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To cite this article: Vikki Boliver , Stephen Gorard & Nadia Siddiqui (2021) Using contextual data to widen access to higher education, *Perspectives: Policy and Practice in Higher Education*, 25:1, 7-13, DOI: [10.1080/13603108.2019.1678076](https://doi.org/10.1080/13603108.2019.1678076)

To link to this article: <https://doi.org/10.1080/13603108.2019.1678076>



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Published online: 17 Oct 2019.



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## Using contextual data to widen access to higher education

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### ABSTRACT

This paper reports on the findings of an ESRC funded project that contributes to the evidence base underpinning contextualised approaches to undergraduate admissions in England. We show that the bolder use of reduced entry requirements for disadvantaged learners is necessary if ambitious new widening access targets set by the Office for Students (OfS) are to be achieved. We demonstrate empirically that academic entry requirements for disadvantaged learners can be reduced substantially without setting these students up to fail at university. We also show that the use of area level measures to identify contextually disadvantaged learners – including the OfS's preferred measure, POLAR – runs a high risk of failure to reach the intended beneficiaries of contextualised admissions policies. We argue strongly in favour of the use of administratively verified individual level metrics to identify contextually disadvantaged learners, most notably receipt of free school meals and low household income.

### KEYWORDS

Contextualised admissions; fairness; universities; free school meals

### Introduction

The Office for Students (OfS) has announced ambitious new widening access targets, which aim to eliminate the socioeconomic gap in access to higher-tariff<sup>1</sup> providers in England within one generation (OfS 2019a). The OfS envisages that higher-tariff HE providers will oversee a rapid reduction in the ratio of young entrants from areas with the highest and lowest rates of young participation in higher education (POLAR quintiles 5 and 1 respectively). They want to see this ratio decline from approximately 5:1 as currently, to 3:1 by 2024–25, and to 1:1 by 2038–39. These targets evidence an ambition to usher in a new era of rapid progress on widening access to higher-tariff universities in England, following a period of negligible change over the last two decades (Boliver 2015). Figure 1 shows statistical projections generated by the OfS (2018). These make clear that a substantial and sustained increase in the rate at which those from lower HE participation neighbourhoods enter higher-tariff providers will be required, whereas the rate of entry to higher-tariff providers for those from high HE participation areas is to remain about the same. What is less clear is how this convergence of entry rates can be achieved.

### The necessity of a contextualised approach to higher education admissions

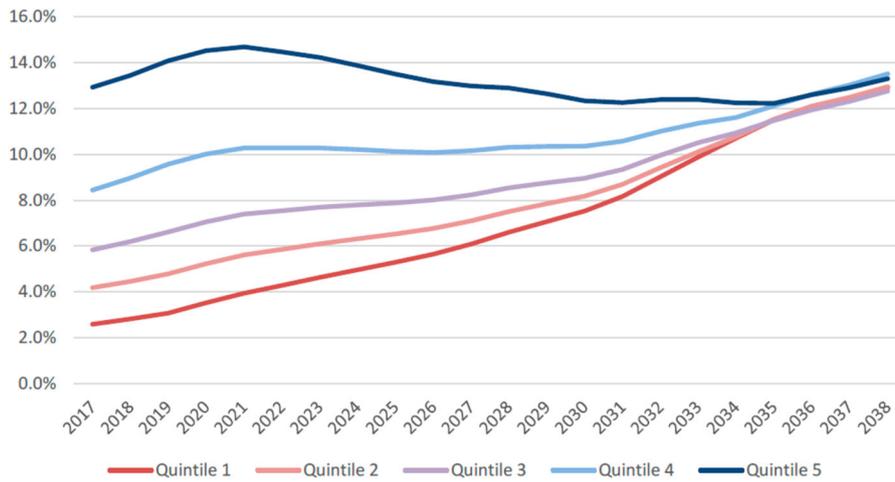
A major barrier to achieving the widening access targets set by OfS is that young people from less advantaged backgrounds are substantially less likely than their more advantaged peers to achieve the high

