

Widening Participation Research Fund Final Report

Project Title: The High-Potential Learners Project: Increasing the participation in Russell Group universities of high potential learners from low-performing institutions

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A brief description of the research project as presented in the original proposal, including the objectives and the research methodology

The aim of the research is to provide new evidence on the key influences on the decision-making of disadvantaged learners with high potential from different types of low-performing institutions¹. Using a mixture of quantitative and qualitative methods, this research will investigate which home, school, and personal characteristics of KS5 students are the key influences on decision-making potentially leading to HE and RG university participation. The focus will be on evaluating the relative importance of individual factors such as: the nature of career aspirations; financing considerations; knowledge of opportunities and the “system”; self-confidence; and perceptions of school and teacher support; and school- and teacher-level factors, such as: school ethos; setting and streaming; leadership focus on HE/RG attendance; parental engagement; and use of mentors and role models. Such school- and teacher- level factors may directly influence aspirations, or have an indirect effect on aspirations for HE/RG entrance by supporting high attainment, and we will explore this relationship further. Further factors may be added to this list of individual and school/teacher level influences as the research progresses. In the first strand a set of key influences will be identified from quantitative analysis of a large-scale nationally representative dataset of learners at Key Stages 4 and 5 who potentially started HE in 2010. A set of 48 case studies of young people across 6 institutions will then investigate further the influence of these factors on learners in the most recent cohorts as they go through the decision-making process, particularly in the context of the current economic recession and increased tuition fees, indicating that financial considerations are likely to play a considerable role. The findings will reveal which experiences and beliefs are the greatest deterrents on the path to a RG university in the specific context of high-potential students in low-performing institutions.

Research questions

1. Among high-potential students in low-performing institutions, which experiences and beliefs, as perceived by learners themselves, are most strongly associated with who does and does not go on to: a) achieve entrance to HE and b) attend RG universities?
2. What are the roles of the nature of career aspirations; financing considerations; knowledge of opportunities and the “system”; self-confidence; and perceived school/teacher support?
3. How does the relationship between these factors and HE/RG participation depend on characteristics such as gender, ethnicity and socio-economic status?
4. What are the key individual-level and school/teacher-level factors in the decision-making processes involved in university choice among high potential A-level students from institutions with below average performance?
5. Are any of the factors more or less salient in the local Bristol context, and in different types of institution (FE college, sixth-form college, or 11-18 school)?
6. What evidence is there of best practice for supporting the application and entrance of learners from institutions with below average performance to RG universities such as Bristol?

Approach

Strand 1: Perform secondary analysis of the Longitudinal Survey of Young People in England (LSYPE) dataset to assess the predictive strength of a range of home, school and personal characteristics for HE/RG participation in 2010 among the target group. (RQs 1&2).

Strand 2: Track a group of 8 learners with high potential (i.e. who have achieved highly in KS4) from WP backgrounds in each of six case study institutions as they progress through KS5. Here the study is more focused

¹ Defined as those with an average KS5 points score per student below 690 (equivalent to BBC at A-level) in state schools in England, with 728 points as the national average in 2011. The UoB WP guidelines define a low-performing school as one in the bottom 40 percent on this or two other related measures.

on the decision-making processes involved in young people aiming towards entrance to RG universities, and how schools support these aspirations. (RQs 3-5).

Strand 1: 1 April 2013 – 31 August 2013.

The LSYPE is a nationally representative sample of a single cohort of over 10,000 young people who were born in 1989 and 1990. Respondents were interviewed annually from 2004 (age 13/14) to 2010 (age 19/20), with a survey of their parents also included in the first four waves. This is a rich and as yet relatively under-mined dataset covering a wide range of subjects including parent and child characteristics; attitudes; experiences and behaviours; educational engagement and attainment; and employment and training activities. Broadly, the analysis will use regression methods to assess which factors are most strongly linked with HE outcomes, after controlling for prior differences in attainment and family background. Two outcomes will be examined: the probability of attendance at any HE institution by age 19 and, conditional on any participation, the probability of attendance at a RG university. The analysis in this strand will draw on a sub-sample of students with a GCSE points score in the top 25% of the national distribution who chose to begin A-level study in Year 12. The primary focus will be on a set of attitudinal measures of learners' perceptions and beliefs measured during the Year 12/13 period. Variables have been identified that capture the five dimensions of: the nature of career aspirations; financing considerations; knowledge of opportunities and the "system"; self-confidence; and school and teacher support. The regression models will quantify the predictive power of each factor for the HE outcomes first unconditionally, then simultaneously (since they are potentially highly correlated). Models will use detailed controls for pre-existing differences between pupils that may confound contemporaneous experiences, such as family background characteristics and prior attainment. Our ultimate interest is in those students in low-performing schools in terms of their average Key Stage 5 performance, and we will focus our analysis on those who attended schools with below-average performance on this measure. Further exploration of the findings via the qualitative strands of the project is therefore crucial. Interaction terms included in the models will allow us to explore whether the influence of the key predictive factors is different for groups defined by gender, socio-economic status and ethnicity.

Strand 2: 1 September 2013 – 31 December 2015.

