'First in the family' university graduates in England

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Abstract

This paper explores the characteristics of a recent generation of 'First in the family' (FiF) to complete a university degree individuals in England using a nationally representative dataset, Next Steps (formerly the Longitudinal study of Young People in England, LSYPE) to provide the first comprehensive, descriptive statistics on this group. We identify the proportion of FiF young people at age 25 as compared to their peers who either match their parents' education level (either with degree or without degree) or are downwardly mobile, meaning their parent(s) has a university degree, but they do not. Our results show that that 16 per cent of young people aged 25 in 2015 in England are FiF, comprising nearly half of all university graduates of this cohort. We find that girls are more likely than boys to be FiF, as are young people of Indian and Black Caribbean origin, in line with current and historical trends in HE participation. FiF students are less likely to study at elite institutions, but no more likely to drop out, once we control for their previous attainment. We also find that FiF students have greater odds of studying for a Law, Economics and Management degree rather than the 'harder' subjects of Science, Technology, Engineering and Maths (STEM) subjects. Our analysis indicates that being FiF is moderately predictive of other forms of disadvantage, but is still capturing some additional, separate form of disadvantage beyond traditional 'Widening Participation' indicators. This has important implications for universities that use FiF as a Widening Participation indicator (e.g. 15 of the 24 Russell Group universities).

Keywords: higher education, socio-economic gaps, drop-out, contextual admissions

JEL Classification Codes: I23, I24, J24

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Introduction

The policy discussion about 'widening participation' in UK higher education (HE) has expanded beyond traditional socioeconomic gaps, e.g. Free School Meal status or growing up in a poor neighbourhood, (Bowen et al., 2009; Chowdry et al., 2012; Boliver, 2013) to focus on 'first in the family' to achieve a degree as a specific form of disadvantage. First in family (FiF) refers to students who attend university and achieve a degree but whose mother or father (or step mother or father) did not.

'Widening participation' has increasingly become a focus of the UK educational policy agenda since Tony Blair announced the target to get 50 per cent of young people into higher education at the Labour Party conference in 1999. The government further affirmed this intention in the 2003 White Paper, 'The Future of Higher Education', in which they stated their aim to see 'all HEIs (higher education institutions) excelling in teaching and reaching out to low participation groups' (DfE, 2003: 22). This intention was put into action in 2004, with the creation of the Office for Fair Access to widen participation and access and to manage bursaries (David, 2012). Thereafter in 2005, the Higher Education Funding Council for England (HEFCE) and the Economic and Social Research Council (ESRC) commissioned research projects to examine the reach of widening participation in HE and the best ways to lead to fair access for all (Gorard et al., 2006, 2007; Wakeling and Kyriacou, 2010).

To the best of our knowledge, none of this research has explicitly examined FiF students, although universities (e.g. 15 of the 24 Russell Group universities) use FiF as an explicit characteristic in order to widen participation. The Widening Participation agenda focuses on increasing access and participation from disadvantaged and vulnerable groups, such as those from low income families, those who are eligible for Free School Meals (FSM), those from a low class background, first in family students, young carers and those who have been in care, those with disabilities or special education needs, and those from minority ethnic backgrounds, all of whom traditionally had limited participation in HE in the UK. Over time, the Widening Participation agenda has increasing became a metric on which to judge universities' success beyond traditional league tables (Sundorph, Vasilev, and Coiffait, 2017).

While FiF students have captured popular interest,[3] there is no research on the UK examining who these students are or what type of disadvantage this measure actually captures.[4] There are several channels through which the disadvantage of being FiF could run. FiF students may come from poorer families with fewer resources to spend on their education, be less informed about university or have fewer role models than their peers whose parents have a degree; however, no robust evidence exists on their characteristics and how they differ from their peers who are not FiF. This paper aims to address these gaps to inform this important policy debate, we will address the following research questions: What proportion of young people who are FiF achieve a degree, relative to their peers?; What are the individual and social characteristics of those who are FiF to achieve a degree?; How does the institution type, subject

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[3] The BBC profiled students who were the first in their family to attend university at the beginning of the academic year 2017/18 as a specific form of disadvantage (Coughlan, 2017).
[4] See Appendix A for an overview of the Widening Participation policies at the 24 Russell Group institutions and the inclusion of FiF as an indicator.

studied and dropout rate differ by FiF status?; and how correlated are the socio-demographic characterises of the widening participation agenda?

This paper explores the characteristics of a recent generation of FiF students in England using a nationally representative dataset, Next Steps (formerly the Longitudinal study of Young People in England, LSYPE) to provide the first comprehensive, descriptive statistics on this group of young people. We begin by quantifying the proportion of FiF young people at age 25 as compared to their peers who either match their parents' education level (either with degree or without degree) or are downwardly mobile, meaning their parent(s) has a university degree, but they do not. We find that 16 per cent of young people aged 25 in 2015 in England are FiF, comprising nearly half of all university graduates of this cohort. We believe this statistic alone highlights the need for further research into this group of young people.

We then examine how FiF students differ from their peers to identify which background characteristics may determine group association. We focus our attention on demographic characteristics, such as gender and ethnicity, but also socio-economic background factors and prior ability. We find that girls are more likely than boys to be FiF as are young people of Indian and Black Caribbean origin, in line with current and historical trends in HE participation.

For the young people who attend university, we compare dropout rates between students who are the first in their family to attend university and those who are not since Widening Participation is ultimately not only about getting disadvantaged pupils in the door, but also making sure they receive a degree. We explore whether these dropout rates differ across institution type (e.g. Russell Group vs. non-Russell Group) and find that FiF pupils comprise a larger percentage of total dropouts at less selective institutions, but a smaller proportion of total dropouts at elite institutions. This provides some preliminary evidence that those FiF students who attend elite universities may be better prepared for the challenges of university study as compared to their FiF peers at less selective institutions. We identify the higher dropout rate of FiF students at less selective institutions as a challenge to their Widening Participation agendas.

We then ask how well the measure of FiF corresponds to other Widening Participation markers of disadvantage. While one in five young people in our sample faces no form of socio-economic disadvantage used in Widening Participation campaigns, we find that over half of the sample faces at least two kinds of disadvantage. For young people from households where neither parent has a degree, they have a higher probability of growing up in poverty or a low social class household and being eligible for free school meals. This preliminary analysis indicates that being FiF is moderately predictive of other forms of disadvantage, but is still capturing some additional, separate form of disadvantage beyond economic disadvantage.

This research is the first to explore the FiF indicator and FiF pupils in England using large scale, nationally representative data and will hopefully inform the Widening Participation agenda of universities across the UK.

Related Literature

'First in family' can be seen as a measure of disadvantage, which may be manifest in terms of impeded aspirations and expectations, lack of understanding of the opportunities or lower ability, but it may also be considered as a signal for upward social mobility. Understanding this 'disadvantaged' group relative to other social disadvantages including income, disability, and status disadvantage is important, and something that this paper will address, but we also aim to understand this group of young people in order to identify what sets them apart from equally able young people who choose not to pursue a higher education degree.