academic entry requirements stipulated by higher-tariff providers. This is evident from our analysis of the National Pupil Database (NPD) for the cohort of state and private school pupils in England who were aged 15/16 in 2005/6.<sup>2</sup> Figure 2 reports the distribution of attainment at Key Stage 5 (A-level and equivalent) for this cohort, including those who achieved no Key Stage 5 qualifications at all (around 45%).<sup>3</sup> While thirteen percent of privately educated pupils went on to achieve Key Stage 5 scores that placed them within the top decile of the attainment distribution nationally (roughly equivalent to AAB at A-level)<sup>4</sup>, this was the case for just two percent of state educated pupils who had been in receipt of free school meals (FSM) at age 15 (Boliver, Gorard, and Siddiqui 2017a). Consequently, higher-tariff providers will need to set academic entry requirements much lower for socioeconomically disadvantaged learners if they are to achieve the targets set by OfS. For example, if higher-tariff providers in England were to admit the highest-performing ten percent of FSM-eligible pupils from state schools<sup>5</sup>, this would mean admitting all state educated FSM-eligible pupils with Key Stage 5 qualifications falling anywhere within the upper half of the distribution nationally (roughly equivalent to BCC and above at A-level). Similarly, if medium-tariff providers were to admit the next highest-performing ten percent of pupils from each group (private, state, FSM-eligible), this would mean admitting state educated FSM pupils with Key Stage 5 scores in the 3rd decile and above (approximately DDD and above at A-level).

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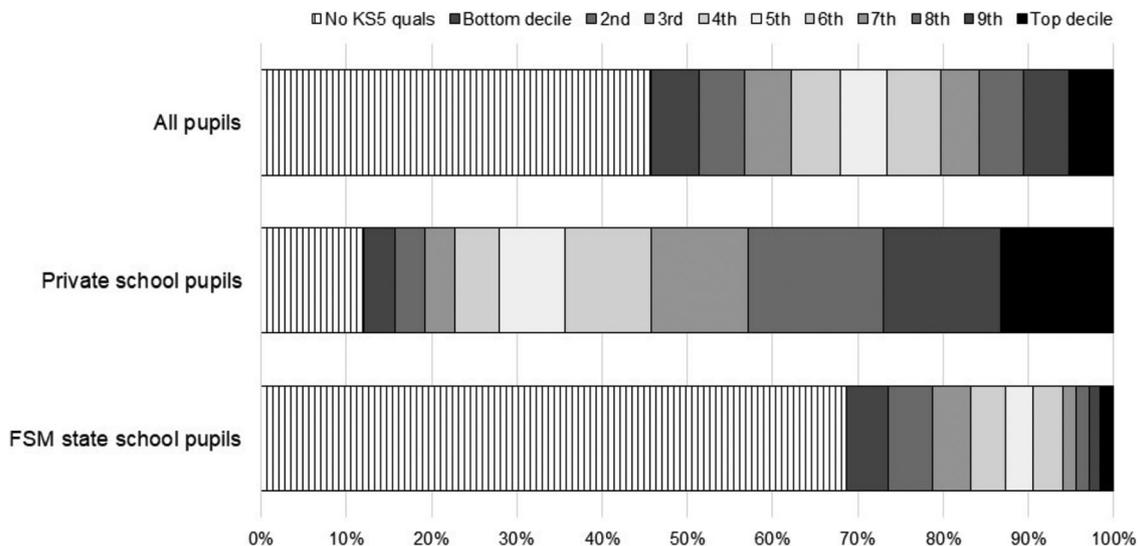
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**Figure 1.** Projected rates of entry to higher-tariff providers in England for UK-domiciled 18 and 19 year olds from areas with the highest (quintile 5) and lowest (quintile 1) rates of young participation in higher education.

