

Applications, Offers and Admissions to Research Led Universities

***A joint report by the Sutton Trust and the
Department for Business Innovation, and Skills***

BIS Research Paper No.5

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August 2009

1. Summary

In September 2007, the Sutton Trust published a statistical analysis of university admissions by individual schools. This showed that 100 elite schools, a small proportion of the school sector, accounted for a sixth of admissions to the 'Sutton 13' group of research-led universities over five years¹. The analysis suggested that this could not be attributed to A level results alone. In the light of these results, the Trust and the Department for Business, Innovation, and Skills (BIS) have undertaken some joint analyses to investigate these patterns further. In particular one set of analyses looked at applications to Higher Education (HE) overall, and more specifically to the 'Sutton 13' group of universities, from different types of post-16 institution (schools or colleges) taking into account the average overall Level 3 performance (A Levels or equivalents) at a school or college. The other set of analyses considered the relationship between individuals' A level results, the type of post-16 institution they attended, and progression to the most academically selective HE courses, as defined by UCAS tariff qualifications on entry.

1.1. Key findings

- The single most important factor determining the probability that students obtained a place on one of the most academically demanding degree courses was the student's own A level (or equivalent) results.
- Beyond this, the differences, by type of school or college, in participation rates on the most academically demanding courses can be largely explained by differences in the number and patterns of applications from different types of school or college.
- Therefore, it appears that young people with similar attainment who applied to one of the most academically demanding degree courses, were around as likely to get an offer, regardless of the type of school or college they attended.
- Pupils from independent schools in the top fifth of schools according to average A level attainment, on average made twice as many applications to 'Sutton 13' universities than their peers from comprehensive schools with similar overall levels of attainment.
- As a consequence, a student with the equivalent of ABB at A level (including at least one 'core academic' A level) who attended an independent school had a 79% chance of entering one of the 500 most selective degree courses, compared with 70% for a similar student attending a state maintained school.²
- Application rates from FE colleges to 'Sutton 13' universities were less than half of those from other types of schools, even when account is taken of the differences in average overall levels of A level attainment of the schools or colleges.
- As such students from the FE sector were less likely to study the most selective HE courses than students with similar A levels from other types of educational establishment.

¹ <http://www.suttontrust.com/reports/UniversityAdmissionsbySchool.pdf>

The 'Sutton 13' universities are: Birmingham, Bristol, Cambridge, Durham, Edinburgh, Imperial College, London School of Economics, Nottingham, Oxford, St. Andrews, University College London, Warwick and York.

² For this analysis, core academic subjects were defined as A levels in Maths, English, Physics, Chemistry, Biology, or, History.

- If FE sector students had the same participation rates as those in selective state schools with similar “academic” A level attainment we would have expected over 1,000 extra students from the FE sector (including FE and sixth form colleges) to enter the 500 courses with the highest average entry qualifications by age 19³.
- About a third of applications to 'Sutton 13' universities from those in the comprehensive schools with the lowest attainment result in offers, but only a fifth of those from FE colleges with similar overall levels of attainment do so. However, this finding needs some caution as it may still reflect differences in individual students' levels of achievement.

³ To put this figure into context, this compares to 15,000 pupils in FE colleges who attain similar A-level scores (including at least one "traditional" subject), and 60,000 pupils from all schools and colleges who enrol at the 500 most selective degree courses.

2. Applications to selective universities

2.1. Summary

This section uses information provided by UCAS about young people's applications to higher education, and explores the relationship between the type of school or college attended by these young people and the number of applications to, offers from, and places accepted at universities in the 'Sutton 13'.⁴ This information includes maintained and independent schools, general further education colleges and sixth form colleges. This data has some limitations, most notably in that information was available only for whole schools or colleges rather than for individual students. Also, not all schools and colleges in England were included.

Nevertheless, the pattern of results strongly suggests that applicants to higher education from maintained schools and FE colleges were less likely to apply to the 'Sutton 13' than young people from independent schools. This result holds not only for schools and colleges overall, but also when comparisons are made between post-16 institutions with similar overall levels of attainment. Further, applicants from FE colleges were less likely to apply to the 'Sutton 13' than maintained schools and there were also fewer offers per application from FE colleges than for applications from other types of post-16 provision. However, this finding must be treated with some caution since this may be explained by the attainment and subject choices of individual students. Offer rates across all other institution types were broadly similar.

2.2. Data

The analysis described in this section is based on information provided by UCAS about the applications made to higher education institutions (HEIs) by UK based students aged 18 or 19 in autumn 2005, for courses starting either in autumn 2006 or in 2007 for those deferring entry for a year.

Following discussions between the Sutton Trust and UCAS, it was agreed that selected information from the complete dataset relating to applications to first degrees held by UCAS, aggregated to the level of individual UCAS centres⁵ would be provided to allow an examination of patterns of application to, and take-up of places at, HEIs for students applying in 2002 to 2006. In order to preserve the confidentiality of students' data, centres with fewer than five applicants were excluded. The results reported here are based on students applying in 2006 for entry to higher education in 2007 or 2008.

The information provided by UCAS included, for each UCAS centre, the following:

- the total number of students making one or more applications to a UK HEI (the number of candidates)
- the number of candidates applying to at least one 'Sutton 13' university
- the total number of applications to 'Sutton 13' universities from all candidates in the centre
- the number of offers from 'Sutton 13' universities
- the number of acceptances at a 'Sutton 13' university

⁴ Here, an acceptance means that the university has confirmed the offer of a place and that the young person has confirmed their intention of enrolling on the course.

⁵ Generally, each school or further education college is one centre. Where a number of schools act as a consortium to provide post-16 education, this may be treated as one centre. Some colleges are treated as more than one centre, e.g. those that have sites in different locations.

For centres in England, information on the overall level of attainment in level 3 qualifications was obtained from the Department for Children, Schools and Families (DCSF). Two measures of attainment were considered: points per student (i.e. total points from all level 3 qualifications divided by the number of students entered) and points per entry (i.e. total points divided by the number of entries). These two measures tend to be strongly related (although points per entry can be more discriminating for schools and colleges with high overall levels of attainment) so only results based on points per student are discussed here. The analysis then explored the relationship between the overall levels of attainment in schools and colleges and the patterns of applications to, offers from and acceptances at 'Sutton 13' universities.

A number of limitations in the matching of information from UCAS and DCSF need to be noted here.