Surprisingly, there has been no large-scale research on first in family students in the UK[5]; however, research in the US and Australia has shown that 'first in the family' or 'first-generation' students are less likely than their peers with university educated parents to apply to college, and ultimately enrol (Engle, 2007; Toutkoushian, Stollberg, and Slaton, 2015; O'Shea et al., 2017). Moreover, in the US there is evidence that first generation students are less-well prepared for HE study. They tend to have lower high school GPAs and SAT scores (Riehl, 1994) and tend to go to college later (Fallon, 1997) and choose to study in less selective institutions (MacDermott, Conn & Owen, 1987).

There is, however, a large literature on socioeconomic gaps in access to higher education in the UK (e.g. Blanden and Machin, 2004), which is related to the issue of FiF. We know that parental education has a substantial impact on educational levels of their children in the UK (for example, Gorard et al. 1998; Thayer, 2000; Tramonte and Willms, 2009; Wilks and Wilson, 2012) and that pupils from lower SES backgrounds in England are less likely to aspire to attend university and have concrete plans backing up these aspirations (Jerrim and Shure, 2016). Pupils from disadvantaged backgrounds in the UK are also less likely to apply to high-status universities, than those from a private school background or with parents from higher professional or managerial occupations (Boliver, 2013). And even if they do decide to apply to a Russell Group university those from lower socio-economic backgrounds are less likely to be accepted (Boliver, 2013; Jerrim, 2013). Interestingly the findings hold even when taking into account A Level results, this suggests that part of the reason we see lower participation in study at high-status universities is not completely driven by prior attainment, instead is based on the decisions that students make and the increased rates of rejection by university. This is partly confirmed by some research by Anders (2012) who finds that the differences in rate of entry to university by socio-economic status is driven by applications to university rather than the decisions that universities make about acceptance/rejection. That is, the young people are not selecting university as a viable horizon and are therefore discounting themselves from the process. In addition, we see that even if these young people from lower socio-economic backgrounds make it to university, and are less likely to end up in high status occupations (Macmillan, Tyler, and Vignoles, 2014).

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[5] There is one paper from the UK which examines the biographical histories of 129 'first generation' undergraduates to learn more about their experience at university and finds that friendships were a major factor in determining their success (Stuart, 2006).

There is some evidence that pupils from lower socioeconomic backgrounds in the UK lack information about the returns to education (McGuigan, McNally, and Wyness, 2016). This mechanism may be especially salient for FiF students since they lack role models who have completed HE and have this information and may lead them to select lower ranked institutions and to study less prestigious subjects or subjects with a smaller economic return. This is problematic given that HE plays a fundamental role in improving later labour market and life outcomes and social mobility. University graduates on average earn more money, spend less time in unemployment, and even live longer than their non-university educated peers (Oreopoulos and Petronijevic, 2013), making the FiF indicator an important issue to explore from a socioeconomic inequality perspective (Gregg, Macmillan, & Vittori, 2016).

There is an assumption that universities should be doing more to ensure widening participation and encouraging a diverse student body especially in the context of the changing costs of higher education. Recent changes to the higher education fee structures in the UK have raised concerns about whether the rising costs of going to university have reduced the number of young people applying to and attending university, especially those from poorer backgrounds. The evidence presented in Crawford et al. (2017) suggests that this hasn't been borne out in the data. For example Crawford et al. (2017) find a that when they use free school meal (FSM) eligibility as an indicator of low family income, there is an increased number in university entry for both those who are eligible for FSM and those who are not and the difference between the groups remained stable. This suggests that differences in university attendance by family background differences cannot be fully explained by changes in the free structure.

Widening Participation is commonly used to refer to the expansion of access to HE. In the UK, it was developed into a key policy area by New Labour's goal to have 50% of all 18-30 year olds in HE by 2010. Increasingly universities (e.g. University of Manchester, University of Nottingham, see Appendix A for further information) are using FiF as an explicit characteristic in order to widen participation, yet there is no work examining what type of disadvantage this measure actually captures. We will focus our analysis on a new generation of young adults using Next Steps who turned 25 in 2015 to address the following research questions:

1. What proportion of young people who are FiF achieve a degree, relative to their peers?
2. What are the individual and social characteristics of those who are FiF to achieve a degree?
3. How does the institution type, subject studied and dropout rate differ by FiF status?
4. And how correlated are the socio-demographic characterises of the Widening Participation agenda?

Data and methods

We use Next Steps (formerly the Longitudinal Study of Young People in England) which follows a cohort of children born in 1989/1990, and comprises eight waves of data until age 25. This cohort of young people can be linked with the National Pupil Database (NPD) which provides a census of pupils attending schools in England, allowing us to access their school exam results.

Next Steps began in 2004 when the sample members were aged between 13 and 14. The timing of this cohort means that the young people were affected by New Labour education policy, which promoted diversity and flexibility in the 14-16 curriculum and introduced tuition fees in higher education. In 2006/07 the university fees were introduced in England and Northern Ireland, and despite universities being allowed to choose their fee amount, almost all UK institutions chose to charge the full £3,000 per annum fee (Wyness, 2010). In addition to this policy change the Next Steps cohort also faced some administrative changes in loan and grant entitlement, which ultimately didn't result in an overall change to access to finances, rather changes in application, see Wyness (2010) for additional information. It is worth noting that most students do not have to pay their fees in advance of study and they can take out a government endorsed student loan for the full value of the fees and a contribution to the costs of living. These are 'income-contingent' student loans which mean that graduates only start to repay the loans when they are earning over a certain income threshold, which reduces some of the risk involved in higher education study. Respondents of the Next Steps study were selected to be representative of young people in England using a stratified random sample, with disproportionate sampling for deprived schools. Schools were the primary sampling units, then pupils within schools. The two-stage sampling design that Next Steps uses presents a possible clustering effect due to between-school differences; therefore, all models are adjusted for school clusters and the appropriate weights.

Our main outcome of interest is whether the young person is the first in family to achieve a degree. That is, neither the young person's mother or father (or resident step parents) had achieved a degree by the time the young person was aged 17. It is important to delineate a cut off because increasingly adults return to university to study for a degree, but the processes of socialisation we are interested in unpacking are likely to have been influential during the formative years of the young person's life. We choose age 17 because it is the age at which most of the young people in our sample are making the decision about applying to university. Our focus is on intergenerational educational mobility as we are unable to look at whether a sibling attended university due to data constraints. This also corresponds with the Widening Participation indicator, which only asks whether or not an individual's (step) parents achieved a degree.