This evidence clearly indicates that a contextualised approach to admissions, involving the reduction of academic entry requirements for disadvantaged learners, is arithmetically necessary in order to achieve wider access to higher education for disadvantaged students (unless or until these patterns of attainment change). Moreover, a contextualised approach to admissions represents a crucial means of achieving *fairer* as well as wider access. As articulated in the Schwartz Report some fifteen years ago, a contextualised approach to university admissions recognises that ‘equal examination grades do not necessarily represent equal potential’ and that ‘it is fair and appropriate to consider contextual factors as well as formal educational achievement, given the variation in learners’ opportunities and circumstances’ (Schwartz 2004, 5, 6). More recently, the Scottish Government’s Commission on Widening Access (CoWA) has advocated the use of reduced entry requirements for contextually disadvantaged learners

in recognition that ‘the school attainment of disadvantaged learners often does not reflect their full potential’ (CoWA 2016, 10). Research commissioned by the Scottish Funding Council has demonstrated that academic entry requirements can be reduced in the Scottish context without setting students up to fail (Boliver et al. 2017; Boliver 2019). The Scottish Government has since mandated all Scottish universities to put in place separate minimum entry requirements for contextually disadvantaged applicants. These minimum entry requirements are widely understood to be a key means of meeting the Scottish Government’s vision that ‘a child born today in one of our most deprived communities should have no lesser chance of entering higher education than a child born in one of our least deprived’ (Scottish Government 2014, 4). Although English HEIs have not been mandated to reduce entry requirements for disadvantaged learners, the OfS has strongly advocated ‘rethinking how merit is judged



**Figure 2.** Distribution of key stage 5 (A-level and equivalent) achievement for pupils from socioeconomically advantaged and disadvantaged backgrounds.

in admissions' as a vital means of achieving fairer access (OfS 2019b, 8).

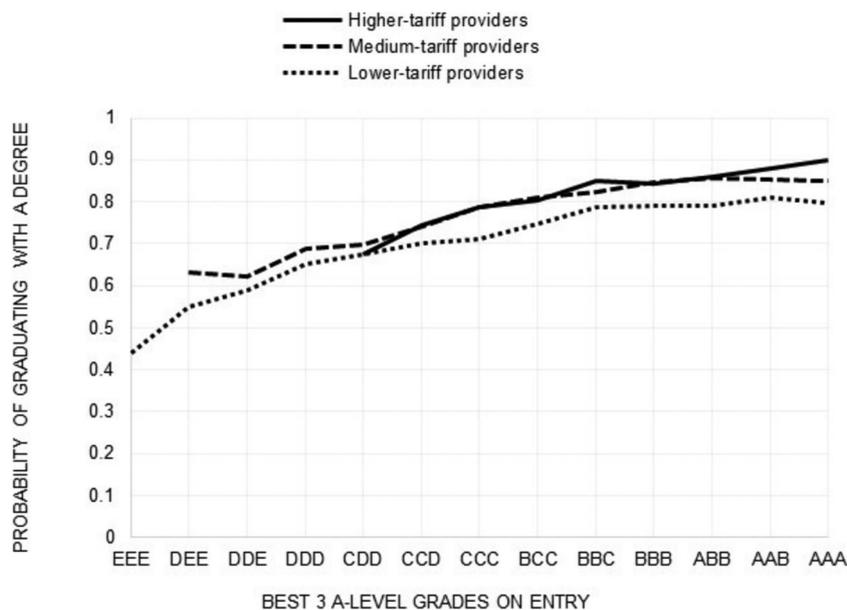
### Reducing academic entry requirements for contextually disadvantaged learners

In England, there is a growing appetite for contextualised admissions among higher education providers (Fair Education Alliance 2018; Mountford-Zimdars, Moore, and Higham 2019) and some institutions are also already reducing entry requirements for contextually disadvantaged learners. But this practice is not yet widespread, and most reductions are very modest, in the order of just one or two grades (Boliver et al. 2017). A major source of hesitation comes from the concern that admitting learners with prior attainment levels that are lower than is currently standard risks setting students up to fail (Boliver, Powell, and Moreira 2018). On the contrary, evidence to date indicates that it is possible to reduce entry requirements significantly for contextually disadvantaged learners without jeopardising their chances of succeeding at degree level.