- UCAS centres do not always map directly onto schools and colleges as given in the DCSF attainment tables. For example, where schools group together to operate a combined sixth form, DCSF data includes each student in the results for his or her 'home' school, whereas UCAS may treat the whole sixth form as one centre. In some cases, FE colleges with multiple sites are treated as several centres by UCAS but as one entity by DCSF.
- Some independent schools choose not to be included in DCSF attainment results.
- In order to protect the confidentiality of candidates' information, the information from UCAS did not identify small centres (those with fewer than five candidates).
- It was not always possible to match data from the two sources reliably, for example where there were two schools with similar names.

The final analysis was based on 1945 institutions in England:

- 1091 comprehensive schools
- 133 grammar schools
- 24 schools classified as secondary modern
- 216 FE colleges
- 91 sixth form colleges
- 389 independent schools.

Unlike the results presented in Section 2, which makes use of individual level data, the analysis in this section is based on institution-level data. Ideally this analysis would focus only on pupils who have sufficiently high level 3 results which would make them candidates for HE. The attainment measure used for each school/college is based on all students entering for level 3 qualifications. In many cases, the vast majority of these students would also be potential candidates for higher education. However, there will be some institutions where the number of level 3 entrants is considerably greater than the number of candidates for higher education. This is likely to be the case for FE colleges where there will be a much greater spread of attainment, particularly when compared to independent or grammar schools. It is probable that, in general, the performance measures we have for such schools or colleges will tend to understate the attainment of those who actually apply to higher

education. In particular, we cannot identify which students in a school or college applied to a 'Sutton 13' university, or which applications resulted in offers or places. Therefore, great care needs to be taken when interpreting results based on institutional averages and the findings should be treated as indications of the need for further investigation rather than definitive conclusions in themselves.

Despite the weaknesses mentioned above, analysis of this data provides some insights into patterns of application to higher education.

2.3. Findings

2.3.1. Application rates to 'Sutton 13' universities

The first stage of the analysis examined the average number of applications to 'Sutton 13' universities per UCAS candidate. Schools and colleges were categorised into quintiles⁶ based on the level 3 'points per student' measure, and within each school/college the average number of applications to 'Sutton 13' universities per UCAS candidate was calculated. Most candidates make six HE applications and, overall, the average application rate to 'Sutton 13' universities, i.e. the number of applications to 'Sutton 13' universities divided by the number of candidates, was 0.86.

However, there were wide variations between schools and colleges in the application rate to ST13 universities, and these variations appear to be related to school/college type and to their overall level of attainment. Table 2-1 shows the number of schools/colleges and their average 'Sutton 13' application rate, separately for each type of institution.⁷ Entries in italics are based on 10 or fewer institutions and should be treated with caution. This information is presented graphically in Figure 2-1.

Table 2-1: Applications to 'Sutton 13' Universities per candidate

Quintiles of points per student	Comprehensive	FE colleges	Grammar	Independent	Sixth Form Colleges
1 (lowest)	0.38 [230]	0.15 [127]		<i>0.93</i> [7]	<i>0.33</i> [8]
2	0.53 [271]	0.19 [70]	<i>0.27</i> [1]	0.91 [20]	0.54 [23]
3	0.74 [303]	0.4 [12]	<i>1.01</i> [3]	1.09 [50]	0.57 [18]
4	0.82 [218]	0.53 [4]	1.03 [24]	1.46 [115]	0.72 [27]
5 (highest)	1.03 [69]	<i>0.8</i> [3]	1.52 [105]	2.11 [197]	1.08 [15]
Total	0.64 [1091]	0.2 [216]	1.42 [133]	1.71 [389]	0.67 [91]

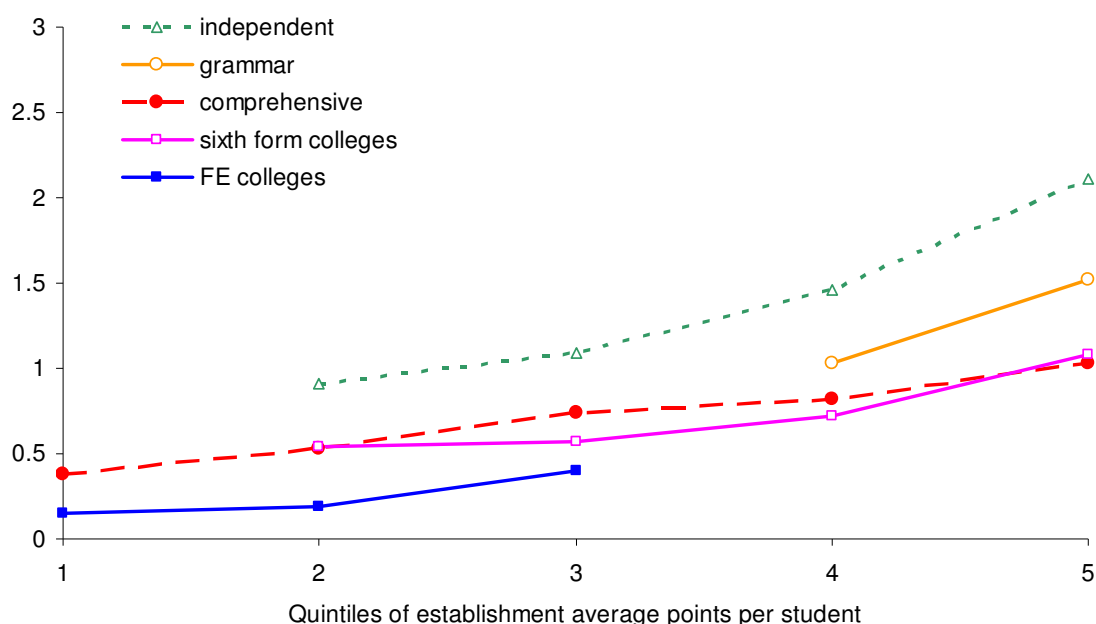
Number of cases in each cell shown in square brackets.

Figures in *italics* are based on up to 10 cases and should be treated with caution.

⁶ That is, the 20% of schools colleges with the lowest level of attainment were places in the lowest of five groups, the next 20% in the second group, and so on.

⁷ Results for the small number of schools classified as secondary modern are omitted.