The case studies will be based in six educational institutions (two schools, two sixth form colleges, and two Further Education (FE) colleges). We will select one of each type of institution with below average performance in terms of A-level grades with some leavers progressing to HE and RG universities. These will be compared with another of each type of institution with similar intakes and A-level records, but with lower HE participation rates. Half the institutions will be from Bristol and surrounding area (to include South Gloucestershire, Bath and North-East Somerset, and North Somerset), and the other half will be from Birmingham. The UoB is committed to extending its outreach beyond the traditional AimHigher South West area: this sample selection will provide a diversity of types of institution, in a diversity of areas (rural, urban, and large city), in areas where we already have contact with local schools and local authorities.

Institutions will be asked to identify students from WP backgrounds at the start of year 12 with high GCSE grades (at least 5 A* or A grades), indicating potential to perform well at A-level and apply to Russell Group universities. We will work with 8 of these young people in KS5 in each institution, meeting them 6 times over the course of two years, as they progress from the start of Y12 to the end of Y13. We will work with students from low SES backgrounds, ethnic minorities and both genders. Interviews and focus groups will enable us to understand the development of their aspirations around HE, decisions about HE application, and important influences on their educational pathways to date. Focus groups will be used to discuss young people's views and expectations of HE, and the support they are receiving for decisions about their educational pathways, and individual interviews will cover more personal histories of educational and family experiences that may influence decision making about HE. The content of the focus groups and interviews will be informed by the quantitative data analysis in Strand 1, covering topics that are significant predictors of attendance at RG universities. Working with the students at several time points during Y12 and Y13 will enable the research to track the development of their thinking about HE applications. Three visits will be made per year, to include key time points such as university open day visits, UCAS applications, and decisions about which subjects continue to A-level. Specific members of staff in the institutions will be interviewed once each year to gain an institutional perspective on the provision of support for progression to HE. This is likely to include interviews with a senior manager (such as head teacher or principal / assistant head or deputy principal), chair of governors, careers advisor, pastoral tutors, university WP link person, and subject teachers. Documentary evidence such as career guidance strategies and literature will also be collected from the case study institutions.

The data will enable a short-term longitudinal account of their educational pathways to be constructed for each participant. Data analysis will mark significant influences and critical incidents, both positive and negative,

in the development of aspirations and decision-making process about learning pathways and HE. School-level data (interviews with staff, and documentary evidence) will be analysed thematically, with codes being developed both inductively (according to the content of the data) and deductively (according to a-priori issues identified from existing theory and from Strand 1). Data will be compared between the six different institutions and, where possible, across gender and ethnicity.

An outline of any departures from the original objectives and methodology, with reasons

- In Strand 1, we chose to focus our analysis of the LSYPE on RG attendance, because of the very high rates of HE attendance in our sample.
- The crucial importance of subject choice at A-level became apparent when the analysis was underway, and this became an important part of the LSYPE analysis for Strand 1.
- In Strand 2, due to the sampling requirements for case-study institutions (in the bottom 40% of attainment at A-level, with some students each year reaching the required grades for RG attendance), we recruited 4 schools and 2 FE colleges as case study institutions, and no sixth-form colleges.
- In Strand 2, we originally recruited 60 students for case studies. One school dropped out of the case study research in Autumn 2014, due to staff changes, and four students from other institutions dropped out part way through the study. This left us with 44 case study students.
- In Strand 2, we met with case-study participants at five time points, to work around their exam commitments and crucial time points in their decision making. We also conducted several interviews with parents.
- We requested a no-cost extension to the project to allow for more dissemination activities (see below).

Summary of the findings

1. Quantitative secondary data analysis

Background

This part of the project drew on a sample of 2290 'high-potential' learners from the LSYPE, who were nationally representative of pupils in England scoring in the top 25% of GCSE points in 2006. All were engaged in A-level study in the summer of Year 12, directly following their GCSE year. 32% of this group went on to attend a Russell Group university by 2009, compared with just 2.5% of pupils outside the 'high-potential' group; hence we are confident that our selection captures the vast majority of pupils who can be considered potential elite university participants at age 16. As we might expect, this group is positively selected in terms of social background. For example, 59% had a parent who had participated in HE, compared with 35% in the population in general. Girls were over-represented in the group (54% compared with 50% in the population). BME learners were not under-represented in general (14% in both the HPL sample and the population), but Indian and Other ethnicity (including Chinese) pupils were significantly over-represented while Pakistani and Black pupils were under-represented. It is important to bear in mind that the circumstances of high-potential learners are not representative of all pupils, but that nevertheless the group does include non-trivial numbers of pupils from less advantaged backgrounds.

The HPL group had very high aspirations for HE participation in general, with 88% reporting they were fairly or very likely to attend university when they were just 14, rising to 95% in Year 12. And, indeed, the vast majority (89%) did go on to attend a university by the age of 19. For this group, therefore, the salient question is much more about which institution to attend than whether to participate in HE at all. For this reason, the key outcome we consider is a binary indicator for whether the learner had attended a Russell Group (RG) university within two years of their expected A-level completion date.

The focus of our qualitative work is to understand the decision-making process of learners such as these who are based in *low-performing* schools (i.e. those in the bottom 40% of 16-18 institutions when ranked by average KS5 points per pupil). The quantitative work first sets this particular sub-population in context, by comparing how outcomes of HPL learners in LP schools differ from those in average-performing schools (those ranked between 40% and 80% in terms of average KS5 points), and those in high-performing schools (those in the top 20%). It then goes on to consider how the characteristics of learners in low-performing schools differ from those of HPLs in other settings, and which of these characteristics help to account for differences in RG participation rates. We consider a range of factors: sociodemographic measures of family background; academic achievement prior to the start of A-level study; attitudes to and beliefs about university in the first year of A-level

study; A-level subject choices; final A-level performance; and the attainment of milestones in the HE application process.