We make use of the first four waves of Next Steps to capture the main independent variables: parental social class measured by taking the highest class category mentioned from age 13-16 ,[6] equivalised permanent income,[7] housing tenure measured by taking the highest tenure reported at age 13 and 14, ethnicity, gender, if the young person ever reported any special educational needs (SEN) from age 13 to 16, capped linear GCSE scores (Key Stage 4) and school type attended at age 13. We also include a binary

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[6] Social class is measured using the National Statistics Socio Economic Classification (NS-SEC) which uses occupational types to capture dimensions of social class (Rose and Pevalin, 2001). We make use of the three-category NS-SEC, which consists of: Higher Managerial, administrative and professional occupations; Intermediate occupations; Routine and manual occupations. More details can be found at http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html#5.

[7] We take an average of the household income over the first four waves and divide by the square root of household size to provide a measure of equivalised permanent income. This has been shown to have a larger effect on young people's educational outcomes than transitory income (Jenkins and Schluter, 2002).

measure about whether the young person studied for A Levels, the traditional post-16 study route to university. We could include actual A Level results, but doing so reduces the sample size by one-fifth as many students take vocational routes to university also actual A Level results has the same effect of including prior attainment[8] in the model. By controlling for prior attainment and these other background characteristics we are able to isolate the predictors of first in family. Observations are included in the analytic models when the dependent variable response have no missing data. However, some independent variables also suffer from item non-response. In order to avoid dropping cases with missing or unknown information on background variables we take the first available response mentioned for parental class, parental education and household tenure over the first four waves. The main advantages of this approach are avoiding the loss of statistical power due to reduced N and reducing bias.

We also make use of the new Next Steps age 25 data, which follows up sample members as they develop into young adults with a particular focus on highest level of educational qualification achieved and characteristics of the university at which they studied (if relevant). These exclusions result in an analytical sample of 4,795 young people.

We acknowledge that our modelling strategy is vulnerable to omitted variable bias, since our independent variables of interest, such as parental socioeconomic status, are likely to be correlated with many individual- and school-level factors affecting educational attainment. We try to minimise this issue through use of the rich background data (including prior attainment measures) available in Next Steps. Nevertheless, we do not view our results as truly causal, but rather capturing conditional relationships between background and educational attainment. In addition, we account for the fact that observations are not truly independent from others attending the same school by calculating cluster-robust standard errors at school-level to conduct appropriate statistical inference.

Results

1. *What proportion of young people who are FiF achieve a degree, relative to their peers?*

We begin by quantifying the proportion of young people in England who are FiF. Table 1 shows the proportion of young people who achieve a degree versus not, with reference to parental education levels. The results show that 32.3 per cent of the sample achieve a degree by age 25. More specifically we see that 15.9 per cent are the first in in their family to achieve a degree while 16.4 per cent are not the first in their family to achieve a degree.[9] These results are rather surprising: just under half of those who achieve a degree are the first in their family in this cohort.

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[8] A Level results are highly correlated with GCSE results 0.6 (p<0.05).

[9] When looking at higher education participation (rather than graduation) the figures differ slightly; 44.5 per cent of 25-year-olds had ever attended university. 2006/7 national figures showed that 39.8 per cent of 17 to 30-year-olds participated in higher education (Gill, 2008).

Just over 50 per cent of the sample do not achieve a degree and have parents who also did not and 17.2 per cent have downward educational mobility; that is, they did not achieve a degree by the age of 25 but they have at least one parent who has a degree. Table 1 shows that there is an increasing need to understand the characteristics of FiF students because of the large proportion of total university graduates they comprise.

Table 1.

	Parent(s) has degree	**No parent with degree**
Young person obtains degree	Matched parents' education (higher education) 16.4%	FiF (upward educational mobility) 15.9%
Young person does not obtain degree	Downward educational mobility 17.2%	Matched parents' education (no university) 50.5%

Source: Next Steps, N = 4,795. Individual degree measured at age 25.

　　　2. What are the individual and social characteristics of those who are FiF to achieve a degree?

In order to understand the characteristics of the FiF students we first examine the descriptive statistics. Table 2 shows the demographic characteristics by proportion and mean of the four groups from Table 1: (1) the first in family to achieve a degree group; (2) the matched parents' education group who have higher education; (3) the matched parents' education with no higher education; and (4) those who have downward educational mobility, where the parents have a degree but the young person does not.

　　　A priori, we would expect that group (1) and (3) to be similar because both groups have parents without a degree; however, they differ on a number of dimensions in the raw descriptive statistics. Firstly, the prior attainment for the first in family (1) is higher than for those who match their parents with no degree (3), measured by key stage 2, key stage 3 and GCSE. Interestingly, a higher proportion of group (3) take A Levels than those pupils who go on to become FiF university students.

　　　Their class backgrounds also differ. A higher proportion of the FiF group (1) are in the higher managerial class than for those who match parents' education with no degree (3), whereas 63% in group 3 are in routine occupations compared to only 49% who are FiF (1). Family income is lower for those who match their parent's education with no degree (3) than for first in family (1) and a higher proportion of those who match their parents who no degree are eligible for free school meals. Moreover, a higher proportion of those who match their parents with no degree (3) rent their home compared to first in family (1) and a lower proportion of group (3) went to an independent school. Taken together, this indicates that FiF pupils may come from slightly more advantaged backgrounds than their peers who match their parents in not obtaining university degrees.

　　　Turning now to those who attain a degree but are not the first in their family (2), we see that their prior attainment levels are higher than those who are FiF, so too is their A Level participation compared with first in family (1). These are the two groups of young people who ultimately obtain university

degrees. These young adults who match their parent's education with a degree come from a higher social class background, had a higher income during adolescence, a larger proportion of them are likely to come from a family who own their own home or have a mortgage, a higher proportion attended an independent school and a smaller proportion of them are eligible for free school meals. Those who match their parent's educational level with a degree (2) are less ethnically diverse than those who are first in family. The last group of interest, those who are downwardly mobile (4), are slightly less academically able than those who are first in family (1), but more so than those who match their parent's education with no degree (3). On the whole a smaller proportion of those who are downwardly mobile are from ethnic minorities, instead this group comprises of the mainly white group.

To identify whether these descriptive statistics are indicative of deeper patterns, we run a multinomial logistic regression predicting belonging to first in family, matching parental education with no degree, and those who have downward educational mobility with the base category of matching parents' education with a degree. The results in Table 3 show that those who are first in the family to achieve a degree have, on average, lower odds of achieving good GCSE results than those who are not the first in family to achieve a degree, all else being equal. Moreover, we see that the first in family group have higher odds of coming from an intermediate family background (OR 1.82, p<0.001) and routine family background (OR 2.13, p<0.001) with reference to higher managerial and professional backgrounds. The first in family group have significantly lower equivalised household income; significantly higher odds of renting/other their house in adolescence and significantly higher odds of being eligible for free school meals than those who are not the first in family to achieve a degree. Taken together, these results indicate that FiF captures various aspects of disadvantage, which we will explore later on in the paper.

