the same categories, and we have reported findings in line with the source material.

⁴ See more on [the Next Steps study](#).

5. Pre-16 attainment

For the purpose of this review, we categorised all papers focused on any type of attainment before the end of secondary education as ‘pre-16’ attainment. Those papers which were deemed relevant for inclusion via our multi-stage review process mainly focused on performance at GCSE. A total of 19 sources with some focus on pre-16 attainment were included in the final list.

The majority of these sources (14) focused on low SES pupils as the primary focus group. Other sources covered ethnicity (7), gender (5), place (4) and care experience (3) as factors which can affect attainment. Some sources covered multiple focus groups or the intersection of characteristics such as SES, ethnicity and gender.

We supplement the literature which we uncovered via our review with national statistics published by the Department for Education (DfE) on performance at Key Stage 4 (Department for Education, 2022b). There are a number of ways you can look at the GCSE data to assess performance of different groups, but for simplicity we focus on the well-established benchmark of getting good grades in English and maths GCSEs, and also entry to the English Baccalaureate (EBacc).⁵ As per Farquharson et al. (2022), given the disruption to assessment during the COVID-19 pandemic, to provide a snapshot of inequality in pre-16 attainment, we focus on data from 2019 (the most recent data available that are based on ‘normal’ assessments at all stages).

In the following sections we outline the evidence broken down by: SES, ethnicity, gender, place, the intersection of these demographic characteristics and then for care-experienced pupils.

Socioeconomic status (SES)

The sources relating to SES used a variety of different lenses to explore how an individual’s background affects their attainment. The majority focused on individual-level SES, and quantified raw gaps in outcomes for low SES compared to other pupils. These sources tend to use eligibility for free school meals (FSM) as a proxy for low SES, but in some cases also used measures relating to parental occupation. A small number explored how school structure and systems affected the attainment gap. Each of these topics is addressed in turn below.

Individual-level SES

The issue of inequality in attainment by SES is not unique to England; this is a problem across developed countries. Blanden et al. (2022) explore attainment gaps in the OECD Programme for International Student Assessment (PISA) scores across high-income countries

⁵ The most recent DfE benchmark looks at the percentage of pupils achieving grade 5 or above in both English and maths GCSEs. To meet this criterion a pupil would have to achieve a grade 5 or above in either English literature or English language. There is no requirement to sit both. Note that the EBacc is not a qualification. The EBacc shows how many pupils are entering GCSEs in core academic subjects at Key Stage 4. The EBacc consists of English, maths, science, a language, and history or geography. To count in the EBacc, qualifications must be on the English Baccalaureate list of qualifications.

including England.⁶ They find that there are large inequalities in PISA scores between disadvantaged and other pupils across these countries, and that the gaps *within* countries are large compared to the overall difference in achievement *between* countries – even in the best performing countries, the average test scores of disadvantaged pupils are below the OECD average.

The gap in attainment between low SES pupils and their peers has been a feature of the education landscape for decades. As noted by Farquharson et al. (2022), despite many years of policy attention, this gap remains largely unchanged. They highlight a sizable gap in outcomes from the beginning of schooling which is present through all stages of assessment. For example, in 2019 they find that 57% of FSM-eligible pupils are recorded as having a good level of development at age 5, compared to 74% of their more advantaged peers. By the end of primary school, only 47% of FSM-eligible pupils meet the expected standards in reading, writing and mathematics compared to 60% of other pupils.

This disadvantage flows through to GCSE scores. Again, using the 2018-19 data, 24.7% of FSM-eligible pupils gained at least a grade 5 in both English and mathematics GCSEs compared to 49.9% of other pupils (Farquharson et al., 2022). Table 2 below captures the gaps in key outcomes for the academic year 2018-19 data, but these gaps have been persistent over time; the GCSE inequality gap has remained fairly stable between FSM-eligible pupils and other pupils over the last 15 years.

Hutchinson et al., (2020) conduct similar analysis of national administrative data but construct their own measure of the disadvantage gap by ranking pupils by exam results, calculating the average rank of FSM-eligible and other pupils, and then subtracting the two numbers. They then convert this number to an estimate of the difference in months of developmental progress. Looking at the gap from 2011 to 2019, they find no evidence of progress in the early years but that the gap has reduced at primary and secondary level. However, they suggest that we may have seen a turning point in this progress, with the inequalities starting to widen again over 2018-19.

As well as attainment at GCSE, it is also valuable to explore the subjects which pupils study. DfE statistics show that FSM-eligible pupils were less likely to take subjects counting towards the EBacc (27.5%) than other pupils (44.5%) in 2018-19. This is also the case when using different measures of SES. Henderson et al. (2018) use data from the Next Steps survey and a cohort of almost 12,000 young people born in 1989-90. The analysis uses a number of measures of SES, including NS-SEC and parental education, and finds that young people from higher SES backgrounds are more likely to take an academically demanding set of pre-16 subjects, more likely to take subjects which count towards the EBacc and less likely to take applied GCSEs than lower SES pupils. These differences are only partly accounted for by differences in prior attainment and the authors conclude that direct forms of support from higher SES parents may contribute to subject choice at this point in education.

⁶ PISA measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

Table 2: Performance of FSM-eligible pupils in school

Education stage/standard – 2018-19 data	FSM	Non-FSM	Gap
Age 5 – expected standard of development	57%	74%	17pp
End of primary school – expected standards in reading/writing/mathematics	47%	60%	13pp
GCSE – Grade 5 or above in English and mathematics	24.7%	49.9%	25.2pp
GCSE – entering the English Baccalaureate	27.5%	44.5%	17.0pp

Sources: Farquharson et al. (2022) and Department for Education (2022b)

SES and the school system

Henderson et al. also explore the extent to which schools play a role in the pre-16 subjects pupils study. They find that, after controlling for individual characteristics and prior attainment, pupils who attend grammar schools and single sex schools take more demanding curriculums than pupils in other types of school, which is consistent with a picture of academic selection into these schools. Conversely, studying in a school with a higher proportion of FSM-eligible pupils is also associated with a less demanding curriculum.

Anders et al. (2018) also investigate the extent to which individuals' pre-16 subject choices are associated with the school they attend. The paper uses national administrative data on GCSE results in mainstream English state-funded schools for the academic year 2005-06. They find that school-level characteristics (for example, the proportion of low SES pupils) account for about a third of the variation in the academic selectivity of the subjects that pupils study pre-16, and this reduces to closer to a quarter once also controlling for prior attainment. The authors suggest that this may be due to schools attempting to offer a curriculum which they think is suitable for their intake based on their SES. They also hypothesise that it may be due to differences in staffing, with some schools with lower SES intake struggling to attract and retain teachers of more challenging subjects.

Moving back to a focus on attainment, Hutchings & Francis (2018) conduct analysis to understand the effect of the introduction of academy chains on the outcomes of low-income pupils. They use data from the school performance tables to analyse attainment among disadvantaged pupils both within and between chains. Based on five years of data on sponsored academies in academy chains they find that there is significant variation in the outcomes both between and within chains. The authors find that some chains consistently underperform when it comes to supporting low SES pupils and this is particularly relevant given that sponsored academies were set up to address this issue.

Gorard and Siddiqui (2018) also examine how school type can affect Key Stage 4 attainment, and focus on grammar schools. They use national administrative data for the 2015 GCSE cohort to show that characteristics of pupils attending grammar schools differ greatly from those attending other state-funded schools in England. Grammar school pupils are from less deprived areas, are less likely to be White or Black, less likely to have English

as an additional language, much less likely to report any special educational need, and are substantially less likely to be FSM-eligible at age 15. Once the intake of these schools is taken into account, the authors conclude that results from grammar schools are no better than expected. Lu (2020) reports similar findings.

A full consideration of the effect of school systems and structures is beyond the scope of this review, but the studies discussed here serve to demonstrate that pupil attainment must be framed in the context of the school they attend. The presence or otherwise of different types of schools in their local area – for example, whether they live in a region with selective grammar schools⁷ or within the catchment area of particular academy chains – can drastically change the context in which they learn and impact their outcomes.

Ethnicity

There are substantial differences in pre-16 attainment by ethnicity and the patterns of attainment have changed over recent years (Mirza & Warwick, 2022). Farquharson et al. (2022) provide an overview of recent statistics and research on this issue and show that, although pupils from Black, Asian and Mixed backgrounds do worse than White pupils at earlier ages, by age 11 we start to see this trend reversing.⁸ Please note that the DfE datasets present the attainment of Chinese pupils separately from other Asian pupils, presumably because attainment among this group is so high. However, according to Census groupings Chinese pupils should be nested within the Asian ethnic group.⁹ Therefore, we adjust how the statistics are presented in the tables throughout this report, placing Chinese pupils within the umbrella of 'Asian' and reframing the DfE category which is presented as 'Asian' as 'Asian excluding Chinese'.

Looking at the 2018-19 DfE attainment data, shown in Table 3, Asian pupils (excluding Chinese) have the highest attainment (51.9% attaining Grade 5 or above in English and maths GCSEs) followed by those from Mixed backgrounds (43.8%), White pupils (42.4%) and Black pupils (37.8%). However, these high-level groupings hide important distinctions between subgroups. Most prominently, Chinese pupils have very high attainment, with 76.3% gaining Grade 5 or above in English and maths GCSEs. Indian pupils exceed the overall performance of Asian pupils on average, as 64.1% meet this standard, while at the other end of the spectrum only 41.3% of Pakistani pupils did so. Black African pupils (42.9%) also perform more strongly than Black Caribbean pupils (26.5%).

Farquharson et al. look how this data has changed over time and highlight a narrowing of ethnicity gaps in pre-16 attainment between 2000 and the early 2010s, but a subsequent widening of some gaps. Of particular note is the proportion of Black Caribbean pupils getting good English and maths GCSEs dropping over this period.

Table 3: GCSE performance data by ethnicity using 2018-19 data

⁷ Only 35 local authorities have any grammar schools and around 60% of grammars are located in just 11 local authorities. Source: [UK Parliament Grammar schools in England](#)

⁸ Note that DfE statistics break down the headline performance of pupils by ethnicity according to the major ethnic groups Asian, Black, Mixed, and White but split Chinese pupils out as a separate category due to their exceptionally high performance.

⁹ See ['List of ethnic groups'](#) published on Gov.uk.

	Grade 5 or above in English and mathematics	Entering the English Baccalaureate
White	42.4%	37.5%
White British	42.5%	36.6%
Irish	54.9%	46.9%
Traveller of Irish Heritage	13.9%	15.2%
Gypsy/Roma	6%	11.1%
Any other white background	41.5%	49.5%
Mixed	43.8%	44.3%
White and Black Caribbean	31%	32.5%
White and Black African	41.5%	45.5%
White and Asian	55.5%	50.6%
Any other mixed background	47%	48.7%
Asian (excluding Chinese)	51.9%	50.6%
Indian	64.1%	59%
Pakistani	41.3%	43.6%
Bangladeshi	50.3%	49.1%
Any other Asian background	60.1%	56.1%
Chinese	76.3%	61.6%
Black	37.8%	46.5%
Black Caribbean	26.5%	37.4%
Black African	42.9%	50.5%
Any other black background	33.7%	44.1%
Other groups	-	-
Any other ethnic group	43.4%	51.1%
Unclassified	35.2%	33.3%
All pupils	43.2%	40%

Source: Department for Education (2022b). Note: the DfE datasets present the attainment of Chinese pupils separately from other Asian pupils. However, according to Census groupings Chinese pupils should be nested within the Asian ethnic group, so we adjust how the statistics are presented in the tables throughout this report, placing Chinese pupils within the umbrella of 'Asian' and reframing the DfE category which is presented as 'Asian' as 'Asian excluding Chinese'.

Pupils from Gypsy, Roma or Irish Traveller backgrounds are amongst the lowest performing in pre-16 education (and throughout schooling). Brassington (2022) reports that Gypsy/Roma and Irish Traveller pupils are consistently the two least likely groups to achieve a grade 5 or above in English and Mathematics at GCSE. In the 2018-19 academic year, 6% of Gypsy/Roma pupils and 13.9% of Irish Traveller pupils achieved a grade 5 or above in GCSE English and Mathematics, placing them well below the average for White pupils and the national average.

Pupils from Gypsy/Roma (11.1%) or Irish Traveller (15.2%) backgrounds are also least likely to enter GCSEs in EBacc subjects. Entry rates for White and Black Caribbean (32.5%), white British (36.4%) and Black Caribbean (37.4%) pupils are also below the average for all pupils (40%). In Henderson et al.'s analysis of subject choice in pre-16 study, there is a mixed picture when it comes to ethnicity. When controlling for characteristics and prior attainment there are some differences in the probability of taking a demanding curriculum which cannot be accounted for by the data; for example they find that Bangladeshi pupils take less-demanding subjects and 'other' pupils take more demanding subjects than White pupils. However, when controlling for school characteristics, the pattern of results according to ethnicity changes and Black African pupils take more demanding subjects than white pupils. This suggests there is not a straightforward picture of how ethnicity determines subjects studied at GCSE, and the role of other characteristics, such as SES, prior attainment and school are partly driving the mix of subjects entered.

Gender

Farquharson et al's overview of recent statistics and research on pre-16 attainment by gender finds that female pupils have outperformed male pupils for many years. They report that this gender gap emerged following the introduction of GCSEs in the 1980s and exists throughout the education journey, from age 5 development tests to A-level performance. Looking at the DfE attainment data on pupils getting grades 5 or above in English and maths GCSEs in 2018-19, 46.6% of female pupils met this standard compared to 40.0% of male pupils. Female pupils were also more likely to enter the EBacc subjects (45.9%) than male pupils (34.3%) (see Table 4).

Table 4: GCSE performance data by gender using 2018-19 data

Education stage/standard – 2018-19 data	Male	Female	Gap
GCSE – Grade 5 or above in English and mathematics	40.0%	46.6%	6.6pp
GCSE – entering the English Baccalaureate	34.3%	45.9%	11.6pp

Source: Department for Education (2022b).

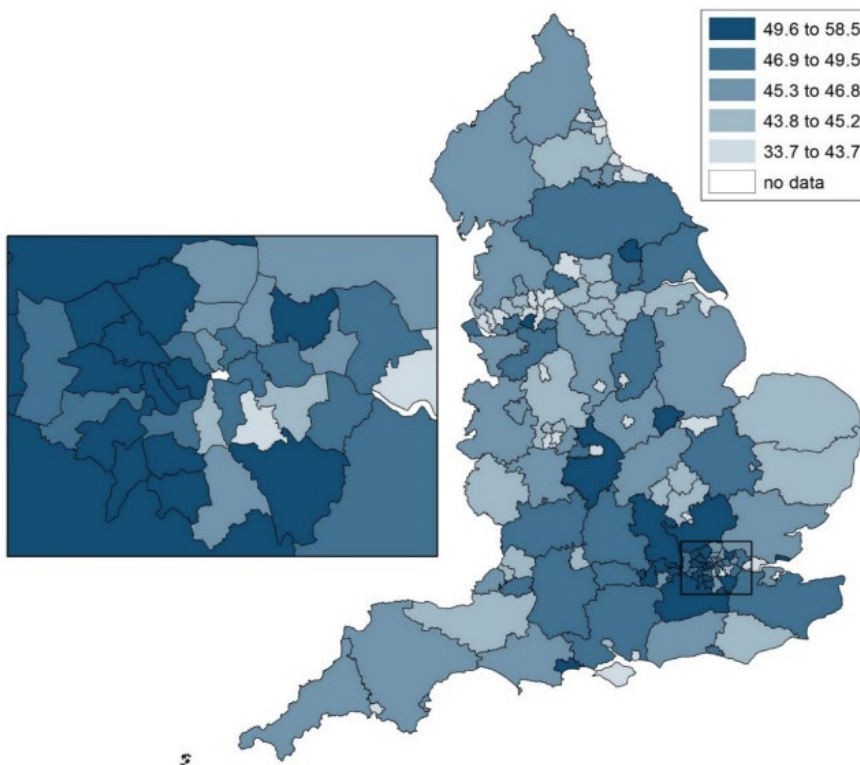
Place

Farquharson et al. provide an overview of recent statistics and research relating to pre-16 attainment by geography. They find that there are substantial differences across local authorities in attainment by the end of primary school. They particularly note that many of the local authorities with highest attainment are in London, and even the areas with lowest attainment in London are above the national average.

The geographical inequality in primary attainment carries through to GCSEs in 2018-19. The proportion of pupils gaining a grade 5 or above in English and Maths at GCSE ranges from 45.8% in the lowest performing region to 57.8% in the highest, a gap of 12pp. EBacc entry similarly ranges from 31.9% to 58.4%, a gap of 26.5pp across regions.

Looking at local authority level, the range is even bigger; the proportion of pupils gaining a grade 5 or above in English and Maths at GCSE ranges from 26.4% in the lowest performing local authority to 69.2% in the area with the highest attainment, a gap of 42.8pp. EBacc entry ranges from 18.9% to 68.5%, a gap of 49.6pp across local authorities. The local authorities with the highest pupil attainment tend to be concentrated in London and the South with the majority of the local authorities with the lowest pupil attainment located in the Northern and Midlands regions. The geographical variation in attainment is shown on the map in Figure 2, which plots average Attainment 8 score by local authority.¹⁰

Figure 2: Average Attainment 8 score per pupil by local authority



Source: Department for Education (2022b)

¹⁰ Attainment 8 is a way of measuring how well pupils do in Key Stage 4. It combines scores in qualifications in 8 subjects, including English and maths. See [DfE GCSE results \(Attainment 8\)](#).

Intersection of characteristics

The analysis so far has focused on individual characteristics. There is however a large body of evidence on how different characteristics interact with one another and which helps provide a clearer account of educational opportunities and outcomes in England

To explore the effect of intersectionality in pre-16 attainment, Prior et al. (2022) use national administrative data on two cohorts of pupils, at age 11 and age 16 in the 2018-19 academic year attending mainstream, state-funded schools in London. The samples consist of almost 91,000 pupils in the age 11 cohort and 71,000 pupils in the age 16 cohort. They examine how well factors including the term in which people were born (e.g. spring/summer/autumn), gender, FSM-eligibility, special needs status and ethnicity can account for attainment at the end of primary and secondary school. They find that the intersection of variables is important – in other words, all of these characteristics separately affect attainment, but we must consider how an individual pupil fares on each to understand their true disadvantage in the education system. They find that the inequalities are primarily additive, so each characteristic acts to increase or decrease average attainment, but the overlap of characteristics does not normally lead to a dramatically bigger effect than would be expected if you were to add the individual effects together. The authors conclude that, given the heavily patterned nature of attainment in England, it is vital to consider the intersection of characteristics to identify groups which face particular disadvantage and may be hidden when focusing on only high-level groupings (e.g. high and low SES or different ethnic groups).

To this end, Strand (2021) provides detailed analysis of ethnic, SES and gender differences in educational achievement at age 16. They use the second LSYPE, a nationally representative sample of almost 10,000 pupils who completed their GCSE examinations at the end of Year 11 in the summer of 2015. Looking at the intersection of characteristics, the author finds that the two groups with the lowest attainment are a. White British and b. Black Caribbean/Mixed White & Black Caribbean pupils (which is treated as a combined category) from low SES backgrounds, who have mean scores far below the average for all pupils. This gap exists for both male and female pupils, although it is larger among males.

Low SES male pupils of Pakistani, White Other and Any Other ethnic group backgrounds also have mean scores below the overall average, but still score more highly than White British and Black Caribbean/Mixed White & Black Caribbean males from low SES backgrounds. It should be noted that, for this analysis, smaller ethnic groups are merged, so White Irish and Gypsy/Roma/Traveller (GRT) are included in the 'White Other' group to avoid small sample sizes in the intersectional groups, which is why performance on these groups is not noted.

The author contends that there are only two instances of ethnic under-achievement compared to White British pupils of the same SES and gender, and both relate to high SES pupils. First, two groups score lower than White British high SES male pupils: these groups are a. Black Caribbean and Mixed White and Black Caribbean high SES male pupils and b. Black African and Mixed White and Black African high SES male pupils. Second, Pakistani females from high SES backgrounds do not achieve as well as White British high SES females.

Looking at the DfE attainment data on pupils getting grades 5 or above in English and maths in 2018-19, the data is not broken down by minor ethnic group but we can see the intersection of major ethnic group, gender and FSM-eligibility (see Table 5). This data aligns with the findings in Strand (2021); the lowest performing groups are white FSM-eligible male and female pupils (15.9% and 20.5%), then FSM-eligible male pupils from Mixed and Black backgrounds. For all groups, the gap between FSM and non-FSM pupils is fairly large (ranging from a low of 11.6pp for Black males to a high of 28.9pp for White British females).

The DfE also provide a separate breakdown for pupils from a Chinese background (hence their exclusion from the 'Asian' category in the table below) which shows that female Chinese pupils, both non-FSM and FSM, are the group with highest attainment (79.5% and 75.8%) with their male counterparts not far behind (74.1% and 62.5%). The FSM gap in attainment for Chinese female pupils is also remarkably small (3.7pp). However, it is not appropriate to compare the results for this group to those for the other major ethnic groups listed here which aggregate attainment across a number of other ethnic groups and contain much larger numbers of pupils.

Table 5: GCSE performance by ethnicity and FSM using 2018-19 data

	GCSE – Grade 5 or above in English and mathematics					
	Males			Females		
	FSM	Non-FSM	FSM Gap	FSM	Non-FSM	FSM Gap
Asian (excluding Chinese)	35.1%	51.9%	16.8pp	39.5%	57.8%	18.pp
Black	24.1%	35.7%	11.6pp	32.1%	45.6%	13.5pp
Mixed	21.3%	46.4%	25.1pp	26.6%	51.2%	24.6pp
Other	30.6%	43.4%	12.8pp	37.4%	50%	12.6pp
White	15.9%	42.4%	26.5pp	20.5%	49.4%	28.9pp
Chinese	62.5%	74.1%	11.6pp	75.8%	79.5%	3.7pp

Source: Department for Education (2022b). Note that, as described elsewhere in this report, pupils from a Chinese background are presented as a separate group in these data, so the Asian group does not include Chinese students.

Moving to the intersection of SES and place, the All-Party Parliamentary Group on Social Mobility's inquiry into the regional attainment gap ran from November 2017 until June 2018 and included three evidence sessions held in Parliament and a call for written submissions. The inquiry report summarises the evidence which was submitted and provides an overview of how attainment varies substantially across the country (All-Party Parliamentary Group on Social Mobility, 2019). As shown in Table 6, the report identifies London as performing particularly strongly on both overall attainment and the gap in attainment between

disadvantaged pupils and their peers; according to 2018-19 data, 34.7% of FSM-eligible pupils in Inner London gained a Grade 5 or above in English and mathematics compared to 49.9% of non-FSM pupils, representing a gap of 15.2pp which is far lower than most other regions. The gap is widest in the South East (30.0pp) and South West (27.4pp).

Table 6: GCSE performance by region and FSM using 2018-19 data

	GCSE – Grade 5 or above in English and mathematics		
	FSM	Non-FSM	Gap
North East	19.3%	44.4%	25.1pp
North West	20.1%	45.3%	25.2pp
Yorkshire and The Humber	20.5%	45.0%	24.5pp
East Midlands	19.9%	45.3%	25.4pp
West Midlands	22.0%	43.5%	21.5pp
East of England	20.0%	45.8%	25.8pp
London	32.9%	52.6%	19.7pp
South East	19.4%	49.4%	30.0pp
South West	18.3%	45.7%	27.4pp
Inner London	34.7%	49.9%	15.2pp
Outer London	31.2%	53.7%	22.5pp

Source: Department for Education (2022b).

As noted by Mirza & Warwick (2022), the high proportion of ethnic minority pupils living in London raises the question of how much patterns of attainment among these pupils is driven by the ‘London effect’ – the name given to the remarkable performance of London compared to the rest of the country on education outcomes. They suggest that there is some consensus in the literature that geography is an important factor in ethnic differences in attainment, although there are areas of disagreement. For example, Burgess (2014) suggests that the London effect can be entirely accounted for by ethnicity, but Greaves, Macmillan and Sibieta (2014) find pupil characteristics are insufficient to account for differences in attainment across regions. However, there is broader consensus that ethnic composition cannot account for changes in the attainment of pupils in London over time and that ethnic minority pupils will have benefited from the positive effect of studying in London

schools to some extent. So there does seem to be some effect of living in London on attainment outcomes which is not simply due to the ethnic mix of pupils based there.

Looking outside London, the All-Party Parliamentary Group on Social Mobility's inquiry into the regional attainment gap found that there is not a simple North/South divide in attainment – although schools in the North East fared worse, schools in the South East and South West also perform poorly for disadvantaged pupils, with the attainment gap in the South East double the size of that in Inner London. However, the report is clear that a simple regional breakdown is not sufficient to capture the more granular picture of how inequality varies across England. Rather, the country is characterised by 'pockets of [educational] deprivation', including in most cities apart from London, as well as in coastal and rural areas.

Care experience

Sinclair et al. (2022) analyse longitudinal national administrative data to understand the effect of being in care on education outcomes. They focus on a cohort of English pupils in mainstream schools who would be 16 in 2013. The authors rank the sample by attainment and find that, in the cohort of 550,000, those in care for at least a year were on average almost 150,000 ranks behind their peers on attainment at age 7.

O'Higgins, Luke & Strand (2021) look at whether young people in care reached key educational thresholds at age 16. The study used national administrative data comprising a sample of more than 640,000 pupils eligible to take GCSEs in 2013. They found that among Children in Need¹¹ 35% achieved 5 A*-C grades at GCSE, compared to 82% of those not in need or in care. For those who'd been in short-term periods of care, 23% met this benchmark and for those in longer-term placements it was 37%.