Figure 2-1: Applications to 'Sutton 13' Universities per applicant by centre type and centre average points per candidate



- Overall, the table shows a clear pattern, with students from higher-performing schools and colleges making more applications to ST13 universities than students in lower performing institutions. These differences are quite marked. For example, students in comprehensive schools with average overall levels of attainment made, on average, 0.74 applications to 'Sutton 13' universities, while those in the top quintile made one or more such applications. Among independent schools, the rate varies from less than one application to 2.11. While there are some exceptions to this pattern, these are based on very small numbers of schools or colleges.
- When schools and colleges with similar levels of attainment are compared, there are some marked differences between school types.
- Application rates were highest from independent schools across all performance bands. Indeed pupils from independent schools in the lowest performance quintiles (across all institutions) still made nearly as many applications as pupils in the top performing comprehensives (although it should be noted that there are relatively few independent schools in these quintiles).
- Application rates from FE colleges were much lower than for schools or sixth form colleges (for example, 0.74 in comprehensive schools and 0.40 in FE colleges with average overall levels of attainment), though it should be noted that the vast majority (90%) of FE colleges are in the 2 lowest performing quintiles.
- Application rates seem to be slightly higher in grammar schools than in comprehensives or sixth form colleges with similar levels of attainment (but some care is need here as there are relatively few sixth form colleges with levels of attainment comparable to those of grammar schools).

2.3.2. Offers from 'Sutton 13' universities

Schools and colleges with no students applying to a Sutton Trust university were excluded, and the 'Sutton 13' offer rate per application, i.e. the number of offers divided by the number of applications, was calculated for each school or college. Table 2-2 and Figure 2-2 are similar in format to Table 1 and Figure 1, but based on fewer institutions: they summarise the offer rate by type of institution and by level of attainment.

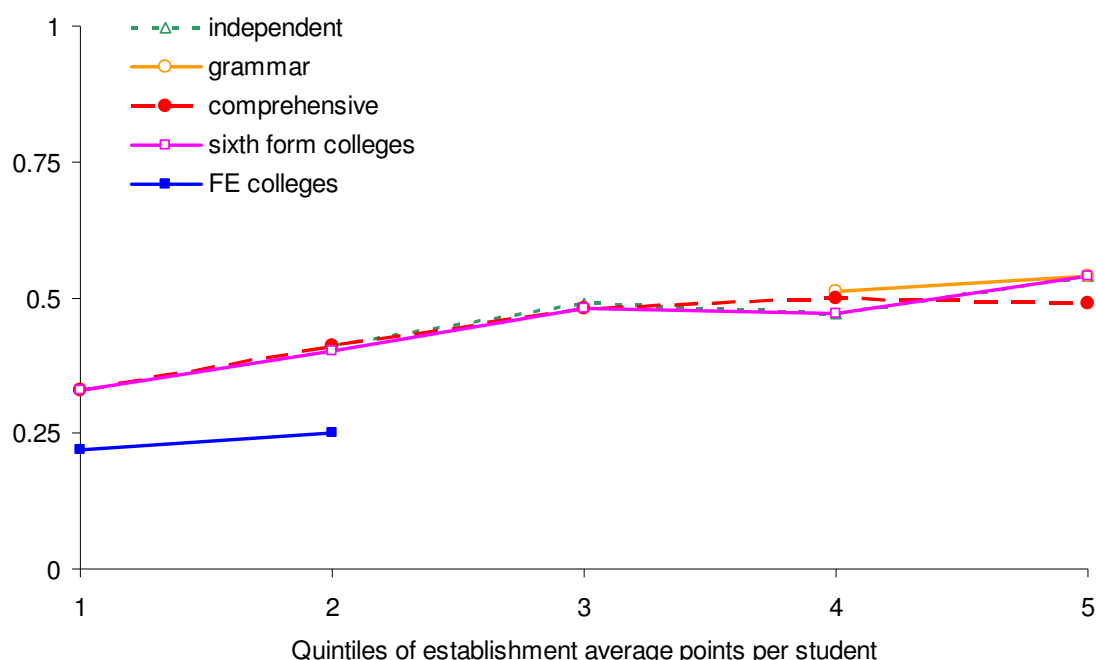
Table 2-2: Offers per application to 'Sutton 13' Universities per applicant by centre type and centre average points per candidate

Quintiles of points per student	Comprehensive	FE colleges	Grammar	Independent	Sixth Form Colleges
1 (lowest)	0.33 [228]	0.22 [123]	[]	<i>0.49</i> [8]	<i>0.33</i> [10]
2	0.41 [271]	0.25 [62]	<i>0.34</i> [2]	0.41 [22]	0.4 [21]
3	0.48 [302]	0.4 [8]	<i>0.49</i> [2]	0.49 [48]	0.48 [18]
4	0.5 [210]	0.47 [4]	0.51 [25]	0.47 [115]	0.47 [27]
5 (highest)	0.49 [66]	<i>0.3</i> [3]	0.54 [104]	0.54 [195]	0.54 [15]
Total	0.43 [1077]	0.24 [200]	0.53 [133]	0.5 [388]	0.45 [91]

Number of cases in each cell shown in square brackets.

Figures in *italics* are based on up to 10 cases and should be treated with caution.

Figure 2-2: Offers per application to 'Sutton 13' Universities per applicant by centre type and centre average points per candidate



Overall, about 43% of applications to 'Sutton 13' universities resulted in an offer being made to the candidate. In general, applications from students from high attaining schools or colleges were more likely to result in offers than applications from lower attaining institutions. This pattern was particularly evident among comprehensive schools, but this is mainly because this is the largest group, and shows a wide range of levels of attainment. This difference is mainly between the lowest one or two quintiles (i.e. schools with levels of attainment below average) and those with levels of attainment around or above average, so that there is relatively little difference in offer rates between the top three quintiles. For example, among comprehensive schools with average or above levels of attainment based on points per student, almost 50% of applications to ST13 universities resulted in an offer to the candidate. For comprehensive schools in the lowest quintile of attainment, the corresponding figure was 33%, and it was 41% for the next lowest quintile.

Once institutional average levels of attainment are taken into consideration, there was relatively little difference in the offer rate between institution types, except that application from students in FE colleges appeared to be less likely to result in offers than those from other types of school and college. Although some caution is needed because of the relatively small number of institutions involved, Table 2 suggests that the offer rate for students from FE colleges was consistently lower than that for students from comprehensive schools with similar overall levels of attainment. For example, 33% of applications from the 228 comprehensive schools in the lowest quintile in terms of points per student resulted in an offer. For students from the 123 similar FE colleges, the corresponding figure was 22%.