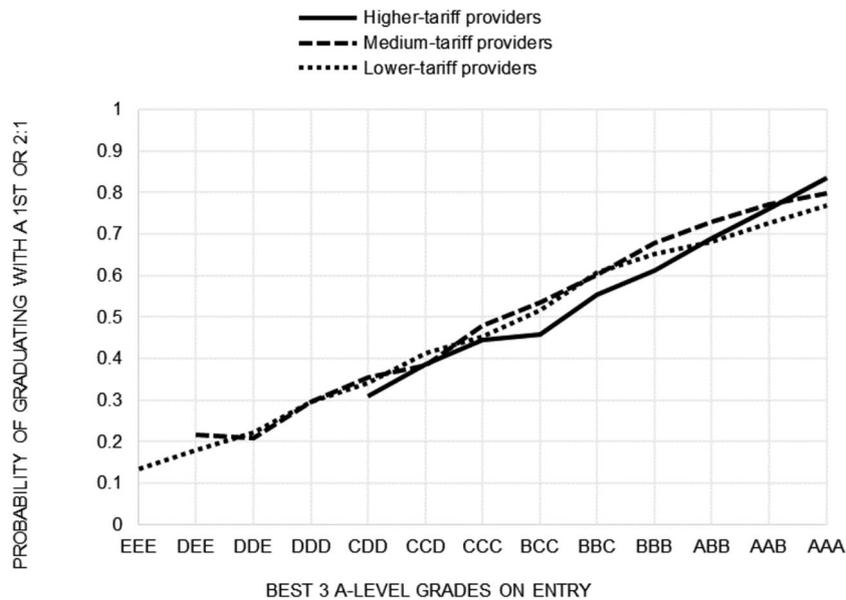
Figure 3 reports the statistical relationship between best three A-level grades on entry to a three-year full-time degree programme at a higher-tariff, medium-tariff or lower-tariff HE provider in England, and the probability of successfully graduating with a bachelor's degree, rather than non-completion for whatever reason.<sup>6</sup> What is immediately clear is that the probability of achieving a degree does not vary widely depending on grades on entry, and success rates do not decline sharply at any point along the range of entry grades. More specifically, while students entering higher-tariff providers with AAB at A-level had an 88

percent chance of graduating three years later with a bachelor's degree, the probability for those entering with BCC was not that much lower at 80 percent (see also Boliver, Gorard, and Siddiqui 2017b). And while applicants entering medium-tariff universities with BBB at A-level had an 85 percent chance of achieving a bachelor's degree, the corresponding probability for those entering with DDD at A-level was noticeably lower, but still reasonably high, at 69 percent (and remains higher than 50% even at EEE). The general pattern is similar for those entering lower-tariff providers. These findings suggest that entrants to higher education with grades lower than is standard at more academically selective institutions are much more likely than not to succeed in achieving a degree.

Figure 4 reports the results of a similar analysis but this time takes as the marker of a successful outcome graduation with a first class or upper second class degree, rather than graduation with a lower degree classification or non-completion for whatever reason, three years after entry to a three year full-time degree programme. This relationship is stronger than the one shown previously in Figure 3 (i.e. there is a steeper gradient) but is again similar for higher-, medium- and lower-tariff providers. While students entering higher-tariff providers with AAB at A-level have a 76 percent chance of graduating with a first or upper second class degree, the figure for those entering with BCC is rather lower at 46 percent. Likewise, while applicants entering medium-tariff universities with BBB at A-level have a 68 percent chance of achieving a first or upper second class degree, the corresponding figure for those entering with DDD at A-level is significantly lower at 30 percent. This evidence suggests that higher education providers will need to



**Figure 3.** Statistical relationship between best three A-level grades on entry to higher education and probability of graduating with a bachelor's degree rather than non-completion, three years after entry.