Compared to their peers who match their parents' education with a degree, women have higher odds of being in the first in family to achieve a degree and so too do Indian (OR 1.88, p<0.01) and Black Caribbean (OR 2.03, p<0.05) young people compared to White young people. This is in line with the evidence which shows that there is higher participation in HE among women in the UK (Department for Business, Innovation and Skills, 2015) and that there are traditionally lower HE participation rates of the parents of ethnic minority groups (Connor & Dewson, 2001), which increases the probability of both women and ethnic minorities being FiF. The first in family group are not significantly different from those who match their parent's education with a degree on the dimensions of A Level participation, school type and special education needs.

The results in Table 3 also show the comparisons between the characteristics of belonging to the downward mobility group, those who do not have a degree and match their parents' education, with the reference category of matching parents with a degree. The odds of achieving good GCSEs are lower for those who match their parents' education with no degree compared to those who have either parent with a degree. They also have lower odds of pursuing A Level study, and lower odds of being Black African. Moreover, there are some key socioeconomic characteristics which predict matching their parent's education with no degree: they have higher odds of being in lower social class backgrounds; have lower

equivalised household income during adolescence; higher odds of living in rented accommodation during adolescence; and higher odds of being eligible for free school meals. Pakistani young people and Black African young people have lower odds of matching their parents' education with no degree.

Lastly, we see that the downward mobility group has lower odds of achieving good GCSE grades and participating in A Level study. The downward mobility group yield higher odds of having special education needs than those who have educated parents but also achieve a degree and lower odds of being Pakistani. The other categories do not significantly predict downward educational mobility.

3. *How does the institution type, subject studied and dropout rate differ by FiF status?*

Widening Participation campaigns often highlight increasing diversity in admissions, but increasing diversity in degree completion is ultimately the more important policy goal. We now turn our attention to whether or not students whose parents did not attend university, but they do, have a higher propensity to drop out than their peers whose parents have a university degree.

In Next Steps, we are able to identify those who report having ever attended university and whether they have achieved a degree. Anyone who says they have attended but did not achieve a degree are labelled as having dropped out of university. Because of the way this question is asked, they may have attended for one week, one term, or one year before dropping out, but the data do not allow us to identify the duration of study. This is clearly a limitation of the study as this would be interesting in order to better understanding the mechanisms behind drop out. Even with this limitation, we are still able to examine the prevalence of dropouts in a meaningful way.

We find that of all young people in our sample who have ever attended university, 34 per cent drop out. Of these dropouts, 58 per cent are the first in their family to attend university compared to 42 per cent of dropouts whose parents have a degree. Descriptively at least, those who are first in family are at a greater risk of dropping out. However when we examine this relationship in a multivariate logistic regression, controlling for prior attainment and socio-demographic characteristics (Table 4, Model 1) we see that this difference between FiF students and non FiF peers is not statistically significant and the descriptive result is driven by prior attainment.

Descriptively the proportions of drop out differ substantially when examining dropouts by Russell Group status as shown in Table 5. Of those who drop out from a non- Russell Group university, 64 per cent are first in family to attend university compared to 36 per cent whose parent(s) have a degree. The pattern is reversed for Russell Group universities, where 38 per cent of dropouts are first in the family to attend university and 62 per cent of those who drop out are not first in family. These results suggest that those who are first in family and accepted by a Russell Group university are less likely to drop out than their peers who have a parent who achieved a degree. This is suggestive of first in family students being more resilient to challenge conditional on having the academic ability to make it to an elite institution. At less selective institutions, the higher dropout rates of potential FiF students indicates a

challenge to the Widening Participation agendas of these institutions. To test whether the interaction between drop-out and study institution is statistically significant we run an interaction term in Table 4, Model 2. The results show that without taking into socio-demographic characteristics the interaction terms are not significant, but the main effects show that those who are first in family have greater odds in dropping out, but attending Oxbridge is associated with a reduction in dropping out of degree study. However when we include the background characterises to isolate the association further (Table 4, Model 3), the FiF association remains positive but is no longer significant and net of all other characteristics studying at Oxbridge is associated with a lower odds of dropping out.

Table 5

Non-Russell Group University (N=1,621)			
	First in family	Not first in family	Total
Degree	59.03	40.97	100
Dropout	64.42	35.58	100
Russell Group University (N=484)			
	First in family	Not first in family	
Degree	37.47	62.53	100
Dropout	37.04	62.96	100

Turning to the other multivariate multinomial regressions predicting higher education participation by institution (Table 6). We can see that those who are first in family have significantly lower odds in studying for their degree at a Russell group university compared to an 'Other HE institutions' and lower odds of studying for their degree at an Oxbridge university, but these odds are not statistically significant. There are some additional covariates of interest in this model for example we see that prior attainment is an important predictor of university institution attended, but that income and housing tenure are not significant predictors of institution. Class is important and significant only for study at Oxbridge compared to 'other HE' institution, where coming from a lower class background is associated with a reduction in odds of Oxbridge study.

In order to examine whether there are differences in FiF status by subject studied at university we first group the degree subject into four groupings of those used in the Labour Force Survey. We identify those studying science (including health and medicine related degrees), technology, engineering and maths (STEM), those studying for STEM subjects account for 41% of those studying in HE; those who study law, economics and management (LEM), accounting for 15% of the analytical sample; those who study arts, humanities and other social sciences (OSSAH) which accounts for 41% of the sample; and 'other', including combined degrees who account for 3% of the sample (OTHER). The results in Table 7 uses STEM as the base category, meaning that all of the coefficients should be read relative to STEM subjects. We see that only the difference between FiF students which is significant is for LEM subjects relative to STEM subjects, that is, young people who are first in family to study at university have higher odds of taking LEM rather than STEM subjects. The difference for FiF students for OSSAH and OTHER are not statistically significant.

4. *How correlated are the socio-demographic characterises of the widening participation agenda?*

In order to identify the prevalence and overlaps of the indicators of socioeconomic disadvantage that are used by the Widening Participation agenda[10], we focus on five forms of disadvantage. These are: special education needs; eligibility for free school meals; growing up in relative poverty[11]; neither parent with a degree and lowest social class category. The proportions of young people facing these disadvantages are shown in Table 8. From this table, we can see that the most common experience is coming from low social class category, second only to having low educated parents. The least common are having special education needs (7.3%) or being eligible for free school meals (8%).

Table 8. Prevalence of socioeconomic disadvantage used by the Widening Participation agenda

| Disadvantage faced	Proportion
Special education needs	7.33%
Free school meals	8.01%
Poverty	16.64%
Parents, no degree	65.33%
Lowest social class category (routine, manual and unemployed)	44.15%

N=4,795
Notes: Authors' calculation using Next Steps

We examine the overlap of these indicators by calculating the proportion of our sample facing multiple disadvantages. Figure 1 suggests that a just over a fifth of the whole sample have zero socioeconomic disadvantages (21%) and just under one third have one form of disadvantage (31%). At the more extreme end, we see that 26 per cent face two socioeconomic adversities, 12 per cent face three forms of disadvantage and nine per cent face four adversities with 0.53 per cent reporting all five forms of socioeconomic disadvantage. This suggests that around half of the sample face two or more disadvantages co-occur and nearly no one in the sample faces all five forms of disadvantage.