Outcomes of HPLs by school performance level

The distribution of all LSYPE pupils across the three school groups aligns well with what we would expect from the national data. Of the LSYPE sample in full-time education in Year 12, 22% were in schools classed as high-performing (20% of schools nationally); 43% were in average-performing schools (40% nationally); and 35% were in low-performing schools (40% nationally). As we would expect on the basis of both their achievement and their family background, the HPL sample tend to attend higher-performing schools on average. 31% were in high-performing schools; 47% in average schools; and 22% in low-performing schools. Nevertheless, it is striking that *more than 1-in-5 potential elite university participants* in 2007 were being educated in schools in which the highest A-level grades were far from the norm. Challenges particular to this group identified, for example, in our qualitative work therefore apply to a considerable fraction of the pool from which elite universities can draw.

Evidence that there are indeed challenges is suggested by the stark differences in the rates at which HPLs from different types of school did attend RG universities. While nearly half (46%) of HPLs in the top-performing schools went on to Russell Group, less than a third of those in average schools did so (31%), and less than 1-in-6 (16%) of those in low-performing schools did so. *A high-potential learner in a top-performing school was nearly three times as likely as one in a low-performing school to attend RG, even though all were in the top 25% in terms of individual GCSE performance, although of course it should be considered that the number of GCSEs taken and the type of points that make up the point scores differs across institutions.*

Differences in academic achievement at 16

One potential explanation for the RG disparities between schools is that, within the top 25% of learners at 16, those with the very highest levels of academic aptitude are concentrated in the higher-performing schools, while those who are only just above the threshold are clustered in the lower-performing schools. At first inspection, the evidence for this seems weak. *Average GCSE points (and equivalents) of HPL learners in low- and average-performing schools were identical at 560 points, and only slightly higher in the top-performing schools at 571 points.* (This is a small difference, given that a single GCSE grade accounts for 6 points, and it corresponds to an effect size of 0.15.)

However, key differences emerge in terms of the *portfolio of GCSE qualifications*, that is, the mix of different qualifications and grades that go to make up a given total points score. We capture this by a measure of the proportion of their total points score that is accounted for by the learner's 8 best GCSEs (or equivalents). For a given total points score, a higher proportion on this measure indicates higher grades in a smaller number of entries, while a lower proportion indicates lower grades across a larger number of entries. We find that *learners in low-performing schools had lower points from their 8 best GCSEs than those in higher-performing schools, but this was largely disguised by the accumulation of more points in additional subjects beyond the first eight.* Those in the top-performing schools got 75% of their points from their 8 best entries, compared with 74% in average- and 71% in low-performing schools. The importance of this is revealed when we see how strong the proportion measure is as a predictor of RG attendance. Comparing two individuals with the same points score, an extra 5% points of the total accounted for by the top 8 entries is associated with a more than tripling of the odds of RG attendance. Holding constant the division of points between the best 8 entries and the rest, this magnitude is equivalent to the effect of 46 extra GCSE points, or nearly 8 grades, on the chance of RG attendance.

To sum up, although HPLs in low-performing schools tend to have similar total GCSE points to those in higher-performing schools, this measure alone is a poor indicator of academic achievement at 16, at least in terms of how it translates into RG potential. Learners in the higher-performing schools tend to have a smaller number of qualifications in total, but with higher grades like As and Bs. Learners who sort into low-performing schools have a more diffuse set of grades, with lower grades such as Cs and Ds but in a larger number of subjects. The latter situation is one that is strongly negatively associated with Russell Group participation. It may be that a learner's portfolio of GCSEs reflects their underlying academic aptitudes, in which case weaker students are sorting into lower-performing schools, and differences in HPL RG participation rates across schools simply reflect this. However, it is possible that portfolio differences reflect factors other than aptitude, such as options and advice directed to pupils earlier in the school career. In this case we could not infer that HPLs in low-performing schools necessarily have less aptitude than those in other schools, or that they have less capacity to achieve the highest A-level grades. What is clear, however, is the differing value placed on combinations of Key Stage 4 qualifications that are notionally equivalent. Three C's are officially 'worth more' than two A*'s (120 vs 116 points), but this is not the case in practice, at least when it comes to elite academic pathways. Decisions made as early as age 14 about which and how many subjects to study, and how to allocate effort between them, have a lasting impact on the chances of elite university attendance, and this is separate from pupils' overall

levels of attainment. The move to Progress 8 measures of attainment and the eBacc may have the effect of making these implicit valuations of different qualifications more transparent to learners, parents and teachers, whereas before such knowledge was the preserve of those with inside experience of the 'rules of the game'.

Differences in family background

Different kinds of schools attract HPLs from different backgrounds, as well as those with different academic portfolios. Boys are over-represented in the highest-performing schools, and Pakistani and Bangladeshi HPLs are over-represented in the lowest performing schools. Sizable social class differences are also apparent. 56% of HPLs in low-performing schools have no parent with HE, compared with just 33% of HPLs in the highest-performing schools. In terms of the NS-SEC social classification often used in WP measures, the comparison is 42% vs 21% of HPLs with low socioeconomic status (classes 4-7 plus unemployed).