Berrington, Steven & Tammes (2016) conduct analysis of national administrative data for a whole birth cohort of over 470,000 pupils born in England in 2000-01, tracking them from starting school in 2006/07 through to their GCSE exams in 2016/17. Attainment among children who had any social work intervention during their school years was lower at every Key Stage compared to those who had no intervention. At Key Stage 4, pupils who had been subject to intervention scored 34%-53% lower than other pupils. When controlling for pupils' characteristics and prior attainment, this gap shrunk and the only remaining gaps remained for those who had spent time in care and those who were receiving social work interventions in Year 11 (with scores falling 3-6pp lower than for their peers).

Finally, when we look at those applying to HE, UCAS analysis of GCSE data for applicants in 2022 shows one in three (35%) of those stating they had care experience achieved an average of grade 7 (or higher) in their top three GCSEs, compared to one in two (53%) applicants without care experience (UCAS, 2022c).

¹¹ Children in Need are those entitled to a service from the local authority because of an assessment concluding that it is necessary to promote or safeguard their health or welfare (e.g. due to child protection concerns or disability).

Discussion

In this section we have presented a summary of recent evidence on gaps in pre-16 attainment by SES, ethnicity, gender, place, the intersection of these characteristics and for the specific group of care-experienced pupils. We prioritised attainment at GCSE, as this is the culmination of pre-16 study and offers an opportunity to benchmark performance across different groups. We use 2018-19 data where possible as this relates to Key Stage 4 performance before the COVID-19 pandemic which means our data is unaffected by changes to assessment practice or any impact on learning due to the pandemic. A separate discussion of the impact of the COVID-19 pandemic is given in [Section 16](#). A summary of the gaps we have identified is given in Table 7.

Table 7: Summary of gaps in pre-16 attainment

Pre-16 attainment gap	Size of gap
SES	<p>In 2018-19, 24.7% of FSM-eligible pupils gained at least a grade 5 in both English and mathematics GCSEs compared to 49.9% of other pupils.</p> <p>GAP: 25.2pp – non-FSM pupils 2.0 times more likely to meet standard</p>
Ethnicity	<p>In 2018-19, 51.9% of Asian (excluding Chinese), 43.8% of Mixed, 43.4% of other, 42.4% of White and 37.8% of Black pupils achieved the benchmark of at least a grade 5 in both English and mathematics GCSEs. Among individual ethnic groups, 76.3% of Chinese pupils met this standard, as did only 6% of Gypsy/Roma pupils.</p> <p>LARGEST GAP BETWEEN INDIVIDUAL ETHNICITY GROUPS: 70.3pp - Chinese pupils 12.7 times more likely to meet standard than Gypsy/Roma pupils</p> <p>LARGEST GAP BETWEEN WHITE BRITISH AND INDIVIDUAL ETHNICITY GROUP: 36.4pp – White pupils 7.1 times more likely to meet standard than Gypsy/Roma pupils</p>
Gender	<p>In 2018-19, 46.6% of female pupils gained at least a grade 5 in both English and mathematics GCSEs compared to 40.0% of male pupils.</p> <p>GAP: 6.6pp – Female pupils 1.2 times more likely to meet standard</p>
Place	<p>In 2018-19, the proportion of pupils gaining a grade 5 or above in English and mathematics at GCSEs ranged from 45.8% in the region with lowest attainment to 57.8% in that with the highest attainment.</p> <p>GAP: 12.0pp – most highly performing region 1.3 times more likely to meet standard than area with lowest attainment</p> <p>In 2018-19 the proportion of pupils gaining a grade 5 or above in English and mathematics at GCSE ranged from 26.4% in the local authority with the lowest attainment to 69.2% in that with the highest average attainment</p>

Pre-16 attainment gap	Size of gap
	<p>GAP: 42.8pp – highest performing local authority 2.6 times more likely to meet standard than local authority with lowest attainment</p>
<p>Intersection</p>	<p><u>SES-ethnicity-gender</u> Looking at the intersection of ethnicity, gender and FSM-eligibility, in 2018-19, 57.8% of Asian (excluding Chinese) non-FSM females met the standard (the group with the highest attainment) compared to 15.9% of white FSM boys (the group with the lowest attainment)</p> <p>GAP: 41.9pp – best performing group is 3.6 times more likely to meet benchmark than worst performing</p> <p><u>SES-place</u> Looking at the intersection of region and FSM-eligibility, in 2018-19 non-FSM pupils ranged from 1.6 times more likely (in London) to 2.5 times times more likely (in the South East) to meet the benchmark than FSM pupils</p> <p>GAP: Non-FSM eligible pupils between 1.6-2.5 times more likely to meet benchmark depending on region</p>
<p>Care-experience</p>	<p>In 2012-13, 35% of Children in Need gained at least 5 A*-C at GCSE compared to 82% of those not in care. For those who'd been in short-term stints of care, 23% met this benchmark and for those in longer-term placements it was 37%.</p> <p>GAP: Pupils with no experience of care 2.2-3.6 times more likely to meet the benchmark – however, note this is a different benchmark to the one used for other characteristics so is not directly comparable</p>

In sum, there are large gaps in attainment by demographic characteristics which have existed over many years. The differences by SES and gender are both sizable, but the SES gap is larger, in both absolute and relative terms, based on our benchmark. The range by ethnicity is even larger, particularly when we look at more granular ethnic groups. The range in outcomes across local authorities is similar in magnitude to the range across minority ethnic groups in absolute terms. However, the headline differences on each of these characteristics mask important gaps at a more granular level, for example those due to the intersection of gender and ethnicity and by region. London stands out as an area with high attainment overall and a low SES attainment gap. Finally, the relative gap in GCSE attainment for care-experienced learners appears similar in magnitude to the SES gap. These differences provide important context for the discussion of gaps later in the student journey which are discussed in the remainder of this review.

6. Post-16 pathways

For the purpose of this review, we categorised all papers focused on performance after the end of compulsory schooling and between the ages of 16-18 as post-16 pathways. These sources focus on how pupils move into different qualifications after the age of 16, and particularly on attainment in A-levels as the most common qualification taken by students as preparation for HE (although this varies by SES) (Dilnot, Macmillan & Wyness, 2022). A total of 14 sources with some focus on post-16 pathways were included in the final list.

Of these sources, five focused on low SES pupils as the primary focus group. Other sources covered ethnicity (3), gender (2), place (1) and care experience (1) as factors which can affect attainment. Some sources covered multiple focus groups or the intersection of characteristics such as SES, ethnicity and gender. We also found several sources which discuss the value of GCSEs in leading to academic post-16 study, and include these as a separate section.

We supplement the literature which we uncovered via our review with national statistics published by the DfE on performance at Key Stage 5 (Department for Education, 2022a). We use Average Point Score per entry (APS) as a comparable measure to benchmark performance across groups.¹² As per Farquharson, given the disruption to assessment during the COVID-19 pandemic, to provide a snapshot of inequality in post-16 attainment, we focus on data from 2018-19 (the most recent data available that are based on 'normal' assessments at all stages).

In the following sections we first outline the evidence on the importance of GCSEs as a predictor of post-16 academic study. We then discuss some of the divergence of students into academic compared to vocational pathways before moving onto a focus on post-16 academic attainment. In the latter section the evidence is broken down by SES, ethnicity, gender, place, the intersection of these demographic characteristics and then for care-experienced pupils.

The role of prior attainment in academic pathways

As noted in Farquharson et al. (2022), GCSEs are a 'gatekeeper' in the education system and pre-16 performance is highly predictive of entry to academic post-16 study. They review findings from two papers which highlight the importance of GCSE attainment. Machin, McNally and Ruiz-Valenzuela (2020) find that people who do not get at least a C in their English GCSE are around 9pp less likely to complete A-levels or equivalent qualifications than those who do so, and are more likely to drop out of education by age 18 by about 4pp (compared to the national average of 12%). Anderson (2022) also looks at the effect of crossing the threshold of gaining five or more good grades at GCSE and finds a 6-7pp increase in the proportion of men and women (respectively) going on to take academic qualifications.

Farquharson et al. (2022) provide their own evidence on the importance of pre-16 attainment in driving post-16 attainment, tracking the 2006 GCSE cohort over time; using national

¹² The average point score (APS) is calculated by dividing the total point score by the number of entries.

administrative data they split the cohort into those who do (53%) and don't (47%) meet the threshold of gaining at least five good GCSEs. In the higher attaining group, 34% went onto Academic level 3 (A-level or equivalent) study by age 19 compared to less than 15% of those in the lower attaining group. These studies demonstrate that performance at GCSE has important implications for pupils' post-school destinations, which in turn can help explain their trajectories into HE and into the labour market.

Therefore, it is unsurprising that many of the patterns of attainment at GCSE, as discussed in [Section 5](#), are reflected in patterns of entry to academic post-16 qualifications. DfE statistics show that in 2018-19, 15.8% of the A-level cohort were 'disadvantaged' (defined as those who were in receipt of Pupil Premium when they were in their last year of Key Stage 4) compared to 82.8% who were not disadvantaged (the remainder were in the 'unknown' category on disadvantage). This compares to 25.3% of state-funded students being disadvantaged at the end of 16-18 study, suggesting that these students are more likely to enter other (ie non-A-level) routes.

Subject choice at GCSE can also play a role in determining entry to post-16 destinations. Moulton et al. (2018) use data from Next Steps, following a cohort of almost 10,000 pupils born in 1989-90 and their education journey over time. They examine the impact of the curriculum studied by pupils aged 14-16 on whether they stayed in post-16 education and went onto A-level study. They find prior attainment is the most important factor in accounting for all post-16 transitions. They also find students with more educated parents, those from minority ethnic backgrounds, girls, and young people with SEN are more likely to be studying A-levels. In an extension to the studies discussed above, Moulton et al. also found that pursuing an EBacc-eligible curriculum increased the chances of progressing into all post-16 education destinations, and particularly the chances of entering academic study such as A-levels. Given the varying rates of entry into EBacc eligible subjects by demographic characteristics it is also unsurprising we see entry to academic post-16 study is patterned by these factors.

An additional factor in progression to academic post-16 study is the aspiration to study specific subjects. While this is not a primary focus of this review, we include two studies which serve to demonstrate how subject-specific aspirations can help drive patterns of progression to certain qualifications. Quaye & Pomeroy (2022) present an analysis from a survey of 1,000 14-16 year old pupils in three English state schools, 76% of whom self-identified as 'working-class'. The survey focused on attitudes to mathematics and revealed that working-class pupils had lower aspirations to have a mathematics-related career and generally less positive dispositions towards maths as a subject. Jones and Hamer (2022) examine the relationship between the attitudes and beliefs of parents/carers and their child's future participation in physics. Using survey data relating to a sample of around 2,000 pupils in 60 English schools they found strong relationships between the likelihood of a parent expecting their child to take Physics A-level and the parent's own attitudes and beliefs. They comment that, in light of a broader literature which suggests individuals' attitudes and beliefs may differ by ethnicity and by SES, and that parents are less likely to believe that science is interesting and achievable for their daughters than their sons, this may lead to patterned uptake of physics by demographic characteristics.

As discussed in [Section 9](#), there is evidence that attainment in specific subjects in post-16 qualifications can be valuable for progression to HE and to selective HE in particular. Maths and Physics are among those subjects which have been identified as particularly useful; therefore, different subject choice by different groups is another factor which may be responsible for differences in entry to HE and success in the labour market.

In sum, the attainment of different groups at GCSE, and the importance of GCSE attainment in sorting pupils into different post-16 pathways, means we must apply caveats to our interpretation of the evidence covered in the remainder of this section. Any student who progressed to post-16 education will have higher attainment on average, and may be systematically different from other students who have the same demographic characteristics in ways we cannot measure. **The gaps we observe among the post-16 academic cohort need to be interpreted with this in mind.**

Vocational and academic post-16 pathways

As higher attaining pupils at 16 are more likely to transition to academic post-16 options, the inverse is also true: lower attaining pupils are more likely to enter vocational pathways. But it is important to consider the other ways in which entrants to vocational pathways differ from those to academic pathways.

Vocational education has seen a degree of reform over recent years, as noted in Vidal Rodeiro & Vitello (2020). Given the evolving nature of the vocational post-16 landscape, it is harder to give an accurate picture of equality gaps relating to this topic than on the more entrenched and stable gaps in attainment, for example. However, the papers reviewed here provide a snapshot of the current status of vocational post-16 pathways and how entry differs by key characteristics. This section is not intended to provide a full review of the equality landscape in vocational pathways, but to contextualise the more academic pathways and also provide background to some later sections of this report where we discuss outcomes for individuals progressing through HE via vocational pathways.

Vidal Rodeiro & Vitello (2020) explore the role of vocational qualifications in patterns of entry to post-16 education. They use national administrative data and look at the cohort of students at the end of Key Stage 4 or Key Stage 5 in 2016-17. They find that substantial percentages of candidates took at least one DfE-approved vocational qualification; just under 50% of the cohort followed a purely academic pathway at Key Stage 4 and just under 45% did the same at Key Stage 5).¹³ They find larger and more consistent differences between academic and vocational candidates at Key Stage 5 than at Key Stage 4. At Key Stage 4, income-related deprivation (and the related low attainment) seem to be the only factor driving vocational qualification uptake whereas at Key Stage 5 other characteristics also seem to play a role. Poorer students were still more likely to take vocational pathways, but males were also more likely to take vocational qualifications than females. There was little evidence of a link between ethnicity and the uptake of vocational qualifications at either Key Stage.

¹³ The vocational qualifications at Key Stage 5 included any Level 3 Vocational Qualification, Applied Generals and Tech Levels.

Farquharson et al. highlight one area in which there is a difference by ethnicity; young people are more likely to start an apprenticeship if they are white British, either compared with the cohort as a whole or compared with those undertaking vocational education at the same level. Cavaglia, McNally & Ventura (2022) provide detailed analysis of apprenticeship uptake data since 2015 and find white British individuals account for approximately 80% of apprenticeship starts in 2020 (compared to 77% of the working age population in 2019) and this has seen little change over time. They account for a smaller share of Higher and Degree Apprenticeships (76% and 74% for Higher and Degree Apprenticeships respectively) as participation among ethnic minorities has increased at these levels over recent years. In contrast to Vidal who focuses on Key Stage 5 vocational qualifications, Cavaglia et al. show that individuals from low SES backgrounds are under-presented at all levels of apprenticeship, with under-representation getting more severe as the level increases; they made up just 5% of the total at Degree Apprenticeship level in 2020. This means that the representation of low SES individuals within Degree Apprenticeships is slightly worse than their representation in HE.

However, in common with Key Stage 5 vocational qualifications, females are under-represented in apprenticeship starts. In 2020, females represented 45% of apprenticeship starts, but this differed by level and at Higher Apprenticeship level females make up 57% of the total. Apprentices also generally skew older; in 2018-19 21.5% of apprenticeship starts were under 19, 35.4% were aged 19-24 and 43.1% were aged 25 or older (Farquharson et al., 2022).

Moving to the role of place, according to Ilie, Vignoles & Zhao (2021), alongside SES, geography is an important predictor of vocational pathway choice. This is due to the combination of local characteristics, including deprivation, labour market conditions and distance to education providers, that shape the education decision-making process. This aligns with findings from Crawford, Macmillan & Vignoles (2014), that, once they have decided to stay on in full-time education, students in poorer areas are 14.4pp more likely to choose a further education college over a sixth-form college, even after allowing for academic achievement at GCSE and school characteristics. Some of this difference in behaviour can be explained by the local education landscape and the college options available to students.

There is some evidence that specific groups of learners are more likely to enter HE via a vocational pathway. Harrison (2017) show that the care leavers group is less likely to enter HE with A-levels than the cohort as a whole (29.8%, compared with 49.3%), and more likely to enter through a range of non-traditional routes, including access courses (5.2% compared to 1.1%), vocational qualifications (49.3% compared to 44.4%) and other HE courses within a further education setting (5.7% compared to 2.6%). This is supported by UCAS analysis of applicant data which shows that care-experienced learners are 112% more likely to take an Access to HE Diploma (6.5% compared to 3.1%) and 40% less likely to apply with A-levels (27% versus 45%) (UCAS, 2022c). Eighteen-year-old care-experienced learners are 46% more likely to apply with only BTECs (13% compared to 9%). UCAS also find that 18-year-old disabled applicants are 11% less likely to hold only A-levels (41% compared to 46%) and 11% more likely to hold BTECs (20% compared to 18%).

Post-16 academic attainment

SES

Individual-level SES

The DfE statistics on performance at A-level and other 16-18 results show that attainment is lower for disadvantaged students compared to non-disadvantaged students across all level 3 qualification types, but the gap is greatest for A-levels. Table 8 shows the average grade for A-levels was C for disadvantaged students, and C+ for non-disadvantaged students, corresponding to a gap of 4.88 points in APS.

Table 8: A-level APS by disadvantage status using 2018-19 data

Education stage/standard – 2018-19 data	Disadvantaged	Not disadvantaged	Gap
APS per entry	28.70	33.58	4.88
Average grade	C	C+	NA

Source: Department for Education (2022a)

Crawford et al. (2014) track the performance of high-achieving pupils from poor backgrounds through the education system. They use national administrative data on a cohort containing more than 500,000 children born in 1991-92 and show large differences by SES in the proportion of pupils gaining three or more grades A-B in any subjects at A-level, with around 2.4% of FSM-eligible pupils meeting this threshold compared to 10-11% of other pupils. Looking at their more granular measure of SES (which they define locally by combining FSM-eligibility and geographic measures), only 2.2% of pupils from the most deprived quintiles meet this threshold compared to 20.6% from the least deprived. The analysis also shows differences in students gaining facilitating subjects at A-level; approximately 0.6% of FSM-eligible pupils gained three or more A-B grades in these subjects compared to around 3% of other pupils. Looking at their more granular measure of SES, only 0.6% of pupils from the most deprived quintiles met this threshold compared to 6.5% from the least deprived.

SES and the school system

Crawford et al. (2014) also explore the role of schools in A-level attainment. Differences by school type are even larger than those by individual-level markers of SES, with 8.1% in non-selective state schools, 44.5% in selective state schools and 41.8% in private schools getting three or more A-B grades in any subjects at A-level, respectively. Again there are large differences in subjects studied by school type, with 2.2% in non-selective state schools, 16.2% in selective state schools and 15.3% in private schools getting three or more A-B grades in any facilitating subjects at A-level, respectively.

Henderson et al. (2020a) explore the role of private schools in post-16 attainment. Using the Next Steps data and a sample of almost 6,000 students, they derive a measure of private school attendance which captures whether students are in private education at age 16-18 for A-level studies. They find that the number of facilitating subjects at A-level is 63% higher for

those attending private school; this is reduced to 34% once prior attainment is taken into account and further shrinks to 27% when other background variables are included.

Ethnicity

The DfE statistics on performance at A-level broken down by major ethnic group in Table 9 show Asian students have the highest APS and Black students the lowest. Students whose ethnic group is unknown have the highest APS per entry for A-level, reflecting the fact they are likely to have attended an independent school at Key Stage 4.

However, important subgroup effects are revealed when looking at individual ethnicity groups. For example, Gypsy/Roma students have the lowest outcomes overall, although the data for this group is based on less than 100 students so should be handled with some caution. As per pre-16 attainment, we also see a divergence between Black African students (who average a C grade) and Black Caribbean (who average a C-). As per pre-16 attainment, pupils from a Chinese background have the highest post-16 attainment.

Table 9: A-level APS by ethnicity using 2018-19 data

	A-level average point score per entry (APS)	Average grade
White	32.52	C+
White British	32.48	C+
Irish	34.67	C+
Traveller of Irish Heritage	30.88	C
Gypsy/Roma	25.16	C-
Any other White background	32.99	C+
Mixed	32.31	C+
White and Black Caribbean	29.67	C
White and Black African	30.7	C
White and Asian	34.25	C+
Any other mixed background	32.86	C+
Asian (excluding Chinese)	31.17	C
Indian	33.67	C+
Pakistani	29.15	C
Bangladeshi	29.57	C
Any other Asian background	31.3	C
Chinese	37.32	B
Black	28.33	C-
Black Caribbean	27.39	C-
Black African	28.57	C
Any other black background	28.29	C-
Other groups	-	-
Any other ethnic group	31.43	C
Unclassified	39.22	B
All pupils	33.33	C+

Source: Department for Education (2022a). Note: the DfE datasets present the attainment of Chinese pupils separately from other Asian pupils. However, according to Census groupings Chinese pupils should be nested within the Asian ethnic group, so we adjust how the statistics are presented in the tables throughout this report, placing Chinese pupils within the umbrella of 'Asian' and reframing the DfE category which is presented as 'Asian' as 'Asian excluding Chinese'.

Mirza & Warwick (2022) report that substantial differences exist at the top end of the grade distribution by ethnicity. They find that national administrative data from 2018-19 show that among A-level students, 25% of Chinese pupils, 15% of Indian pupils and 10% of White British pupils in England achieved at least three A grades. These figures fall to 7%, 6% and 3% for Pakistani, Black African and Black Caribbean students, respectively.

Gender

The DfE statistics on performance at A-level broken down by gender are given in Table 10. They show that, overall, female students achieve a higher APS per entry in A-levels. However, it should be noted that a higher proportion of male students achieve top grades; 14% of males achieve three A*-A grades or better, compared to 12.1% of females.

Table 10: A-level APS by gender using 2018-19 data

Education stage/standard – 2018-19 data	Male	Female	Gap
A-level average point score per entry (APS)	33.31	34.58	1.27
Average grade	C+	C+	NA

Source: Department for Education (2022a)

Care experience

UCAS analysis of applicant data shows that care-experienced learners are 51% less likely than their non-care-experienced peers to achieve A*AA or above at A-level (12% versus 24%). They are 31% less likely to achieve ABB or above at A-level and 23% less likely to achieve DDD or above in the BTEC Extended Diploma (44% versus 57%) (UCAS, 2022c).

Discussion

In this section we have presented a summary of recent evidence on gaps in post-16 academic attainment by SES, ethnicity, gender, the intersection of these characteristics and for the specific group of care-experienced pupils. We use 2018-19 data where possible as this relates to Key Stage 5 performance before the COVID-19 pandemic which means our data is unaffected by changes to assessment practice or any impact on learning due to the pandemic. A separate discussion of the impact of the COVID-19 pandemic is given in [Section 16](#). A summary of the gaps we have identified, and the nature of these gaps, is given in Table 11. Unfortunately, we are unable to provide a snapshot of A-level attainment by the intersection of characteristics and for care-experienced students due to lack of data.

Table 11: Summary of the gaps identified relating to post-16 A-level attainment

Post-16 attainment gap	Size of gap
SES	<p>In 2018-19, the APS for disadvantaged students was 28.70 compared to 33.58 for other students</p> <p>GAP: 4.88 points – non-disadvantaged students’ score was 17% higher</p>
Ethnicity	<p>In 2018-19, students from a mixed background had the highest average attainment with an APS per entry of 32.31, followed by White (32.52), Asian (excluding Chinese) (31.17) and Black students (28.33). For individual ethnic groups, Chinese students had an average APS of 37.32 compared to 25.16 for Gypsy/Roma students. White British students had an APS per entry of 32.48.</p> <p>LARGEST GAP BETWEEN INDIVIDUAL ETHNICITY GROUPS: 12.16 points – the Chinese students’ score was 48% higher than that of Gypsy/Roma students</p> <p>LARGEST GAP BETWEEN WHITE BRITISH AND INDIVIDUAL ETHNICITY GROUP: 4.84 points – the Chinese students’ score was 15% higher than that of White British students</p>
Gender	<p>In 2018-19, the APS for female students was 34.58 compared to 33.31 for other students.</p> <p>GAP: 1.3 points – the female students’ score was 4% higher</p>
Intersection	<i>Insufficient data to benchmark other groups</i>
Care-experience	

Using the data we do have, we can see the gender gap is relatively small. By contrast, the gaps by ethnicity are large, and as per Key Stage 4 attainment, major groupings obscure very large gaps between the highest and lowest performing groups. These ethnicity gaps are bigger than the gap by SES at A-level. However, as for Key Stage 4 attainment, it is insufficient to consider these raw gaps, as attainment is patterned by their intersection, discussed elsewhere in this review.

7. HE aspirations and expectations

This review focuses on quantitative behaviour and outcome data that can help us understand equality gaps that open up through the student journey. HE aspirations or expectations are not behaviours or outcomes, but can be captured via survey data to provide a snapshot of an individual's feelings relating to HE when we do not have more concrete data. Therefore, in this section, we review evidence where aspirations or expectations have been collected and analysed quantitatively. As per the inclusion criteria, we do not provide a full review of the large and rich qualitative literature on aspirations and expectations.

The role of aspirations and expectations in HE entry is not straightforward. Although, historically, a lot of access and participation work has focused on 'raising aspirations', it is not clear to what extent this approach is effective or the strength of its role in driving HE entry. There is some evidence that might superficially support this approach; for example pupils' expectations about the future correlate with attainment at age 16 (Chowdry, Crawford & Goodman, 2010) and HE entry (Anders and Micklewright, 2015). However, prior attainment is the dominant factor which determines whether and where a person studies, and aspirations appear to largely reflect this prior attainment (Chowdry et al., 2013; Cummings et al., 2012). In other words, attainment and aspirations and expectations are intimately bound up with each other and difficult to untangle. In this sense, aspirations and expectations data should not be used without considering the broader set of factors which might inhibit entry into HE. Aspirations should be considered as a product of SES, prior attainment, and other background characteristics, rather than something which can be 'raised' in isolation.

The nine sources used in this section focus on low SES students (7), ethnicity (2), gender (2), school factors (1) and care experience (1) as factors which can affect attainment. Some sources cover multiple focus groups or the intersection of characteristics such as SES, ethnicity and gender.