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[10] See Appendix A for an overview of the Widening participation indicators used by Russell Group universities.
[11] The poverty line is set at 60 per cent of the median UK household income. In other words, if a household's income is less than 60 per cent of this average, we consider them to be living in poverty. The median household income is £22,064.41.

Figure 1. Number of socioeconomic disadvantages faced
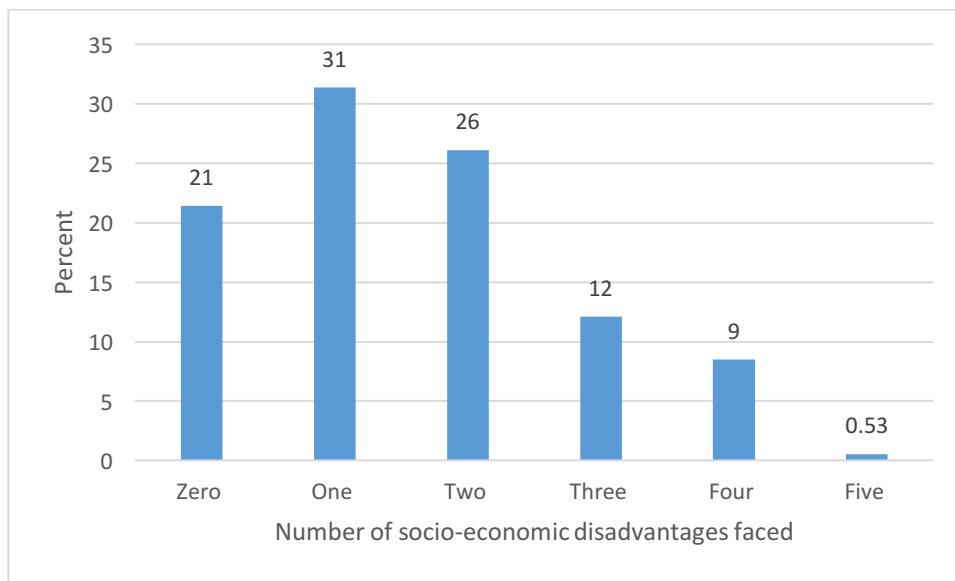
Source: authors' calculations using Next Steps

An indication of the relationships between these disadvantage indicators is given in Table 9 in the tetrachoric correlation matrix (a method which allows the examination of the correlation between binary outcomes). The entries in the body of the table represent the correlation of experiencing the named socioeconomic disadvantage given the child is growing up in a family with one of the other disadvantages. Correlation coefficients which are closer to 1 indicates a strong statistical relationship where there is a higher likelihood of having both disadvantages, whereas a correlation coefficient of close to zero indicates a lower likelihood of facing the other disadvantage.

We find that the majority of correlations linking the various Widening Participation indicators in Next Steps are over 0.3. This suggests that being disadvantaged in one respect correlates with being disadvantaged in other respects. The exception to this is the relationship between special education needs and the more socio-economic disadvantages which all have low correlation coefficients of less than 0.03. Having parents without university degrees is significantly predictive of economic disadvantage, e.g. being eligible for free school meals (0.56), growing up in poverty (0.36), living in the lowest IDACI quintile (0.47) and coming from the lowest social class (0.53), but not of having special education needs.

Being in poverty is highly correlated with free school meals eligibility (0.54), so too is coming from a lower social class background (0.71). These results confirm that, on the whole, the Widening Participation characteristics of disadvantage do not exist in isolation and that young people living in families with one of these disadvantages are likely to be exposed to other risk factors as well. Based on this preliminary analysis, it seems that using FiF as a Widening Participation indicator is capturing a separate, although related, form of disadvantage from the other indicators assessed here.

Table 9. Tetrachoric correlation of disadvantage

	Special Education Needs	Free School Meals	Lowest income quintile	Parents with no degree	Lowest class category	Bottom quintile of IDACI
Special Education Needs	1					
Free School Meals	0.03	1				
Lowest income quintile	0.03	0.54*	1			
Parents with no degree	0.03	0.56*	0.36*	1		
Lowest class category	-0.03	0.71*	0.40*	0.53*	1	
Bottom quintile of IDACI	-0.02	0.63*	0.41*	0.47*	0.49*	1

Source: authors' calculations using Next Steps

Discussion and Conclusion

The analysis presented in this paper is the first step in unpacking the extent to which using first in family as a marker captures the same or different individuals as the other socio-demographic characteristics used by universities in their Widening Participation agendas. The fact universities have been using FiF as a Widening Participation without any exploration of its validity as an instrument has prompted this paper.

The evidence presented in this paper suggests that those who are FiF are less likely to study at Russell Group universities rather than non-elite universities, even when prior attainment is taken into account. This is a concerning as this findings signals that there is a risk that some young people may not be applying to high status institutions even though they have the skills to do so. This may be because lack of awareness of the importance of high-status universities, lack of confidence in being accepted if they apply or they do not understand that the returns to education are higher if they study a high-status university. One important policy outcome related to this finding is that universities and schools should ensure that all students have access to high quality information on the costs and benefits of higher education. Previous work by McGuigan et al. (2016) shows that young people's expectations can be raised by simple school level interventions, so too can their understanding of the costs and benefits of pursuing higher education study. This may be especially salient for students who lack family role models and information.

In addition to this we see that subject choice at university varies by FiF status, where those who are the first generation to study at university have greater odds in studying for a Law, Economics and Management degree rather than the 'harder' subjects of Science, Technology, Engineering and Maths (STEM) subjects. It is difficult to assess whether these are suboptimal subject choices, further research in examining the returns to the labour market would get to this question, however it is clear there are patterns of degree subject selection that are influenced by FiF status.

We also find that those who are FiF are not at a greater risk of dropping out of university if they are accepted once prior attainment and socio-demographic characteristics are taken into account. This means that universities can be confident that these students are completers of degrees and are actually a

low risk selection when it comes to admissions policies. This finding runs contrary to the evidence from the USA and indeed are masked by the descriptive results. Universities already make use of information on prospective students' socio-economic background, the types of school they attended and contextual results in order to inform their admission process. And it will remain a persistent challenge for universities to identify those students who have some form of social disadvantage but with high potential to succeed.

While there is some evidence on 'what works' in terms of Widening Participation (e.g. Hefce, 2010; Hoare and Mann, 2011; and Emmerson et al. 2006) there needs to be a greater understanding of the policy interventions to increase participation among these underrepresented groups. Given that attainment drives some of the higher education participation, but not all of it, there needs to be an increase in early interventions the educational process to raise awareness of the costs, benefits and opportunities of higher education for young people. Moreover, understanding more about this upwardly mobile group will inform change in higher education degree achievement for the next generation.