**Figure 4.** Statistical relationship between best three A-level grades on entry to higher education and probability of graduating with a first or upper-second class bachelor's degree rather than a lower degree classification or non-completion, three years after entry.

ensure that contextually admitted learners are well supported at university if they are to graduate not only with a degree but also with a first class or upper-second class award.

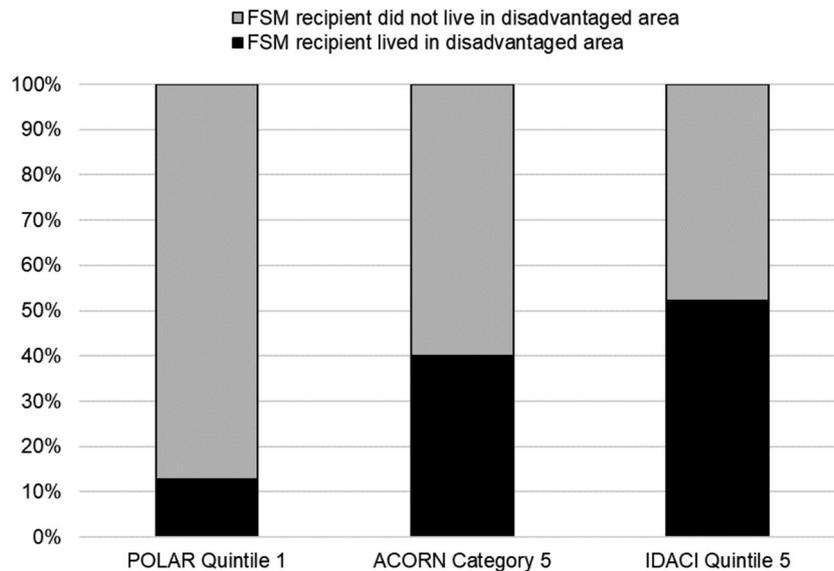
Of course, the higher the chances of successful degree completion the better, but the precise probability of success already varies between individuals, courses and providers. Critically, non-zero chances of success, and especially chances of success above fifty percent, indicate that there is *potential* for successful study at degree-level for contextually admitted students, at least under certain conditions. The chances of success for those with lower than standard grades on entry are likely to improve as more contextually admitted students appear in universities, and in response to greater institutional investment in supporting their progression. There is already a valuable research literature in this area (e.g. Thomas 2011; Howieson and Minty 2019), and evaluation research centres such as the *Durham Evidence Centre for Education* and the newly created *OfS Evidence and Impact Exchange* will be important sources of evidence on the most effective learning and teaching practices and interventions.<sup>7</sup>

### Identifying contextually disadvantaged learners

Contextualised admissions practices can only be effective if the indicators used to identify contextually disadvantaged learners are both valid and reliable. The OfS guidance advocates the use of the area-level measure POLAR4, with scope for supplementary use of other measures such as the area-level Index of Multiple Deprivation (OfS 2019a, 25). Postcode-based area-level measures such as these tend to be reasonably

reliable in that they are easy to apply in a consistent manner. However, such measures are usually not valid as indicators of the circumstances of individuals. Indeed, the use of area-level measures to identify contextually disadvantaged individuals carries a high risk of error due to what is known as the ecological fallacy; the average characteristics of individuals living in a given area do not necessarily reflect the characteristics of specific individuals (Boliver, Gorard, and Siddiqui 2015; Harrison and McCaig 2015; Fisher and Begbie 2019; Gorard et al. 2019). One risk of error is that an area-level measure such as POLAR may yield some, and possibly many, *false negatives*: individuals identified as not disadvantaged because they do not live in disadvantaged areas who are in fact disadvantaged. A second risk is that of *false positives*: individuals identified as disadvantaged because they live in an area where disadvantage is common but who are not themselves disadvantaged.

