

Technical appendix 1

An investigation into the relationship between outreach participation and KS4 attainment: analysis based on the HEAT aggregate tracking dataset

Anna Anthony, Senior Research Analyst, Higher Education Access Tracker (HEAT) Service

March 2021

Contents

1. Introduction.....	2
2. Description of Data	3
2.1 Size and composition of the dataset	3
2.2 Limitations of the dataset.....	3
3. Methods.....	4
3.1 The HEAT Groups.....	4
3.2 Descriptive Statistics	5
3.3 Regression Analyses.....	5
3.4 Rounding and Suppression	5
4. Results	5
4.1 Taking part in intensive outreach is associated with higher attainment at KS4.....	5
4.2 Participation in Summer Schools is associated with higher attainment at KS4.....	6
4.3 Participation in Campus Visits is associated with higher attainment at KS4, with differences greatest for disadvantaged students with low prior attainment.....	7
4.4 Participation in Mentoring has produced mixed results and requires further investigation.....	8
4.4.1 Single Activity Participants.....	9
Appendix	10
Appendix 1	10
Appendix 2.....	11
Appendix 3.....	12
Appendix 4.....	12

1. Introduction

- This report is a technical appendix to our summary report: An investigation into the relationship between outreach participation and Key Stage 4 (KS4) attainment/HE progression.¹ Please refer to the summary report for a discussion of the results of this analysis.
- In this report we use regression analysis to explore the extent to which participation in outreach recorded on the HEAT database is associated with KS4 attainment.
- It is important to note that this analysis cannot provide *casual* evidence on the efficacy of outreach because:
 - We cannot capture differences between outreach participants in terms of factors such as individual motivation and school/parental support.
 - Individuals who are more interested in HE and have more school/parental support may be more likely to participate in a greater number of activities or different activities.
 - These factors are also strongly correlated with attainment and HE progression.
 - In other words, there is a risk of ‘selection bias’, where the groups we examine (i.e., those who do and do not take part in outreach) may have been very different to begin with, regardless of those activities.²
 - Therefore, where we find that participation in outreach is associated with progression to attainment/HE progression, it is not possible to attribute this to the activities recorded in HEAT because we cannot rule out that other differences are driving the pattern we observe.
- However, there are a number of factors which are strongly correlated with attainment and HE progression that *are* present in the HEAT dataset. These include prior attainment and proxies for socio-economic background such as Free School Meals (FSM) eligibility, Income Deprivation Affecting Children Index (IDACI) and whether the individual is first in family to attend HE. We include such variables in our analysis in an attempt to take into account some of the measurable differences between individuals who take part in different activities.
- Therefore, although not capable of providing causal evidence, this descriptive analysis is able to provide high level trends which can be used to inform future causal studies. According to the [Office for Students \(OfS\) Standards of Evidence](#), we categorise this work as Type 2 evidence.

¹ See accompanying summary report: <https://taso.org.uk/wp-content/uploads/relationship-outreach-attainment-progression.pdf>

² For more information on selection bias please see [this explanation on the Institute for Work and Health website](#).

2. Description of Data

This section provides a description of the HEAT aggregate tracking dataset on which this analysis is based.

2.1 Size and composition of the dataset

In the HEAT aggregate tracking dataset, each record relates to one student who has participated in at least one outreach activity. All students included in this dataset must have participated in outreach *before* the time they took their KS4 exams (known as pre-16 outreach). This is in order to show any possible associations between participation and improved performance in those exams. Additional filtering was carried out to ensure participation during Secondary School (year groups 7 to 11), thus removing any participants who took part only whilst in Primary School. This yielded a population of 117,550 participant records, collated by 92 different outreach providers. These providers include a range of pre- and post-1992 HEIs, NCOPs and third sector organisation (see Appendix 1).

Although all students in the dataset must have participated in at least one outreach activity, this may have been of any type. Appendix 2 shows some descriptive statistics on the number of activities in which students in the dataset have participated. Data for the number of activities by Activity Type and by Activity Location are also given. Students often participate in more than one activity, so the percentage by Activity Type and Activity Location do not add up to 100.