In the following sections we outline the evidence broken down by SES, ethnicity and gender, attainment grouping, the intersection of some demographic characteristics and then for care-experienced pupils.

SES

Chowdry, Crawford & Goodman (2011) use data on a sample of 13,300 young people from LSYPE. The sample were aged 13 or 14 in the academic year 2003-04 so this is slightly old data and it is important to note that the LSYPE data pre-date the large rise in maximum tuition fees in 2012. They find there are large and significant differences in the attitudes and behaviours of young people from the highest and lowest SES quintiles. In the highest quintile, 80.7% of parents thought their child was very or fairly likely to go to university, compared to 53.4% in the lowest quintile. Looking at young people's own responses, 78.6% of those from the highest SES quintile thought they were likely to apply and likely to get into HE, compared to 49.2% of those from the lowest quintile.

Anders & Micklewright (2015) also use data from LSYPE and adopt a similar sample to Chowdry et al. They explore how expectations of applying to university change through the

teenage years and how these expectations translate into actual applications. Expectations are very high at 14, with two thirds of young people saying they are very or fairly likely to apply to university. The proportion who expect they will apply at this early age is much higher than the proportion who eventually attend, and there is a general fall in the proportion expecting to attend between 14 and 17. Among low SES students, expectations are lower at age 14, and fall faster; when comparing those with a parent with a degree and parents in the lowest educational group (no age 16 qualifications) the gap is about 35pp at age 14 and widens by about 5pp by age 17. Anders (2017) finds that pupils in the lowest SES quintile have more than twice the probability of switching from reporting being 'likely to apply' to reporting being 'unlikely to apply' as those in the highest quintile, after taking into account attainment.

Berrington, Roberts & Tammes (2016) conduct analysis of the United Kingdom Household Longitudinal Survey (UKHLS), an annual panel survey of over 30,000 private UK households. Their analysis focuses on responses of almost 5,000 10-15 year-olds born in the 1990s and early 2000s who completed the youth questionnaire. As per Anders & Micklewright (2015), they find aspirations for HE are high but there are significant differences by SES; overall, 66% of 10-15 year olds stated positive aspirations for college/university, but they find large differences according to parental occupational class.

More recently, the COVID Social Mobility and Opportunities (COSMO) cohort study is generating evidence about how the COVID-19 pandemic has affected socio-economic inequalities in life chances, including short- and long-term effects on education, wellbeing and career outcomes (see [Section 16](#) for a discussion of relevant findings). A sample of more than 13,000 cohort members was recruited in the first wave of the study in 2022 and showed large inequalities in aspirations by background. Disadvantaged students were less likely to be planning to apply for university, had less confidence about getting into university, and were more likely to plan to do a vocational qualification. While 98% of participants who were privately educated and 92% of those who attended state grammar schools report that they were likely to apply for university, only 68% of those attending state comprehensive schools say they plan to do so.

Ethnicity and gender

The Berrington, Roberts & Tammes (2016) analysis of youth questionnaire data from the UKHLS finds that a smaller percentage (66%) of White children hold aspirations for higher levels of education compared to all other ethnic groups. Aspirations are highest for Black Caribbean (86%), Black African (81%), Indian (82%) and Bangladeshi (78%) teenagers and the difference between these groups and the White majority are statistically significant. They also find that boys are significantly less likely to aspire to university (58%) compared to girls (74%).

Attainment grouping

Mazenod et al. (2019) explore secondary school students' university aspirations and whether these are affected by attainment grouping. They collect data on almost 7,000 pupils via two large-scale randomised control trials (RCTs) taking place in English secondary schools. Using survey data collected as part of the project they find that there is an association

between secondary school students' university aspirations and their set placement (top, middle or bottom). By the second year of setting in secondary school, placement in a top set appears to positively impact on university aspirations over and above the effects of prior attainment and aspirations.

Intersection of characteristics

Bowes et al. (2015) provide analysis of the LSYPE. They use a sample of over 3,000 young people, drawing on survey data captured between the ages of 13 and 20. Bowes find large differences in the likelihood of applying to university among disadvantaged young people by ethnicity. At Wave 1, just 16% of White pupils said they were very likely to attend, compared to 38% of Bangladeshi, 41% of Pakistani, 44% of Black Caribbean, 52% of Indian and 56% of Black African pupils. There is also an important intersection of ethnicity and gender; looking at disadvantaged White individuals, by the final wave of the survey, 79% of boys said they were not very likely or not at all likely to apply, compared to 65% of girls.

By analysing how attitudes to university are related to HE application behaviour, Bowes et al. also find evidence that these aspirations and attitudes of children and their parents do play a part in accounting for the gaps in application rates. Among the most important predictors are beliefs about whether the best jobs go to people who have been to HE, and whether university is for people 'like them', alongside general aspirations to attend. Parental aspirations and attitudes have a smaller effect. However, even when taking into account these factors, and prior attainment, White students are still less likely to apply. The analysis suggests that the chance of a White individual applying to university is 23pp lower than for a Black, Asian and Minority ethnic (BAME) individual with similar attainment.

Berrington, Roberts & Tammes (2016) also look at the intersection of demographic characteristics and find that within all ethnic groups girls are more likely to aspire than boys, but the gender difference is largest among White teenagers (17pp; for minority ethnic groups the gap is between 4 and 8pp). Indian boys appear more likely to have higher educational aspirations (79%) than Pakistani (70%) and Bangladeshi (75%), but the difference is not statistically significant due to the relatively small sample sizes. All boys in minority ethnic groups report higher educational aspirations than their White male peers and most tend to have higher aspirations than White girls.

Berrington et al. also find large differences by parental occupational class which differ substantially by gender: for boys, positive aspirations are much higher among those from managerial and professional backgrounds (67%) compared to those with intermediate (57%) or routine class backgrounds (50%). Among girls, aspirations were higher generally and the gap by parental occupational class was smaller (80% compared to 74%).

Care experience

Williams et al. (2020) report on a quantitative study of expectations of care-experienced Year 9 pupils in relation to university aspirations. They use a sample of almost 16,000 individuals from the Next Steps survey, approximately 230 of whom are classified as 'in care' or 'care experienced' at the start of study. Quantitative analysis shows that young people who are either in care or care experienced at 13- or 14-years old have significantly lower

expectations of attending university than peers who have not entered care. These lower expectations remain even when the young people's Special Educational Needs status, history of school exclusions, and family benefit levels are taken into account. At age 13/14, 45.2% of care-experienced students indicated they were likely to apply to university, compared to 65.9% of other learners. This gap persisted over time to 31.4% compared to 55.1% at age 16/17.

Discussion

In sum, aspirations to attend HE are generally high among young people, but clearly correlated with SES; this gap widens as the cohort gets older. White students are less likely to aspire to HE than other ethnic groups and boys are also less likely to aspire to HE than girls. As per attainment at pre- and post-16, aspirations are heavily patterned by the intersection of these characteristics; for example, among low SES students, white boys are particularly unlikely to aspire to HE. More broadly, girls' aspirations seem less affected by SES than boys. Care-experienced students are a particular group who report lower aspirations to attend HE than their peers. However, as noted earlier in this section, these patterns in aspirations are reminiscent of the patterns we see in attainment. Therefore, we should be cautious in how we frame aspirations as factors in students' journeys into HE.

8. Overall HE entry

In the following section we present a summary of the equality gaps at the point of entry to higher education, focusing on overall entry to any HE provider. A total of 31 sources with some focus on HE entry were included in the final list for this analysis.

These sources focused on SES (6), ethnicity (2), place (4) or the intersection of characteristics such as SES, ethnicity and gender. We also found 12 sources relating to specific target groups. We supplement the literature which we uncovered via our review with national statistics published by the DfE on widening participation (Department for Education, 2022c). We use the widening participation statistics to help scaffold this section; note however that the OfS will be undertaking more detailed analysis of this data.

SES

Individual/area-level SES

As discussed previously, there are multiple different ways of measuring SES, and all give a slightly different picture of patterns of HE entry. Some of these measures relate to individuals (e.g. FSM-eligibility, or NS-SEC) and others are area-based measures (e.g. POLAR and IMD). In the literature we found, individual and area-based proxies for SES are often combined, so we combine them in this section.

To start with raw gaps in entry to HE, the DfE Widening Participation data provides a breakdown by FSM-eligibility and POLAR4, focusing on progression to HE by age 19 for state-funded pupils. These data do not account for variations in prior attainment.

The data show that entry rates for FSM-eligible pupils have increased steadily over time, from just 14.2% in 2005-06 to 28.1% in 2020-21. However, progression among other pupils has also risen over this period, so the gap in entry remains large, at 18.7pp in 2020-21 (28.1% compared to 46.8%). This gap has not narrowed appreciably over time, in fact Farquharson et al. (2022) note that the gap closed slowly between the mid-2000s and 2015 but that it has opened up again since then, and that the gap in 2021 was the same as it was in 2007.

Using POLAR4 as a measure of SES, we see a similar trend of overall participation rising over time, from 18% in the most disadvantaged quintile in 2009-10 to 29.5% in 2020-21. The overall participation for the most advantaged quintile has not increased as quickly over this period, so there has been some narrowing in the gap between top and bottom quintiles, from 33.3pp (18% compared to 51.3%) in 2009-10 to 29.7pp in 2020-21 (29.5% compared to 59.2%).

UCAS data also provides useful insight into patterns of entry in the admissions data. Using the most recently available UCAS data for 18-year-old students from England, analysis using IMD quintiles shows that the absolute gap in 2022 entry between those from the least and most deprived quintiles was 19.7pp (48.5% compared to 28.7%), meaning that the most advantaged students were 1.67 times more likely to enter HE than the least advantaged on this metric (UCAS, 2022d). Using this measure of SES, both the absolute gap in entry (in pp terms) and the ratio have been decreasing almost year-on-year for the last 16 years, from a high of 26.8pp in 2006 (meaning those from the least deprived quintiles were then 3.35 times more likely to enter HE).

We can also split the UCAS data by the UCAS multiple equality measure (MEM). According to UCAS (UCAS, 2023):

“[MEM]... brings together information on several equality dimensions for which large differences in the probability of progression into higher education exist. These equality dimensions include sex, ethnic group, where people live (using the POLAR3 and IMD classifications), secondary education school type, and income background (as measured by whether a person was in receipt of free school meals (FSM), a means-tested benefit, while at school). These equality dimensions are combined... and used to aggregate pupils into groups, where group 1 contains those least likely to enter higher education (“most disadvantaged” in this context), and group 5 contains those most likely to enter higher education (“most advantaged” in this context).”

Using MEM, 59.6% of quintile 5 students (the most advantaged) entered HE in 2022 compared to 14.6% of quintile 1 students (the least advantaged) – a gap of 45pp. The absolute gap in entry rates has not changed much over the last 16 years, widening slightly from 42.2pp in 2006. However, due to the overall increase in HE participation, as for FSM-eligible students, we see sustained improvement in the ratio of entry rates over this period: in 2006, quintile 5 students were 7.21 times more likely to attend HE than quintile 1 students, in 2022 it was 4.08 times.

Looking further into adulthood by focusing on the cohort of students who completed their GCSEs in 2006, Farquharson et al (2022) note that 10 years after GCSEs, roughly a third of

adults have completed a degree, but this is highly dependent on background. They use administrative education outcomes data and divide the cohort into quintiles based on a measure of SES, including a separate category for whether individuals went to private schools or not. They find widely differing qualification profiles; in the most deprived quintile just 17% had achieved a degree or equivalent qualification by age 26, compared to 49% in the least deprived quintile and 71% among those who went to independent schools (a gap of 32pp and 54pp, respectively).

Another SES-related measure in widening participation contexts is being 'first in family' to enter HE. First-in-family students are those whose (step)father and (step)mother or guardian(s) did not experience HE. Henderson, Shure & Adamecz-Völgyi (2020) conduct analysis using the Next Steps longitudinal survey, and using a sample of approximately 7,700 individuals, they generate an estimate of the proportion of the general population they expect to be first in their family to attend HE. They propose that, of the 27% of graduates who achieved their degree by age 25, 17% are first in family and 9% are not first in family (i.e. first-in-family students comprise two thirds of graduates). This finding is consistent with a story of HE expansion over the period in question. These numbers imply an entry rate of 22% among students who would be first in family if they attended HE, compared to 52% among students who had at least one parent/guardian attend HE (a gap of 30pp). Descriptive analysis of the 'first in family' group finds that, on average, they have higher attainment than other individuals who match the education level of their parents and do not attend university. Those from BAME groups are more likely to outperform their parents in achieving a degree than those who classify themselves as White. However, the analysis does not provide an adjusted estimate of the gap in entry rates when controlling for these variables.

Blanden, Doepke & Stuhler (2022) also investigate the link between family background and attainment by conducting analysis of the Next Steps longitudinal study. Focusing on a sample of almost 8,000 pupils in England, they use parental education as a simple proxy for SES, and define more advantaged pupils as those who have at least one parent who had obtained a level of education beyond high school. They find that the probability of attending university at age 20 is 27pp higher for children of highly educated parents, and the probability of obtaining a degree by age 25 is 17pp higher for this group. To present this another way, the odds of attending university (the proportion of students attending over those not attending) are 2.7 times higher for children of highly educated parents. The odds of getting a degree by age 25 are 2.4 times higher for the more advantaged individuals. Blanden et al. show that when controlling for test scores in maths and reading these gaps narrow substantially to 7pp and 6pp, respectively. The authors note that the remaining gap is smaller in England than the comparable gap in the US, suggesting that prior attainment is the dominant determinant of HE attendance in England, whereas costs and credit constraints are an additional important variable in the US context.

Although not strictly within our inclusion criteria, we also include Crawford & Greave's (2015) comprehensive analysis of relationships between SES, ethnicity and HE participation to inform this review, given the strength and relevance of the research. The analysis is based on individual-level administrative data held by the government and focused on state-school pupils taking GCSEs in England between 2002-3 and 2007-8, totalling over half a million pupils per cohort. Crawford & Greaves handle SES by combining FSM eligibility and various

postcode-based measures of advantage to divide students into quintiles of advantage. They also explore progression using the POLAR index of participation.

Crawford & Greaves' analysis of the raw equality gaps is superseded by the statistics presented above, but crucially the authors go beyond these raw gaps, and explore to what extent they reflect differences in the other characteristics of pupils from different socio-economic backgrounds, the schools they attend or their prior attainment. They find that controlling for background characteristics (including gender, ethnicity, month of birth, whether English is an additional language, special education needs, region, attainment at the end of primary school and secondary school characteristics), account for a sizable proportion of the difference in outcomes – 30-40% amongst quintile groups defined using the SES index and 50-55% amongst quintile groups defined using POLAR.

However, adding a rich set of measures of attainment at secondary school reduces the gaps most substantially – they are able to account for over four fifths of the gap between the most and least deprived groups when adding Key Stage 4 attainment. In fact, when controlling for both Key Stage 2 and Key Stage 4 attainment, the gap becomes small and not significantly different from zero, suggesting that, among students with the same Key Stage 4 results, it is prior attainment which determines their likelihood to enter HE, not other differences in secondary school. Interestingly, accounting for post-16 performance at Key Stage 5 only reduces the SES gap in HE entry by a small amount, suggesting that Key Stage 4 performance is the dominant predictor of HE participation.

Looking at individual-level factors in more detail, the most important factors which help account for the gap appear to be ethnicity and whether English is an additional language. This finding suggests that these characteristics (and unobserved factors associated with these characteristics) are important factors behind the differences in HE entry, including amongst young people from different SES backgrounds. However, it is important to note that, even after controlling for a rich set of variables, Crawford & Greaves still find a gap in HE entry which cannot be accounted for by the data available. They estimate that amongst the cohort who sat their GCSEs in 2008, those from the lowest SES quintile group remain 5.6pp less likely to go to university than those from the highest SES quintile group (3.9pp if using POLAR quintiles).

SES – school

As well as individual-level measures of SES, some sources in our review explore how HE entry differs between different types of school. Because attendance at a private school is a proxy for higher SES, we discuss these sources here.

The DfE Widening Participation statistics shows that, among A-level students, the progression rate by age 19 for state school A-level students was 79.7% in 2020-21 compared to 87.3% in independent schools, a gap of 7.5pp. As noted by Montecute and Cullinane (2018), this gap has fluctuated over the last decade but shows no consistent sign of narrowing. This is consistent with Farquharson et al (2022) (as noted earlier in this section); they find 10 years after GCSEs, the rate of people holding a degree is much higher amongst those who went to independent schools, at 71%; this compares to 49% in the least

deprived quintile and 17% for those in the most deprived quintile (based on their own metric for SES).

Henderson et al. (2020a) explore the role of private schools in rates of progression to HE. Using the Next Steps data and a sample of almost 6,000 students, they derive a measure of private school attendance which captures whether students were in private education at age 16-18 for A-level studies. The analysis finds that there is a positive significant effect of attending a private school on entering HE of 9pp, after controlling for a range of variables including GCSE results, region, gender, ethnicity and SES. If A-level performance is controlled for, the gap drops to 6pp. This analysis shows that there is a net advantage to choosing facilitating subjects and getting high grades in these subjects (see [Section 6](#) on post-16 subject choice for more on this issue).

There are also differences in HE access within different types of state-funded schools. National administrative data shows the percentage of level 3 pupils (e.g. those that studied A-levels, tech levels and applied general qualifications) continuing to a sustained education or training destination at level 4 or higher (such as degrees, Higher Apprenticeships and higher national diplomas) in the year after completing 16-18 study. The proportion of students progressing to such a destination is 88.5% in selective state-funded schools, compared to 62.0% in non-selective schools in highly selective areas and 73.5% in other non-selective schools.

Ethnicity

In 2021-22 the HE entry rate was 65.7% for Asian students, 62.1% for Black students, 48.1% for Mixed students and 39.7% for White students. As noted in Crawford & Greaves (2015) participation among all ethnic groups has risen over time, but most groups have seen larger increases than White British students. Entry rates among Black, Mixed and White students were much closer 16 years ago, essentially overlapping, but White students have lagged behind these other groups in terms of improved progression.

The DfE also provides a more granular breakdown of HE entry by age 19 by ethnicity which shows important differences by ethnic group in the 2020-21 data. For example, Black African and Black Caribbean students have very different rates of HE entry – 69.8% and 45.8%, respectively. Students from different Asian backgrounds also have different HE entry rates – 81.0% among Chinese students, 72.6% among Indian students and 58.4% among Pakistani students. White British students still have among the lowest outcomes in this ranking (39.1%), with White and Black Caribbean students having slightly lower HE entry rates (35.3% – although, as noted by Mirza & Warwick (2022), the performance of this group has been improving over time).

The lowest HE entry is among Gypsy/Roma students (6.8%) and Travellers of Irish Heritage (9.3%). Brassington (2022) provides a detailed overview of the data on education outcomes for Gypsy, Roma and Traveller students and highlights that between 2009-10 and 2017-18, HE participation for all other White groups improved but it stayed static for the Gypsy/Roma group and declined for Travellers of Irish Heritage.

Farquharson et al. (2022) look further into adulthood and find differences in HE entry reflected in differences in education levels at age 26 for the 2006 GCSE cohort by ethnicity. They find that Indian and Chinese students are the most successful groups on this measure, with 62% and 67% respectively gaining degrees or equivalent qualifications. The next most successful group is Black African students, among whom 49% meet this threshold. Other groups have a qualification profile which is similar to white British students, although White British students have the lowest qualifications overall, with just 29% holding a degree or equivalent by age 26.

Crawford and Greaves (2015) conduct an analysis of students sitting their GCSEs in 2003 and 2008. They find that controlling for background characteristics and prior attainment at Key Stage 2 does not account for the gap, and actually increases the performance of some ethnic minority groups relative to white British students – namely Black, Pakistani and Bangladeshi students. This reflects lower levels of SES among these students and poorer Key Stage 2 attainment, which mean we would expect them to be *less likely* to go to HE, not more likely than the white British group.

Controlling for attainment at the end of secondary school helps explain the higher rates of entry, particularly for Chinese students, but Key Stage 5 attainment does not add much to the picture. Overall, the remaining gaps in HE entry for BAME groups compared to white British students remain large and cannot be accounted for by the data available. Black African students stand out in particular – amongst the cohort who sat their GCSEs in 2008, Black African pupils from similar backgrounds, attending similar schools and with similar attainment trajectories as White British pupils are almost 35pp more likely to enter HE. Most other ethnic minority groups are 15-25pp more likely to participate in HE.

Gender

Historically men have been much more likely to attend HE than women, but women overtook men in terms of degree completion in the 1990s (Farquharson et al., 2022). The most recently available DfE Widening Participation data shows that more than half (50.6%) of female pupils entered HE by age 19 by 2020-21 compared to 38.4% of males. The gap in progression rates between males and females appears to be increasing over time, and rose from 7.8pp in 2019-10 to 12.2pp 2020-21.

Using slightly older data, Crawford & Greaves (2015) explore these gender differences in HE participation in more detail. They find that controlling for Key Stage 4 attainment substantially reduces the gender difference in participation, which suggests that poorer GCSE attainment among boys is a key reason for lower HE entry. The addition of Key Stage 5 attainment makes little additional difference, suggesting GCSEs are a much more important determinant of HE entry. When also controlling for a set of background and school characteristics, plus Key Stage 2 results, the remaining gap is less than 1pp.

Place

Place has a significant effect on HE participation (All Party Parliamentary Group on Social Mobility – Sutton Trust, 2019). The DfE Widening Participation statistics provide a regional breakdown and show that London is a particularly strong performer at a regional level, with

57.8% of students progressing to HE by age 19 in 2020-21 compared to the lower rates of 39.1% in the South West, 40.6% in the East Midlands, 40.4% in North East and 41.5% in Yorkshire and the Humber.

Looking at a more granular level, coastal and rural areas have the lowest levels of HE access. In their State of the Nation report 2017, the Social Mobility Commission find that 14% of disadvantaged young people in rural coldspots progress to university in comparison to 27% in hotspots (which they defined in the report as places that offered poor or good opportunities for social progress, respectively). The report also shines a light on several local authorities with very low participation where there is limited access to HE locally, restricting choice for learners. The report found that in most of the ten lowest-performing local authority areas, many parts of the area are about an hour each way from the nearest university by public transport. The authors draw a direct link between lack of HE provision and low HE participation, particularly in the South West, Yorkshire and The Humber, and coastal areas of the South East and East of England.

The issue of geography and access was highlighted by Go Higher West Yorkshire (GHWY) in their submission to this review (GWHY, 2022). They state that West Yorkshire neighbourhoods are significantly over-represented in the 10% most deprived nationally and are characterised by a fairly low skills base, with a deficit of people qualified to Level 4 and above (i.e. higher-level skills) and an over-representation of people with no or low-level qualifications. The skills deficit means that the higher skilled roles do not always go to local residents. According to GHWY, HESA data for 2021-22 shows that in three medium to large HE providers in West Yorkshire, around half their UK students are from what they define as 'local areas'. Of these local students, around half are from 'minoritised ethnicities' (compared to around a third in the rest of the UK). These local students are much more likely to be from deprived IMD quintiles and low-participation neighbourhoods than the national average. GHWY therefore highlight how local HE provision helps provide opportunities to those from local communities, those in communities characterised by education, skills and training deprivation, and to groups under-represented in HE who may need to stay local during their studies.

White & Lee (2020) investigate the relationship of distance and university enrollment in England using national administrative data on 18 and 19 year olds, who entered HE between 2009 and 2014. They find a negative relationship between mean distance to an HE provider and participation, after controlling for deprivation and population density. The authors state that this finding reflects a similar pattern demonstrated in a number of international studies; however, it should be noted that this result differs from earlier analysis on HE participation in England by Gibbons and Vignoles (2012) which found that distance had little effect on whether or not students participated in HE but did have a large effect on institution choice. It should be noted that White & Lee use publicly available data on HE entry which is aggregated at the geographical level of 'Middle Layer Super Output Area' which means their analysis is not very granular. By contrast, Gibbons & Vignoles use individual-level data accessed via the government's National Pupil Database, so is likely to provide more granular and robust analysis. The latter analysis is not formally within the inclusion criteria for this review, but is mentioned due to its robust nature and high relevance.

Aside from the availability of HE provision, there is some evidence on how geographical differences in attainment may partly explain differences in participation. Farquharson et al., (2022) use administrative data on the cohort who took their GCSEs in 2005-06 and plot the relationship between GCSE attainment and degree completion by age 26 at local authority level. They find a strong relationship between GCSE attainment and degree completion: a 10pp increase in the share of a cohort earning five good GCSEs is associated with a 7.5pp increase in the share of young adults who go on to earn a degree. However, for London boroughs, the share of young people who go on to earn a degree is about 9pp higher than would be predicted by GCSE results.

Crawford & Greaves (2015) provide some discussion of the 'London effect' in their analysis of HE entry rates. After accounting for background characteristics and a rich set of measures of prior attainment, there remain very large and significant differences in participation between minority ethnic groups and White British pupils and this is true inside and outside London. However, the remaining differences are bigger inside London, suggesting there are some characteristics of the pupils, their families or their schools which are correlated both with the likelihood of living in London and the likelihood of entering HE. Moreover, the analysis suggests that the role played by these factors has been increasing over time. The analysis cannot tell us definitively what these factors are, but they could include parents' aspirations and expectations, perceived returns from HE or the opportunity cost of attending university.