The implications of this finding are not clear. It may be that the relatively low number of applications to 'Sutton 13' universities from students in further education colleges indicates that even those students who do apply to these universities have lower individual levels of attainment than do students applying from other types of school or college. If this is the case, we would expect to see a lower offer rate.

Nevertheless, the relatively low offer rate to FE students merits further investigation.

2.3.3. Acceptances at 'Sutton 13' universities

Finally, schools and colleges with no offers from 'Sutton 13' universities were excluded and the acceptance rate per offer, i.e. the number of places taken up as a proportion of the offers made, was calculated for each school and college. These results are summarised in Table 2-3 and Figure 2-3.

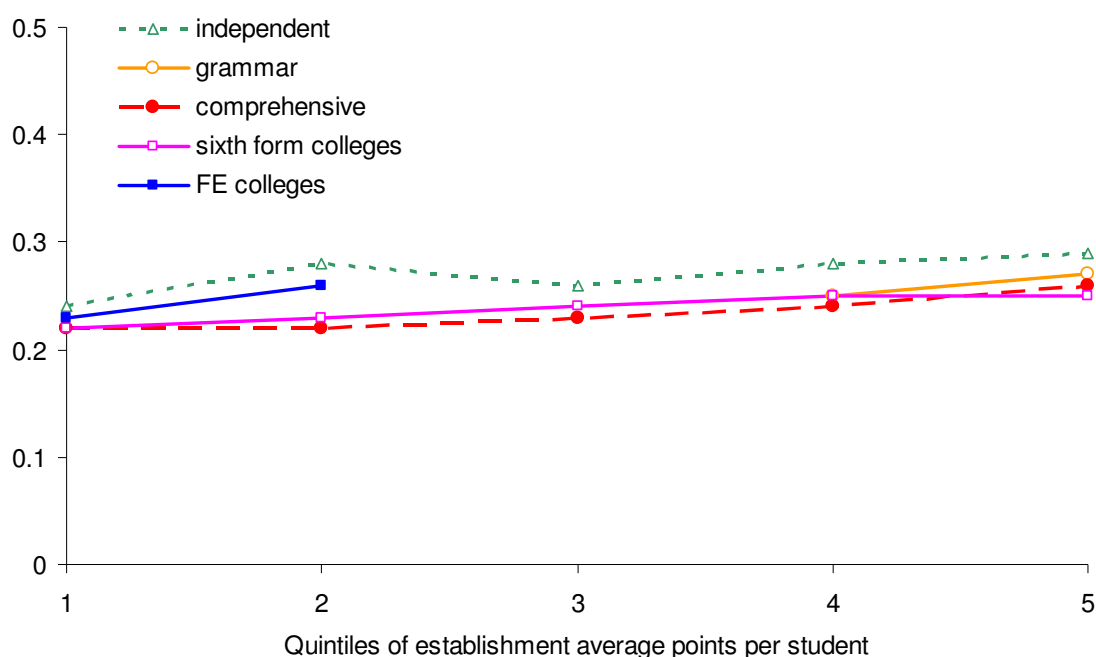
Table 2-3: 'Sutton 13' acceptances per offer

Quintiles of points per student	Comprehensive	FE colleges	Grammar	Independent	Sixth Form Colleges
1 (lowest)	0.22 [225]	0.23 [102]	[]	<i>0.24</i> [10]	0.22 [14]
2	0.22 [273]	0.26 [38]	<i>0.15</i> [2]	0.28 [24]	0.23 [21]
3	0.23 [277]	<i>0.28</i> [5]	<i>0.25</i> [5]	0.26 [54]	0.24 [17]
4	0.24 [193]	<i>0.23</i> [4]	0.25 [25]	0.28 [113]	0.25 [24]
5 (highest)	0.26 [58]	<i>0.3</i> [2]	0.27 [101]	0.29 [184]	0.25 [15]
Total	0.23 [1026]	0.24 [151]	0.26 [133]	0.28 [385]	0.24 [91]

Number of cases in each cell shown in square brackets.

Figures in *italics* are based on up to 10 cases and should be treated with caution.

Figure 2-3: 'Sutton 13' Acceptances per offer



Overall, around a quarter of offers from 'Sutton 13' universities were taken up, with the student concerned finally being accepted at the relevant university. There does not appear to be any systematic relationship between school type, overall level of attainment and this acceptance rate per offer. For example, for both comprehensive schools and FE colleges in the lowest quintile based on points per student, just over 20% of offers resulted in places taken up. So it appears that once a student has received an offer from a 'Sutton 13' university, they are equally likely to accept it wherever they are studying.

2.4. Conclusions

When account is taken of overall average levels of attainment within schools, FE colleges and sixth form colleges (using level 3 points per student to classify schools and colleges), the analysis presented here suggests that:

- students from FE colleges were the least likely to apply to at least one 'Sutton 13' university; pupils from independent schools were the most likely to apply, and in fact the application rate from independent schools in the lowest average performance quintiles was nearly as high as that from s in the top performing comprehensives;
- applications to 'Sutton 13' universities from students in FE colleges were less likely to result in offers than applications from students in all other schools and sixth form colleges, even when account is taken of schools' and colleges' overall levels of attainment; there were very little differences between offer rates across all other types of institution;
- there seems to be little relationship between school or college type, overall levels of attainment and the probability that an offer from a 'Sutton 13' university results in a place being taken up.

Using level 3 points per entry instead of points per student to classify schools and colleges gives similar, but rather more marked, differences between types of post-16 provider.

Some of the limitations of the data in terms of coverage were noted in Section 3.2 above. The use of institution level aggregate data also creates limitations.

- The available data does not allow us to identify which individual students were applying to 'Sutton 13' universities and, in particular, the levels of attainment and the types of courses being taken by these students.
- We do not know, for individual students, how many applications they made to 'Sutton 13' universities: if there are 100 students and 200 applications to ST13 universities, this could represent two such applications per student, or it could be that there is a much wider variation between students in the number of applications being made.
- Similarly, we do not know the extent to which some students are receiving multiple offers from 'Sutton 13' universities and some are receiving none or one.
- There are a number of reasons why students do not take up particular offers, including preferring a different course or failing to meet the conditions of offers.