All students took their KS4 exams in one of three years: 2016/17, 2017/18 or 2018/19 – with the latter being the latest available. Results for these three years are aggregated to yield a large enough sample size to provide intersections based on a number of variables relevant to outreach participation. Participants were linked to their record on the National Pupil Database (NPD) as part of HEAT's ongoing longitudinal tracking study. This linking was carried out by the Office for National Statistics (ONS) on behalf of the Department for Education (DfE) with the aim of providing a dataset to evaluate the efficacy of outreach in raising student attainment and later progression to Higher Education.

2.2 Limitations of the dataset

The first limitation relates to the coverage of the HEAT aggregate tracking dataset. The dataset was compiled by 92 different outreach providers as described in Appendix 1. An up-to-date list of HEAT's member organisations is available on the [HEAT website](#). Although this represents a large proportion of outreach providers, the dataset does not include all organisations providing outreach. There remain several HEIs and two Uni Connect consortia that use their own regional tracking databases that are currently separate from HEAT. Furthermore, there are third sector and private providers of outreach that do not record their data on a central tracker database. Therefore, this dataset can be considered as a sample of outreach participants, rather than a complete dataset of all outreach delivered nationally.

Furthermore, HEAT's member organisations are free to use the HEAT database to record the student and activity data according to their individual organisation's needs. Thus, even within the membership, there may be gaps in data collection and recording. The extent of the gaps in data are currently unknown, but there are a number of imperatives such as Data Protection

regulations and the Office for Students (OfS) requirements to evaluate that work to encourage organisations to record their data securely on a tracking system such as HEAT’s. The large sample size provides further evidence that the sample of outreach participants we do have represents a large proportion of all outreach work delivered nationally.

A second limitation relates to the ability of the data to demonstrate ‘what works’ in terms of outreach in raising student attainment at KS4. In spite of rich data collected on activities (see Appendix 2), the data are observational (i.e. this dataset did not come from a controlled experiment but rather from ‘real-life’ processes). Measures are taken to control for observed variables known to influence KS4 attainment. However, simply calculating average attainment for students who attended different types cannot isolate the effect of the activity from other unknown factors (such as students’ personal motivation or their input from family, friends and teachers). As a result, statistical *associations* are shown between activities and differential participant attainment, providing a strong Type 2 standard of evidence according to the [Office for Students’ guidance](#). The research does not claim to show robust causal effects.

A third limitation relates to the diversity in the packages of activities in which students have participated. Based on Activity Type and Activity Location variables alone, there are over 3000 different combinations of packages of activity in which students have participated. If we include other variables – such as the sequence of activities, the contact hours and the year groups in which students participated – the number of combinations increases further. This makes isolating the possible effects of one type of activity difficult. Efforts are made to control for the package of activities in which students have participated. However, the very diverse nature of activities renders this task challenging.

3. Methods

This section introduces the HEAT Groups and goes on to outline the methods used in the analysis. The HEAT Groups provide the principal method of controlling for covariates known to influence KS4 attainment.

3.1 The HEAT Groups

The HEAT Groups were developed by HEAT to classify outreach participants into one of six groups based on their level of disadvantage (high or low) and prior attainment (low, medium or high). Classifying participants of outreach in this way has allowed comparison of outcomes for students who are similar in terms of their likely achievement at KS4.

The HEAT Group model can be illustrated as follows:

		Disadvantage	
		High	Low
Prior Attainment (KS2)	Low	Group 1	Group 3
	Medium	Group 2b	Group 4b
	High	Group 2a	Group 4a

Students’ prior attainment is based on their Key Stage 2 (KS2) band, with these exams being the latest available prior to KS4. KS2 bands consist of low (below Level 4), medium (at Level 4) and high (above Level 4).

A linear regression conducted in the SPSS statistical software showed that KS2 band accounts for 42.7% of the variance in Attainment 8 scores for HEAT’s outreach participant cohort ($R^2 = 0.427$, see Appendix 4 Output 1).

A student is classified as ‘high disadvantage’ if they meet one of the following proxies:

- Attend a school with an Attainment 8 score in the bottom two quintiles when ranked nationally
- Are eligible for Free School Meals (FSM)
- Belong to a disadvantaged Acorn Group

A stepwise linear regression showed that when combined with prior attainment at KS2, the above three proxies for disadvantage explain 52% of the variation in KS4 attainment of the HEAT outreach participant cohort ($R^2 = 0.52$, see Appendix 4 Output 1).