Background differences are strongly associated with RG attendance, even amongst HPLs with the same GCSE profile and attending the same type of school. In multivariate analyses conditioning on these factors and a range of background characteristics, we found that the odds of Russell Group attendance were twice as high for a learner whose parent had a degree than an equivalent learner whose parents had not attended HE. Having a parent from a higher managerial/professional background increased the odds by a further 50% compared to those from a low socioeconomic status background. Boys had 40% higher odds of attending RG than girls with the same GCSE portfolio, but we found no significant differences associated with race/ethnicity.

The RG 'penalty' associated with socioeconomic disadvantage is something that applies on average to learners in all types of school, including those in the top-performing schools. However, these types of learners are more commonly found in low-performing schools. This helps to 'explain' in part why RG rates are lower in these schools, and suggests that WP strategies that address social class barriers at the individual level will be particularly relevant in low-performing schools.

Differences in attitudes and beliefs in Year 12

Differences across school types in the degree to which HPLs express concerns about the costs and debt implications of university are present, but relatively muted. For example, 35% of HPLs in low-performing schools reported that they had considered not attending university for financial reasons, compared with 30% in average-performing schools. Knowledge about the financial procedures involved did not differ significantly across school types, at least as captured by questions on whether the learner was aware of their entitlement to grants or bursaries and whether they felt well-informed on sources of financial support.

Ties to home were relatively important for students in low-performing schools, with many more reporting that they would prefer to live at home during university (27% compared with just 10% of those in the top-performing schools). Students in low-performing schools were also significantly more likely to rate highly 'because my parents or family want it' as the reason for their choice of subject at university. Those in lower-performing schools reported much less agreement with the statement 'Most of my friends will go to university' and, perhaps related to this, were significantly less likely to cite 'the lifestyle/social life' as a benefit of going to university. They also expressed greater agreement with the statement 'People like me don't go to university'.

The cultural aspects of university were perhaps less important to the HPLs in low-performing schools. They were less likely to cite the opportunity for learning or personal development as an advantage of university, and less likely to give the reason for their choice of university subject as because they were interested in the subject or particularly good at it. They were also less likely to engage in extracurricular music or sport activities, and reported reading less often for pleasure.

Besides these differences, there were many factors that were similar to HPLs across the school types. Those in low-performing schools were only slightly more likely than those in high-performing schools to agree that a degree was unnecessary for a job they want, or to report choosing a particular subject at university because of the need for a specific job. They also expressed similar views of the importance of getting a well-paid job for going to university and choosing a particular subject to study.

It should be borne in mind, however, that many of the questions asked in the LSYPE relate to HE institutions generally, without distinguishing views on different types of institutions. Since the sample of high-potential learners were overwhelmingly on the path to HE participation at *some* institution, it is perhaps unsurprising that their responses about universities in general were fairly similar. When we investigated which factors were associated with RG participation, after accounting for GCSE attainment and family background, we found only a few significant predictors. Statements associated with a significantly lower probability of RG were: that a degree was unnecessary for a job they wanted; that their subject was chosen with a specific career in mind; that the thought of borrowing or relying on parents was a deterrent to university; and, that STEM subjects are more difficult than other subjects. In addition, the statement that their subject choice was motivated by the desire for a well-paid job was positively associated with RG participation. Some factors, such as the preference to live at

home, were quite strongly associated with RG participation (negatively in that case) but lost statistical significance when multiple predictors were added to the model. It is unfortunately a limitation that a sample size of 2290 lacks power for teasing out the independent association of many different correlated factors with RG participation, each of which may have only a weak influence on the outcome. However, our qualitative analysis is designed to probe these issues in a much deeper way.

Differences in A-level courses and grades

Students in lower-performing schools enter for fewer A-levels (and equivalents) in total than those in higher performing schools. By the end of Year 13, HPLs in the lowest-performing schools had entered for 3.4 A-levels on average, while those in average-performing schools had entered for one extra AS-level equivalent and those in the highest-performing schools had entered for two additional A-level equivalents. There were also significant differences in the kinds of subjects chosen. Those in low-, average- and high-performing schools entered on average for 1.3, 1.8 and 2.2 'facilitating' A-level equivalents respectively. The average of 'non-facilitating' entries across schools was similar at just over two, so that the average *proportion* of A-levels that a student sat that were in facilitating subjects was 37%, 45% and 50% across the schools respectively.

The number and type of A-levels entered for by the end of Year 13 reflects choices at the start of A-level study, but also later decisions about which subjects to start and drop, which may have been affected by subsequent achievement and experiences. AS-level entries at the end of Year 12 might give us a better picture of how *initial* subject choices varied across schools, but only 76% of HPLs sat any A/AS levels at all at this point, presumably because of school-level choices about exam boards and the structure of KS5 study. (Those in the top- and lowest-performing schools were both less likely to take any AS-levels in Year 12 than those in the average schools.) Looking at the sub-sample that *did* take AS-levels in Year 12, the evidence suggests that differences in average subject choices across schools reflect both differences in initial choices and in decisions made in Year 13. HPLs in low-performing schools took significantly fewer AS levels in total in their first year of study, and the ones they did take were disproportionately skewed towards non-facilitating subjects. This trend was compounded by decisions made over the AS equivalents they entered in Year 13.

Just 5.5% of the HPLs overall sat for any A-level equivalents in the year after Year 13 (for example for re-takes or because of postponements in study), and this fraction did not differ significantly across school types.

Conditional on a learner's GCSE profile, family background characteristics and school type, number of A-levels entered is a strong predictor of RG attendance. An additional AS entry raises the odds of RG attendance by nearly 25%, but the effect is much stronger if that entry is in a facilitating subject (39%) than in a non-facilitating subject (16%). There was no significant difference in these effects across school types.