Intersection of characteristics

In the preceding sections we outline how HE entry varies by individual demographic characteristics. We have isolated SES, ethnicity, gender and place to identify the gaps in outcomes. However, there are important interactions between these characteristics which we must take into consideration. For example, as noted by Farquharson et al. (2022), FSM-eligible students are more likely to be concentrated in certain parts of England, so when we look at the gap by SES we may be picking up some of the place-based disadvantages too. FSM-eligibility also varies by ethnicity, with some ethnic groups having far higher proportions of students who would qualify as 'low SES' in some of the analyses presented above. We must also consider the cumulative ways in which being disadvantaged on multiple metrics might impact outcomes.

The DfE Widening Participation statistics provide a helpful breakdown of progression to HE by FSM status, gender and ethnic group in 2020-21. This shows that progression was highest for Chinese students, regardless of gender or FSM-eligibility, reaching a high of 85% among non-FSM Chinese girls. At the other end of the spectrum, HE entry is very low for FSM-eligible male Travellers of Irish Heritage, presenting as 0% (although caution is needed due to small numbers of students in the data) and 10% for their female counterparts. Overall, these data show some substantial differences in HE entry between genders within ethnic groups, demonstrating the importance of considering the intersection of demographic characteristics.

Crawford & Greaves (2015) provide more thorough analysis of the intersection of ethnicity and SES. Using their local measure of SES which splits students into quintiles, they look at outcomes for pupils who sat GCSEs in 2003 and 2008. The authors note that, when splitting

the sample in this way, some groupings become too small to compare with others in a meaningful way, and this particularly applies to splitting SES/ethnic groups by gender. Notwithstanding this caveat, the data shows sharp gradients in HE participation within ethnic groups by SES. Most strikingly, White British students in the two lowest quintiles have very low participation compared to other groups. By contrast, Chinese students have very high participation across the board. They also find the socio-economic gradient in HE entry is steepest for White British pupils. These findings are consistent with the more recent DfE data provided above which uses FSM-eligibility as a binary measure of SES. There is not a consistent pattern in terms of how the gender gap differs by SES for different ethnic groups.

To explore the data in more detail, the authors present the difference in HE entry between White British and other ethnic groups for both the top and bottom quintiles separately. They find that among the lowest SES quintile group, HE entry rates of all ethnic minority groups are substantially higher than those of their White British counterparts, and the gaps for most groups have also increased over time. However, looking at the low SES quintile only, not all minority ethnic groups outperform White British students – for example, those from Black Caribbean and Other Black backgrounds in the highest SES group are less likely to enter HE than White British pupils from similar backgrounds.

Controlling for background characteristics and Key Stage 2 scores reduces the apparent ethnic advantage among the lowest SES quintile, suggesting the White British students have characteristics which are generally associated with lower HE entry, such as special educational needs, and lower attainment. The authors can account for 20-30% of the raw differences using background characteristics and Key Stage 2 test scores.

Among the highest SES quintile, accounting for background characteristics and Key Stage 2 scores increases the difference in participation relative to White British pupils for most ethnic minority groups suggesting that, among the highest SES quintile, White British students have characteristics which are more typically associated with HE entry.

Controlling for GCSE attainment has a similar effect to controlling for Key Stage 2 attainment: it reduces the difference between White British and other students in the lowest SES quintile, but not in the highest SES group. This is because the higher SES White British pupils perform better on average than other pupils from similar backgrounds. Controlling for Key Stage 5 attainment makes little difference.

After including all available controls, the remaining gaps are larger for ethnic minorities from higher SES backgrounds than for those from lower SES backgrounds. The authors conclude that ‘other factors that matter for HE participation which we are not able to account for in our modelling – be they aspirations and expectations, higher perceived returns from education or something else – must differ to a larger extent between ethnic minorities and White British pupils from higher socio-economic backgrounds, or matter more for ethnic minorities than White British pupils from these families and neighbourhoods’. Moreover, these unexplained differences have generally been increasing over time which means that they cannot be entirely accounted for by patterns of attainment changing over time, and that the importance of other factors such as aspirations may be increasing.

Montecute and Cullinane (2018) highlight that place has a significant effect on HE participation, particularly when viewed in combination with SES; the proportion of FSM-eligible students who enter HE varies widely by region and even by borough. The most recent Widening Participation data provided by the DfE shows that half of FSM-eligible students in London progressed to HE by age 19 in 2020-21, compared to less than 20% in the South East and South West. Based on the same year's data, London far outperforms other areas when it comes to HE access, with progression rates by age 19 at above 50% for FSM-pupils in the highest performing 12 Local Authorities in London but below 20% in the lowest quarter of Local Authorities (all outside London).

Specific groups

Care experience and estrangement

The DfE Widening Participation data provides two sets of statistics which relate to learners with experience of children's social care. The first is HE entry for Children in Need and shows 13% of Children in Need at age 15 progressed to HE by age 19 by 2020-21 compared to 45% of all other pupils (a gap of 32pp). The second set of statistics relates to Looked After Children¹⁴ and shows 13% of pupils who were looked after continuously for 12 months or more at 31st March 2017 progressed to HE by age 19 by 2020-21 compared to 45% of all other pupils (also a gap of 32pp). These gaps have remained large over time and, in the latter case, show some signs of widening.

Harrison (2020) aims to provide a mapping of HE entry for care leavers.¹⁵ The paper uses annual reports on care leavers developed by the DfE and finds that, compared to a steady rise in participation among young people from among areas with historically low participation rates (i.e. POLAR4 quintile 1 areas) the HE entry rates for care leavers sat at around 6% between 2006 to 2017, somewhat declining over this period. Using data from the National Pupil Database on young people who were aged 16 at the end of 2007-08, Harrison then links these records to HESA data for those who had entered HE at any point up to 2014-15. Based on this mapping, they conclude that 11.8% of the care leavers participated in HE (higher than estimates based on DfE reports mentioned above), compared to 43.1% for the whole cohort and 26.1% for those previously FSM-eligible students. The analysis found that care leavers tended to enter HE later than other young people; for example, only 33.3% of care leavers were aged 19 at the end of their first year, compared to 57.6% for the cohort as a whole. Harrison highlights that these students have significantly lower attainment at school than other learners and were more likely to have special educational needs at age 16 (62.7% compared to 19.8% for the wider cohort). However, when controlling for special education needs, prior attainment and other demographic characteristics, care learners were still less around 11% less likely to go to HE than other learners.

UCAS provides an overview of the HE experience for students from a care background in their insight report on this topic (UCAS, 2022c). In 2008, UCAS introduced a new question

¹⁴ This publication presents figures for children looked after continuously for 12 months or more at 31st March for state-funded and special school pupils who were 15 at the start of the academic year.

¹⁵ Those young people still in care at their 16th birthday are officially defined by the DfE as 'care leavers' (provided they have spent at least three months in care since the age of 14).

into the HE application process enabling people with care experience to share their circumstances. Since its introduction the proportion of people sharing this information has risen from 0.8% of all UK applicants in 2009 to 1.6% in 2022. The UCAS data provides important insight into the characteristics of those applicants from a care background; for example, compared to the non-care-experienced applicants they are more likely to share a mental health condition (13% compared to 5%), more likely to share a disability (31% compared to 16%), more likely to be of mixed ethnicity (11% compared to 5.4%), more likely to be black (17% compared to 9.3%), less likely to be from an advantaged area (i.e. POLAR4 quintile 5; 22% compared to 29%), and more likely to share an LGBTQ+ identity (22% compared to 12%). The overall gender gap is even more pronounced for care-experienced applicants, with 66% of applicants being female compared to 58% of other applicants.

As per Harrison (2020), UCAS also find that care-experienced applicants are also more likely to be mature, with 35% applying aged 21 or over, compared to 21% of non-care-experienced students. It is important to note that, while 82% apply before their statutory support from the local authority ends when they turn 26, nearly a fifth apply after this point, meaning they are ineligible for local authority support or the care leaver bursary.

While national statistics are not available on the HE entry patterns for estranged students, an ad-hoc publication by the Student Loans Company (SLC) does provide some insights into the number of individuals applying for student finance, who have indicated on their applications that they are estranged from their parents in 2017-18 to 2021-22 (Gov.uk, 2022). Looking at all providers the number of estranged applicants has increased from 8,393 in 2017/18 to 8,435 in 2021-22.

Bland & Shaw (2015) brings together research from the Unite Foundation and Stand Alone Charity to build a picture of the profile of care leavers and estranged students in HE. The report highlights how the estranged student population contains a larger percentage of Black and minority ethnic students than the average student population; specifically, there are substantially larger Black African (16.5%) and Black Caribbean (5.1%) populations in the estranged student group in comparison to the average student population (5.4% and 1.9%, respectively). However, this data is only based on a subset of students who declare ethnicity to the SLC and so may not be truly representative of the national picture. Further SLC data acquired by Stand Alone shows that 52% of estranged students were between the ages of 21-24 in the 2014-15 data, compared to an average of 33% being in this age bracket in the general student population, so estranged students are older than their peers, on average.

Carers

There is limited quantitative evidence on the progression of young carers to HE. This review found one study which aimed to explore the impact of informal care in early adulthood on education outcomes (Xue et al., 2022). Data was drawn from the UK Household Longitudinal Study, including young adults who were age 16-19 in 2009-11, and the sample contained almost 5,000 carers. The study estimates that, among the adults surveyed, 19.7% were carers. Compared to other adults, carers are more likely to reside in a lower SES household, including lower household income and lower parental educational qualification and

occupational class. The authors find that carers are 36% less likely to have a degree qualification than non-carers.

Refugees

There is limited quantitative evidence on the progression of refugees into HE, so we include some global estimates here in lieu of more local statistics which would strictly meet our inclusion criteria. The Association of Commonwealth Universities (2019) states that only 1% of refugees participate in tertiary education compared to 37% of people globally while Lambrechts (2020) provides slightly more recent commentary and estimates that 3% of refugees have access to HE across the world. The paper notes that there are difficulties in accurately estimating the number of those students with refugee backgrounds in universities. Stevenson & Baker (2018) note that exact data on the number of refugees in UK HE is largely unknown, because they are categorised as being 'home' students for fee status purposes. This also means they are rarely offered focused social or academic support. Stevenson & Baker do note that information from the SLC shows that in the academic year 2008-09, 2,200 applicants with refugee status were awarded a student loan, increasing to 3,700 in 2016-17, however, this only covers those with indefinite leave to remain who would be eligible to apply, so data limitations mean we cannot accurately estimate the equality gap in entry for these students.

Learners with criminal records

There is limited quantitative evidence on the progression of people with criminal records into HE. One exception is Custer (2018) which provides an overview of how most HE providers in England now require applicants to disclose prior criminal history on undergraduate admissions applications. The paper uses 2014-15 and 2015-16 admissions data from a small sample of universities to understand the prevalence of applicants with criminal records. A total of 30 universities were surveyed on this issue, of which 21 provided usable data. Across these universities, 4,585 students in 2014–15 and 3,986 students in 2015–16 indicated having criminal history. The paper finds that the rate at which applicants are rejected solely based on the criminal record varies widely, but averages 1-2%. However, the authors do not provide the overall number of applicants, or the overall rejection rates for learners without a criminal record, so further analysis would be needed to properly benchmark this data or and quantify the equality gap for these learners when it comes to HE entry.

Learners from military families

According to UCAS, research indicates that learners from military families are less likely to go to HE than their peers. The participation rate is estimated to be 24% (compared to a national average of 43%) (UCAS, 2022a). Those with high-ranking parent(s) and carer(s) are more likely to aspire to HE than those with lower ranking parent(s) and carer(s), who tend to perform below the national average.

Disabled learners

Disabled students remain under-represented at point of entry to HE.¹⁶ The HESA Widening Participation summary tables show that, in England, the proportion of UK domiciled students in receipt of Disabled Student Allowance sits at around 7% of the student population, and this has not changed substantially since 2015-16 (HESA, 2022). The Office for National Statistics (2021) report that in a recent Annual Population Survey, a quarter (24.9%) of disabled people aged 21 to 64 years had a degree or equivalent as their highest qualification, compared with 42.7% of non-disabled people. The DfE Widening Participation statistics do not provide a breakdown for disabled compared to non-disabled students, but they do report differences in progression rates for pupils with Special Education Needs and show that they lag well behind those for other pupils. Just 8.7% of pupils with an Education, Health and Care Plan (EHCP) or Statement of SEN (special educational needs) progressed to HE by age 19 by 2020-21 compared to 22.5% of pupils on SEN Support and 48.6% for pupils with no SEN.

A broader picture of HE access for disabled students is given in UCAS's 'Next Steps' report (UCAS 2022b). The report uses admissions data to show that over the last 10 years there has been a 105% increase in applicants sharing disability information, but this has been driven largely by a steep increase in disclosure of mental health conditions (up 453%) and social, behavioural or communication impairments (up 249%). UCAS state that, compared to the wider population, there is an underrepresentation of physical impairments or challenges with mobility (9% of disabled applicants compared to 41% at a national level) and an over-representation of mental health conditions (56% of disabled applicants compared to 42% at a national level). In comparison to non-disabled applicants, disabled applicants are more likely to be men (43% compared to 41%), more likely to be from more advantaged areas (i.e. POLAR4 quintile 5; 39% compared to 32%), more likely to be White (80% compared to 67%), more likely to identify as LGBTQ+ (15% compared to 8%), and more likely to be care experienced (1.9% compared to 1.1%). They are also older, with 29% applying aged 21 or over, compared to 27% of non-disabled students. However, there are important differences between groups of learners with different disabilities. One crucial finding is that those with learning differences are more likely to come from more advantaged backgrounds, and nearly three times more likely to come from an independent school, than other disabled applicants. UCAS states that the over-representation of the most advantaged students in this category masks the challenges faced by those from low-income families. Overall, there are important differences in the profile and experiences of different groups which would bear fine grain analysis and response from the HE sector.

Vocational learners

The DfE Destinations data show the percentage of level 3 pupils (e.g. those that studied A-levels, tech levels and applied general qualifications) continuing to a sustained education or training destination at level 4 or higher (such as degrees, Higher Apprenticeships and higher national diplomas) in the year after completing 16 to 18 study. Progression varies widely by institution type, with 47% of further education (FE) college learners progressing to a level 4 or higher destination compared to 73.1% in sixth form colleges and 74.6% in mainstream

¹⁶ See the [TASO report 'What works to reduce equality gaps for disabled students'](#) for an overview of the challenges faced by disabled students in HE access and success.

schools. This may reflect the suitability of the different qualifications offered in these settings for HE progression, and the different attainment profile of the students who enter them. However, Lisauskaite et al. (2019) explore the role of the FE sector in supporting social mobility. Using official DfE statistics they find that young people who attend an FE college are less likely to proceed to HE than their counterparts in sixth forms (even with the same prior attainment).

Joslin & Smith (2014) provide an overview of the progression to HE of advanced level apprentices over a seven-year period. Although outside of the formal inclusion criteria for this review, this report is included based on its relevance and robustness. The report analyses the results of tracking five cohorts who progressed into HE between 2005-06 and 2011-12. The research findings are based on the matching of ILR (Individualised Learner Record) datasets with HESA datasets. The report finds that 18.8% of the 2005-06 tracked apprentice cohort progressed to HE when tracked for a total of seven years, while 11.7% progressed immediately in the three years following the start of their apprenticeship. These figures present an improvement on previous estimates. However the research also shows that the three-year progression rate dipped over the five cohort years from 11.7% in 2005-06 to 9.5% in 2009-10. However, due to time lags in reporting and a lack of more recent evidence found via this review, we note that these estimates do not relate to recent cohorts, and changes to the education landscape over the intervening period may have had an important impact on HE entry for this group.

Mature and part-time learners

There is no official definition of a 'mature student' – this term is usually used to refer to older students, particularly students over 21 at the start of an undergraduate degree course (Hubble & Bolton, 2021). In 2019-20 there were around 254,000 mature undergraduate entrants at UK universities: 39% of all undergraduate entrants. Analysis based on 20170-18 data suggests that HE entry falls rapidly after age 21 to below 1% (of the cohort) for those over 23 and to 0.1% or lower for those aged 45 and above. The combined mature participation rate was 11.3% compared to 43.6% among those aged 20 or younger. However, entry was higher among women at 16.6% in 2018-19 compared to 10.3% for men. The initial participation rate for mature full-time students fell in 2012-13 but has stabilised since then.

UCAS data suggests that, in 2020, 24% of home entrants were mature students (age 21 or older) (UCAS, 2022d). New female students were slightly more likely to be mature (25% versus 20% for males). The HE admissions data also shows that in 2020 there were relatively high proportions of mature entrants among Black students (38%), particularly Black women (41%), and relatively low proportions among Asian students (15%), White men and men from mixed backgrounds (12% and 13%, respectively). Application data for this admission cycle also showed 16% of mature full-time undergraduate entrants had a self-reported disability (higher than the 13% of young entrants). Gov.uk analysis finds that mature students are much more likely to study part time at all levels. In 2019-20 28% of undergraduate mature students studied part time compared to 3% of young undergraduates.

Looking at part-time learners specifically, the number of these students had been rising annually until 2006-07 but faltered and started a steep decline from 2008-09 (Hubble &

Bolton, 2021). The number of part-time students in the 2020-21 data is 43% below the peak of 590,000 in 2008-09. In 2020-21 7% of new part-time students were aged 20 or under compared to 46% of full-time students. Conversely, 58% of part-time students were aged 30 and over compared to 13% of full-timers. There was also a higher proportion of women among part-time students; 61% compared to 56% of the full-time population. Part-time students often have caring responsibilities and are often first time participants in HE. They are also often employed and tend to be less geographically mobile than full-time students due to their work and family commitments.

Callender & Thompson (2018) report that the decline in part-time numbers since 2012 has varied by group, with the sharpest drops among mature students over 35, those pursuing sub-degree qualifications, and those on low-intensity courses (lower than 25% full-time equivalent). There have also been significant declines in students from England not eligible for loans, particularly at the Open University, highlighting the impact of financial constraints on this group. They warn that the fall in part-time study has negative consequences for widening participation as young part-time students are more likely to be from lower participation areas. In 2015, there were almost 2.5 times more full-time students in the most advantaged group compared to the most disadvantaged but entry was almost equivalent from these groups among part-time students.

Discussion

In this section we have presented a summary of recent evidence on gaps in overall entry to HE. A summary of the gaps we have identified is given in Table 12.

Table 12: Summary of gaps identified relating to overall HE entry

Overall HE entry equality gap	Size of gap
SES	<p>The SES gap can be measured in multiple different ways.</p> <p>FSM gap in 2020-21: 28.1% FSM compared to 46.8% non-FSM – non-FSM 1.6 times more likely to enter</p> <p>POLAR gap in 2020-21: 18% quintile 1 compared to 51.3% quintile 5 – highest quintile 2.9 times more likely to enter</p> <p>IMD quintile in 2021-22: 28.7% quintile 1 compared to 48.5% quintile 5 – highest quintile 1.7 times more likely to enter</p> <p>UCAS MEM quintile in 2021-22: 14.6% quintile 1 compared to 59.6% quintile 5 – highest quintile 4.1 times more likely to enter</p> <p>First in family: 22% first in family compared to 52% other – non first-in-family 2.5 times more likely to enter</p> <p>Type of school: 79.7% state school compared to 87.3% independent school – independent school 1.1 times more likely to enter</p>

Overall HE entry equality gap	Size of gap
Ethnicity	<p>In 2020-21, HE entry rates varied significantly by ethnicity. Black African entry rates were 69.8% while Black Caribbean students' entry rates were 45.8%. Students from different Asian backgrounds also have different HE entry rates – 81.0% for Chinese students, 72.6% among Indian students and 58.4% among Pakistani students. White British students have among the lowest entry rates (39.1%), with White and Black Caribbean students having slightly lower rates (35.3%). The lowest HE entry rate is among Gypsy/Roma students (6.8%) and Travellers of Irish Heritage (9.3%).</p> <p>GAPS BETWEEN ETHNIC GROUPS:</p> <p>Chinese students 2.1 times more likely to enter than White British students</p> <p>Chinese students 11.9 times more likely enter than Gypsy/Roma students</p> <p>White British students 5.8 times more likely enter than Gypsy/Roma students</p>
Gender	<p>In 2020-21, 50.6% of female students entered compared to 38.4% of male students</p> <p>GAP: 12.2pp – Female pupils 1.3 times more likely to enter</p>
Place	<p>Large regional differences e.g. 57.8% of students in London progressing to HE by age 19 in 2020-21 compared to 39.1% in the South West, 40.6% in the East Midlands, 40.4% in North East and 41.5% in Yorkshire and the Humber.</p> <p>GAP: 18.7pp – students in highest performing region 1.5 times more likely to enter than those in lowest performing region</p>
Intersection of characteristics	<p><u>SES-ethnicity-gender</u></p> <p>Looking at the intersection of ethnicity, gender and FSM-eligibility, in 2020-21, 85% of Chinese non-FSM females entered (highest performing group) compared to 0% of FSM male Traveller of Irish Heritage (the lowest performing group).</p> <p>GAP: 85pp – 0% entering among the lowest performing group</p> <p><u>SES-place</u></p> <p>Looking at the intersection of region and FSM-eligibility, in 2020-21 half of FSM-eligible students in London progressed to HE by age 19 in 2020-21, compared to less than 20% in the South East and South West.</p> <p>GAP: non-FSM eligible pupils between 1.2-2.4 times more likely to enter depending on region</p>
Care-experience	<p>In 2020-21 13% of Children in Need entered HE compared to 45% of all other pupils.</p>

Overall HE entry equality gap	Size of gap
	<p>Research estimates 11.8% of care leavers entered HE compared to 43.1% of other students.</p> <p>GAP: approximately 32pp – students who were not care-experienced 3.5-3.6 times more likely to enter</p>
<p>Other groups</p>	<p><u>Learners from military families</u> Research suggests learners from military families are less likely to go to HE than their peers: 24% compared to 43%. GAP: 19pp – learners not from military families 1.8 times more likely to enter</p> <p><u>Disabled learners</u> ONS report 24.9% of disabled people aged 21 to 64 years had a degree or equivalent as their highest qualification, compared with 42.7% of non-disabled people. GAP: 17.8pp – non-disabled people 1.7 times more likely to hold degree</p> <p><u>Vocational learners</u> In 2020-21 47% of FE college learners progressed to a level 4 or higher destination compared to 73.1% in sixth form colleges and 74.6% in mainstream schools. GAP: 26pp between FE colleges and sixth form colleges – sixth form college students 1.6 times more likely to enter HE</p> <p><u>Mature</u> In 2017-18, the mature participation rate was 11.3% compared to 43.6% among those aged 20 or younger. GAP: 32.2pp – young students 3.9 times more likely to enter than mature students</p> <p><i>There is insufficient data to benchmark other groups</i></p>

The estimates of the SES gap in entry in this table are sensitive to decisions made about how to identify ‘disadvantaged’ students. Entry rates among the more advantaged groups range from 1.6 to 4.1 times higher than for their less advantaged peers. Gaps by ethnicity are of a similar magnitude when we look at the broadest ethnicity categories, but considerably larger when we look at the nineteen individual ethnicity groupings collected by the Office for National Statistics (ONS). Differences by gender are sizable in absolute terms but not so large in relative terms or in comparison to some of the other gaps. As for attainment, HE entry differs substantially by region, and there are important interactions between SES, ethnicity and gender, as well as geography. For example, White British students from low SES backgrounds have strikingly low entry to HE. We have also identified evidence on several specific groups who face particular disadvantages in accessing HE, including care-experienced students, learners from military families, disabled learners, vocational learners and mature students.

The substance of this section serves to contextualise our findings on these raw gaps. Specifically, there is evidence that gaps by SES can be partly accounted for by other student

characteristics and prior attainment, with Key Stage 4 attainment being the dominant factor. However, there remains a sizable gap by SES which cannot be accounted for by the other data available. The gap by gender can be almost entirely accounted for by background characteristics and attainment. By contrast, controlling for background characteristics and attainment does not account for the gaps by ethnicity, and gaps remain large, with some ethnic groups performing much more strongly than would be predicted. White British students are among the least likely to attend HE. The over-representation of London in entry to HE is also a clear theme from this section, and existing evidence suggests that the 'London effect' cannot be accounted for purely by demographic factors.

9. Entry to selective HEPs

In the following section we present a summary of the equality gaps at the point of entry to HE, focusing on overall entry to selective HE providers. There is no universal definition of a 'selective' HE provider; some sources focus on 'top third' universities (i.e. the top third of HEPs when ranked by average entry requirements) while others use proxies for a higher entry tariff, such as mission group membership, most commonly membership of the 'Russell Group'. We indicate where different approaches are used, but provide a combined discussion of the sources to provide a high-level overview of access to selective HE providers.

Before providing evidence on specific target groups, we provide a brief overview of the role of A-levels in mediating access to selective HEPs. We also provide an overview of a small body of literature uncovered via our review which speaks to issues around HEP choice more broadly. We then move onto reviewing 20 sources which provide evidence on equality gaps on entry to selective HEPs. These sources focus on SES (12), ethnicity (5), gender (3), place (5) or the intersection of characteristics such as SES, ethnicity and gender. We also found three sources relating to specific target groups. As per overall HE entry, we supplement the literature which we uncovered via our review with national statistics published by the DfE on Widening Participation (Department for Education, 2022c). We use the Widening Participation statistics to help scaffold this section; note however that the OfS will be undertaking more detailed analysis of this data.

The role of A-levels

When considering rates of entry to selective HE, A-level attainment and subject choice is an important factor. Vidal Rodeiro (2019) uses national administrative data which followed a full cohort of Year 13 students in schools/colleges in England through the first year of their HE studies in 2016-17. Their analysis reveals that the probability of attending any HE institution, and in selective HEPs specifically, increased significantly with the number of A-levels achieved and with the number of A-levels in facilitating subjects. However, Key Stage 4 performance was still an important predictor of HE entry and entry to selective HEPs after taking into account Key Stage 5 grades.