Therefore, the HEAT Groups explain 52% of variation in KS4 attainment, with the remaining 48% not accounted for in unmeasured variables.

3.2 Descriptive Statistics

Drawing on the HEAT Group model outlined above, a series of descriptive statistics are presented to understand the associations between attendance at an activity and achievement at KS4 for students from each of the six HEAT Groups. Achievement at KS4 is shown as average Attainment 8 score, with this being the sum of the scores assigned to the eight highest GCSE grades. Data were manipulated in Excel.

3.3 Regression Analyses

Results from regression analyses are presented to supplement the descriptive statistics. Linear regressions were conducted in SPSS Statistics 26. With the exception of the HEAT Groups analysis (which used a stepwise regression), all regressions used the enter method (where all variables are entered simultaneously). Changes in R^2 values are quoted and presented in Appendix 4 Outputs 1 to 5, alongside estimated improvements to KS4 Attainment 8 scores that are derived from Unstandardized Beta Coefficients.

3.4 Rounding and Suppression

HEAT's rounding and suppression policy (as set out in Appendix 3) has been applied to all counts, percentages and averages based on individuals.

4. Results

4.1 Taking part in intensive outreach is associated with higher attainment at KS4

Participants from all HEAT Groups that have taken part in a more intensive package of activities achieved higher Attainment 8 scores than their peers from similar backgrounds who have taken part in a less intensive activity package. An intensive package of activities is defined using a straightforward binary approach used by the HEAT in reporting, which considers Activity Type alongside the number of activities³.

Table 1 shows the average Attainment 8 scores for each HEAT Group broken down by activity participation (Intensive vs less intensive). The final column shows the difference in Attainment 8 scores. Of the three disadvantaged groups (Group 1, 2a and 2b), there is a difference of between two and four points.

³ An 'intensive' package of activities is defined by HEAT as: one or more summer schools; one or more HE insight events; one or more mentoring interactions; one or more projects; two or more skills and attainment activities; two or more campus visits; one or more skills and attainment activities and one or more campus visits; three or more HE information talks and one or more skills and attainment activities; three or more HE information talks and one or more visits.

Less Intensive Package of Activities = All other combinations

Table 1: Average Attainment 8 scores for outreach participants of Intensive and Less Intensive Activity Packages

HEAT Group	Intensive Activity Participants		Less Intensive Activity Participants		Difference in Attainment 8 Scores
	N	Mean Attainment 8 Score	N	Mean Attainment 8 Scores	
HEAT Group 1	1835	31	8069	28	3
HEAT Group 2a	15580	65	36132	63	2
HEAT Group 2b	10490	48	31654	44	4
HEAT Group 3	155	31	530	27	4
HEAT Group 4a	860	64	1689	62	3
HEAT Group 4b	1046	50	3396	45	5
Total	29984	56	81470	51	5

A regression analysis was run to examine the relationship between participation in an intensive package of activities (independent variable) and Attainment 8 score (dependent variable). Results presented in Appendix 4 Output 2 show an R^2 value of 0.536. This compares with an R^2 value of 0.52 when the variables making up the HEAT Groups are included in the regression model alone. Thus including intensive activity participation explains a further 1.6% of the Attainment 8 scores in the HEAT tracked cohort than the HEAT Group information alone.

The coefficients also presented in Appendix 4 Output 2 show that taking part in intensive outreach is associated with an increase in Attainment 8 scores of 3.4 points ($p < 0.00$), after controlling for prior attainment at KS2 and disadvantage.

4.2 Participation in Summer Schools is associated with higher attainment at KS4

Participants from all HEAT Groups who have taken part in a Summer School achieved higher Attainment 8 scores than their peers from similar backgrounds who had not taken part in a Summer School but had taken part in a similarly intensive package of other activities.

Table 2 shows the average Attainment 8 scores for each HEAT Group, broken down by participants who have and have not taken part in a Summer School. All participants who have not taken part in a Summer School had taken part in an intensive package of activities as defined in the previous section. The final column shows the difference in Attainment 8 score. Of the three disadvantaged groups (Group 1, 2a and 2b), differences in average scores are largest (four points) for those with low or medium prior attainment (Groups 1 and 2b). Participants from non-disadvantaged groups also demonstrate higher Attainment 8 scores if they participated in a Summer School.