Differences in subject choices are an important factor in explaining lower RG participation rates among HPLs in low-performing schools. However, it will obviously matter crucially how students perform in terms of grades in the subjects they do take. HPLs in low-performing schools achieve, on average, 104 points per AS-level entry, significantly lower than the 116 points in the top-performing schools (for context a grade D AS-level equates to 90 points, a grade C to 105 points, and a grade B to 120 points). The achievement gap in facilitating subjects is noticeably larger (99 vs 115 points) than in non-facilitating subjects (107 vs 115 points).

Holding constant number of entries and characteristics at 16, an additional AS grade per entry (equivalent for example to A-levels of AAA compared to ABC) more than doubles the odds of RG participation. Grades in facilitating subjects are worth more than those in non-facilitating subjects, with each AS grade per facilitating entry raising the odds by 60%, but per non-facilitating entry by only 30%.

To sum up, HPLs in low-performing schools take fewer A-level subjects in total, and choose fewer facilitating options than HPLs in higher-performing schools. Among the options they do take, they also tend to achieve lower grades, and particularly so in facilitating subjects. All these factors are independently associated with RG attendance and together they can account for virtually the entire RG participation gap between HPLs in differently-performing schools, as RG differences between school types are no longer significant when A-level performance is accounted for. Academic factors are clearly hugely important in determining access to RG, and these results point to the need for greater understanding of how and why learners choose a particular combination for A-level study.

Timing of milestones in the HE application process

Although the vast majority of HPLs in our sample had applied for a place at HE by the end of the observation period, the small minority that never applied (6% in total) were more likely to have attended a low-performing school (10%) than either an average- (5%) or top-performing school (3%).

Among those who ever made an application, 89% first applied 'on time' during Year 13 and the vast majority of these also accepted a university place in Year 13 (84% in total), and these percentages were only slightly lower in low-performing schools than top-performing schools. The small group of learners who had not accepted

a place prior to sitting their A-levels had a lower eventual RG participation rate (21%) than those who had accepted a place (36%).

80% of HPLs who attended HE took up a place in HE immediately following their A-levels, and their RG participation rate was 37%. One-fifth of HPL HE participants therefore took a gap year, and this group had a slightly lower RG participation rate of 32%. The proportion taking a gap year was similar across school types, but it is possible that the reasons for delaying HE entry differ across schools. For example, gap year takers from low-performing schools were less likely to have accepted a place prior to taking their A-levels than gap year takers in high-performing schools (47% vs 61%). Unfortunately, the LSYPE data does not contain information on whether learners who accepted a place ultimately took up a place at that same institution, so we cannot distinguish those whose plans changed during their gap year, for example because they did not meet their offer grades, or who chose to re-apply with better-than-accepted grades, from those who met their offer and delayed for other reasons (such as travelling). The available data do not suggest a strong relationship between timing of milestones in the applications process and either RG participation or school type. However, the LSYPE data can only give a partial picture here because we lack information on which institutions individuals chose to apply to, and on how offers received compared with their predicted and realized grades. Again, our qualitative case studies provide a much richer description of behaviours and motivations at each stage of the applications process.

2. Qualitative case studies

Key findings from the case studies will be discussed in terms of ***influences on the students***, and in terms of ***factors considered during decision making***.

Sources of influence discussed by the students could be broadly categorised into family and school/college. Participants often turned to families, including parents, family friends, and other older relations, for advice or commentary about universities or ideas around what to do in the future. The parents of many of the participants had not been to university, so there was little discussion of different universities at home. Most students did know someone who had been to university, whether that was an older relation (such as a cousin, older sibling, aunt or uncle) or a family friend, and sought advice from them: both students and parents discussed this. However, there was often an uncritical acceptance of this advice or information: if an older relation or family friend expressed an opinion on a particular university or a particular course, or followed a particular pathway into a particular job, then often students seemed to assume that experience or trajectory would be the case for them as well, were they to start the same course. In the absence of a range of perspectives, and with little other information, it is hard for students to develop an appreciation of university context. Particularly earlier on in their sixth form career, many of the students were unaware of the diversity of opportunities that are available in HE, and without this awareness it is very hard to develop a critical view of the random pieces of information given by older friends and family. Many parents spoke about leaving the decision making to their child, and acting as a sounding board for ideas and accompanying their children on university open days, rather than providing advice. For the most part, this was related to parents' lack of experience of university. In short, many of the participants had little social or cultural capital at home to understand the range of opportunities available, so tended to place a lot of weight on the individual pieces of information they did receive.

Advice and influence from families did not just come in the form of information about universities. Many participants (particularly those whose parents had not been to HE) viewed university as training for a job. Interviews with students and with their parents revealed that some parents seemed to have an influence on their children's educational trajectories and steered participants towards "professional training", such as law, medicine, or dentistry, irrespective of participants' academic passions or strengths. There are limited numbers of universities offering these types of courses: for example, medicine and dentistry are only offered at a select group of RG universities. These are very competitive courses, and if participants' grades were unlikely to be high enough, they tended to apply to alternatives such as pharmacy, radiography and nursing, which tend not to be offered at RG. For those participants whose parents had not been to university, HE was not seen as a place to "learn how to think", and sometimes not as a place to learn more generic skills that could be applied in the job market. Most participants believed that their parents wanted them to go to university, but in the context of £9,000 per year tuition fees, some students from families with relatively low incomes found it hard to justify borrowing over £27,000 for three or more years of study, unless it was training for a profession. However, in interviews, most parents spoke about wanting their child to follow their interests and strengths, and to be happy in their chosen career pathway.