Figure 5 illustrates the risk of false negatives by focusing on those HE-goers who were in receipt of free school meals at age 15 – an objectively disadvantaged group of individuals – and examining what percentages lived within and outside of disadvantaged areas as indicated by home postcode corresponding to POLAR Quintile 1, ACORN Category 5, or IDACI Quintile 5 postcode. Just thirteen percent of HE entrants who had been in receipt of free school meals at age 15 lived within a disadvantaged area as indicated by a POLAR Quintile 1 postcode.<sup>8</sup> ACORN Category 5 and IDACI Quintile 5 postcodes capture more HE entrants who had received free school meals at age 15, at forty and fifty-two percent respectively, but it is still the case that very large proportions of free school meal recipients lived outside of these most-deprived areas. Clearly using area-level measures to

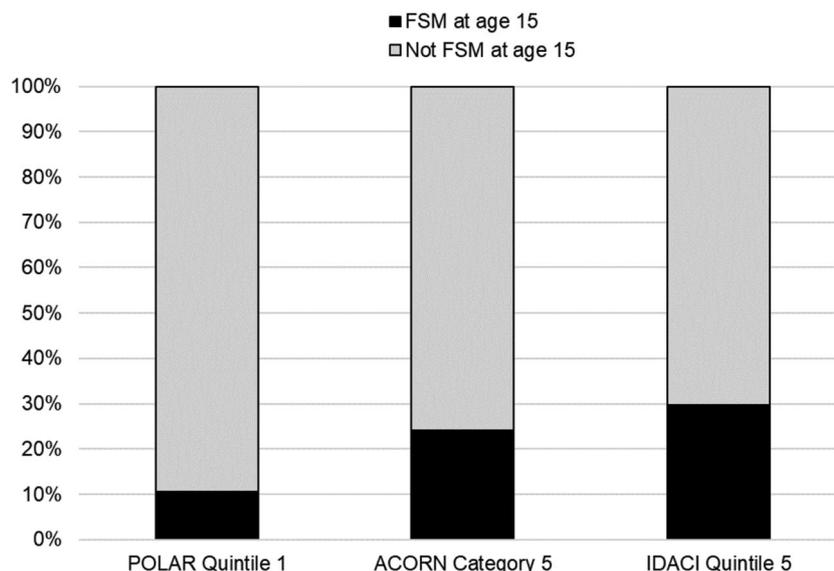


**Figure 5.** Percentage of HE entrants in receipt of free school meals at age 15 who lived in a disadvantaged area (true positives) and who did not live in a disadvantaged area (false negatives).

identify contextually disadvantaged individuals runs a very high risk of false negatives. This is the case regardless of the level of aggregation (Gorard 2018). School-level indicators tend to be similarly problematic (Gorard, Siddiqui, and Boliver 2017).

Figure 6 illustrates the risk of false positives by showing the percentages of higher education entrants coming from disadvantaged areas who were and who were not in receipt of free school meals at age 15.<sup>9</sup> Of those coming from POLAR Quintile 1 postcodes, just 10% were free school meal recipients at age 15 whereas the remaining 90% were not. Some of that 90% will be genuinely disadvantaged individuals, including those from families entitled in principle but not registered for free school meals, and those ineligible for free school meals but living in lower income

households. But we can expect at least some, and possibly many, of that remaining 90% to be advantaged individuals who just happen to live in areas characterised by low rates of participation in higher education. The ACORN Category 5 and IDACI Quintile 5 indicators appear to perform better than POLAR Quintile 1, but as area-level measures they too inevitably produce an unknown and potentially very high rate of false positives. Offering contextualised admissions to individuals living in disadvantaged areas but not known to be personally disadvantaged, and rendering ineligible for contextualised admission individuals who are known to be disadvantaged but just happen to live outside of disadvantaged areas, is likely to be ineffective at widening participation and may even be counterproductive.



**Figure 6.** Percentage of HE entrants living in a disadvantaged area who received free school meals (true positives) and who did not receive free school meals (possible false positives) at age 15.