Despite these limitations, the findings presented here suggest that there is scope for further investigation into the reasons why students from FE colleges do not apply to 'Sutton 13' universities in the numbers which might be expected based on patterns observed in comprehensive schools, and why these applications are less likely to result in offers. Similarly, it would be useful to investigate the difference in application rates between independent and maintained schools with similar overall levels of attainment.

3. Participation in selective HEIs

3.1. Summary

This section presents analysis of similar issues using a different data source⁸, which contains detailed information on individual students' A level attainment⁹ rather than schools' average results. One weakness of the analysis presented in the previous section is that the results are based on institutional level averages, and hence sensitive to small differences in the distribution of students' attainment within schools. For instance, a small number of additional high attaining students could greatly increase the participation rate in highly selective forms of HE, but this may only have a small influence on the whole school's average attainment. If this is the case then, in the previous section, comparisons of schools with "similar average A level scores", may actually have been comparing schools that had different proportions of high attaining pupils. When considering forms of HE that have high entry requirements, this latter proportion is more important than the school level average.

The disadvantage of the data source used for this section is that it does not contain information about applications to institutions: rather, it contains information about their ultimate participation in HE by age 19. Therefore, this does not allow us to understand differences in participation which are due to applications behaviour of pupils from different types of school.

Also, rather than using the 'Sutton 13' grouping, this section differentiates HE entry by selectivity of course and institution, as follows:

- all HE courses in UK HEIs or English FECs,
- the 500 courses with the highest average UCAS tariff scores¹⁰ for entrants (500EQ)¹¹, and,
- the 100 courses with the 100 highest average UCAS tariff scores for entrants (100EQ).

The analyses indicate that the young HE participation rates of students with similar A level attainment at age 17 are relatively close to one another when comparing those studying in different establishment types, though the rate for sixth form and FE colleges is marginally lower. However, high attaining students in independent schools are more likely to participate in the most selective forms of HE than those in the maintained sector with similar levels of attainment. Further, those in sixth form and FE colleges are slightly less likely than those in other types of post-16 establishment to participate in this form of HE by age 19.

⁸ The National Pupil Database (NPD), which contains matched records from the Higher Education Statistics Agency's (HESA) Student Record and the Learning and Skills Council's (LSC) Individualised Learner Record (ILR).

⁹ Although it will exclude those engaged in programmes of study that do not result in 2+ A level equivalent examination entries in the summer of year 13.

¹⁰ The UCAS tariff score is a means of adding up attainment over a wide range of qualifications to provide a single attainment measure for HE institutions, should they wish to use it; see www.ucas.com/website/documents/tariff/tariff_nov07.doc for further details.

¹¹ Average total tariff score (where available) calculated for all entrants in 2004/05 to each JACS subject group for each Institution. Higher level courses in FECs were not included. Where there were fewer than 50 students with valid tariff score information the institutional average over all subject groups was used.

3.2. Data

The data used in this section are drawn from an extract of the NPD detailing A level students in schools and colleges at age 17 in 2003/04 who may have entered HE in any UK HEI or a Higher course at an English FEC at age 18 in 2004/05, or at age 19 in 2005/06. The base population is those with Key stage 5 attainment records for 2003/04, which means they must have attempted qualifications of equivalent level to two or more A levels in the summer of that year.

3.3. Findings

3.3.1. Performance and Progression (Institutional Averages)¹²

The first stage of the analysis considers the overall performance and progression from different types of schools and colleges, and entry to different selective definitions of HE. Use of institutional average performance is comparable to the analysis in section 2; subsequent analyses look at the results for individual students.

This analysis shows that independent and selective schools have the highest average attainment and that the average attainment of students in our selective definitions of HE have significantly higher attainment than the average of students. Table 3-1, Table 3-2 and Figure 3-1 explore these results in more detail. We look at three definitions of attainment to enable differing degrees of “academic” focus which might be of importance to those studying in research intensive / selective HEIs: i) Total A level points, ii) points from three highest academic A levels, iii) points from full A levels in Maths, English, Physics, Chemistry, Biology, or, History. Under the UCAS points tariff, an A grade at A level is worth 120 points, B 100, C 80, D 60 and E 40.

Table 3-1 : Average A level attainment and participation by institution type

	Number of cases	Average A level points per student			Participation rate by 19 (%)		
		total	3 highest A levels	selected A levels*	in HE	500EQ	100EQ
General/tertiary colleges	30,078	199	124	43	58	10	1
Other maintained	4,679	210	133	51	61	11	2
Comprehensive schools	101,532	263	196	83	73	21	3
Sixth form colleges	40,933	291	208	76	73	22	4
Independent schools	29,506	359	287	150	85	56	15
Selective Schools	18,475	374	281	145	88	48	11
Total	225,203	280	207	89	74	26	5

*Selected A levels are Maths, English Physics, Chemistry, Biology, History

Table 3-1 shows that, in our sample, selective maintained schools have the highest average KS5 point scores and points from academic A levels, along with the highest HE participation rates. Independent schools have the highest average points scored in Mathematics, English, Physics, Biology, Chemistry and History; they also have the highest participation rates in the two selective forms of HE considered here. General / Tertiary FE colleges have the lowest average A level attainment and participation rates.

¹² Our set of KS5 records is based on institution and key stage 5 information at age 17, so the general/tertiary sector makes up a relatively small fraction of the KS5 students. If we were considering attainment and institution at ages 18/19 and over we would expect a greater proportion to be studying in general FE colleges.]

Even at this relatively crude level, we see the patterns that we have seen using the school aggregate data in section 2: that HE participation is correlated with A level attainment and that participation in more selective forms of HE is correlated with academic and traditional A level attainment.

Table 3-2: Average attainment by HE type

	Number of cases	Proportion (%) of		Average A level points per student		
		cases	HE entrants	total	3 highest A levels	selected A levels*
100 EQ	11,742	5	7	483	348	273
500 EQ	59,202	26	36	410	313	183
All HE	165,839	74	100	313	236	108
Not in HE	59,364	26	-	189	125	39
Total	225,203	100	-	280	207	89

Table 3-2 shows that students in the more selective forms of HE (100EQ and 500EQ) have higher A level attainment. Comparing these average scores to those in Table 3-1, it is clear that we must focus on students towards the top of the attainment distribution, since the average scores of entrants to these forms of HE are much higher than the average for any of the establishment types examined above. It is clear that, for these forms of HE, we are looking at students who perform significantly above the average. 100EQ is a particularly restrictive definition covering only 7% of the HE entrants in this sample. 500EQ is less restrictive covering over one third of the HE entrants in this sample.