There were a number of ways in which students drew support for decision making from schools and colleges. Perhaps the most notable influence was the extent to which students had been given opportunities to experience different universities, through masterclasses, campus visits, events aimed at school/college students,

mentoring by current university students, and so on. Students from the institutions which sent more students to RG university were notably more familiar and comfortable with the concept of university, the ways universities worked with students, and the vocabulary used in university culture: to these students, university was an “everyday concept”. The schools/college that these students were in tended to offer many opportunities for students to engage with different universities, and students were strongly encouraged to take up these opportunities – although teachers in one of the case study institutions said that they provided opportunities for students to visit universities but students were reluctant to take up these opportunities. The kinds of activities experienced by participants in our study enabled them to develop some cultural capital around universities, that some of them may not have had the opportunity to develop at home. However, students at the other three (then two) institutions in the project seemed to have had (or at least to have taken up) fewer opportunities to engage with university, and consequently many of them did not feel at all familiar with what universities were like and with the range of opportunities available. This “normalization” of university appeared as a key influence that the school or college could have on students to support their decision making. A minority of our participants (some of those whose parents had been to university) were comfortable with the concept of university without the support of the school – but many participants needed the input from school to “socialize” them into university language and culture. Those students who were most comfortable with the general concept of university seemed to approach their UCAS applications with most confidence too, and to be more deliberate in their decisions to apply to “better” universities (often RG).

Direct engagement with universities themselves was not the only way in which schools supported students. In some institutions, participants reported that teachers introduced university into conversation, and there was an assumption that students would go on to university. Most institutions used pastoral tutor time to focus on UCAS applications, and tutors aimed to support students through the application process – in some cases there was particular provision for students who were applying for Oxbridge or medicine/dentistry courses, and some teachers discussed trying to ensure that students did not aim “too high” and apply to universities where they had very little hope of reaching the required grades. As students were trying to make decisions about which universities to apply to, many asked their tutors or teachers about the universities they went to and what they were like: this is similar to the kind of advice sought from older family and friends, in that it is small pieces of specific information from a particular perspective. This demonstrates that young people who have few resources at home do seek advice and information from other sources. We now need to consider how holistic that advice is, and how young people interact with it. The role of schools, then, in supporting young people to understand what is possible, and make decisions around university applications, is crucial.

Factors Considered by Young People in Decision Making can be broadly categorised into university-specific issues and student-specific issues.

University-Specific Issues

The process of deciding on which university (as opposed to which course or subject), in particular before students submitted their UCAS application, was mainly focused on the characteristics of the university rather than the characteristics of the student. The location, or proximity to home, of a university was a key consideration for many students, and for their parents, particularly those from ethnic minorities and from white, lower SES backgrounds. Many of these students wanted to go to a university that would enable them to stay living at home – either for financial reasons (as it would save money on rent and bills), or for cultural reasons (for example, a large proportion of the female participants who were from Muslim families either wanted to stay at home with their families, or said that their parents wanted them to stay at home). This means that the range of possible universities is limited – although the extent of this limitation varies by location. Birmingham (one of the areas of case study schools) has nine universities (including two RG universities) within realistic commuting distance, but Bristol only has two within the city (one of which is RG), and two others nearby in Bath.

The demographic of these universities was also important: the University of Birmingham has a wide range of ethnic minority students from a diversity of educational backgrounds, whereas the University of Bristol has a intake of mainly white middle class students, many from independent schools. Many participating students were unsure of whether they would “fit in” at Bristol. Birmingham has a much larger population of local sixth-form students from ethnic minorities and/or more deprived backgrounds than Bristol, so it may be easier for a local RG university to recruit students from non-traditional (widening participation) backgrounds who may want to remain living at home for financial or cultural reasons. Bristol, however, being a smaller, less densely-populated city, has a smaller pool of potential local non-traditional students from which to recruit – and low numbers of non-traditional students attending may make it harder for the university to attract greater numbers partly because of fears about “fitting in”. This is consistent with the results from the national quantitative analysis that students in low-performing schools are more likely to express a preference for living at home, and that this preference is

negatively associated with RG participation. There are 24 RG universities in the UK, and many more non-RG universities. Therefore, if a student wants to go to a local university, they might not live near to a RG university, and if they do, there may be much more choice of non-RG universities.

Not all students wanted to stay at home, however - some students (particularly those from the more rural areas) wanted to move away and become independent, although most stipulated that they did not want to be more than a few hours travelling time away (partly for financial reasons when travelling, and partly for the time taken to come home). Again, most parents discussed being more comfortable with their child being either at a local university or one within a relatively short train ride.

Familiarity with a university was an important influence for students when considering universities. This relates to the activities provided by schools to develop students' engagement with universities. Students spoke enthusiastically about applying to universities they had visited for masterclasses, or residential events for example. The University of Birmingham provided a lot of opportunities for local school students, and had a particularly close relationship with six different local schools situated in areas of economic deprivation (including two of our case study schools). This meant that the university had a high profile in the students' eyes: they were familiar with it, and could imagine themselves as students there - much more so than at other universities, either in the same area or in different cities that they had not visited. The sense of familiarity was important for some of these students - they felt that university would be a big enough change in terms of the way they learnt and their social group, without having to cope with finding their way around a new locality as well.