Table 2: Average Attainment 8 scores for outreach participants who did and did not attend a Summer School

HEAT Group	Attended a Summer School		Did not attend a Summer School		Difference in Attainment 8 Scores
	N	Mean Attainment 8 Score	N	Mean Attainment 8 Scores	
HEAT Group 1	340	34	1515	30	4
HEAT Group 2a	4445	67	11140	64	2
HEAT Group 2b	2585	51	7905	47	4
HEAT Group 3	35	38	120	29	8
HEAT Group 4a	280	67	580	63	4
HEAT Group 4b	260	51	785	50	1
Total	7945	59	22040	55	4

A regression analysis was run to examine the relationship between participation in a Summer School (independent variable) and Attainment 8 score (dependent variable). Results presented in Appendix 4 Output 3 shows an R^2 value of 0.538. This compares with an R^2 value of 0.536 when the variables making up the HEAT Groups and intensive package of activities are included in the regression model alone. Thus participating in a Summer School explains a further 0.2% of the Attainment 8 scores in the HEAT tracked cohort compared to the HEAT Group information and intensive activity participation measure alone.

The coefficients also presented in Appendix 4 Output 3 show that taking part in a Summer School is associated with an increase in Attainment 8 scores of 2.9 points ($p < 0.00$), after controlling for prior attainment at KS2, disadvantage and participation in other activities.

4.3 Participation in Campus Visits is associated with higher attainment at KS4, with differences greatest for disadvantaged students with low prior attainment

Participants from disadvantaged HEAT Groups who have taken part in a Campus Visit achieved higher Attainment 8 scores than their peers from similar backgrounds who had not taken part in a Campus Visit but had taken part in a similarly intensive package of other activities.

Table 3 shows the average Attainment 8 scores for each HEAT Group, broken down by those who have and have not taken part in a Campus Visit. All participants who have not taken part in a Campus Visit had taken part in an intensive package of activities as defined in section 4.1. The final column shows the difference in Attainment 8 score. Of the three disadvantaged groups, the lowest attainment group (Group 1) showed the greatest difference (four points); suggesting that Campus Visits may be particularly effective for disadvantaged students with low prior attainment. Participants from non-disadvantaged groups did not achieve higher Attainment 8 scores if they participated in a Campus Visit.

Table 3: Average Attainment 8 scores for outreach participants who did and did not attend a Campus Visit

HEAT Group	Attended a Campus Visit		Did not attend a Campus Visit		Difference in Attainment 8 Scores
	N	Mean Attainment 8 Score	N	Mean Attainment 8 Scores	
HEAT Group 1	505	34	1345	30	4
HEAT Group 2a	5350	66	10230	65	1
HEAT Group 2b	3165	48	7320	47	1
HEAT Group 3	55	32	105	31	0
HEAT Group 4a	265	65	590	64	0
HEAT Group 4b	310	50	735	50	0
Total	9655	58	20330	55	2

A regression analysis was run to examine the relationship between participation in a Campus Visit (independent variable) and Attainment 8 score (dependent variable). Results presented in Appendix 4 Output 4 shows an R^2 value of 0.537. This compares with an R^2 value of 0.536 when the variables making up the HEAT Groups and intensive package of activities are included in the regression model alone. Thus participating in a Campus Visit explains a further 0.1% of the Attainment 8 scores in the HEAT tracked cohort compared to the HEAT Group information and intensive activity participation measure alone.

The coefficients also presented in Appendix 4 Output 4 show that taking part in a Campus Visit is associated with a small increase in Attainment 8 scores of 0.7 points ($p < 0.00$), after controlling for prior attainment at KS2, disadvantage and participation in other activities.

Thus, it appears that participation in Campus Visits explains less of the variation in Attainment 8 scores than participation in a Summer School. This is perhaps not surprising considering Summer Schools are a more intensive and immersive activity. Moreover, Summer Schools are more likely to be subject to selection bias.