Dilnot (2018) explores national administrative data on three cohorts of English pupils taking GCSEs in 2008-10. They look at the subjects of A-levels taken by each pupil and found that each additional facilitating subject is associated with entering a university with a Times Good

University Guide score 14 points higher, even when degree course group, A-level grades, other prior attainment and school type are controlled for. Holding a Maths A-level appears to be particularly important: on average, having maths rather than any other facilitating subject is associated with attending a university ranked seven points higher, even after attainment and degree course are controlled for.

As discussed earlier in this report, A-level attainment and the uptake of facilitating subjects varies by group, so it is perhaps not surprising that we see entry rates to selective HEPs also differ by group. When we look at raw gaps in entry to selective HEPs, some of what we observe is simply reflecting prior attainment, but analysis which controls for attainment at Key Stage 5 (or earlier) attempts to understand where gaps exist which cannot be accounted for by these factors.

Specific HEP choices

Although this section focuses on entry to selective HE, it is pertinent to also touch on a small number of sources found via this review which explore HEP choices more broadly, particularly the role of distance. This literature does explore selectivity of courses as one factor which affects student decision-making but places it in the context of other issues, particularly financial and geographical considerations which influence choice across the whole student population but may disproportionately affect some groups.

Calendar & Melis (2022) analyse results from a bespoke one-off survey administered in 2015 to a nationally representative sample of around 1,300 17-21 year old students in England who had applied, or intended to apply, to study for an undergraduate degree at a HEP. Analysis of the data shows that the student's choices about where to study are linked to social class and the financial resources at their disposal. Students who indicate the greatest concern about minimising the cost of HE are more likely to anticipate working during holidays and term-time, and as a result plan to apply to HEPs in areas with better employment opportunities, where living costs are low and where bursaries are offered.

Donnelley & Gamsu (2019) analyse data on a sample of more than 400,000 full-time students on face-to-face courses who enrolled in HE in 2014. They explore geographic mobility among this sample and find that around half stayed in the same region for their studies, while the other half moved out of the region. They find differences by region, with North East and North West both having a higher proportion of immobile students. They suggest that part of this pattern may be due to the relative density of HEPs on offer in certain parts of the country, but note that, even in some areas with a high number of HEPs, mobility can be high (for example, the South East). There are clear patterns in mobility by SES, with higher SES students more likely to move out of their home region. The rates of mobility among private school students are much higher than the state-school average. White, Black, Indian and Chinese ethnic groups are each equally as likely to be mobile or immobile from their home region, whilst Bangladeshi and Pakistani students are much more likely to be immobile. The extent to which students travel out of region for HE also differs by subject of study, with Medicine and Veterinary Sciences having the most mobile students, reflecting the uneven spread of degree courses across the country. The authors go on to explore to what extent these gaps can be accounted for by social background, educational choices and geography. Looking across the piece, they conclude that geographic location and the

selectivity of the HEP attended are the strongest predictors of the propensity to move out of home region for HE, controlling for other variables.

Gill, Vidal Rodeiro & Zanini (2018) focus on national administrative data on cohorts of university students who had specialised in Science, Technology, Engineering and Mathematics (STEM) subjects at school and started an undergraduate degree course in 2010-11 in an English HEP. They found that mission group was a significant predictor of course choice, with more selective HEPs more likely to be chosen. They also found a significant negative relationship between distance to an institution and a student's likelihood of studying there, but the effect of the distance from home was different for different groups of students, being smaller for private school students.

In sum, although selectivity of HEP is one factor which affects decision making, the topic of HEP choice is broader, and there are a number of other factors which affect where a student applies. In the remainder of this section we discuss patterns of selective HE entry for specific groups, but it must be borne in mind that within this is nested a lower-order pattern of entry to specific providers. There is not space in this review to explore the more granular HEP choices of students and how these might differ by specific region or subject, but it should be something which individual HEPs bear in mind as they assess participation in their local context.

SES

Individual/area-level SES

To start with raw gaps in entry to selective HEPs, the DfE Widening Participation data provides a breakdown by FSM-eligibility and POLAR4, focusing on progression to 'high tariff' HE by age 19 for state-funded pupils.¹⁷ These data do not account for variations in prior attainment.

The data show that entry rates for FSM-eligible pupils have increased slightly over time, from 2.0% in 2009-10 to 4.5% in 2020-21. However, progression among other pupils has also risen over this period, so the gap in entry has actually widened slightly, from 7.4pp in 2009-10 to 8.0pp in 2020-21 (4.5% compared to 12.4%).

Using POLAR4 as a measure of SES, we see a similar trend of entry to selective HEPs rising over time, from 2.7% in the most disadvantaged quintile in 2009-10 to 4.8% in 2020-21. But again, the entry to selective HEPs has also risen among those from the most advantaged quintile, so the gap between top and bottom quintiles in 2020-21 (4.8% compared to 21.5% – 16.7pp) is larger than it was in 2009-10 (2.7% compared to 17.6% – 14.9pp).

Using the most recently available UCAS data for 18 year old students from England, analysis using MEM quintile shows that the absolute gap in 2022 entry to higher tariff providers between those from the least and most deprived quintiles was 32.7pp (57.0%

¹⁷ The DfE group HEPs into low, medium and high tariff providers based on the normalised mean tariff score of their intake. The top third of providers are categorised as 'high tariff'.

compared to 24.3%) (UCAS, 2022d). Using this measure of SES, the absolute gap in entry has grown since 2006, when it was 41.3% compared to 13.6% (27.7pp).

Blanden, Doepke & Stuhler (2022) also explore the link between family background and attainment by conducting analysis of the Next Steps longitudinal study. Using a sample of almost 8,000 pupils in England, they use parental education as a simple proxy for SES. They find that the probability of attending a Russell Group university for children who had at least one parent who had obtained a level of education beyond high school is 9pp higher, however this gap reduces to 4pp higher when controlling for maths and reading scores.

Using 'First in family' as a measure of SES, Henderson, Shure & Adamecz-Völgyi, (2020) conduct analysis using the Next Steps longitudinal survey, taking a sample of approximately 7,700 individuals. They estimate that only 50% of students in Russell Group universities are 'First in family' compared to 76% in other HE settings (a gap of 26pp). After controlling for prior attainment, individual characteristics and socioeconomic status, these students are 3pp less likely to attend the Russell Group universities and 6pp more likely to attend other universities compared to other students.

Ro, Fernandez & Alcott (2021) also use data from the Next Steps longitudinal survey. The analysis focuses on approximately 1,000 students studying STEM subjects and whether they were situated in Russell Group or other universities. They find that, when controlling for attainment and other background characteristics, parental occupation is not a significant predictor of whether students enter Russell Group universities among those studying STEM subjects. However, among students who study STEM, those who live in poorer neighbourhoods were 6pp less likely to attend Russell Group universities than those who live in richer areas, even after controlling for background characteristics and attainment. STEM students whose parents do not have a tertiary degree are 12pp less likely to enrol at Russell Group universities after controlling for these factors.

Campbell et al. (2021) use national administrative data to complete an extensive analysis of a cohort of 140,000 students moving from school to HE. They construct measures of student to university/subject match (which they call 'degree match'). They rank students nationally based on their end of secondary school qualifications and also rank degrees, by the qualifications of median students on each course and median earnings of previous graduates from that degree. The authors then look for a 'match' by taking the difference of the percentile ranking of students and degrees to understand whether different types of students are systematically entering degrees which are higher or lower ranked than expected based on their entry qualifications. FSM-eligibility was combined with neighbourhood-based variables to come up with a local measure of SES, from which the lowest quintile was defined as 'disadvantaged'. The analysis finds that in the top quintile of the achievement distribution, disadvantaged students are 8 percentiles lower matched than their more advantaged counterparts. However, the largest inequalities are actually found around the 90th percentile of the achievement distribution, where disadvantaged students are 9-11 percentiles lower matched than their more advantaged counterparts. These gaps do not appear to be driven by subject chosen at university. In sum, even for students with similar prior attainment and studying a similar degree subject, low SES individuals tend to enter lower-ranked institutions (on both achievement and earning rankings).

Britton, Drayton & Van der Erve (2021) use national administrative data and a sample of almost one million individuals who took their GCSEs between 2002 and 2006 to explore the extent to which individual universities, subjects and courses promote intergenerational mobility. They use FSM-eligibility as a measure of SES. They present the proportion of FSM-eligible students entering individual universities, sorted by their 'selectivity'. They find that at the lower end of this ranking, 20-30% of students are FSM-eligible, but at the ten most selective universities, this drops to below 2%, and all Russell Group universities, except Queen Mary University London, have below the national average. Looking at the type of school attended, at the most selective Russell Group universities (the Universities of Oxford and Cambridge, LSE and Imperial College London), private school students make up more than 44% of the student body, despite representing only 7% of the overall population. The authors calculate that privately educated students are around 50 times more likely than the poorest students to attend one of these universities, and nearly 100 times more likely to go to the Universities of Oxford or Cambridge, than FSM-eligible pupils.

Crawford, Macmillan & Vignoles (2014) use national administrative data on a cohort of over 500,000 children born in 1991–92 and adopt three measures of SES: school-type, FSM-eligibility and a measure which combines FSM with neighbourhood measures of deprivation. They also define high-status HE providers as Russell Group institutions or institutions with an average score from the 2001 Research Assessment Exercise (RAE) that is higher than the lowest-ranked Russell Group institution. The authors find that young people from the least deprived backgrounds are 5.9pp more likely to attend a high-status university than those from the most deprived backgrounds, even after accounting for a rich set of controls. They note that the lower SES learners who enter high-status universities have lower academic achievement than their more advantaged peers who also enter these institutions.

SES – school

The DfE Widening Participation statistics shows that the rate of entry to high tariff HEPs by age 19 for state school A-level students was 26.0% in 2020-21 compared to 57.3% for independent school students, a gap of 31.2pp. This large gap has persisted over time, although a change in the cohort criteria means data is not comparable before 2017-18.

Montacute & Cullinane (2018) explore the influence of school type on access to more selective universities and use data for the UCAS application cycles 2014-15, 2015-16 and 2016-17. Overall, 23% of students applying to HE from comprehensive schools went on to gain a place at a Russell Group university, compared to 60% of students at independent schools, 51% of students from selective schools, 24% applying to HE from sixth form colleges, and just 11% of those applying from general FE colleges. While 7% of students applying to HE from independent schools gained a place at the Universities of Oxford or Cambridge, and 5% of students from grammar schools did so, just 1% of students going on to HE from comprehensive schools or sixth form colleges gained a place, and only 0.3% of the students applying to HE from general FE colleges. The analysis also found that this did not mirror patterns of attainment, because schools with similar exam results had very different rates of progression to selective universities, particularly to the Universities of Oxford and Cambridge.

Crawford, Macmillan & Vignoles (2014) also speak to the dominance of private education in

accessing selective universities. They find that those attending private secondary schools are 4.3pp more likely to attend a high-status institution than those who attend non-selective state secondary schools. However, their analysis suggest this difference can largely be accounted for by the inclusion of controls for individual measures of SES in addition to school type.

Campbell et al. (2021) find further support for the importance of school factors in their analysis. They suggest that the SES match gap for students from the same school is reduced by up to 79% (down to 2 percentiles) when school type is controlled for in their analysis.

Ethnicity

As in the case of overall HE entry, entry to higher tariff HEPs varies by ethnic group; in 2020-21 the entry rate was 15.6% for Asian students, 13.4% for those from a 'Mixed' ethnic background, 10.7% for Black students and 10.5% for White students.

The DfE provides a more granular breakdown of entry to high tariff HEPs by age 19 by ethnicity which shows how patterns vary within the largest ethnic categories. For example, in 2020-21, 40.7% of Chinese students progressed to a high tariff HEP. This compares to 13.2% of Black African students and 5.4% of Black Caribbean students. Indian students had higher progression rates (22.3%) than Bangladeshi (15.6%) or Pakistani (9.8%) students. White British students (10.3%) outperform a number of other ethnic groups on this measure, in contrast to HE participation overall. Consistent with the pattern of entry to HE overall, Travellers of Irish Heritage and Gypsy/Roma students have the lowest progression rates to high tariff HEPs (1.2% and 0%, respectively).

In their large-scale analysis of administrative data, Crawford and Greaves (2015) explore the extent to which these patterns in entry can be accounted for by demographic characteristics and attainment. They find that, for most ethnic groups, they are able to account for much of the difference in participation at the most selective institutions using prior attainment. This is in contrast to overall entry to HE, for which large differences remained even after taking into account attainment. The remaining gaps (compared to White British students) range up to a maximum of 4.1pp for Bangladeshi students.

Boliver (2013) analysed UCAS data for the period 1996 to 2006 to explore the patterns of offer making. The author finds that Black and Asian ethnic backgrounds remained much less likely to receive offers of admission from Russell Group universities in comparison with their equivalently qualified peers from private schools and the White ethnic group. Boliver 2016 builds on this evidence and uses UCAS data to explore course choice by ethnicity in more detail. The analysis finds that ethnic minority applications are more likely than white applicants to choose oversubscribed courses, but ethnic minority applicants remain less likely to receive offers from Russell Group universities than comparably qualified White applicants even after the numerical competitiveness of courses has been taken into account. It also finds that ethnic inequalities in admissions chances at Russell Group universities are greater for degree subject areas where the percentage of ethnic minority applicants is higher, which the author suggests may be due to admissions staff unfairly rejecting applicants to ensure an ethnic mix which is representative of the national population.

However, the author states that some limitations to available data limit the robustness of these findings, and so further analysis would be needed to confirm them.

Gender

The most recently available DfE Widening Participation data shows that 12.7% of female pupils were entering high tariff providers by age 19 by 2020-21 compared to 10.1% of males, and this difference has stayed reasonably stable over time.

In their analysis of 'matching' of students to courses, Campbell et al. (2021) find only modest differences in the academic match between males and females, meaning males and females with a given set of qualifications are enrolling in courses with similar entry standards.

Crawford and Greaves (2015) explore how the pattern of attendance at selective universities changes when taking into account the other ways male and female students differ. They find that the gap reduces when taking into account Key Stage 2 attainment. When Key Stage 4 and 5 attainment is taken into account they find that boys are actually slightly more likely to attend a selective university than girls given their prior attainment. A similar pattern is observed in Vidal Rodeiro (2019) which finds that, if they go to HE, boys are more likely to attend selective HEPs.

Place

The DfE Widening Participation statistics provide a regional breakdown and show that, as for overall HE entry, London is a particularly strong performer on entry to high tariff HEPs with 16.1% of students progressing to these destinations by age 19 in 2020-21 compared to rates of between 9% (West Midlands) and 12.1% (South East) in all other regions.

Montacute and Cullinane (2018) use UCAS admissions data to look at applications and acceptances to Russell Group universities by region. By comparing the proportion of applications to the Russell Group and the Universities of Oxford and Cambridge from each region to the proportion of students applying to HE overall, they show that London and the North East are the most over-represented in applications to the Russell Group, with 7% more applications to these institutions than would be expected. Looking at applications to Oxford and Cambridge, students applying from the South East, South West, London and the East of England are all over-represented by more than 20%. By contrast, the North West, West Midlands, Yorkshire and the Humber, East Midlands and the North East are all under-represented in applications to Oxford and Cambridge by over 20%, with students from the North East under-represented by a third compared to their applications to HE overall.

The proportion of HE applicants accepted to the Russell Group differs across regions, with a gap of 5pp between the regions with highest and lowest performance; the acceptance rate ranges from 24% in the South West down to 19% in the West Midlands. Acceptances to Oxford and Cambridge vary even more by region. The authors find that some local authorities have had very few or no applications to these institutions over a number of years and identified a stark North/South divide, with regions in the South and East of England having a much higher acceptance rate than elsewhere. More granular analysis identifies significant patterning of acceptances at local authority level, and the authors particularly note

a band of low Russell Group attendance across the north of England despite a high density of these types of institutions in the areas in question.¹⁸

Davies, Donnelly & Sandoval Hernandez (2021) specifically examine the role of geography in mediating progression to selective universities. The analysis uses HESA data on 800,000 students starting HE in 2008-09, 2010-11, 2012-13, 2014-15 and 2016-17 and the authors devise their own local measure of selective universities using Complete University Guide rankings based on entry standards and research scores. They then look at the physical proximity of each Middle Layer Super Output Area (MSOA) to these universities. They find that 17 of the top 20 MSOAs for selective university progression were in London, specifically, most were in affluent areas of South and South West London. When controlling for various factors, they find the biggest impact comes from education variables, which reduce the variance between MSOAs by half, suggesting much of the variation in progression to selective HE reflects attainment. The addition of SES also has a big impact, reducing between-MSOA variance by a third. The addition of distance travelled (to selective universities) reduces the between-MSOA variance by approximately 15%, whereas the addition of age, ethnicity and gender has a lesser impact – reducing the between-MSOA variance by just over 5%.

The authors find that rural areas tend to have higher proportions of their students progressing to selective universities than urban areas, which makes sense given the relative affluence of rural areas. However, when controlling for demographic characteristics, the picture changes so that some MSOAs in rural areas (especially in the North East and South West) have higher than expected participation rates, many rural areas have lower rates than expected based on the type of pupils they contain and the levels of attainment. The authors argue this represents an ‘urban escalator’ effect which means disadvantaged students situated in urban areas are advantaged over similarly disadvantaged students situated in rural areas. This is demonstrated by the stand-out case of London. Some parts of London appear to perform poorly looking at raw numbers, but when control variables are added, London MSOAs have almost universally higher than expected progression. Overall the authors argue that other factors such as SES are more important predictors of progression to selective universities, but that there are important differences by geography which should be borne in mind when targeting pupils for outreach.

As per their analysis of overall HE entry patterns, Crawford & Greaves (2015) explore the extent to which the over-performance of London in entry to selective HEPs can be accounted for by the characteristics and attainment of pupils. They find that the data is insufficient to explain the patterns we see, so again, there appear to be some unseen characteristics of the pupils, families or schools that we cannot observe but are correlated both with living in London and attending selective HEPs, and the influences of such factors appears to have grown over the period across which the data was analysed (2003-2008).

¹⁸ The band of low Russell Group acceptances starts in local authorities near Liverpool and runs through to those around Manchester, across the Pennines to the area above Sheffield, and further east over to the areas in and around Hull.

Intersection of characteristics

The DfE Widening Participation statistics provide a helpful breakdown of progression to high tariff HEPs by FSM status, gender and ethnic group in 2020-21. As in the case of overall HE entry, this shows the highest progression for Chinese pupils regardless of gender or FSM eligibility; if the focus is only on pupils who are eligible for free school meals, Chinese pupils are more than three times as likely as all other pupils to progress to high tariff HE. Mirroring overall HE entry, again, the very lowest progression is for Travellers of Irish Heritage and Gypsy/Roma students, but White Irish FSM-eligible boys also have among the lowest rates (0%). White British FSM-eligible students have low rates whether they are male or female, but for non-FSM pupils, Pakistani, White and Black Caribbean, and Black Caribbean students all have lower rates than White British students of the same gender.

Crawford and Greaves explore to what extent differences in participation at selective universities by ethnicity and SES can be accounted for by other characteristics and attainment. For low SES pupils, when they control for these factors, they find that the gaps can be reduced to effectively zero (noting that Key Stage 5 plays a very minor role compared to earlier attainment). For high SES pupils there is a more mixed picture, and there are some remaining gaps even after controlling for attainment. The authors find that the differences in participation relative to White British pupils that remain after controlling for all observed factors are increasing over time among high SES pupils for most ethnic minority groups, suggesting a potentially increasing role for other factors in accounting for why high SES ethnic minorities are more likely to attend the most selective institutions than White British pupils, but that this effect varies across high SES ethnic groups.

There is also an important interaction between SES and place. The DfE Widening Participation statistics show that the higher tariff entry rate among FSM-eligible pupils in London (9.7%) is almost as high as the rate among non-FSM pupils in the West Midlands and East Midlands (10.0% and 10.1%, respectively). The lowest rates are for FSM-eligible pupils in the East of England (2.6%), East Midlands (2.6%) and South East (2.4%).

However, it should be noted that in their detailed analysis of course matching, which took into account the prior attainment of students, Cambell et al. find that that geography has little impact on the SES match gap; they contend that students only have to travel short distances to find a well-matched course, with the average distance to a well-matched course in England a little under nine miles. The figures below do not take into account the relative attainment or other characteristics of pupils in these regions so we do not know to what extent the gaps reflect these factors.

Specific groups

Care experience and estrangement

As in the case of overall entry to HE, the DfE Widening Participation data provides two sets of statistics which relate to learners with experience of children's social care. The first, for Children in Need, shows 2% of Children in Need at age 15 were progressing to a high tariff HEP by age 19 by 2020-21 compared to 12% of all other pupils (a gap of 10pp). The second

set of statistics relates to Looked After Children¹⁹ and shows 2% of pupils who were looked after continuously for 12 months or more at 31st March 2017 progressed to a high tariff HEP by age 19 by 2020-21 compared to 11% of all other pupils (a gap of 9pp). These gaps have persisted over time.

In their mapping of HE access for care-experienced students, Harrison (2020) estimate that 10.7% of the care-experienced full-time students they identified were in Russell Group universities, compared to 25.7% of the non-care-experienced full-time students (a gap of 15pp). UCAS 2022 report that, compared to other applicants, care-experienced applicants are 30% less likely to be accepted at a higher tariff provider (20% versus 28%) (UCAS, 2022c).

Disabled learners

The DfE Widening Participation statistics do not provide a breakdown for disabled compared to non-disabled students, but they do report differences in progression rates for pupils with Special Education Needs. Just 1.1% of pupils with an EHCP/Statement and 3.6% of those on SEN support progressed to a high tariff HEP in 2020-21. In comparison, the progression rate for other pupils was 12.8%. UCAS's 'Next Steps' report gives a broader picture of HE entry for applicants declaring a disability. It reports that disabled applicants are less likely to be placed at a higher tariff provider than other students (26% compared to 28%) (UCAS, 2022d).

Vocational learners

Montacute and Cullinane (2018) look at applications and acceptances to Russell Group universities by school/college type. General FE colleges make up 27% of applications to all HE providers, but only 18% of applications to Russell Group universities and 7% of applications to the Universities of Oxford and Cambridge. They find that just 11% of students who apply to a Russell Group university from an FE college take a place, compared to 24% applying from sixth form college, 51% from selective schools and 60% from independent schools. Looking at Oxford and Cambridge specifically, 7% of students applying from independent schools gain a place, but the figure is 5% for grammar schools, 1% for comprehensive schools or sixth form colleges and only 0.3% for FE colleges.

Mature and part-time learners

Analysis of HE admissions data by UCAS in 2017 found that older students were more likely to enter lower tariff HEPs (UCAS, 2018). At that time, for the older age group (36+), the percentage share of students entering lower tariff providers had increased from 63.6% in 2008 to 69.3% in 2017. However, this was likely skewed by the large number of mature students entering the Open University. In 2019-20 the Open University had by far the most students aged 25+, with the total number being more than the rest of the top ten combined (Hubbard & Bolton, 2021).

¹⁹ This publication presents figures for children looked after continuously for 12 months or more at 31st March for state-funded and special school pupils who were 15 at the start of the academic year.

Discussion

In this section we have presented a summary of recent evidence on gaps in entry to selective HEPs. A summary of the gaps we have identified is given in Table 13.

Table 13: Summary of gaps identified relating to entry to selective HEPs

Selective HEP entry equality gap	Size of gap
SES	<p>The SES gap can be measured in multiple different ways.</p> <p>FSM gap in 2020-21: 4.5% FSM compared to 12.4% non-FSM – 2.7 times more likely to enter</p> <p>POLAR gap in 2020-21: 4.8% quintile 1 compared to 16.7% quintile 5 – 3.5 times more likely to enter</p> <p>UCAS MEM quintile in 2021-22: 24.3% quintile 1 compared to 57.0% quintile 1 – 2.3 times more likely to enter</p> <p>First in family: 50% first in family compared to 76% other – 1.5 times more likely to enter</p> <p>Type of school: 26.0% state schools compared to 57.3% independent schools – 2.2 times more likely to enter</p>
Ethnicity	<p>In 2021-22, 40.7% of Chinese students progressed to high tariff HEPs. This compares to 13.2% of Black African students and 5.4% of Black Caribbean students. Indian students also had higher progression (22.3%) than Bangladeshi (15.6%) or Pakistani (9.8%) students. White British students' progression rate to high tariff HEPs was 10.3%. Consistent with the pattern of entry to HE overall, Travellers of Irish Heritage and Gypsy/Roma students had the lowest high tariff HE entry rates (1.2% and 0%, respectively).</p> <p>GAP BETWEEN ETHNIC GROUPS:</p> <p>Chinese students 3.9 times more likely to enter than White British students.</p> <p>Chinese students 33.9 times more likely to enter than Travellers of Irish Heritage</p> <p>White British students 8.5 times more likely to enter than Travellers of Irish Heritage</p>
Gender	<p>In 2020-21, 12.7% of female students entered high tariff HEPs compared to 10.1% of male students.</p> <p>GAP: 2.6pp – Female pupils 1.3 times more likely to enter</p>

Selective HEP entry equality gap	Size of gap
Place	<p>There are large regional differences, e.g. 16.1% of students in London progressed to high tariff HEPs by age 19 in 2020-21 compared to rates of between 9% (West Midlands) and 12.1% (South East) in all other regions.</p> <p>GAP: 7.0pp – students in region with highest attainment 1.7 times more likely to enter than those in region with the lowest attainment</p>
Intersection of characteristics	<p><u>SES-ethnicity-gender</u> Looking at the intersection of ethnicity, gender and FSM-eligibility, in 2020-21 43% of Chinese non-FSM females entered (highest performing group) compared to 0% of FSM male Traveller of Irish Heritage (the group with lowest average attainment).</p> <p>GAP: 43pp – compared to a low of 0% among the group with lowest average attainment</p> <p><u>SES-place</u> Looking at the intersection of region and FSM-eligibility, in 2020-21 9.7% of FSM-eligible students in London progressed to a high tariff HEP by age 19 in 2020-21. This was almost as high as the rate among non-FSM pupils in the West Midlands and East Midlands (10.0% and 10.1%, respectively). The very lowest rates are for FSM-eligible pupils in the East of England (2.6%), East Midlands (2.6%) and South East (2.4%).</p> <p>GAP: non-FSM eligible pupils between 1.8 and 5.4 times more likely to enter depending on region</p>
Care-experience	<p>In 2020-21, 2% of Children in Need entered compared to 12% of all other pupils.</p> <p>Research estimates 10.7% of care leavers entered compared to 25.7% of other students.</p> <p>GAP: approximately 10-15pp – students who are not care-experienced 2-6 times more likely to enter</p>
Other groups	<i>There is insufficient data to benchmark other groups</i>

As in the case of overall HE entry, we find large SES gaps in entry to selective HEPs, which again are sensitive to the SES measure used. There is also a clear picture of private school advantage in accessing the most selective HEPs. And again, as for overall HE entry, London performs particularly strongly compared to other areas of the country, speaking to wide geographical variation in access. Overall the intersection of these characteristics is key to the propensity of different groups to enter selective HEPs, as per earlier stages in the education journey. We have also identified a number of other key groups which face particularly low levels of entry to selective HEPs. The patterns we observe, as for overall HE

entry, reflect prior attainment although post-16 subject choice also appears to be an important factor.