Participants were asked in Year 12 about what kinds of differences they thought existed between universities, and in Year 13 (having accepted offers from their UCAS applications) what dimensions of quality in universities they had considered. Most students had used league tables (from a range of sources) as an indicator of quality, but had little understanding of what dimensions fed into the league table position. They also viewed student satisfaction as a good indicator of quality. Several mentioned the terms "red brick" or RG, but when questioned further had little idea of what that meant, apart from believing that employers would view a degree from that kind of university as better than a degree from another university. This again related to our analysis of the LSYPE, which demonstrated that high attainers who reported in Y12 that the likelihood of their university subject choice leading to a well-paid job was very important, were more likely to attend a RG university: so it seems that students do tend to relate the prestige of university to their likelihood of securing good employment.

When it came to writing their UCAS application, students tried to be strategic in making their application attractive to universities. Strategies employed included seeking out relevant work experience, and ensuring that they had selected a range of subjects at AS and A2. Obviously students were aware of the impact of AS grades and predicted A2 grades on the likelihood of being given an offer. However, very few students were aware of facilitating subjects at A2. Our analysis of the LSYPE data shows that choosing facilitating subjects at A Level was an important predictor of attendance at a RG university, and crucially also that high-attaining students at schools with low average attainment tended to take fewer facilitating subjects at A level than those at schools with high average attainment. Furthermore, few case study participants were aware of the myriad of different ways in which universities (and departments within universities) make admissions decisions, and the different emphases placed on the personal statement, so they were basing their application strategy on the basis of very limited or even incorrect information.

Preferences for particular universities, following applications, often changed when offers came in. Five case-study participants had applied to Oxford or Cambridge, stating Oxbridge as their preference, and had had interviews, but none were subsequently offered a place. Other students were also rejected from their original preferred university. Decisions about which university to put down as first and second choice were often made on the basis of how they felt about the university on visiting it (whether on an open day, or from prior experiences), the relative offers (there was no point putting a particular university as second choice if the offer was higher than the first choice), and how confident students felt about achieving the offer.

Student-Specific Issues

Individual student characteristics, preferences, and backgrounds were also important to students when making their decisions. The way in which the purpose of education, and in particular of university, was viewed was important when deciding on subject choice. As previously mentioned, many students (and their families) believed that university was about training for a specific job: it may be that this was a lack of awareness of the roles that universities can play in education, by those who were unfamiliar with university. As previously mentioned, it may also be that few of our participants had the financial resources to allow themselves the "luxury" of seeing university primarily as a life-changing experience, or a way of learning how to develop your thinking.

There was a dynamic relationship between students' subject choice at AS level, their AS grades achieved and predicted A2 grades, and their aspirations regarding university and subject choice. Most students chose their AS subjects before they had a clearly formed aspiration of what they wanted to study at university, or of what the

requirements for particular courses were – and as mentioned before, many chose a range of subjects to “keep their options open”. Some, however, chose their AS subjects with a particular course in mind, such as Medicine or Dentistry. As they progressed through Year 12, aspirations regarding university were shaped further. However, many students ended up revising and changing their aspirations – either because they had not chosen the required subjects for courses they considered studying, or because their AS and predicted A2 grades were not sufficient. Those who revised their aspirations (particularly with regard to university they were applying to) to fit in with lower-than-hoped-for grades then reframed how they discussed the benefits of particular universities, and the indicators of quality they might use. Other students re-started their AS levels, or re-took particular modules to improve their grade. Some students decided that they were going to take a gap year, and apply once they had received their grades so they were more confident of the likelihood of being accepted. This strategic response to a lower-than-hoped-for performance was suggested by the school or college in some cases, who had had experience of students being accepted onto courses such as Medicine based on A level grades achieved, which they would have been very unlikely to have been accepted onto if applying with their AS grades only at the start of Y13.

Other students took a similarly strategic approach, but went one step further – they applied for their “second choice” of subject at the start of Y13, and then if they received higher-than-expected grades at A2, were planning to take a gap year and apply for their first choice subject for which they needed higher grades. Few students were planning on taking a gap year for travel and “experience” – instead this was a strategic approach to maximizing their chances of successful application to their desired course. In some cases, however, students surpassed their own expectations regarding AS grades, so revised their aspirations towards a course that required higher grades (one student, for example, was considering becoming a primary school teacher, but on receiving straight A grades at AS level then applied for and was offered a place to study Law at the University of Birmingham). Although not related to information about specific universities, this strategic behavior in response to AS grades was an interesting way of “playing the game” of UCAS application.

What was undoubtedly clear from the longitudinal nature of the case studies was that students’ aspirations changed dramatically over the course of their sixth form studies. For the most part, they became more confident about understanding what university might be like. Some students started out very focused on a particular course or university (often on the basis of a conversation about the experiences of one older family member or friend), and over the course of their sixth form before UCAS applications, broadened their horizons to understand the range of opportunities that they could pursue. Other students started their sixth form career confused and overwhelmed by the choice available, and eventually started to bring their aspirations into focus.