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Table 2. Descriptive statistics comparing of young people's degree achievement with reference to parental education levels

	(1) First in family to achieve a degree (upward educational mobility)	(2) Matched parent's education (higher education)	(3) Matched parent's education (no higher education)	(4) Did not achieve a degree (downward educational mobility)	Total
Prior attainment					
Key stage 2 (mean)	29.28	30.38	26.43	28.31	27.81
Key stage 3 (mean)	38.27	40.46	32.65	36.47	35.36
GCSE (Capped linear score, mean)	369.19	393.77	278.83	335.78	320.71
Did not study A Levels	0.19	0.09	0.66	0.40	0.45
A Level participation	0.81	0.91	0.34	0.60	0.55
Socio-economic status					
Higher Managerial	0.21	0.52	0.12	0.42	0.24
Intermediate	0.30	0.26	0.25	0.31	0.27
Routine	0.49	0.22	0.63	0.28	0.48
Equivalised household income in adolescence (multiple of £10,000, mean)	1.45	2.48	1.19	2.17	1.60
Owns/Mortgage	0.77	0.95	0.63	0.90	0.75
Rent/ Other	0.23	0.05	0.37	0.10	0.25
Did not attend Independent School	0.97	0.93	0.99	0.94	0.97
Independent School	0.03	0.07	0.01	0.06	0.03
Not eligible for Free school meal	0.91	0.99	0.84	0.98	0.90
Free School Meal	0.09	0.01	0.16	0.02	0.10
Individual characteristics					
White	0.80	0.89	0.89	0.92	0.88
Mixed	0.02	0.02	0.02	0.02	0.02
Indian	0.05	0.02	0.02	0.01	0.02
Pakistani	0.04	0.01	0.02	0.01	0.02
Bangladeshi	0.02	0.00	0.01	0.00	0.01
Black Caribbean	0.01	0.00	0.01	0.01	0.01
Black African	0.02	0.01	0.01	0.01	0.01
Other	0.04	0.03	0.02	0.02	0.03
Male	0.40	0.45	0.45	0.47	0.44
Female	0.60	0.55	0.55	0.53	0.56
No Special Education needs	0.98	0.98	0.90	0.91	0.93
Special Education Needs	0.02	0.02	0.10	0.09	0.07

N = 4,795

Table 3. Multinomial Logistic Regression Predicting 'First in Family' to Achieve a Degree Versus Other

Base Category: Matched parent's education (degree)	First in family		Matched parental education (no degree)		Downward educational mobility	
	OR	SE	OR	SE	OR	SE
GCSE (Capped linear score)	0.80***	(0.05)	0.45***	(0.03)	0.56***	(0.03)
Ref: Did not study A Levels						
A Level participation	0.87	(0.17)	0.31***	(0.06)	0.42***	(0.08)
Ref: Did not attend Independent School						
Independent School	0.98	(0.29)	0.65	(0.26)	1.28	(0.29)
Ref: No Special Education needs						
Special Education Needs	0.66	(0.26)	1.21	(0.37)	1.82*	(0.52)
Ref: Higher Managerial						
Intermediate	1.82***	(0.26)	2.08***	(0.29)	1.16	(0.17)
Routine	2.13***	(0.34)	2.73***	(0.40)	1.04	(0.16)
Equivalised household income in adolescence (multiple of £10,000)	0.51***	(0.04)	0.47***	(0.03)	0.93	(0.05)
Ref: Owns/Mortgage						
Rent/ Other	2.03***	(0.40)	2.26***	(0.43)	1.25	(0.28)
Ref: Not eligible for Free school meal						
Free School Meal	2.11*	(0.76)	2.38*	(0.86)	1.44	(0.64)
Ref: White						
Mixed	0.82	(0.27)	0.68	(0.20)	0.68	(0.23)
Indian	1.88**	(0.36)	0.82	(0.19)	0.74	(0.20)
Pakistani	1.23	(0.47)	0.46*	(0.18)	0.42*	(0.18)
Bangladeshi	1.77	(0.75)	1.08	(0.48)	0.21+	(0.19)
Black Caribbean	2.03*	(0.73)	0.94	(0.39)	0.52	(0.22)
Black African	0.70	(0.25)	0.17***	(0.06)	0.54	(0.23)
Other	0.73	(0.22)	0.41*	(0.15)	0.62	(0.25)
Ref: Male						
Female	1.31*	(0.15)	1.39**	(0.15)	1.15	(0.13)
Observations	4,795					
Pseudo R2	0.21					

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 4. Logistic Regression Predicting University Drop Out

	Model 1 β	Model 1 SE	Model 2 β	Model 2 SE	Model 3 β	Model 3 SE
Ref: Not first in family to attend university						
First in Family	1.15	(0.11)	1.32*	(0.14)	1.16	(0.14)
Ref: Other Higher Education Institution						
Russell Group			0.84	(0.13)	0.99	(0.16)
Oxbridge			0.21*	(0.13)	0.26*	(0.16)
Ref: Not first in family x Other HE inst						
FiF X Russell Group			0.70	(0.17)	0.74	(0.18)
FiF X Oxbridge			1.69	(1.68)	1.93	(1.93)
GCSE results	0.81***	(0.03)			0.82***	(0.04)
Ref: Did not study A Levels						
A Level participation	0.80+	(0.10)			1.08	(0.18)
Ref: Higher Managerial Class						
Intermediate	1.10	(0.12)			1.08	(0.14)
Routine	1.14	(0.13)			1.18	(0.16)
Equivalised household income in adolescence (multiple of £10,000)	0.98	(0.05)			1.02	(0.05)
Ref: Owns home/Mortgage						
Rent/Other	0.93	(0.11)			0.94	(0.14)
Ref: White						
Mixed	0.80	(0.16)			0.79	(0.20)
Indian	0.89	(0.13)			1.03	(0.17)
Pakistani	0.94	(0.17)			0.93	(0.19)
Bangladeshi	1.36	(0.28)			1.36	(0.31)
Black Caribbean	0.97	(0.24)			1.36	(0.41)
Black African	0.97	(0.22)			1.24	(0.32)
Other	0.76	(0.16)			0.76	(0.18)
Ref: Male						
Female	1.12	(0.09)			1.19+	(0.11)
Ref: No SEN						
SEN	0.98	(0.25)			1.05	(0.31)
Ref: Did not attend an independent school						
Attended an independent school	0.94	(0.26)			1.04	(0.32)
Constant	1.31	(0.29)	0.48***	(0.04)	0.81	(0.23)
Observations	2,105		2,105		2,105	

Table 6. Multinomial Logistic Regression: University Type Attended (Ref: Other University)