10. HE subject choice

A number of our sources touch on how subject choice in HE differs between groups. While a more extensive and focused review would be needed to provide comprehensive coverage of this issue for different groups and on different subjects, we note the points arising in those sources here for completeness. They serve to demonstrate that different groups of students may be over- or under-represented at subject or course level, and HEPs must bear this in mind as they review equality gaps in their local context.

One example of systematic differences in subject choice relates to whether a student has family experience of HE. Henderson, Shure & Adamecz-Völgyi (2020) find that First in Family students are 5pp more likely to take Law, Economics and Management (LEM) subjects and 5pp less likely to take Social Sciences, Arts, Humanities and Languages subjects than graduates who were not First in Family. Specifically, they estimate that the subjects which attract a high share of First in Family students are Education (87%), Business and Administrative Studies (79%), followed by Mass Communication (78%), subjects allied to Medicine (76%) and Law (75%). The authors suggest that these students may be more likely to privilege subjects that offer good labour market prospects but are not overly competitive in their HE choices.

This focus on the economic value of the degree is echoed in Brassington (2022), which uses OfS data to show five subject areas studied by Gypsy/Roma or Traveller of Irish Heritage undergraduates in the 2020-21 academic year for which the Office for Students has data. The most popular areas are Business and Management (50% of students), then Social Sciences (16%), Design, and Creative and Performing Arts (16%), subjects allied to Medicine (11%) and Psychology (8%). The author suggests that the strong focus on Business and Management relates to preference for self-employment among these groups.

Care-experienced students seem to have a slightly different distribution across subjects in HE. Harrison (2020) finds that care-experienced students are more likely to be pursuing courses in Sociology, Social Policy, Social Work and Creative Arts, but under-represented in Medicine, physical sciences, Mathematics, Engineering, Languages, History and Philosophy. UCAS also find that care-experienced students are 179% more likely to study Health and Social Care (5.9% versus 2.1%) and 50% more likely to study Nursing and Midwifery (10% versus 7%). They also report that this group are 44% less likely to study Economics (1.3% versus 2.3%) and 38% less likely to study Geography and Earth Sciences (1.3% versus 2.0%).

The Bridge Group (2022) focuses on access to Engineering, and reports that 35.5% of full-time Engineering students are from POLAR4 quintile five areas (with the highest HE participation) and just 9.6% are from quintile one (with the lowest). They find that Engineering courses admit a higher proportion of students from quintiles four and five than the average for all subjects, and a smaller proportion of students from quintiles one, two and three.

The studies reviewed here show that just as demographic characteristics influence attainment, they also influence the subjects students study in HE and this may help account for some of the patterns in labour market outcomes, discussed in [Section 14](#).

11. HE continuation

In the following section we present a summary of the equality gaps in continuation on course post-entry. We only found a small number of studies on this issue, so analysis of OfS data is likely to be a particularly important source of evidence on gaps in continuation. The sources we did find focused on SES (2), ethnicity (1), care-experienced and estranged students (1) and carers (1). Due to the small number of sources used, we do not provide a benchmarking at the end of this section, which would be better derived from the OfS data analysis exercise.

SES

Crawford (2014) uses national administrative data on English-domiciled students who attended any UK university for the first time at age 18 or 19 between 2004-05 and 2009-10, with each cohort including between 180,000 and 235,000 HE participants. It should be noted that this source is slightly older than much of the evidence in this review, and outside our formal inclusion criteria, but is included on the basis of relevance. The authors combine individual and neighbourhood level data to create an index of SES. There are sizable differences in the likelihood of non-continuation by SES; less than 10% of those from the highest SES students dropped out within two years, compared to more than 20% among the lowest SES group. Controlling for attainment, background characteristics and information about the HE courses attended leaves a difference between the top and bottom SES quintile group of 3.5 pp which cannot be accounted for by the data. Focusing on a group of 'high-status' universities, the SES gradient in dropout is less severe, with individuals from the top SES quintile group 5.3pp less likely to drop out of university within two years of entering than those from the bottom socio-economic quintile group. Half of this raw gap can be accounted for by a small number of demographic characteristics and a very rich set of measures of prior attainment.

In their analysis of HE behaviour for First in Family students, Henderson, Shure & Adamecz-Völgyi (2020) find evidence of a statistically significant difference between First in Family status and the likelihood of dropping out of university. Once they take into account prior attainment, individual characteristics and SES, First in Family students are 4pp more likely to drop out than students whose parents have a degree. Their measure of non-completion has some limitations and is calculated differently to those used in national datasets, so this finding should be handled with some caution.

Care experience and estrangement

According to Bland (2015), among a survey sample of almost 600 estranged students, 41% had considered suspending or withdrawing from their course. In total, 6% report that they have either suspended or withdrawn from their studies. Financial stress is the main driver of students withdrawing from their current course, followed by health issues and wellbeing.

Carers

There is no robust administrative or large scale survey data on carers in HE. Research by the Carer Trust which uses data from a survey of approximately 350 people aged 14-25 found that young adult carers were four times more likely to drop out of college or university

than students who were not young adult carers. They also report that 13% of those at college or university felt they may drop out because of financial difficulties.

Other groups

Benson-Eggleton (2019) examines the relationship between a student's mental wellbeing and their financial circumstances. The research draws on data from a questionnaire to over 1,000 undergraduate students at a large Russell Group university in London. When respondents are segmented based on their wellbeing score, a strong association is found between wellbeing and whether or not a student had ever seriously considered leaving their course; among quintile 1 learners (with the worst wellbeing), 63% had considered leaving compared to 18% in quintile 5 (with the best). Further analysis finds that students from any wellbeing quintile were just as likely to select 'finances' as a key reason for considering leaving. Instead, it seems a sense of feeling 'unsupported' by the institution is the main difference between groups which may be behind this reported risk of dropout.

12. HE success

In the following section we present a summary of the equality gaps in on-course success in HE, primarily focusing on degree awarding gaps. As for continuation, we only find a modest number of studies on the issue, so analysis of OfS data is likely to be particularly important to understand gaps in success in HE. Due to the small number of sources used, we do not provide a benchmarking at the end of this section. The sources we did find focused on SES (1), ethnicity (2), care and estranged students (2) and vocational students (1).

SES

Crawford (2016) looks at degree outcomes as well as completion. They find that, among the highest SES students in their study, nearly 70% graduate with a first or 2:1, compared to 40% among the lowest SES. They find that the raw differences in likelihood of getting a first or 2:1 are bigger than those in drop-out or degree completion. After controlling for prior attainment and background characteristics, these gaps fall considerably to just to just 4.3pp between the top and bottom SES quintile groups. Further information about choice of university or course makes little difference to the overall picture, suggesting that student-level factors are more important. However, there remain significant differences in the chance of getting a first or 2:1 which cannot be accounted for by these factors.

Ethnicity

Data on degree awarding in English HE suggest that BAME students are significantly less likely to get a first or a 2.1 than White students. Universities UK (UUK) highlight a gap of 13% for 2017-18 graduates, with the largest gap being between Black and White students (23.4%) (UUK, 2019). UUK find that the gap between White and BAME students overall persists even when focusing on specific subjects, subgroups of students living at home during term time and across regions. The gap exists across UK HEPs, and in 2017-18 more than two-thirds of institutions had an attainment gap above 10% while 29% of institutions had an attainment gap of between 10% and 15%. Entry qualifications can account for some of the patterns of degree awarding, but large gaps remain. UUK report on OfS analysis

which found that after controlling for prior attainment, gender and age there remains a difference between White and Black students of 17%, and of 10% between White and Asian students, which cannot be accounted for.

Codioli McMaster (2021) uses more recent national administrative data from 2019-20 and explores degree awarding by ethnicity. They find that 87.1% of white graduates received a first or 2:1 compared with 77.2% of BAME graduates, representing a degree awarding gap of 9.9 pp. This gap is found to be driven mainly by the proportion of students given firsts by ethnicity; 38.9% of White qualifiers and 28.7% of BAME qualifiers were awarded a first, representing a gap of 10.2 pp. Similar proportions of White (48.2%) and BAME (48.5%) qualifiers were awarded a 2:1 degree, representing a 0.3 pp gap in favour of BAME qualifiers. Looking at longitudinal data, the gap has persisted over time, and has only reduced slightly from 17.2pp in 2003-04 to 13.3pp in 2018-19. The most notable change happened between 2018-19 and 2019-20, when the gap fell 3.4 pp with the introduction of changes to teaching and assessment due to the COVID-19 pandemic.

Analysis was completed to understand whether awarding gaps remained when controlling for individual and institutional characteristics. The final analysis used data for almost 240,000 students. It found that controlling for factors such as SES consistently reduced the gaps. Adding institutional characteristics had little effect but prior attainment accounted for some more of the gap. However, even after adding all available controls, large gaps remained: the awarding gap remained particularly large for Black African (7.2 pp), Black Caribbean (6.5 pp) and other Black (8.9 pp) students compared to White students.

Care experience and estrangement

Stevenson et al. (2020) report on analysis of a HESA data set of nearly 250,000 full-time UK students who graduated in 2017 from UK undergraduate courses. They find that care-experienced students were slightly less likely to gain a first or 2:1. However, Harrison (2017) found that this could be accounted for through differences in entry qualifications and demographic profile.

Vocational learners

Shields & Masardo (2018) investigate differences in HE outcomes according to the qualifications with which students enter university. The analysis is based on national administrative data comprising records of all students who graduated from United Kingdom HEPs between the years 2009 to 2013. The authors find that 92.3% of graduates had academic entry qualifications, and 69.8% of this group gained a 2:1 or first. Only 4.3% had vocational entry qualifications (most of this group were BTEC students) and, of this group, 50.5% gained a 2:1 or first. Even when controlling for demographic factors, students who enter HE with vocational qualifications are unlikely to receive the same degree outcomes as students who enter with academic qualifications. The results suggest that vocational qualifications are associated with a decrease of 16.7% in the probability of a first or 2:1 degree qualification, after controlling for demographic variables, and this effect appears larger than that associated with SES or gender.

13. Mental health in HE

The aim of this section is to provide an overview of how mental health in HE differs between groups of students, and identify any groups which face particularly high risks on this front. A total of 34 sources with some focus on mental health were included in the final list.

Parts of this section are reproduced from the TASO report on 'What works to tackle mental health inequalities in higher education?' which contains a summary of the literature that identifies groups at greater risk of mental health issues (Robertson et al., 2022). Although the evidence included sometimes sits outside the formal inclusion criteria for our review (for example, some US-based research is included), as a recent and highly relevant piece of evidence synthesis it is appropriate to include this report in our review. We have supplemented the original content with additional sources identified through this review.

The majority of the sources (13) focus on LGBTQ+ students. Other sources covered SES (5), ethnicity (5), gender (4), and care experience/estrangement (4) as factors which are linked to mental health.

Overall picture of mental health in HE

There has been a steep increase (up 453%) in disclosure of mental health conditions at the point of application to HE over the last ten years (UCAS, 2021). The proportion of HE students stating they had a mental health issue stood at 4.2% in 2020, but wider research suggests that the true rate of mental health issues in the student population is considerably higher (Hubble & Bolton, 2021). A 2018 survey of undergraduates in the United Kingdom found that a fifth of students had a mental health diagnosis, a third had experienced serious psychological issues that they felt needed professional help, and nine in 10 struggled with feelings of anxiety (Pereira et al., 2019).

Callender, Lewis & McCloud (2021) provide some useful context on this topic. They conduct a research project to improve our understanding of common mental health problems in young people who attend HE, compared with those who do not, using data from LSYPE. They find that symptoms of common mental disorders were higher among 18/19 year olds who started HE in 2018-19, compared with young people who did not attend higher education. They suggest that HE might increase the risk of symptoms of common mental disorders due to financial stress, academic pressures (e.g. workload, exam stress, fear of failure), and changes to social relationships and living arrangements that may cause isolation, loneliness or lack of support. However, they note the small number of studies on this topic, and the mixed results in their analysis and literature, so suggest further research is needed to confirm whether and to what extent mental health is more prevalent among HE students.

SES

The evidence base on the relationship between student SES and mental health outcomes is mixed, with some studies suggesting a link between low SES and poor mental health and wellbeing, while other studies have found no association between SES and diagnosable mental health disorders.

Ibrahim, Kelly & Glazebrook (2013) conducted an online survey of 923 undergraduate students and find that students who live in a deprived area are more likely to report depressive symptoms compared to their peers in higher-SES areas. Similarly, a correlational study of undergraduate students at a Russell Group university in London found that students with higher scores on a mental wellbeing scale were more likely to receive financial support from their parents, less likely to need a student loan, and less likely to be in debt when compared to those who had lower wellbeing scores (Benson-Eggleton, 2019).

In contrast, other studies, including those based on the two LSYPE cohorts, have found no association between SES and diagnosable mental health conditions among undergraduates (Lewis, McCloud & Callender, 2021).

Ethnicity

Although UCAS declaration rates are higher among White students and students of mixed ethnicity compared to Black and Asian students, this is likely due to underreporting among students from certain BAME backgrounds. Research has found that people from BAME backgrounds are more likely to experience poor mental health but less likely to access support (UCAS, 2020).

When people from BAME backgrounds do seek mental health support, they are more likely to be prescribed medication and detained while their White counterparts are more likely to be offered cognitive and talking therapies (MIND, 2013). Two-thirds of BAME HE students who have a mental health condition report experiencing discrimination from healthcare professionals (MIND, 2013).

A 2021 study found that three-quarters of Black students reported that racism had some level of impact on their mental health, with some feeling distressed in their HE accommodation. Particular problems identified included: experiences of microaggressions in accommodation; a lack of diversity among accommodation staff; a sense that accommodation is allocated in a racially segregated way; and a lack of policies and procedures relating to racism in accommodation or a lack of awareness of or trust in these policies. A perceived lack of support and difficulties in finding counsellors with either the lived or professional experience to understand the impact of racism on mental health compound this and, as a result, students are turning to family and Black peers for support instead (Stoll et al, 2021).

Gender

Female students are more than twice as likely as male students to declare a mental health condition through UCAS (UCAS, 2020). Other research with young people aged 11-19 finds that females are three times more likely to report experiencing depression and anxiety than males (Patalay & Fitzsimons, 2021). However, given that in the general population men report lower levels of life satisfaction, are more likely to die by suicide, and are less likely to seek psychological help (NHS, 2020; Manders & Windsor-Shellard, 2020; Tabor & Stockley, 2018), this disparity is potentially due to men being less likely to report a mental health issue rather than being less likely to experience one. Indeed, female university students hold more

positive attitudes towards seeking help than male university students (Sheu & Sedlacek, 2004).

Mature students

Mature students, defined as those who start HE aged 21 or older, are more likely to declare a mental health condition through UCAS than their younger peers. The declaration rate is highest for 21-24 year olds and 25-29 year olds, at 7% and 5.9% respectively, compared to 2.1% among 18-year-olds. Research on mature learners' experience in HE finds that they face a variety of challenges, which may have a detrimental impact on their mental health, including social isolation, relationship tensions, financial strain and a lack of institutional support for their caring responsibilities (Hume et al., 2021; Pennacchia et al., 2018). However, there is a lack of robust studies in the wider evidence base exploring mature HE learners' mental health specifically.

Sexual orientation

LGBTQ+ adults in the general population are significantly more likely to experience poor mental health than the non-LGBTQ+ population, particularly among younger and older populations (Bachmann & Gooch, 2018; Macrory, 2016; McManus et al., 2016; Semlyen et al., 2016).

LGBTQ+ youth may be at even higher risk of poor mental health than adults, with studies finding higher rates of depression and anxiety and a greatly increased risk of self-harm and suicide (Miranda-Mendizábal et al., 2017; Semlyen et al., 2016; Muehlenkamp et al., 2015; Robinson & Espelage, 2011). A survey of more than 7,000 young people in the UK aged 16-25 found that LGBTQ+ young people, compared to heterosexual, cisgendered young people, were more likely to seek medical help for depression and anxiety (42% compared to 29%), more likely to self-harm (52% compared to 35%) and more likely to have thought about suicide (44% compared to 26%) (Ussher et al., 2016). As is reflected in higher rates of UCAS declarations, studies with university students have found that these trends persist in HE student populations (Gnan et al., 2019; Kerr, Santurri & Peters, 2013).

Sanders (2022) provides analysis specifically focused on LGBTQ+ HE students using mental health data from the Student Academic Experiences Survey (SAES) conducted between 2016-17 and 2021-22. The sample contains over 70,000 students and shows that the proportion of participants identifying as LGBTQ+ rises steadily over the course of time covered by this data. Wellbeing is measured in the SAES using the ONS four wellbeing questions which relate to life satisfaction, worthwhileness, happiness and anxiety. The analysis finds very substantial inequalities in wellbeing and concludes that LGBTQ+ students in general experience lower wellbeing and higher anxiety than their heterosexual and cisgendered peers. Homosexual men's experiences are closer to those of heterosexual people overall. LGBTQ+ students, and particularly transgender students, are more likely to experience acutely low wellbeing (high anxiety) than their peers.

Studies investigating the risk factors behind LGBTQ+ students' poor mental health have found that experiencing discrimination is associated with mental health issues and suicide risk (Gnan et al., 2019; Espelage, Merrin & Hatchel, 2018; Woodford et al., 2018). LGBTQ+

students are likely to be subject to these negative experiences while at university: a survey of more than 5,000 LGBTQ+ university students found that students, especially transgender students, experienced negative comments and attacks from staff and other students and did not feel safe or able to report discrimination in their institution (Bachmann & Gooch, 2018).

Care-experienced students

Care-experienced young people are more likely to have poor mental health (Sanders, 2020; Bazalgette, Rahilly & Trevelyan, 2015). Research has found that 45% of looked-after children, and more than 70% of children in residential care, have a mental health disorder, and care-experienced young people are at least four times more likely to attempt suicide in adulthood compared to their non-care-experienced peers (Smith, 2017). Although UCAS declaration rates are much lower for this group, care-experienced students are more likely than other students to declare that they have a mental health issue – 9.2% compared to 3.5% (UCAS, 2020).

The challenges that care-experienced young people face while in HE – such as struggling to find accommodation, the threat of homelessness, and having to repeatedly explain their experiences in order to access support – can have a negative impact on their mental health (Stevenson et al., 2020). In turn, studies on the educational experiences of care-experienced young people have found that poor mental health is often cited as a factor that limits their ability to progress to HE or makes the transition challenging (Harrison, 2017).

Discussion

In this section we have presented a summary of recent evidence on relating to mental health in HE. A summary of the relative likelihood of groups declaring a mental health condition is given in Table 14 (drawn from Ramaiah & Robinson, 2022).

Table 14: Groups most/least likely to declare a mental health condition

Mental health equality gap	Size of gap
SES	POLAR4: 4.6% quintile 1 compared to 3.5% quintile 5 GAP: 1.1pp – lower SES 1.3 times more likely to declare
Gender	2.1% men compared to 4.7% of women GAP: 2.6pp – women 2.2 times more likely to declare
Age	18-year-olds (2.3%); 21–24 years (7%) GAP: 4.7pp – mature students 3.0 times more likely to declare
Ethnicity	Mixed (4.3%); White (4.3%); Black (1.5%) Asian (1.5%) GAP: mixed students 2.8 times more likely to declare than Asian students
Sexual orientation	Bisexual (15.6%); Gay women/lesbians (15.2%); Heterosexual (2.6%) GAP: bisexual people/students 6.0 times more likely to declare than heterosexual people/students
Care experience	Declared ‘in care’ on UCAS application (9.2%) compared to no care experience declared (3.5%) GAP: 5.7pp – care-experienced students 2.6 times more likely to declare than those with no care experience

Source: Robinson, Mulcahy & Baars (2022). Note that the rate of disclosure may not reflect the true prevalence of mental health conditions in the populations described due to systematic under-reporting by some groups, as discussed in the body of the review.

This summary provides a useful overview of how likely different groups are to declare a mental health condition. However, as noted in Ramaiah & Robinson (2022) rates of disclosure differ between groups, so these data likely reflect under-reporting of the challenges faced by some, such as Black students and male students. With this in mind, we should be cautious about how we interpret the gender and ethnicity gaps outlined above, and further work is needed to get a clearer picture of the mental health of these groups in HE. However, LGBTQ+ students do appear to face particular challenges in relation to mental health, as do care-experienced and mature students.

14. Labour market outcomes

The aim of this section is to provide an overview of how labour market outcomes differ between groups of students. In some cases we review raw gaps by different subjects or provider types, but we are primarily interested in the following question: if we were to compare two individuals who went to the same HEP, studied the same subject and achieved the same degree class – but had different demographic characteristics – would there be any difference in their subsequent destinations and earnings? We do not focus on outcomes by provider or by subject except where this is relevant to a specific group.

Parts of this section are reproduced from the TASO report on ‘What works to reduce equality gaps in employment?’ which contains a summary of the gaps in earnings between different groups following graduation (Ramaiah & Robinson, 2022). We have supplemented this with additional sources identified through this review. A total of 12 sources with some focus on labour market outcomes were included in the final list.

These sources focused on SES (5), ethnicity (5), gender (4), place (1) as factors which can affect labour market outcomes. A number of sources focused on specific groups of students, covered multiple focus groups or the intersection of characteristics such as SES, ethnicity and gender.

SES

Ramaiah & Robinson (2022) provide analysis of earnings data, but note it does not include information on part-time work or employment status which may skew the earnings gap for some demographics. They show analysis of earnings by FSM eligibility and POLAR3 quintile. They find that three years after graduating, the earnings gap between graduates who were FSM-eligible at secondary school and those who were not was £1,900. Looking at the earnings gap in the five years following graduation, they find the FSM/non-FSM gap does not widen as much as the gaps based on some other characteristics (e.g. gender). Indeed, there is little change in the gap between one and three years following graduation. In absolute terms, the gap increases by £100, but in percentage terms, non-FSM students go from earning 10% more after one year to 8% more after three years. In the following two years, the gap increases by £1,000, such that non-FSM students are earning 12% more on average than their FSM counterparts.

Crawford & Van de Erve (2015) produce evidence on differences in graduates’ earnings by SES. They use data on approximately 1,700 individuals from the British Cohort Study, which tracks individuals born in a particular week of April 1970 through their lives, up to and including the latest survey in 2012, when the individuals were aged 42. Using rich individual-level data, they control for some of the ways in which graduates from different SES backgrounds might also differ. They break down post-HE outcomes for graduates whose father was in a higher managerial and professional occupation when they were aged 10 and those whose father worked in any other occupation. At age 26, the high-SES graduates earned just under 12% more, on average, than those from other backgrounds. When controlling for a broader set of measures of SES, father’s occupation drops in importance, and instead family income and mother’s education appear to be the most important of these

measures of SES, with those in the top income quintile earning around 10% more than those in any other income quintile, and those whose mothers have at least A-level qualifications earning around 9% more than those whose mothers have lower qualifications. They find some interesting differences by gender, with income and mother's education being most strongly predictive for girls, and father's education featuring significantly for boys.

Adding controls – for gender, age, ethnicity and region; for number of A-levels and school type; and for undergraduate degree institution, subject and class – reduces the association between SES and earnings, suggesting that these controls capture some of the ways through which SES influences earnings, but they cannot entirely account for the pattern observed. The authors control for a number of proxies for social and cultural capital, and early skills measurements, and find these make little difference to the link between SES and earnings. Detailed measures of prior attainment (upon entry to HE) also only act to reduce unexplained gaps a little.

The authors conclude that “even amongst similarly qualified individuals graduating from similar universities having studied similar subjects and achieving the same degree class... those from higher socio-economic backgrounds still earn more, on average, than those from lower socio-economic backgrounds”. Comparing graduates who go into similar jobs does help account for the remaining SES differences somewhat, suggesting that part of the benefit of coming from a higher SES background is to enable access to higher status jobs. But even amongst similarly qualified graduates who work in the same occupations, there remain some significant differences in earnings by SES.