Key recommendations

- A focus on quality, comprehensiveness and consistency of advice and information may help students in their decision making.
- Crucially advice needs to focus more clearly on the choice of facilitating subjects at ‘A’ level and prior to that even in the choice of GCSEs that may then lead on to facilitating subjects. A focus on the quality of teaching and learning remains critical to helping high potential learners in low performing schools achieve the A level grades they need for entry to a RG university.
- High-attaining learners from different backgrounds may require different kinds and degrees of support tailored to an awareness of their specific context, family and cultural background. This may also involve more actively engaging in dialogue with families around the different options available to young people and how these relate to future career choices and life aspirations.
- Supporting students to become familiar with universities through visits can help them see university as “a place for them”.
- It is suggested that advice be focused around key “crunch” points in students’ decision-making processes: choice of A levels; selecting degree subject; UCAS applications (and whether to do this at the start of Year 13 or at the start of a gap year); receiving predicted grades; and receiving offers from universities. Students may benefit from a sustained relationship with school staff so they can access holistic support at each of these stages.
- Schools may benefit from relationships with HEIs to help:
 - define the role(s) of teacher(s) with special responsibility for HE;
 - provide support for other key players such as parents and subject teachers;
 - and offering timely, appropriate advice to students.

Dissemination activities undertaken and planned

Conference and Symposium presentations

27 Feb 2016: Invited paper at EducationSW Conference, Stanchester School, Yeovil.

18 Feb 2016: 2 papers at the Widening Participation Symposium, GSoE, UoB.

15 Sept 2015: Paper as part of symposium on "Participation and Progression from pre-16 to post-16 to University Education: Case studies from Bristol", at BERA annual conference, Queens University Belfast, Northern Ireland.

10 Sept 2016: Paper presented at the ECER annual conference, Corvinus University of Budapest, Hungary.

19 Aug 2015: Paper and poster presented at the "Ethnicity and Inequality: The role of aspirations and education" symposium, SPAIS, UoB.

11 June 2015: Paper presented at the Widening Participation Fund Research Meeting, UoB.

4 Dec 2014: Paper presented at the Widening Participation Group Meeting, GSoE, UoB.

16 Sept 2014: Paper presented at the Widening Participation Group Meeting, GSoE, UoB.

3 Sept 2014: Paper presented at the ECER annual conference, Porto University, Portugal, 2-5 September.

20 May 2014: Paper presented at "Their futures? A widening participation symposium on young people's aspirations into higher education and beyond", UoB.

3 Oct 2013: Paper presented at Widening Participation Research Fund meeting, UoB.

Ongoing discussion in networks

GW4 Widening Participation network (Universities of Bristol, Bath and Exeter, and Cardiff University)

Western Widening Participation Research Network (Universities of Bristol and Bath, UWE, Bath Spa University)

Planned journal articles

British Educational Research Journal, on the case study work and implications for schools (Rose et al, submission June 2016)

Journal of Education Policy, on the policy implications (Tikly et al, submission September 2016)

Higher Education, on the LSYPE analysis (Washbrook et al, submission September 2016)

Planned briefings

Policy Bristol (June 2016)

GSoE Research Briefings (June 2016)

GSoE Document Summary Service summary (July 2016)

Planned Events

4 July 2016: High-Potential Learners Project dissemination event, GSoE, UoB.

Nov 2016: Application submitted for Thinking Futures ESRC Festival of Social Sciences event.

Suggestions for extension of the project or further research avenues

- (1) A point to emerge from the findings has been the preference of some high performing learners from disadvantaged backgrounds and some minority ethnic groups to apply to local universities. Our research has also drawn attention to differences in the size of catchment for the Universities of Birmingham and Bristol respectively, in terms of schools serving disadvantaged learners, minority ethnic communities and low participation neighbourhoods that might fulfil WP criteria. These differences in catchment might affect the ability of universities to attract these students and thus raise questions about the appropriateness/ fairness/ relevance of existing government targets for different RG universities. Future research on the WP "potential" for different RG universities based on their location and local population characteristics may help to refine Access Agreement targets and assess their appropriateness.
- (2) The number and choice of subjects at both GCSE and A level has been found to be a critical factor in the chances of HPLs going to a RG university. Compared with HPLs in high performing schools, those in low performing schools are less likely to take the facilitating subjects commonly required for RG entry. Further research on school/college differences in subjects offered and factors affecting student choice would help support a level playing field in options available and advice given.

Impact for the University of Bristol, for other Russell Group institutions and more broadly

We have identified and targeted a range of relevant stakeholders to engage since the inception of the project

and in the dissemination phase. These include the WP offices at the Universities of Bristol and Birmingham, sixth form colleges, and schools. The participative nature of the research design has ensured continuous engagement with schools and WP offices. Engagement has also been achieved through the dissemination activities detailed above. The team will ask local schools and the WP offices to explain how they will take our research forward in their policy and planning processes during the dissemination event planned for 4 July, and this will be recorded. The policy briefs we will develop will target policy makers at national and local level. The project has been identified as a potential impact case study for the next REF and the Graduate School of Education is committed to supporting the team in collecting further evidence of impact. The team intend to apply for ESRC impact acceleration funding to develop impact following the conclusion of the project and collect evidence of changes to policy and practice that can be attributed to the project.

Financial summary

Budget Headings (to match headings provided in initial bid)	Budget £	Actual £
<i>Staffing</i>	£63,732	£63,198
<i>Non-Staff</i>		
Consumables	£237	£118
Case Study visits	£12,480	£6,753
Transcription	£19,399	£10,549
Consultancy (Hill)	£3,687	<i>(included in transcription)</i>
Grand Total	£99,535	£80,617

***NOTE: DISEMINATION EVENT ON 4th JULY,
SPENDING PENDING**