Figure 3-1: Proportion (%) of students with each level of attainment by type of establishment at age 17

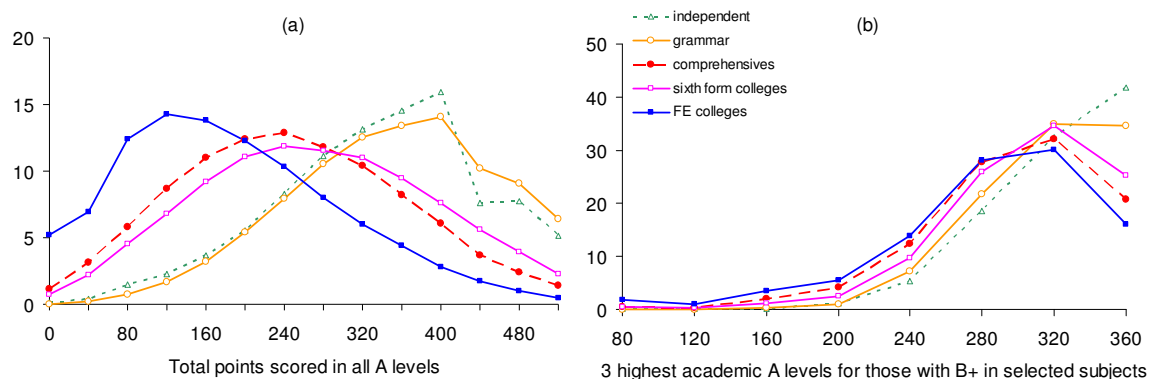
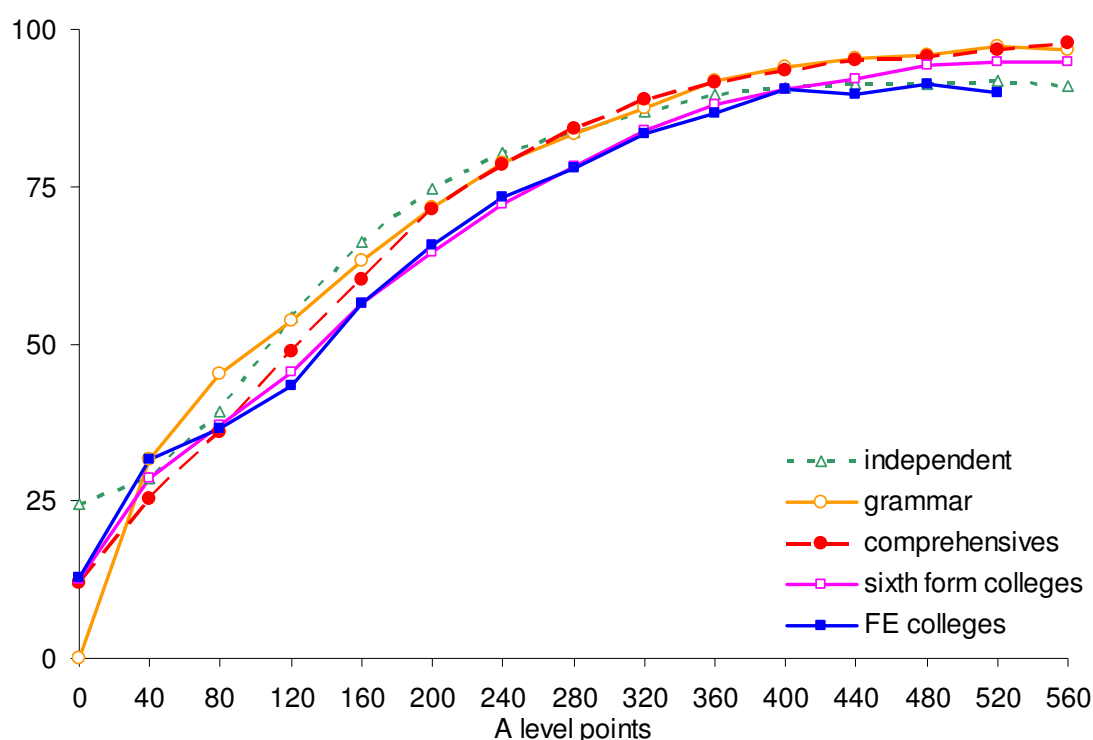


Figure 3-1 shows the distribution of A level attainment for 5 types of post-16 establishment. Panel (a) shows the distribution of total A level points. It is clear that independent and selective schools have proportionately more high attaining students and general / tertiary FE colleges have proportionately more students with lower A level attainment at age 17. Panel (b) shows the distribution of points scored in the 3 highest A levels only for those with at least one B in Mathematics, English, Physics, Biology, Chemistry or History. The distributions are much closer since we have effectively filtered out many low attainment or vocationally oriented students. However, it is still the case that independent and selective schools have a higher proportion of students in the highest levels of attainment; sixth form colleges have more high attainment students than comprehensives; and general/tertiary FE colleges have the lowest proportion of high attainment students

3.3.2. Young participation in HE for Students with Similar Levels of Attainment

Figure 3-2 shows the participation rates in all types of HE by institution type with students grouped by levels of attainment. This shows that there were small differences across school types between the participation rates of pupils with similar attainment. This means that students with a given level of attainment were around as likely to go into HE regardless of the type of post-16 establishment that they attended. The participation rates for students in colleges were a little lower than those for students in schools, though the difference is relatively small: generally less than 5 percentage points.

Figure 3-2 : Proportion (%) in HE by age 19 by A level attainment and type of establishment at age 17



3.3.3. Young participation in selective HE courses for Students with Similar Levels of Attainment

In this section we examine the proportion of students who entered HE courses that attract students with high entry tariff scores. We find that, even when we use our most “academic” measure of attainment, students in independent schools were somewhat more likely to participate in HE courses that attract high attainment students than students in the maintained sector. Students in FE colleges were less likely to participate in such forms of HE than those in the school sector.

In contrast to the “all HE” findings, Figure 3-3 panel (a) shows that there were gaps between post-16 establishment types in participation in the 500 HE courses with the highest average entry qualifications (500EQ). In particular, it is clear that high attaining students in independent schools were more likely to participate in this form of HE than those in the maintained sector who had similar levels of attainment.