	Russell Group		Oxbridge	
	OR	SE	OR	SE
Ref: Not first in family to attend university				
First in Family	0.74*	(0.10)	0.56	(0.22)
GCSE results	3.54***	(0.32)	11.40***	(5.75)
Ref: Did not study A Levels				
A Level participation	1.10	(0.32)	0.61	(0.47)
Ref: Higher Managerial Class				
Intermediate	0.92	(0.14)	0.24**	(0.12)
Routine	0.83	(0.13)	0.38*	(0.17)
Equivalised household income in adolescence (multiple of £10,000)	1.11+	(0.06)	1.02	(0.17)
Ref: Owns home/Mortgage				
Rent/Other	0.71+	(0.15)	1.15	(0.70)
Ref: White				
Mixed	1.72+	(0.50)	3.39*	(1.84)
Indian	1.26	(0.26)	0.30	(0.31)
Pakistani	0.97	(0.30)	0.00	(0.00)
Bangladeshi	0.99	(0.36)	0.00	(0.00)
Black Caribbean	1.00	(0.49)	0.00	(0.00)
Black African	1.33	(0.53)	1.08	(1.20)
Other	0.66	(0.22)	0.97	(0.76)
Ref: Male				
Female	0.82	(0.10)	0.71	(0.23)
Ref: No SEN				
SEN	1.20	(0.44)	0.00	(0.00)
Ref: Did not attend an independent school				
Attended an independent school	1.16	(0.36)	0.46	(0.48)
Pseudo R2	0.19		0.19	
Observations	1,548		1,548	

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 7. Multinomial Logistic Regression: Predicting Subject Studied at University (Ref: STEM degree)

	LEM		OSSAH		Other	
	OR	SE	OR	SE	OR	SE
Ref: Not first in family to attend university						
First in Family	1.54**	(0.24)	1.06	(0.12)	0.99	(0.39)
Ref: Other Higher Education Institution						
Russell Group	0.62**	(0.11)	0.64***	(0.08)	0.34+	(0.22)
Oxbridge	0.62	(0.35)	0.72	(0.25)	1.38	(1.48)
GCSE results	0.70***	(0.05)	0.79***	(0.05)	0.57***	(0.10)
Ref: Did not study A Levels						
A Level participation	1.61*	(0.38)	1.08	(0.20)	0.93	(0.46)
Ref: Higher Managerial Class						
Intermediate	0.69*	(0.12)	0.83	(0.11)	0.42+	(0.21)
Routine	0.95	(0.17)	0.96	(0.14)	0.63	(0.29)
Equivalised household income in adolescence (multiple of £10,000)	1.16*	(0.08)	1.03	(0.06)	0.88	(0.19)
Ref: Owns home/Mortgage						
Rent/Other	0.92	(0.17)	0.85	(0.14)	1.14	(0.53)
Ref: White						
Mixed	0.88	(0.32)	0.81	(0.20)	0.00	(0.00)
Indian	1.51*	(0.30)	0.40***	(0.08)	0.80	(0.43)
Pakistani	1.41	(0.35)	0.28***	(0.07)	0.22	(0.24)
Bangladeshi	1.76*	(0.49)	0.28***	(0.09)	0.90	(0.63)
Black Caribbean	1.65	(0.63)	0.57	(0.20)	0.00	(0.00)
Black African	1.83+	(0.61)	0.70	(0.22)	0.77	(0.64)
Other	1.29	(0.37)	0.37***	(0.10)	1.56	(0.92)
Ref: Male						
Female	1.42**	(0.19)	1.88***	(0.20)	0.77	(0.25)
Ref: No SEN						
SEN	1.07	(0.45)	1.15	(0.36)	1.04	(1.09)
Ref: Did not attend an independent school						
Attended an independent school	0.91	(0.41)	0.94	(0.29)	1.20	(1.29)
Pseudo R2	0.06		0.06		0.06	
Observations	1,548		1,548		1,548	

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Appendix A

The lack of research on FiF as a Widening Participation (WP) indicator meant that there was no indication as to how systematically universities use it. In order to support the relevance of this paper, we decided to focus on the 24 Russell Group institutions and determine how many of them use FiF as a WP indicator. The results presented in Table A1 below indicate that 15 of the 24 Russell Group universities use FiF as an explicit WP indicator in their admissions or other outreach programmes.

Institutions define FiF in a variety of ways, including pupils "with no parental history of HE" (University of Birmingham), pupils with little "family experience of university" (University of Cambridge), pupils who are the "first generation to consider higher education" (University of Edinburgh), or pupils with "no parental university degree" (UCL). There is clearly quite a lot of heterogeneity in how universities define FiF. While these differences may seem small, there is a substantial difference between the indicator applied by the University of Edinburgh (considering HE) and UCL (having a degree). For the purposes of this paper, we focus on parental degree because we are able to observe this in our data, but we are aware that FiF is being used in multiple ways across institutions. Importantly, however, FiF ignores whether or not siblings may have attended university and focuses on whether or not the young person is of the first generation to attend university.

For some institutions, it was difficult to determine whether or not they explicitly use FiF as a WP indicator. The University of Exeter, for example, does not list FiF as one of its own WP indicators, but participates in the Realising Opportunities national programme, which does use FiF as a criterion for participation. Other Russell Group institutions do not mention FiF in any of their WP materials. These include: University of Glasgow, University of Liverpool, University of Manchester, University of Oxford, and University of Sheffield. This indicates that now all institutions believe FiF is capturing a unique form of disadvantage and is worth using as a separate indicator.

Even for those institutions that use FiF as a WP indicator, the weight assigned to it may vary from institution to institution. As indicated in the third column of Table A1, some institutions may use FiF in their admissions (e.g. Cardiff) while others use it to target their outreach programmes (e.g. Cambridge). This heterogeneity of FiF indicator use is a result of institutional autonomy and should be kept in mind when assessing FiF as a WP criterion.

Table A1. Russell Group institutions and FiF as a WP indicator

Russell Group Institution	Uses FiF as Widening participation indicator	Example
1. University of Birmingham	Yes	"Our activity is targeted at students who are under-represented in Higher Education (HE) including students from lower socio-economic groups, from postcode areas with low progression to HE and *with no parental history of HE* [emphasis added]" (University of Birmingham, 2017)
2. University of Bristol	Yes	"The focus of outreach activity in 2017-18 will be long-term and targeted. We have taken an evidence based approach to the targeting of activity and have specific intervention progress measures (detailed in paras 13.7-13.11) to reflect this. For those interventions designed and delivered by the University we require participants on our programmes to fulfil the following criteria: attend a low performing school or college; live in a low participation neighbourhood; *be in the first generation of their family to progress to higher education* [emphasis added]; and live in the local area" (University of Bristol, 2017)
3. University of Cambridge	Yes	"The Cambridge University Students' Union (CUSU) Shadowing Scheme provides UK students with the chance to experience life as a Cambridge student first-hand. The Scheme, which has been running since 2000, targets those who are academically able but *who have little school or family experience of university* [emphasis added]" "Priority for [Easter and Summer Schools] is given to academically able students who have *no parental history of progression to higher education* [emphasis added]" (University of Cambridge, 2015)
4. Cardiff University	Yes	"Widening access addresses the recruitment, retention and progression of students from a wide variety of groups traditionally under-represented in higher education. These include people from ethnic minority groups, from disadvantaged communities, people with disabilities and *those from families with no previous experience of higher education* [emphasis added]" (Cardiff University, 2017)
5. Durham University	Unclear	Unable to find Widening Participation/Access section on university website
6. University of Edinburgh	Yes	"The University is engaged with prospective students, their families and advisers in a wide range of Widening Participation awareness and aspiration-raising projects and activities aimed at students who are: • *first generation to consider higher education* [emphasis added] • from low socio economic groups • attending schools where relatively few students go on to higher education • living in low participation neighbourhoods • mature students from the above groups • looked after / accommodated children or care leavers" (University of Edinburgh, 2017)
7. University of Exeter	Unclear	But they do participate in 'Realising Opportunities', which has the following entry criteria: **"You must meet at least two of the following*** • Live in a neighbourhood which has a low progression rate to higher education or an area which has a high level of financial, social or economic deprivation. This is defined by home postcode