## Key recommendations for good practice

In summary, it is clear that meeting OfS targets for near-equal representation of socio-economic groups in the most selective tiers of higher education by 2038 will require the use of bold contextualised admissions practices, involving substantial reductions in academic entry requirements for contextually disadvantaged learners. The potential risks involved in reducing entry requirements are a modest reduction in rates of degree completion and a more substantial reduction in rates of higher degree classifications awarded, but both of these risks can be ameliorated by providing better support for contextually disadvantaged learners.

Our key recommendations for higher education providers are threefold. First, we recommend the setting of separate minimum entry requirements for contextually disadvantaged learners. The evidence suggests that these could be as low as BCC for contextually disadvantaged learners entering higher-tariff universities, without inevitably setting such students up to fail. Second, we emphasise the need for universities to do more to support contextually disadvantaged learners to fulfil their potential, drawing on research and evaluation studies identifying the most effective learning and teaching practices and interventions. Third, we strongly encourage that universities avoid using area-level measures such as POLAR to determine who is and who is not contextually disadvantaged. The most valid and reliable indicators to use are officially verifiable individual-level measures of contextual disadvantage, such as free school meal status as confirmed by the applicant's school, or lower household income as verified by DWP or HMRC records.

## Notes

1. UCAS distinguishes in its annual statistical reports between higher-tariff, medium-tariff and lower-tariff providers, see UCAS (2018) End of Cycle Report, Ch 2, 11, for further information. Available online at: <https://wwwucas.com/file/196146/download?token=VGsWCAzp>. Higher-tariff providers represent approximately the top third most academically selective universities.
2. The evidence presented in Figures 2–6 are based on the authors' analysis of the National Pupil Database for all pupils in English secondary schools aged 15/16 in 2005/6 ( $N=663,839$ ), linked to data from the Higher Education Statistics agency for the subset who entered a UK higher education institution in 2008/9 or 2009/10 ( $N=239,860$ ). This data is necessarily 'historic', to enable individuals to be followed longitudinally through to degree completion where applicable. There is no reason to believe that the basic patterns of Key Stage 5 attainment reported here are notably different to those for more recent cohorts.
3. Source: Authors' analysis of longitudinal National Pupil Database data for those in key stage 4 (GCSE year) in

English schools in 2005/06 and key stage 5 (A-level and equivalent qualifications) in 2007/08 (if applicable).

4. Authors' calculations based on the median value of the best three A-level grades achieved by the sub-set of individuals in the NPD who had entered higher education by age 19/20. Note that this cohort would have taken A-level examinations in the years prior to the 2010 introduction of the A\* grade.
5. These scenarios reflect the fact that, among those aged 15/16 attending schools in England in 2005/6, around ten percent had entered one of England's higher-tariff higher education providers by age 19/20, around eleven percent had entered a medium-tariff provider, and around fourteen percent had entered a lower-tariff provider.
6. Source for Figures 3 and 4: Authors' analysis of HESA data for entrants to year 1 of a full-time 3-year first-degree programme at an English higher education provider in 2008/09 or 2009/10. Analysis controls for degree subject area studied & specific higher education provider attended. Note that this cohort would have taken A-level examinations in the years prior to the 2010 introduction of the A\* grade. Reasons for non-completion cannot be readily identified using HESA data but include adverse personal circumstances of various kinds, dissatisfaction with choice of course or provider, and poor academic performance.
7. Further information available online at: <https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/evaluation-and-effective-practice/evidence-and-impact-exchange/>
8. If we focus on all young people, not just HE entrants, the percentage of free school meal recipients who live in POLAR quintile 1 neighbourhoods rises to a little over thirty percent (Smart 2019). It is still the case, therefore, that the vast majority of free school meal recipients live outside of low participation neighbourhoods.
9. Source for Figures 5 and 6: Authors' analysis of data for the sub-set of pupils attending English secondary schools aged 15/16 in 2005/6 who subsequently entered a UK higher education institution in 2008/9 or 2009/10. This analysis focuses only on those who attended state schools.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

This research was funded by the Economic and Social Research Council (grant numbers ES/N01166X/1 and ES/N012046/1).

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