Britton, Drayton & Van der Erve (2021) investigate the extent to which individual universities, subjects and courses promote intergenerational mobility. They use national administrative data to calculate a mobility rate for each university, subject and course in England, which they define as the access rate multiplied by the success rate.²⁰ Their analysis is based on 500,000-1,000,000 individuals who took their GCSEs between 2001 and 2006. When splitting the population of graduates by SES marker, they find that 22% of those who would have been FSM-eligible at school reach the top earning quintile age 30, compared to 35% of the non-FSM group. At the other end of the spectrum, almost 40% of those from the least deprived neighbourhoods (based on IDACI) and around 46% of privately educated graduates reached the top quintile of earners. They go on to find that the strong positive relationship between family background and earnings at age 30 is much weaker amongst those who went to university. For example, the overall gap in the average earnings rank between the least deprived state-educated students and the FSM eligible is around 20 percentiles, while it is only around 10 percentiles for those who went to university. They also show that the relationship gets weaker still as you look at more selective universities. Amongst the most selective Russell Group universities, there is almost no gap in the average earnings rank for those eligible for FSM and the least-deprived state school students, while the equivalent gap for the 'Other' universities is close to 10 percentiles. However, the authors note that while the most selective universities have the best success

²⁰ Where the access rate is the share of students for each university, subject or course who are from low-income backgrounds, which they proxy using FSM eligibility, and the success rate is the share of those FSM students who make it to the top 20% of the earnings distribution at age 30.

rates, they also have the lowest access rates – so the overall picture is of a small number of low SES graduates doing well at these universities.

They go on to explore access and labour market success by HEP and by subject and find the picture varies significantly; for example, Pharmacology and Social Care have only very small gaps in access by SES, but there are large gaps in subjects such as Medicine. Many HEPs have courses which are both in the bottom and top 10% on overall mobility. The authors suggest that policies designed to improve labour market outcomes for disadvantaged groups may need to focus on specific courses rather than on HEPs overall.

As noted earlier in this report, Campbell et al. (2021) explore how well students are 'matched' to their courses (where they focus on specific courses of study within a HEP, not just overall entry to HEPs) based on attainment. They find that students from low SES backgrounds are more likely to enter courses with lower earnings outcomes than higher SES peers with the same grades. Accounting for degree subject does not reduce this gap and the authors conclude that a key driver of SES inequalities in matching is the HEP attended. They do not find that geography plays a role in this gap, but they do find that for students who stay close to home for study, there is an SES gap in the type of institution attended which corresponds to lower SES students choosing courses with lower earnings outcomes than their higher SES peers with the same prior attainment.

Britton, Dearden & Waltmann (2021) explore the financial benefits of taking a degree by SES using national administrative data. They focus on a sample of people taking GCSEs in England in 2002. They find that there is a positive return to HE (measured by earnings at 30) but a number of differences between groups. Returns are especially high for privately educated graduates, but even when groups have low earnings (e.g. state-educated graduates from poorest households) they have relatively high returns from HE, because their earnings prospects are so low if they do not attend. Returns do not differ that much by SES; at age 30, the authors estimate an earnings return of around 6% for state-educated men and 27% for state educated women. But privately educated graduates stand out, with returns of 29% for men and 36% for women. The authors conclude that much of the difference in returns can be accounted for by the HE provider attended.

Ethnicity

Ramaiah & Robinson (2022) presents analysis of national administrative data, focusing on the median earnings of different groups of graduates three years after graduating in the 2018-19 tax year. They find variation in earnings by ethnicity, with gaps between those with the highest and lowest earnings of £4,800. Looking at a longitudinal picture, soon after graduation, the different ethnicities broadly fall into low average earners (Pakistani, Caribbean, Bangladeshi, White and Black Caribbean and any other Black background), middle average earners (White, African, White and Black African and Any other Mixed/Multiple ethnic background) or high average earners (Chinese, Indian, White and Asian or Any other Asian background). At one year after graduation, the high earning groups earn 16% more than the low earning ethnicities. Ten years after graduation, the average earnings of the different ethnicities have significantly diverged. Indeed, the averages for graduates from both African and White and Black African ethnicities have diverged away from the averages for the other groups who were previously middle earners (White and Any

other mixed background) and are more similar to those of the low earning groups. The evolution of the average earnings of Pakistani graduates is particularly notable, falling well below even the other low earning groups. Ten years after graduation, the high earning groups are earning 24% more than the low earning groups.

Lessard Philips et al. (2018) explore graduate labour market outcomes for ethnic minority students in the Russell Group universities. The study draws on national administrative data for graduates in 2009-13. They find that among female Russell Group graduates, those from Bangladeshi, Pakistani and Other Asian backgrounds have lower percentages of graduates in professional employment six months after graduation compared to the White group. Unemployment rates are higher for female graduates from all ethnic minority groups than they are for female graduates from the White group. Focusing on male Russell Group graduates, the picture is similar: those from Bangladeshi, Chinese and Any other Asian backgrounds have lower rates of professional employment six months after graduation compared to the White group. Unemployment rates are also higher for male graduates from all ethnic minority groups than they are for the White male graduates. After controlling for degree subject, degree classification and socioeconomic background, female Russell Group graduates from Bangladeshi, Pakistani, Black African and Any other Asian backgrounds continue to have a lower probability of being in professional employment six months after graduation than their white peers on average.

Research from the Resolution Foundation also explores labour market outcomes by ethnicity and has found that accounting for compositional differences, such as differences in age and country of birth, substantially reduces raw pay gaps between different groups; however, they find that for most groups there is a remaining pay 'penalty' of more than 5% for most groups (Henehan & Rose, 2018). The largest penalty is for Black male graduates, who can expect to be paid 17% less than White male graduates after accounting for their background and their job. They further find that there is less variation in the size of penalties that exist between graduates and non-graduates than there is between different ethnic groups themselves and that penalties are generally smaller among women than men. The penalties they observe have remained relatively stable over time for graduates.

Waltmann, Dearden & Britton (2021) find considerable differences in financial benefits of doing a degree by ethnicity and gender; for example, women from south Asian backgrounds all do particularly well from gaining a degree, but black Caribbean women achieve the lowest returns. Men in general have lower returns, but male Pakistani graduates attract sizable returns, partly reflecting the very low earnings of non-graduates in this group. The returns for white British, black Caribbean and black 'other' men are particularly low. The authors conclude that these differences are partly driven by university and subject choices. As noted by Mirza & Warwick (2022), Asian students tend to choose subjects with higher financial returns such as business, law and computing, whereas Black and White British students tend to choose subjects such as sociology, creative arts and social care which have lower returns.

Gender

Three years after graduation, Ramaiah & Robinson (2022) find that the gap in earnings between men and women is already relatively large (£2,600). Looking at longitudinal trends,

the gap exists just a year after graduation, with male graduates earning 8% more than female graduates. It continues to grow in the following four years, with male graduates earning 15% more by five years after graduation. The growth of the gap increases further between five and 10 years after graduation, by which point male graduates are earning 32% more than their female counterparts.

The lower earnings among female graduates may be partly due to degree choice. Advani et al. (2020) report that differences in degree subject choices account for most of the gender pay gap soon after graduation and, of the 5% gap in annual earnings they find at age 25, 2.9 pp (55%) can be accounted for by subject studied at HE, with A-level subject choices making up a further 0.2 pp (5%). However, the extent to which subject choice can account for earnings decreases over time, so that by age 30, it only helps explain a fifth of the gender pay gap.

Campbell et al. (2021) also look at the effect of gender on 'matching' of students and courses and find female and male students attend equally competitive courses, but women enrol in courses with lower earning outcomes than men, even when prior attainment is taken into account. These gaps are largely accounted for by subject choice in HE but a gap remains for women with higher prior attainment, implying that regardless of subject of study, these women attend universities with lower associated earnings.

Place

Ramaiah & Robinson (2022) show how earnings change in the years following graduation according to graduates' home region (where they lived prior to entering HE). From one year after graduation there is a clear divide between the earnings of graduates from London, the South East and East of England and graduates from other regions of England. Weighted by the number of graduates in each region, graduates from London, the South East and East of England earn £2,000 or 10% more than other graduates. This gap only increases as graduates spend more time in the labour market. Ten years after graduation, graduates from London, the South East and East of England earn £4,900 or 16% more than other graduates. Differences in the proportion of graduates returning to their home region, and the variation in earnings across different regions based on the current location of the graduates, are likely to drive these differences. Variation in earnings according to graduates' current location is even starker. After 10 years, graduates living in London earn almost £12,000 (or 43%) more than those in the South West, on average.

Care experience and estrangement

Harrison, Baker & Stevenson (2020) explore outcomes for approximately 1,000 full-time students identified as care-experienced within the cohort graduating from an undergraduate degree programme in the UK in 2016-17. Patterns of progression are roughly similar between groups, but care-experienced graduates are slightly more likely to be unemployed or studying and less likely to be in work (and particularly professional work) than their peers. Specifically, 63.7% of care-experienced graduates progressed to professional roles, compared with 68.5% of other graduates. Earnings data is not available to benchmark this for care-experienced learners.

Carers

In their analysis of HE entry for individuals with caring responsibilities Xue et al. (2022) find that carers are only less likely to enter employment when the caring happens at age 22/23 or later, with carers on average having a 12% lower likelihood of entering employment. For those younger than age 23, care reduces their likelihood of entering employment only when they spend 35 or more hours of care every week. For those aged 23 or older, caring for 10 hours or more is already negatively associated with their employment.

Disability

Ramaiah & Robinson (2022) present graduate earnings by disability status and gender. This data is based on the HESA survey of graduates' outcomes. As this data is derived from a survey rather than administrative data, and the survey takes place 18 months after graduation, it is not directly comparable to national administrative data. After 18 months, the earnings gap between graduates with and without a known disability is around £600, over 60% smaller than the gap between male and female graduates. However, it should be noted that these gaps are based on those in sustained employment, and graduates with a known disability are less likely to be employed shortly after graduation. Of graduates with no known disability, 78% are in full- or part-time employment 18 months after graduation, compared with 73% of graduates with a known disability. Graduates with a known disability are more likely to be undertaking unsalaried activities, such as caring, voluntary or unpaid work.

Vocational learners

Ramaiah & Robinson (2022) show that the results achieved by students prior to HE are also associated with broad variations in earnings. Three years following graduation, a student who achieves four or more A grades at A-level on average earns two-thirds (£15,000) more than a student who achieves Business and Technology Education Council (BTEC) qualifications but no A-levels. Variation in earnings by prior attainment will be highly correlated with variation by provider and subject, given that this prior attainment is a key determinant of which providers and subjects students are able to access.

Selective HEPs

Walker & Zhu (2017) study the labour market outcomes of graduates in the UK using the Labour Force Survey, matched to admission scores at the institution-subject-cohort level using data on high school achievement scores of students admitted to these courses. The merged data contains over 10,000 graduates who entered HE in 1992 or later. Although outside the formal inclusion criteria of this review, we include this source as an important piece of evidence which is frequently cited in the literature. The authors split the HEPs into the Russell Group universities, "Old" universities outside the Russell Group; and the post-1992 "New" universities which were formerly polytechnics prior to the end of the binary divide that existed between universities and polytechnics. They find that, controlling for a rich set of background characteristics, the wage coefficients for attending Russell Group are around 10% for men and 11% for women relative to New university graduates. Estimates of the premium attached to attending an Old university, relative to New, are approximately 7% for men and 5% for women. Analysis of the earnings data linked to entry qualifications

shows that undergraduate degree programme selectivity, as proxied by A-level tariff scores of the degree programme attended, plays an important role in explaining the variation in the graduate wage premium across HEP types and subjects. They also find that the extent to which more selective institutions add value varies substantially by subject.

Discussion

In this section we have presented a summary of recent evidence on gaps in labour market outcomes. A summary of the gaps we have identified is given in Table 15.

Table 15: Summary of the gaps identified relating to labour market outcomes

Labour market equality gap	Size of gap
SES	<p>GAP: 1 year after graduating – 10% premium for non-FSM graduates</p> <p>GAP: 5 years after graduating – 12% premium for non-FSM graduates</p> <p>22% of those who would have been FSM-eligible at school reach the top earning quintile age 30, compared to 35% of the non-FSM group. 46% of privately educated graduates reach the top quintile of earners.</p>
Ethnicity	<p>Ethnicities broadly fall into low average earners (Pakistani, Caribbean, Bangladeshi, White and Black Caribbean and any other Black background), middle average earners (White, African, White and Black African and any other mixed/multiple ethnic background) or high average earners (Chinese, Indian, White and Asian or Any other Asian background).</p> <p>GAP: 1 year after graduating – 16% premium for high earning group</p> <p>GAP: 10 years after graduating – 24% premium for high earning group</p>
Gender	<p>GAP: 1 year after graduating – 8% premium for male graduates</p> <p>GAP: 5 years after graduating – 15% premium for male graduates</p>
Plac	<p>GAP: 1 year after graduating, graduates from London, the South East and East of England earn 10% more than other graduates</p> <p>GAP: 10 years after graduating, graduates from London, the South East and East of England earn 16% more than other graduates</p>
Disability²¹	<p>After 18 months, the earnings gap between graduates with and without a known disability is around £600.</p>

²¹ Note this uses a different data source to the information higher in the table, so is presented slightly differently.

Labour market equality gap	Size of gap
Vocational learners²²	Three years following graduation, a student who achieved four or more A grades at A level on average earns two-thirds (£15,000) more than a student who achieved BTEC qualifications but no A-levels.
Other groups	<i>There is insufficient data to benchmark other groups</i>

Source: Adapted from Ramaiah & Robinson (2022).

There are large differences in labour market outcomes by demographic characteristics. These gaps appear directly after graduation and widen over time. The gender gap widens particularly rapidly over the years after graduation, whereas the premium attached to being from a higher SES background does not appear to grow considerably over time. There are differences by ethnicity, with a wide earnings range between the highest and lowest earning groups. Research suggests that subject choice drives some but not all of the differences by ethnicity, while HEP choice and prior attainment help explain the SES gap. Subject choice drives some of the initial gender gap but the widening of this gap possibly reflects other factors, such as different opportunities for women in the labour market and parenting responsibilities. The dominance of London, the South East and East of England is remarkable, with graduates here earning much more than elsewhere in the country. Individuals who went to independent schools also attract a large and persistent earnings premium.

²² Note this uses a different data source to the information higher in the table, so is presented slightly differently.

15. Entry to PG study

The aim of this section is to provide an overview of how entry to postgraduate study differs between groups of students. The sources we found relate to SES (3), ethnicity (2) and care experience (1).

SES

Mateos-González & Wakeling (2021) use data from very large-scale surveys of UK graduates across the years 2012-12 to 2017-18 to track progression from undergraduate to postgraduate study. They investigate how this varies according to graduates' SES and academic characteristics. The analysis shows that loans for Masters' degrees have apparently been successful in increasing and widening access to these degrees. Rates of progression from an undergraduate degree to a postgraduate master's have increased for graduates of all backgrounds, but they have increased the most for those from low SES groups. In 2013-14, just 6% of first-degree holders from working class backgrounds in England progressed to a taught higher degree (i.e. master's), compared to 8.6% for those from managerial and professional backgrounds. By 2017-18, rates for both groups had risen considerably, and the gap in participation had reduced, with 12.9% for those from working class backgrounds and 14.2% from managerial and professional backgrounds going onto this type of study. More broadly, the authors find that graduates from less privileged backgrounds appear to be less likely to progress than their better-off counterparts. This is true whether looking at parental occupation (with 18.4% of graduates from professional and managerial backgrounds going onto a taught or research higher degree within 15 months of graduating, compared to 14.4% of graduates from routine or semi routine backgrounds), and education (13.9% for those with at least one parent with a HE qualification compared to 11.6% for those with none), neighbourhood (13.2% for those from high participation areas compared to 12.6% for low participation areas) or type of school attended prior to higher education (14.6% for private schools versus 12.5% for state schools). Prior attainment can account for some, but not all, of the patterns observed.

Mateos-González & Wakeling (2022) analyse national administrative data on England domiciled undergraduate leavers graduating in 2015-16 and 2016-17. Their sample contains over 500,000 students and they split students by NS-SEC as a measure of SES. They use this data to investigate the effects of SES characteristics on access to postgraduate education. When they look at progression to higher taught degrees at Russell Group universities almost 6% of graduates from higher managerial backgrounds made this transition, 3-4pp higher than their routine and never worked counterparts. When they control for educational variables, including class of first degree, whether it was an integrated masters degree and qualifications on entry to that degree, the apparent effect of social class on progression to a taught higher degree at a Russell Group university decreases, and the effect disappears almost entirely in relation to research degrees or to other types of further study. First degree institution appears to be a particularly important predictor in these models, suggesting ingrained stratification of the sector which persists from undergraduate through to postgraduate level.

Ethnicity

Wakeling and Mateos-González (2021) find differences in participation in postgraduate study by ethnicity. For progression to taught higher degrees, groups with the highest transition rates are those from “Other” backgrounds (16.1%), Black African (13.8%) and Chinese (12.9%), with graduates from White (10.7%), Indian (10.7%) and Bangladeshi (10.2%) backgrounds having lower rates. For progression to higher research degrees, White graduates have the highest rate (1.7%), followed by Mixed (1.6%) and Chinese (1.4%). Black Caribbean graduates have low rates of progression to both taught (9.4%) and research (0.6%) higher degrees.

Lessard-Phillips et al. (2018) find that among female Russell Group graduates, those from Bangladeshi, Pakistani and Other Asian backgrounds are more likely to be in full-time further study after graduation than their White peers. Women from Black Caribbean backgrounds are the only group to have a lower percentage of graduates pursuing full-time study than is the case for White females. Looking at male graduates, those from the Chinese and Other Asian groups are more likely to be in full-time further study than White graduates. After controlling for degree subject, classification and SES, Russell Group graduates from ethnic minority backgrounds continue to have average probabilities of continuing in further study that are at least as high as for their White peers, and are higher for ethnic minority women as compared to white women.

Care experience and estrangement

Baker, Harrison & Stevenson (2022) explore patterns of postgraduate progression for care-experienced students using data from the national Destinations of Leavers from Higher Education (DLHE) survey for those graduating in 2016-17. They find care-experienced graduates are more likely to progress into postgraduate study than other graduates (25.3%, compared to 21.4%). Specifically, they are more likely to be taking a taught Master’s course, but not so well represented in research degrees or other routes. The authors suggest this may reflect the under-representation of care-experienced students in natural sciences which is a subject which more typically leads to postgraduate research. They also note that care-experienced graduates have a lower propensity to be undertaking postgraduate study in Russell Group universities (18.8%, compared to 32.3% for other graduates), possibly reflecting their lower average degree classifications. However, their analysis finds that even after taking into account degree attainment, care-experienced graduates are less likely to enter postgraduate study in a selective HEP than similarly qualified graduates who were not care-experienced; nearly half (49.5%) of care experienced graduates with first or upper-second-class degrees were studying in post-1992 HEPs, compared to just over one-third (35.5%) of other graduates.

Discussion

In this section we have presented a summary of recent evidence on gaps in entry to postgraduate study. A summary of the gaps we have identified is given in Table 16.

Table 16: Summary of the gaps identified relating to postgraduate study

Postgraduate study gap	Size of gap
SES	<p>Research finding: in 2017-18 12.9% of graduates from higher SES backgrounds progressed to a taught higher degree (i.e. master's), compared to 14.2% for those from lower SES backgrounds.</p> <p>GAP: 1.3pp – higher SES graduates 1.1 times more likely to progress to a higher taught degree</p> <p>Research finding: between 2015-16 and 2016-17, 6% of graduates from higher SES backgrounds progressed to taught higher degrees at Russell Group universities, compared to 3% for those from lower SES backgrounds.</p> <p>GAP: 3.0pp – higher SES graduates 2.0 times more likely to progress to a higher taught degree at a Russell Group university</p>
Ethnicity	<p>Research findings:</p> <ul style="list-style-type: none"> - Participation in <u>taught</u> postgraduate study by ethnicity – Other (16.1%), Black African (13.8%) and Chinese (12.9%), White (10.7%), Indian (10.7%) and Bangladeshi (10.2%). - Participation in postgraduate <u>research</u> degrees by ethnicity – White graduates have the highest rate (1.7%), followed by Mixed (1.6%) and Chinese students (1.4%). Black Caribbean graduates have low rates of progression to both taught (9.4%) and research (0.6%) higher degrees. <p>GAP: Participation ranges by 6.7pp for taught degrees, and by 1.1 for research degrees.</p>
Care experience	<p>Research finding: Care-experienced graduates are <u>more</u> likely to progress into postgraduate study than other graduates (25.3%, compared to 21.4%).</p>

In sum, the picture of access to postgraduate taught education is improving, but there still exist gaps in access by SES, which are partly driven by prior attainment. Some ethnic groups are generally more likely to enter postgraduate study than White students, but this is not universally true, and Black Caribbean students have particularly low rates of entry. White students are the most likely to go into research postgraduate degrees. Care-experienced students have higher rates of progression into taught postgraduate study which, given the financial vulnerability of this group, may represent students attempting to reduce the risk of being unemployed. Looking across the piece, there is clear stratification in postgraduate entry, with lower SES and care-experienced students less likely to enter postgraduate education at the most selective HEPs. This pattern reflects stratification earlier in the student journey (i.e. at entry to HE).

16. Broader contextual risks

A summary of the evidence we found on the broader contextual risks is given below. We review nine sources on the COVID-19 pandemic and seven sources on the cost of living crisis.

COVID-19 pandemic

The COVID-19 pandemic had a dramatic effect on the experience of learners across all parts of the student lifecycle. Although the peak of this crisis has passed, we must consider the lasting impact of these experiences on individuals as they move through the education system and into HE.

For this review we do not include literature which was produced during the peak of the pandemic to highlight the challenges students faced at that time. Rather we focus on literature which outlines the issues of ongoing concern; that is the ways in which the pandemic may continue to impact on education outcomes, including access to, and success in, HE.

Pre-entry to HE

The Education Endowment Foundation (EEF, 2022) provides a review of recent evidence on the disruption to education due to the COVID-19 pandemic. They compile results of six studies and find evidence of a negative impact on the attainment of all pupils, but particularly those from disadvantaged backgrounds. They find evidence that the attainment gap between disadvantaged and other pupils has grown due to the pandemic, and that there is some tentative evidence that the negative impact may have been greatest for younger year groups. The authors suggest that the attainment gap may have widened due to several factors including differing approaches between schools in their approach to online learning, varying levels of access to the technology needed for online learning, varying levels of parental support and lack of access to appropriate home learning environments. The review reports that two studies have investigated regional differences in the extent of learning loss experienced and suggest that areas in the North West, North East, West Midlands, Yorkshire and the Humber, East Midlands and East of England have fared worst.

The review also reports that teachers indicate concerns around the effect on pupil wellbeing, and finds emerging evidence that the pandemic has negatively impacted children's mental health. Finally, the review highlights that, although there has been a return to normality in many ways, at no point since the start of the pandemic has school attendance returned to pre-pandemic levels; at the end of March 2022, attendance was 88.6% against a pre-pandemic measure of 95.0%.

Twist, Jones & Treleaven (2022) analyse the trends in data across a number of studies looking at the impact of COVID-19 on attainment in England from March 2020 onwards. First they explore the impact on progress at different ages and find that there was a negative effect on attainment for all Key Stages which has generally seen some recovery; however, at earlier Key Stages there has been less progress, suggesting the need for a greater focus on younger pupils, as suggested by EEF. Also in-line with the EEF review, they find strong

evidence of a widening in the disadvantage gap. In other words, the impact of the pandemic on the progress of disadvantaged pupils has been greater than on the progress of non-disadvantaged pupils.

Tucket et al. (2022) provide analysis of the Key Stage 4 attainment gap in 2021-22. Because of the pandemic, the normal exam regime was changed and pupils were awarded grades that were determined by teachers. Most pupils got higher grades, but the effect was not equal across groups. Tucket finds that, in the 2021-22 data, the gap in grades between FSM-eligible and other pupils widened by 0.1 grades (8%) and that this is the largest annual increase in the gap since 2011. Looking at ethnicity, the analysis suggests that most ethnic minority groups responded similarly to the White British group in terms of grade increases, but Black Caribbean pupils did slightly better, somewhat improving on their historically lower levels of achievement. Gypsy/Roma pupils fell further behind in 2021, possibly indicating their particular vulnerability in light of the pandemic.

Looking at post-16 education, the gap between FSM-eligible and other students widened in 2020 and 2021. In 2021, grades for female students increased slightly more than for males, which is consistent with teachers awarding more generous grades to females compared to males. Between 2019 and 2021, Chinese, Black African, White and Asian, and Any other mixed background students saw increases that were below those of White British students. These differences could not be accounted for by prior attainment and other characteristics. The authors comment that the unequal increases in grades could have put some students at a disadvantage in their HE applications.

Moving away from grades and towards students' self-reported concerns, the COVID Social Mobility and Opportunities (COSMO) study is a national cohort study generating evidence about how the COVID-19 pandemic has affected socio-economic inequalities in life chances, both in terms of short- and long-term effects on education, wellbeing and career outcomes. A representative sample of young people in England who were in Year 11 in the 2021-22 academic year were invited to take part in the survey, with the aim of following them as they progress through the final stages of education and into the labour market. A sample of more than 13,000 cohort members was recruited in the first wave of the study.

Results from COSMO show that many young people missed a lot of school in Year 11 and this differed by school and pupil characteristics (Montacute et al., 2022). In schools with the most deprived intakes 20% of pupils missed more than 20 days of schooling, compared to 14% in the schools with the least deprived intakes. There was a similar pattern by SES, with 21% of those with parents in working class occupations missing that amount, compared to 17% of those with parents with higher managerial/professional occupations. There were no differences by ethnicity.