Students in FE colleges were slightly less likely than those in other types of post-16 establishment to participate in this form of HE by age 19. These results correspond broadly with the findings in section 2, based on institutional average performance.

This overall picture does not change when we base attainment groupings on students' three highest academic A levels, excluding students without at least one B or higher in the subjects listed above, see Figure 3-3 panel (b).

The fourth section of Table 3-3 shows that, within groups of similar A level attainment, students from FE colleges with 280 or more points from their three highest a levels (BBC) were 6 to 18 percentage points less likely to enter 500 EQ courses than those in selective schools.

The fourth panel shows what this "gap" means in terms of the number of extra 500 EQ entrants we would have expected to see if students in FE colleges had similar participation rates in this form of HE to those with similar attainment levels in selective schools. This amounts to over one thousand people from both types of college. This is small in the context of an entire age cohort (roughly 600 thousand people) and even as a fraction of total entrants to the 500EQ (just under 60 thousand). However it is more significant when compared to the relatively small number (around 15 thousand) who attempt and attain 200+ points from academic A levels in colleges.

Figure 3-3 : Participation in 500 EQ by age 19 by A level attainment and type of establishment at age 17

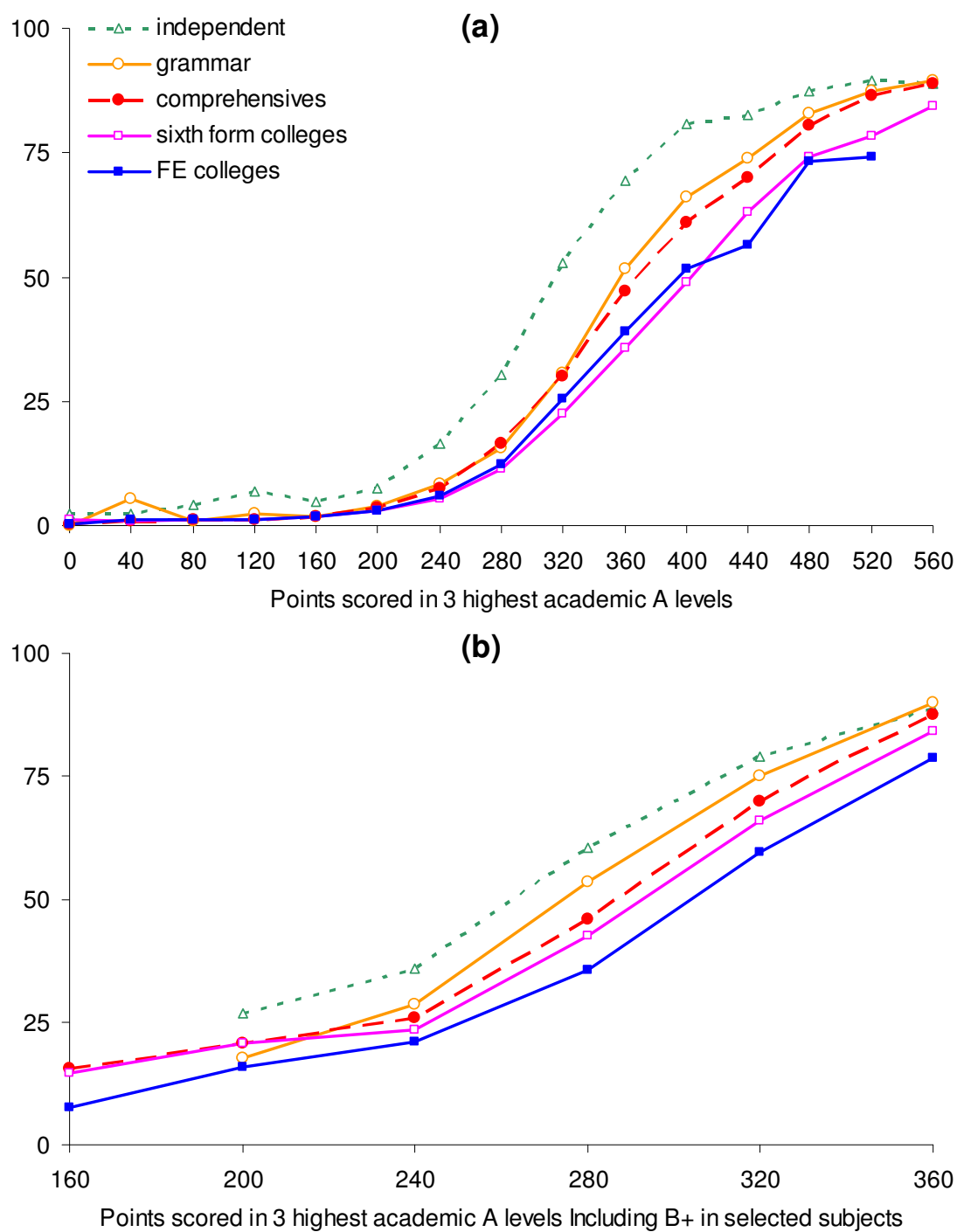


Table 3-3: Numbers and HE outcomes of Students with high attainment in their three highest A levels and at least one B in Maths, English, Physics, Chemistry, Biology or History

Points	Non-selective maintained schools	Sixth form colleges	General / tertiary colleges	Independent schools	Selective schools
Number of students					
200 ~CDD	1,132	282	227	206	102
240 ~CCC	3,339	1,065	564	932	738
280 ~BBC	7,482	2,850	1,137	3,229	2,209
320 ~ABB	8,624	3,809	1,218	5,651	3,566
360 AAA	5,577	2,781	649	7,282	3,529
Proportion (%) in HE by 19, percentage point gap to selective schools shown in parentheses					
200 ~CDD	86 (5)	79 (-2)	75 (-6)	79 (-2)	81
240 ~CCC	89 (1)	86 (-2)	84 (-4)	85 (-3)	88
280 ~BBC	92 (-1)	91 (-3)	85 (-8)	88 (-5)	93
320 ~ABB	94 (-1)	93 (-2)	91 (-4)	90 (-4)	95
360 AAA	97 (-1)	95 (-2)	92 (-6)	92 (-6)	97
Hypothetical additional HE entrants if participated at the rate of those in selective schools					
200 ~CDD	-54	5	15	5	-
240 ~CCC	-29	19	23	27	-
280 ~BBC	59	73	92	155	-
320 ~ABB	58	68	48	253	-
360 AAA	34	68	37	414	-
Total	68	233	214	853	-
Proportion (%) in 500EQ, percentage point gap to selective schools shown in parentheses					
200 ~CDD	21 (3)	21 (3)	16 (-2)	27 (9)	18
240 ~CCC	26 (-3)	23 (-5)	21 (-8)	36 (7)	28
280 ~BBC	46 (-7)	43 (-11)	36 (-18)	60 (7)	53
320 ~ABB	70 (-5)	66 (-9)	60 (-16)	79 (4)	75
360 AAA	87 (-3)	84 (-6)	79 (-11)	89 (-1)	90
Hypothetical additional 500EQ entrants if participated at the rate of those in selective schools					
200 ~CDD	-35	-8	4	-19	-
240 ~CCC	84	55	42	-68	-
280 ~BBC	554	307	203	-225	-
320 ~ABB	445	346	189	-224	-
360 AAA	144	158	73	89	-
Total	1,191	858	512	-447	-