		• *Come from a home where neither parent attended university in the UK or abroad. (If one or more parent is currently studying their first degree, or graduated from their first degree within the last five years, an application will still be considered)* [emphasis added] • Be in receipt of or entitled to discretionary payments/16-19 bursary/Pupil Premium at school/college • Be in receipt of or entitled to free school meals. **Or alternatively meet the following:** • be living in, or have lived in, local authority care or be a young carer**" (Realising Opportunities, 2017)
8. University of Glasgow	No	The following tables document the **Scottish undergraduate entry requirements** for applicants who are within the following categories: 1. Applicants who are or have lived in **Care**; 2. Applicants who, at the time of application, are **living in a priority postcode** which is regarded by the Scottish Government as being within the 40% most deprived regions of the country, as categorised by the Scottish Index of Multiple Deprivation (SIMD). This is sometimes referred to as "MD" or "MD40"; 3. Applicants who attend a Widening Participation (WP) **Target School**; 4. Applicants who are participating in a recognised pre-entry programme, such as **Top-Up** or **Summer School**. (University of Glasgow, 2017).
9. Imperial College London	Unclear	Unclear from website and not mentioned in Access Agreement (Imperial College London, 2017).
10. King's College London	Yes	"Groups of people who may be targeted in the drive to widen participation include: • Young people from low-income backgrounds • Young people from low-participation neighbourhoods (where very few people go on to higher education) • *Young people whose parents did not go to university* [emphasis added] • Young people in or leaving care • Young people living with a disability • Young people from an ethnic minority • Those returning to learning as mature students" (King's College London, 2017).
11. University of Leeds	Yes	"Applicants with siblings who have completed or are currently undertaking a higher education course are eligible to apply (as long as their parents did not complete a higher education course)" (University of Leeds, 2017).
12. University of Liverpool	No	Not listed as one of their "vulnerable groups of students" targeted for outreach (University of Liverpool, 2017).
13. London School of Economics and Political Science	Yes	"We target the following pupils: Students from low performing state schools/schools with high proportion of students who qualify for free school meals. ○ Students who are in receipt of/qualify for free school meals. ○ Students who live in low participation neighbourhoods (POLAR 3 dataset) ○ Students from under-represented ethnic groups, especially black African-Caribbean pupils. ○ *Students with parents with no experience of higher education* [emphasis added]. ○ Students in Local Authority Care. ○ Students with a disability" (LSE, 2016)

14. University of Manchester	No	Not an explicit group on their 'Target Groups' for Widening Participation (University of Manchester, 2017).
15. Newcastle University	Yes	"If **neither** of your **parents/carers** have any of the following higher education qualifications you **might be eligible** for the PARTNERS Programme based on **parental HE experience and occupation**: • Higher Degree (eg MA, MSc, PhD, PGCE) • First Degree (eg BA, BSc)" (Newcastle University, 2017)
16. University of Nottingham	Yes	"Meet at least one of the following criteria: • be living in a household with an income under £42,000* • *be first generation to attend university* [emphasis added] • be attending a school/college with an average point score per student of under 800 • have a disability affecting your studies • be currently or have previously been in local authority care/looked after" (University of Nottingham, 2017)
17. University of Oxford	No	Not an Access Agreement target category University of Oxford (2017).
18. Queen Mary University of London	Yes	**"Widening Participation Criteria** To take part in our activities students must meet one or more of the below criteria: • *parents did not attend Higher Education* [emphasis added] • previously or currently eligible for free school meals • parents are from non-professional occupations • have a disability • is a young carer • is estranged from their family / living independently • have lived, or are currently living, in local authority care" (Queen Mary, 2017)
19. Queen's University Belfast	Unclear	Unclear from website They also do not have an Access Agreement with OFFA.
20. University of Sheffield	No	Not listed as a WP indicator on their website (University of Sheffield, 2017).
21. University of Southampton	Yes	**"Eligibility** Access to Southampton (A2S) is open nationally to students living permanently in the UK. Students must apply to A2S when they are in Year 12 or the first year of A-Level (or equivalent) study. To be eligible for the A2S scheme, you should have the potential to study at the University of Southampton and meet two or more of the following criteria: • *In the first generation of immediate family to apply to Higher Education, excluding brothers or sisters* [emphasis added] • In receipt of a 16-19 Bursary or similar grant OR received Free School Meals at any point during your secondary school education • Attended a secondary school which achieved less than the national average 'Attainment 8' score in 2016* • Studies affected or disrupted by circumstances in your personal, social or domestic life • Are a Young or Young Adult Carer • Living or grew up in Local Authority care • Current home post code shows that you live in an area with low levels of progression to Higher Education. (Postcodes within the lowest 2 POLAR3 quintiles)" (University of Southampton, 2017).

22. University College London	Yes	"No parental university degree" is an essential criterion for widening participation activities (UCL, 2017)
23. University of Warwick	Yes	"We run a wide range of programmes and events to encourage the most talented potential applicants and to ensure our student body is representative of our local and wider national communities. These activities are targeted at state school educated students, *students who would be the first in their family to attend university* [emphasis added], students from low socio-economic backgrounds and students who come from neighbourhoods where there is low progression to university. Ensuring the university is accessible to students from all backgrounds is one of the eight values set out in Warwick's university strategy" (University of Warwick, 2017).
24. University of York	Yes	"We carefully target schools and colleges, using multiple indicators of disadvantage depending on the programme and partner agreements. These indicators include Polar 3, quintiles one and two; Indices of Multiple Deprivation (IMD); Income Deprivation Affecting Children Index (IDACI), Free School Meals, school performing below the national average at GCSE or at Key Stage 5. We also work with schools to carefully select those students who would benefit most from our programmes and use individual eligibility criteria including: LPN; *first in family to attend HE* [emphasis added]; children in care; free school meals; be in receipt of discretionary payments" (University of York, 2017).

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