The government announced a range of catch-up measures during the pandemic. The proportion of pupils who took part in at least one type of catch-up activity ranges from 54% in state comprehensive schools, to 51% in independent schools and 43% in grammar schools. Those in the most deprived comprehensive schools were the most likely to have taken part in some sort of catch-up activity, at 61%, compared to 48% of those in the least deprived. The most common catch-up activity was additional online classes and the least common was extra one-to-one tuition.

As a result of the disruption to schooling, young people feel they have fallen behind where they would have been in the absence of the pandemic. In total 80% agreed that their progress has suffered, with 46% saying they strongly agreed that it had. Females were slightly more likely to think their progress has suffered, at 83%, when compared to males, at 78%. Young people at state schools (81%) were more likely to think their progress has suffered compared to those at private schools (72%).

Some pupils also felt they had fallen behind their peers; 36% of young people agreed with this statement, with female pupils slightly more likely to agree than males (37% compared to 34%). Over a third (37%) of those at state comprehensive schools said they had fallen behind their classmates, more than double the figure for independent school students (15%). Students in state comprehensive schools and those from lower SES backgrounds were also more likely to report they had fallen behind. Students from ethnic minorities were more likely to be concerned they had fallen behind their peers: 39% of Black students, the same proportion of Asian students and 43% of those with other minority ethnic backgrounds shared this worry, compared to 33% of White students.

The concerns of students in the COSMO study are also reflected in the results of a survey run by the Social Mobility Foundation (Social Mobility Foundation, 2021). They surveyed almost 3,000 young people between 14 and 25 years old. The survey found 51% of 14-18 year olds from lower SES backgrounds felt that the pandemic impacted the quality of their education 'a lot', compared to 42% of those from higher SES backgrounds.

The COSMO study provides a detailed look at how COVID-19 influenced future plans and aspirations (Yarde et al., 2022). Based on survey data collected in autumn 2021, among pupils who made education plans, 64% had changed them because of the pandemic, with females, young people from lower SES backgrounds, and those attending state comprehensive schools more likely to have changed their plans. They also found that low SES students were less likely to have received information, advice and guidance (IAG) during the pandemic, while independent schools students were more likely to have accessed formal IAG (86%) compared to 69% in state comprehensive schools as a whole, and 67% at the schools with the highest proportions of FSM-eligible students.

COSMO also tracks young people's wellbeing and found that respondents to the first wave survey reported much higher levels of psychological distress than comparable cohorts from earlier longitudinal surveys (Holt-White et al., 2022). There were also big differences by gender, with more female pupils reporting elevated psychological distress (54%), self-harm (23%) and suicide attempts (11%) than male pupils (33% report distress, 11% report self-harm and 5% report attempting suicide). Those who identify as 'non-binary+' were very likely to report high psychological distress (69%) and they are considerably more likely to have self-harmed (61%) or to have attempted suicide (35%) than their peers who identify as male or female. Worryingly, the level of support for these issues appears to differ by school, with half the pupils in state-funded schools rating their mental health support as 'not very good' compared to a quarter in independent schools. However, these results relate to data collected in Wave 1 of the study in autumn 2021. Information gathered from Wave 2 will provide an update on any ongoing effect of the pandemic on mental health and wellbeing.

HE entry

Looking to the effect on HE entry, HESA provide analysis and commentary on how the pandemic has affected the sector (HESA, 2023). Despite early concerns that COVID-19 disruption would suppress HE entry, the enrolment data for academic years 2019-20 and 2020-21 show an increase in first year enrolments of approximately 10%. Specifically, there has been an increase in enrolment to first degrees and postgraduate taught degrees over this period. The overall increase in first-degree entrants is likely to reflect a growth in the size of the 18 year old population coupled with rising participation, while growth in postgraduate taught degrees is likely a response to uncertainty in the labour market. On the latter, demand appears to have started levelling off as we move out of the pandemic.

Despite concerns about inequality in HE, the UCAS report shows record rates of entry, including among those from disadvantaged backgrounds (UCAS 2020). There is also significant growth in the number of mature entrants, reflecting a demand for reskilling against a straightened economic backdrop.

Post-entry

Shifting to a focus on degree awarding, the move to online examinations and 'no detriment' policies designed to mitigate disruption caused by the start of the pandemic led to a sharp increase in the proportion of students awarded first class degrees at the end of the 2019-20 academic year. Ongoing mitigation measures and online examinations mean this increase was largely propagated to 2020-21. There was a fall in the proportion of first class degrees awarded in 2021-22, albeit to a level which was higher than before the pandemic, suggesting a continuation of a pre-existing trend of more generous awarding.

HESA also note that there has been an increase in the number of students enrolled in UK-based distance learning programmes (HESA 2023). It is not clear whether this is due to the effect of the pandemic, or the continuation of a long-term trend, but there has certainly been a broader shift to more digital and remote learning in HE. As noted in the TASO toolkit, it is important that, as providers introduce more remote teaching, students and teaching staff have access to appropriate tools to participate fully.²³ This may mean tailored support for students from disadvantaged backgrounds. In the final report for the Digital Teaching and Learning Review, HEPs are encouraged to consider each student's individual digital learning needs to develop plans to mitigate issues identified (OfS, 2021). For example, students need access to appropriate hardware and software, access to the internet and an appropriate place to study. These are all factors which may differ systematically by background, and could introduce real risks to equality into HE learning.

Cost of living

The evidence we found on the cost of living speaks to an impact on current students but also to potential longer-term impacts on education outcomes resulting from harm to children in the school system. We briefly summarise the evidence below.

²³ See [the TASO toolkit](#).

Effect on students

The ONS have released experimental statistics on the behaviours, plans, opinions and well-being of students related to the cost of living (Office for National Statistics, 2022). The study was conducted in autumn 2022 using an online survey that was administered to 350,000 HE students at a number of English universities. Half of students surveyed said that they had financial difficulties, with 35% saying these were minor and 15% saying they were major. One in four students (25%) reported they had taken on new debt in response to the rising cost of living. Of those that had borrowed more money or used more credit than usual, two-thirds (66%) said they did so because their student loan was not enough to support their living costs. Nearly half (48%) said that they would be able to ask a family member for money; there is no breakdown of this response by SES, but it is likely that those students from lower SES backgrounds would be less likely to draw on family support in this way. This issue was also noted in Sutton Trust student polling (Sutton Trust, 2022).

Based on the ONS data, more than three-quarters (77%) of students were concerned that the rising cost of living may affect how well they do in their studies. The cost of living crisis has led to a real impact on student behaviour, with nearly three in 10 students (29%) skipping non-mandatory lectures or tutorials to save on costs. More than three in 10 (31%) were not attending additional course-related events that cost money (such as field trips or conferences) and four in ten (40%) students were studying more at home to save on costs.

On more long-term implications, one-third of students (34%) reported that they are now less likely to do further study once they have completed their course. Nearly one in five (19%) said they considered pausing their course and resuming it next year. However, the proportion of students actively planning to take these actions is substantially lower. Only 1% of students plan to pause their course and resume it next year and 91% of students said they were extremely likely or likely to continue their studies.

Another survey run by the NUS found that the cost of housing is the primary source of pressure on student finances. The NUS also report that rent pressures vary by geography, with London and Scotland having the highest rents at c.£180 a week, and Northern Ireland lowest at an average of £99 per week. Similar themes to the ones discussed in the surveys above were also confirmed in Sutton Trust student polling, which highlighted that students from lower socioeconomic backgrounds were more likely to report skipping meals (33% for students from working class families compared to 24% of middle class students). This survey also found that 6% of students reported moving back in with their family to save money on rent or bills, with working class students more likely to report this than middle class students (10% versus 4%). So the effect of the crisis is likely to differ by background characteristics, such as SES and location.

Looking at wellbeing, in the ONS survey, students who reported they were experiencing major or minor financial difficulties had worse scores on all measures than those who were comfortably well off or managing well enough. This finding echoes those reported in Benson Eggleton (2019) which found students with higher scores on a mental wellbeing scale were more likely to receive financial support from their parents, less likely to need a student loan, and less likely to be in debt when compared to those who had lower wellbeing scores. More broadly, around 45% of students reported their mental health and wellbeing had worsened

since the start of the autumn term 2022. The Social Mobility Foundation's Unheard Voices report found the cost of living was believed to be the single most important issue facing the UK today by all young people.

There is some evidence the crisis is also having an impact on students' plans. In the Social Mobility Foundation's Unheard Voices report, they find that 69% of their sample are changing their plans as a result of the cost of living crisis and 44% of are now having to get a job to support their studies (Social Mobility Foundation, 2022).

Maintenance loans

HE students domiciled in England can access government support for living costs in the form of maintenance loans. The amount students are eligible for depends on their parent's income, where they are studying and whether they live with their parents. The current value of loan entitlements can be expected to rise each year as they are adjusted with forecast retail price index (RPIX) inflation which has an upward bias compared with standard inflation. However, if forecast RPIX inflation is less than actual inflation, the real terms value of maintenance loans will fall (Institute for Fiscal Studies, 2022). The Institute for Fiscal Studies say that this has been happening in 2021-22 because actual inflation has been higher than expected. They suggest the maintenance loan value is now at the lowest level seen in seven years and, for students from the poorest families studying outside London and living away from home, they are now £125 out of pocket because of these errors in forecasting inflation. This is consistent with the picture painted by the National Student Money Survey 2022, run by Save the Student, which finds that the average student's maintenance loan falls short of covering their living costs by £439 every month – an increase from 2021, when the shortfall between average maintenance loans and living costs was £340 (Brown, 2022).

Effect earlier in the education journey

It is also important to consider how the impact of the cost of living crisis in schools may have knock-on effects for access and participation work. Sutton Trust polling examined the issues that teachers saw their pupils face linked to living costs in the autumn term 2022. In state schools, 74% of teachers have seen an increase in pupils unable to concentrate or tired in class and 38% of teachers reported an increase in children coming into school hungry, with 17% saying there was an increase in families asking to be referred to food banks. These issues were reported to be more common in schools with the most disadvantaged intakes. There are also geographical differences; the proportion of teachers reporting at least a third of their class are struggling was highest in Yorkshire and the North East, and in the North West, both at 43%, compared to just 28% in the South West and 27% in the South East. A total of 67% of teachers in state schools thought the cost of living crisis would increase the attainment gap at their school, with 18% predicting a substantial increase, with the worst predictions in the schools with the most deprived intakes.

17. Limitations

Some key limitations of this review are outlined below.

Rapid review methodology

This review was conducted in a short timeframe (around eight weeks). As a result, the review represents a snapshot of the evidence across a wide range of issues. A more thorough systematic review would take longer and have a narrower focus. Although it is possible that there is enough evidence in some areas for a systematic review to be conducted, there are other areas in which the evidence is too sparse. The rapid review methodology is appropriate to support the OfS in developing its new approach to access and participation, but the limitations of this approach must be acknowledged when using this report to develop the EORR. The formal constraints of the review are outlined in our inclusion/exclusion criteria, and further limitations have been identified throughout this report. It is important to particularly note that we have focused on evidence published in the last five years and which focused on education in an English context.

Focus on quantitative outcomes

As noted above, the bounds of the review were limited to make it achievable in the required timeframe. Therefore we focused on quantitative outcomes – that is, student attainment, behaviours and achievements which could be analysed via quantitative methods. This approach may attract criticism for privileging measurable outcomes and failing to focus on the causes of inequality and possible solutions. However, the review provides a foundational piece for further targeted research on the causes of the equality gaps identified, and supplements existing work which TASO continues to develop on how to improve access and outcomes in HE. The report is appropriate in its current form to inform the development of the EORR, but we recognise its limitations in supporting the sector to respond to the equality gaps which it identifies.

Evidence coverage

The evidence included in the review has necessarily been filtered by applying the inclusion criteria and constraints outlined above. As a result, we have identified some areas with more evidence than others, particularly when it comes to specific target groups of students. Although we completed targeted searches for a number of key access and participation target groups, evidence was sometimes patchy and rarely available across the full student lifecycle for every group. The relative richness of the review on different groups and at different points in the student lifecycle reflects the availability of literature to us. Although in some cases we relaxed our inclusion criteria to help build a more complete picture, there are some areas in which the evidence is simply lacking.

It is also worth reflecting that much of our evidence draws on analysis of similar (or overlapping) data sources, for example large scale administrative data or longitudinal surveys. This means that we should be slightly cautious about how we interpret the volume of evidence on these topics, as multiple research papers can draw on the same data. In this review we have made it clear when this is the case, and as much of the data is

administrative (and therefore authoritative and representative of the sample we are interested in) the risk to validity of our review is minimal.

Data availability on groups

As noted above, the sources used in his review largely draw on administrative datasets held by the government and associated agencies (for example, the National Pupil Database and HESA data). This means there is a clustering of findings which relate to categories of students who are easily and consistently identified within these datasets, such as FSM-eligibility.

Because it is often difficult to capture a full and nuanced picture of an individual's social background, quantitative data of the sort used in this review, like FSM-eligibility, is often used as a proxy for low SES. The advantage of the FSM-eligibility proxy is that it is widely used, well-understood and available in all major administrative education datasets. The consistent use of this measure across numerous reports means that we are able to compare apples with apples both across different pieces of analysis, and over time. However, FSM-eligibility is an imperfect proxy and faces a number of limitations. For example, as a binary indicator, it divides pupils into two groups which we can define as low SES and 'other', but this is a very crude way of describing SES and there are other issues with its use in this context (see Jerrim, 2020). In this review we have generally indicated the measures of SES used to compare students, and attempted to triangulate sources to get a broader picture of how SES affects outcomes. However, we are fundamentally limited by the measures used in the sources.

Another limitation relating to the evidence sources is that we are largely constrained by the availability (or lack of it) or markers in the data to track specific groups of students. While data on SES (in some form), ethnicity, gender and place are common in large scale administrative data, other data on whether a person is a key target group for access and participation activities is less commonly included. Some headway has been made on this issue, for example with UCAS collecting more and better data on care experience and disability, but the evidence gathered via this review certainly suffers from the historic lack of routine data collection which could be used to conduct more nuanced analyses on the outcomes of specific groups.

18. Conclusions

In this review we have presented recent evidence on equality gaps throughout the student lifecycle, from attainment at school through to labour market outcomes. We paint a picture which is heavily patterned by demographic characteristics, with large differences between outcomes for different groups.

The value of this review in addition to its analysis of administrative data is twofold. First, the published and grey literature sometimes use different data sources or 'cut' the data in different ways, for example by using different measures of SES or by identifying specific target groups for access and participation work. Our approach allows us to get a more detailed understanding of the raw gaps. Second, some of this evidence explores the intersection of different characteristics and tests whether taking into account differences between the groups can reduce some of the observed gaps.

Both perspectives are important. Raw gaps show us the stark ways in which demography can influence outcomes, while conditional gaps (those which still exist after we control for other factors) can help us understand why these gaps exist. For example, through this review, we have shown that earlier attainment has a substantial effect on inequality at several points later in the student lifecycle. This reflects the fact that, from an early age, attainment itself is heavily patterned by demographic characteristics and this pattern leaves an indelible mark on every stage in the journey we have explored.

By presenting the conditional gaps we do not seek to explain away the inequality which exists. The HE sector is not complacent about gaps which can be partly (or largely) accounted for by prior attainment, rather this sort of evidence should help them understand the nature of these gaps and potential solutions. Furthermore, our analysis here cannot explain why the gaps in prior attainment persist; this needs attention independently of their impact on HE outcomes. Given that inequality in attainment is a persistent policy issue, approaches are likely to include both 'upstream' working to improve attainment but also 'downstream' approaches to improving outcomes for groups regardless of grades.

Some other of the limitations to the evidence we found also arguably constitute risks to equality. For example, the ways in which people are grouped and labelled in large administrative datasets can be instrumental in guiding policy initiatives. If these groups are incorrect or too broad, specific groups of students who are most at risk may miss out on important intervention. For example, Brassington (2022) discusses the recent history of lobbying for the Census to include a category for 'Gypsy or Irish Traveller', and subsequently for the addition of 'Roma', to reflect the different profiles and needs of these groups. They further argue that even these categories still do not fully capture the diversity of the community they seek to relate to. Another obvious and recurring issue is the discrepancy between outcomes when we use broad compared to more granular ethnic categories. For example, we see differences between outcomes for Black African and Black Caribbean students throughout this report. Therefore there is a need for consistent and widespread use of more granular ethnic group categories where possible, to identify different student outcomes. The varied use of SES markers to identify 'disadvantaged' students can also mean the net is sometimes cast too wide, potentially diluting the effect of work to address the deepest inequalities.

In sum, some of the categories, groups and metrics which are commonly used in the sort of data we reviewed are not always ‘real’ in the sense that the true characteristic we are interested in is sometimes continuous (in the case of SES) or more complicated and multifaceted (in the case of ethnicity) than the data suggests. While we accept the limitations of the data and this method, while still finding great value in our approach, it is important that use of large scale data to monitor and close equalities is done with this in mind.

There are also real risks to equality in the way that access and participation policy plays out on the ground. Although beyond the scope of this review, it is clear that the issue of how we identify and track the outcomes of individuals is crucial in identifying and supporting those most in need. Therefore, there is a clear need for comprehensive and robust tracking systems for this purpose. The government linked administrative data sets offer a powerful tool to follow the student journey (from early years through to tax records) and the HESA data can provide information on the HE journey specifically. On the access side, we have a number of tracking tools which do provide us with some ability to monitor the support students receive but there are multiple different tracking tools and some variety in how HEPs use these tools. A more consistent approach, preferably led via a single tracking service, would ensure that students are not overlooked because data on their journey is not captured.

Although not the focus of this review, the landscape of access and participation interventions also represents a risk to equality. For example, the area in which a person grows up is likely to have a large impact on the type and amount of pre-entry interventions they encounter (see for example Davies, Donnelly & Sandoval Hernandez, 2021 who touch on the risk of a disproportionately high amount of outreach in urban areas, including London, where there is a high concentration of HEPs). On entry to HE, the student population is split into multiple cohorts all exposed to a different set of interventions which are offered in their local context – for example, the specific mental health or employability support at their university. As noted in our report on What Works for mental health, the way in which different HEPs use and act on mental health data provided via UCAS can vary substantially, and this could represent a risk to equality in a very real sense.

Thinking more globally, there are a number of policy-level risks to equality which are outside the control of HEPs. For example, the level of spending on education, how this changes over time and place, and school/qualification reform all present a shifting foundation for students entering the HE journey. And as we have described, there also exist broader contextual risks, such as the COVID-19 pandemic and cost of living crisis which act as a ‘shock’ to the whole education sector. We cannot quantify or predict the effect of similar risks which may occur in the future.

It is also important to note that the risks faced by students in relation to HE will evolve over time. When progress is made at one part of the student journey, it may unintentionally create more inequality elsewhere. As noted in Mateos-González & Wakeling (2022) there are various theories which outline how, in the context of education expansion, the advantage of higher SES is maintained and how, in the case of greater participation in HE overall, greater inequality at the next stage of education (i.e. postgraduate study) could act to rebalance things in favour of those from the most privileged backgrounds. This is just one example of how the education journey is a dynamic system. Addressing inequality requires a holistic approach to properly understand how gaps open up at different points and their causes. The EORR offers an opportunity to do exactly this, but it is crucial that HEPs take a whole

student-lifecycle approach to equality and do not cherry pick risks. Just as the EORR will evolve over time, the HE sector must be agile and persistent in tracking and tackling inequality.

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20. Annex A: Inclusion and exclusion criteria

Domain	Include	Exclude
Study design	<p>Descriptive quantitative studies which report on a difference in outcomes between groups of students</p> <p>Descriptive quantitative studies which explore the impact of broader contextual issues which may affect student outcomes</p>	<p>Impact evaluation which seeks to understand the effectiveness of interventions to close gaps in student outcomes</p> <p>Any other quantitative studies which are not descriptive in nature</p> <p>Qualitative studies</p>
Student groups	<p>Students in secondary/further education and undergraduates.</p> <p>The following groups:</p> <ul style="list-style-type: none"> Black, Asian and minority ethnic learners Care-experienced learners (and other learners with experience of social care) Carers Learners from deprived areas Disabled learners (not including mental health) Estranged learners Gypsy/Roma and Traveller of Irish Heritage learners Learners with a mental health difficulty Learners with a criminal record LGBTQ+ learners Local and commuter students Part-time/flexible students Refugees Socioeconomically disadvantaged learners (e.g. first generation HE, FSM-eligible, low participation neighbourhoods) Learners from military families 	<p>Postgraduate students</p> <p>International students</p> <p>Groups who are not disadvantaged or under-represented in HE</p>

Domain	Include	Exclude
	<p>Vocational learners, including BTEC students</p> <p>Intersectional groups (for example, White boys from socioeconomically disadvantaged backgrounds)</p> <p>Any other groups which are flagged as relevant through sector engagement which will take place at the same time as the review is undertaken</p>	
Outcomes	<p>Pre-entry to HE</p> <p>Pre-16 differences in attainment, subject choice, measurable gaps in aspirations/expectations/knowledge</p> <p>Post-16 differences in attainment, subject choice, measurable gaps in aspirations/expectations/knowledge and actual entry to HE</p> <p>Differences in wellbeing and mental health</p> <p>Post-entry to HE</p> <p>Differences in continuation rates</p> <p>Differences in on-course success and degree awarding outcomes</p> <p>Differences in wellbeing and mental health</p> <p>Differences in post-HE outcomes, including:</p> <p>Labour market outcomes</p> <p>Entry to postgraduate education</p> <p>Entry to specific careers (for example, Artificial Intelligence)</p>	Other outcomes not listed for inclusion
Geographical scope	<p>National/sector level analysis</p> <p>Analysis which is relevant to the national/sector level picture, albeit developed at a more local level (e.g. evidence which provides useful context).</p>	<p>Institutional analysis</p> <p>Analysis which has a highly local focus and is not relevant to the national/sector level</p>
Date	Published within the last five years; more recent evidence will be prioritised	Published more than five years ago

Domain	Include	Exclude
	Note: evidence published in the last five years is likely to relate to data which is older than this.	
Country	Relevant to English HE	Not relevant to English HE
Language	Published in English	Published in a language other than English
Type of document	Published research, grey literature	Books, theses

21. Annex B: Search terms

The tables below list the search strings used. Synonymous terms are grouped within parentheses and separated using 'OR'. Variants of words can be searched using wildcards, e.g., 'Outcome*' will include 'outcomes'. Because developing search strategies is an iterative process, the exact search terms were edited to fit the database used; where searches returned too few or too many results, we adjusted the search parameters to ensure a manageable number of sources were returned.

The search terms below relate to RQ 1: *How do the size and nature of the 'gaps' in student outcomes differ between groups and at different stages of the student lifecycle, in relation to English higher education?*

To address RQ 2, we identified where sources arising from these searches also relate to broad contextual risks, including:

- COVID pandemic
- cost of living crisis

We conducted further focused searches of sector/charity/research organisation websites for evidence to help understand the scope and scale of these latter risks.

RQ 1 – Pre entry searches

Focus area	Possible search term
Outcomes	"Attainment" OR "Achievement" OR "Aspiration*" OR "Expectation*" OR "Widening Participation" OR "Subject choice" OR "Qualification"
Lifecycle stage	AND "pupil"
Lifecycle stage *only for search on vocational learners*	AND "pupil" OR "student"
Relevant to English higher education	AND "England"
Type of study	AND "Quantitative analysis"
Different groups	Please see Annex A for a full list of the student groups included and a set of strings for each group, noting that some groups are only for inclusion in the post-entry searches, as indicated.

RQ1 – Post entry searches

Focus area	Possible search term
Outcomes	<p>“Access” OR “Participation”</p> <p>“Retention” OR “Attrition” OR “Completion”</p> <p>“Attainment” OR “Achievement” OR “Degree outcome”</p> <p>“Mental health” OR “Wellbeing”</p> <p>“Employ” OR “Graduate outcome”</p>
Lifecycle stage	AND “Higher education” AND “Undergraduate” AND “Student”
Relevant to English higher education	AND “England”
Type of study	AND “Quantitative analysis”
Different groups	Please see Annex A for a full list of the student groups included and a set of strings for each group, noting that some groups are only for inclusion in the post-entry searches, as indicated.

22. Glossary

Abbreviation	Full name
APS	Average Points Score
BAME	Black, Asian and Minority Ethnic
BTEC	Business Technology and Education Council
COSMO	COVID Social Mobility and Opportunities
DfE	Department for Education
DLHE	Destination of Leavers from Higher Education
EBacc	English Baccalaureate
EEF	Education Endowment Foundation
EHCP	Education Health and Care Plan
EORR	Equality of Opportunity Risk Register
ERIC	Education Resources Information Centre
FE	Further Education
FSM	Free School Meals
GRT	Gypsy, Roma, Traveller
GWHY	Go Higher West Yorkshire
HE	Higher Education
HEP	Higher Education Provider
HESA	Higher Education Statistics Agency
IAG	Information, Advice and Guidance
ILR	Individualised Learner Record
LEM	Law, Economics and Management
LSYPE	Longitudinal Study of Young People in England
LSYPE2	Longitudinal Study of Young People in England (second version)
MEM	Multiple Equality Measure
MSOA	Middle Layer Super Output Area
NPD	National Pupil Database
OfS	Office for Students
ONS	Office for National Statistics
RAE	Research Assessment Exercise

Abbreviation	Full name
RCT	Randomised Controlled Trials
RQ	Research Question
SAES	Student Academic Experiences Survey
SEN	Special Educational Needs
SES	Socio Economic Status
SLC	Student Loans Company
STEM	Science, Technology, Engineering and Mathematics
TASO	Transforming Access and Student Outcomes
UKHLS	United Kingdom Household Longitudinal Study
UUK	Universities UK