3.4. Conclusions

The data underlying the analysis in this section has enabled us to account for the attainment of individual students when considering participation in different types of HE. However, we cannot look in more detail to determine whether differences are due to applications behaviour or other reasons.

Overall the analysis tends to support the analysis in Section 2. In particular, the analysis shows:

- independent and selective schools have the highest average attainment and that the average attainment of students in our selective definitions of HE have significantly higher attainment than average;
- differences by school type in participation in any HE is broadly explained by differences in individual attainment levels, so that a young person with a particular level of attainment is as likely to proceed to HE regardless of their school type;

- participation rates from sixth form and FE colleges are slightly lower than would be expected, though this may be accounted for by subject choices;
- high attaining students in independent schools are more likely to participate in this form the most selective forms of HE than those in the maintained sector with similar levels of attainment;
- those in FE colleges with high attainment are also slightly less likely than those in other types of post-16 establishment to participate in this form of HE by age 19.

Results presented in Section 2 indicate that the differences in participation in selective HE is broadly explained by applications behaviour: pupils from independent schools are more likely to apply to selective HE. However we have not been able to incorporate that directly into this analysis to see exactly how much of the results here are driven by applications behaviour.

A further limitation of the analysis underlying this section is that we have not considered the courses that pupils choose to study. For instance, students in FE colleges may prefer to study courses, perhaps more vocationally focused, that are not as attractive to the highest attainment students from other types of establishment. So although these courses may be outside of our definitions of 500EQ, it is possible that they are no less desirable to those that choose them.

4. Discussion

4.1. Implications

As with the earlier work on university admissions by individual schools, these results need to be treated with caution. The analysis of UCAS data considers only school averages and consequently masks differences in the distribution of individual students' achievement and application rates. Average achievement scores recorded for schools and colleges relate to all post-16 qualifications not just A levels. The parallel analysis of individual student data meanwhile considers only partially the issue of subject choice at A level and at university.

However, from the two analyses, it is possible to draw some conclusions about differences in application rates and the likelihood of getting an offer from the most selective HE for students from different types of post-16 institution. For a more definitive analysis, considering the applications and entry patterns whilst taking into account attainment for individual students, it would be necessary to link UCAS data and the matched NPD-HESA dataset.

- The evidence suggests that low application rates are a considerable factor in the relatively low entry into selective research universities from state maintained schools and from FE colleges. This research is not able to identify why application rates are lower: whether decisions not to apply to such institutions are due to poor advice and information or low aspirations, or whether they are simply the result of well-informed choices to apply elsewhere in the Higher Education sector. To determine this would require a study of young people's decision making around choice of HE study.
- The evidence also suggests that there are lower offer rates for applications from FE colleges, although students from FE colleges applying to selective research universities may, overall, have lower levels of attainment than their peers in other forms of post-16 provision. However, other factors may also be relevant. Those students attending institutions with relatively little experience of successful applications to selective universities may be less well able to support their students in terms of factors such as subject choices, preparing applications and personal statements, and applying to courses for which the student has appropriate qualifications.
- Subject choice at A level, and choice between academic and vocational qualifications, are key factors in admissions to selective research universities. But the analysis suggests that even when academic subject choice and level of attainment are taken into consideration, a participation gap remains, with students from FE colleges less likely to enter higher education, and less likely to obtain places on courses with high entry qualifications, than their peers.
- These findings are significant given that the FE sector is an important provider of students to the HE sector. Of almost 320,000 young entrants to A level or equivalent examinations in 2006/07, over 140,000 (44%) were from the FE sector as a whole; over 85,000 (27%) were from general FE colleges¹³.

¹³ See: <http://www.dfes.gov.uk/rsgateway/DB/SFR/s000755/index.shtml>

4.2. Next steps

- To understand the patterns highlighted here for students from different types of schools and colleges would require a qualitative research project to investigate why it is that the application and entry rates of students to selective research institutions are apparently lower than students in other types of post-16 provision. With this in mind, the Sutton Trust and the Department for Business Innovation, Universities and Skills plan to commission a series of surveys to investigate why students make their applications decisions. This will track a number of high performing A level students as they consider, apply to and enter different HEIs.
- Following a request by John Denham, the former Secretary of State of the Department of Innovation, Universities and Skills (DIUS), the Association of Colleges and Universities UK agreed to examine data on the progression rates from further education into higher education. In particular, to look at progression to the most competitive courses from students studying A levels in General Further Education Colleges compared with students from state maintained schools with equivalent A level results.
- The National Council for Educational Excellence recently issued a number of recommendations to improve advice and guidance in schools and colleges, including the provision of clear information on selective research universities and their admissions processes and academic requirements.
- The Trust is also developing a number of practical initiatives as a result of its report to the NCEE. These include:
 - Working with the University of Liverpool to develop a primary school teacher's pack around university aspirations, and to roll this out to schools in areas of low progression to higher education
 - Developing a residential course for teachers and advisers working in disadvantaged areas, giving them access to the latest higher education information and resources with a particular focus on research-led universities and courses.
 - Looking to develop an information and guidance pack for state school teachers on highly-selective universities and courses, to dispel misconceptions and help staff support students' applications
 - Developing and piloting an innovative admissions programme, based on the US percent schemes, at handful of selective UK universities. The scheme would pick up a proportion of able students in disadvantaged schools close to the universities and support them on an access programme from year 10/11 to the end of sixth form. Provided the students met minimum academic requirements and took part in certain activities, they would be guaranteed an undergraduate place at the university at the end of the programme.