4.4 Participation in Mentoring has produced mixed results and requires further investigation

Participants from all HEAT Groups who have taken part in Mentoring achieved lower Attainment 8 scores than their peers from similar backgrounds who had not taken part in Mentoring but had taken part in a similarly intensive package of other activities. HEAT Group 3 (low disadvantaged, low attaining) is the only exception to this.

Table 4 shows the average Attainment 8 scores for each HEAT Group for those who have and have not taken part in Mentoring. All participants who have not taken part in Mentoring had taken part in an intensive package of activities as defined in section 4.1. The final column shows the difference in Attainment 8 score.

Table 4: Average Attainment 8 scores for outreach participants who did and did not take part in Mentoring

HEAT Group	Took part in Mentoring		Did not take part in Mentoring		Difference in Attainment 8 Scores
	N	Mean Attainment 8 Score	N	Mean Attainment 8 Scores	
HEAT Group 1	660	30	1195	31	-1
HEAT Group 2a	4905	63	10680	66	-3
HEAT Group 2b	3495	46	6995	48	-2
HEAT Group 3	45	32	110	31	1
HEAT Group 4a	315	63	540	65	-2
HEAT Group 4b	355	48	690	51	-2
Total	9775	54	20210	57	-3

A regression analysis was run to examine the relationship between participation in Mentoring (independent variable) and Attainment 8 score (dependent variable). Results presented in Appendix 4 Output 5 show an R² value of 0.537. This compares with an R² value of 0.536 when the variables making up the HEAT Groups and intensive package of activities are included in the regression model alone. Thus participating in Mentoring explains a further 0.1% of the Attainment 8 scores in the HEAT tracked cohort compared to the HEAT Group information and intensive activity participation measure alone.

The coefficients also presented in Appendix 4 Output 4 show that taking part in Mentoring is associated with a decrease in Attainment 8 scores of -1.8 points (p<0.00), after controlling for prior attainment at KS2, disadvantage and participation in other activities.

4.4.1 Single Activity Participants

To examine further the relationship between Mentoring participation and achievement, the next stage of analysis presents average Attainment 8 scores for a subset of HEAT’s tracked cohort that has participated in a single type of activity only.

Testing this approach is justified considering the diversity of the packages of activity in which students may have participated. Throughout this analysis we have tried to isolate the effect of one type of activity by controlling for the package of other activities in which the student has participated. The approach has been straightforward – all participants must have taken part in a similarly intensive package. However, a great deal of variation in the composition of this intensive package remains, as discussed in the Limitations section of this report.

Table 5 presents the average Attainment 8 scores for participants of each of HEAT’s Activity Types, with all participants having only taken part in that one type of activity. Data are provided for the three disadvantaged HEAT Groups (Group 1, 2a and 2b) to provide a control for the level of disadvantage and prior attainment of the student. Activity Types are ranked – based on the average Attainment 8 scores – for each group and overall. Here, Mentoring participants emerge with the highest average achievement overall and for the high attaining Group 2a. Although Mentoring participants from Groups 1 and 2b do not rank first, they are within the top three.

Table 5: Average Attainment 8 scores for single activity participants

Activity Type	HEAT Group 1			HEAT Group 2a			HEAT Group 2b			Overall Rank
	N	Mean Att 8 Score	Rank	N	Mean Att 8 Score	Rank	N	Mean Att 8 Score	Rank	
Mentoring	135	31	2	1860	67	1	785	48	3	1
Summer School	205	32	1	1785	63	4	1340	49	2	2
Project	140	27	6	880	66	2	705	49	1	3
Skills and Attainment	1020	29	3	5195	66	3	4025	44	6	4
Campus Visit	1555	28	4	10170	63	5	7490	45	5	5
HE Subject Insight	890	28	5	5055	63	6	4140	46	4	6
General HE Information	1900	26	7	5560	63	7	5555	42	7	7

Turning briefly to the other types of activity, Summer Schools feature strongly (ranked second overall). This finding is in

line with the previous analysis outlined in section 4.2. Campus Visits are ranked fifth overall, and so do not compare as favourably with other types as the analysis presented in section 4.3 suggests. However, the results are not directly comparable as participants included in Table 5 have taken part in one single activity only (one Campus Visit), whereas those included in section 4.3 have taken part in a Campus Visit as part of an intensive package of activities. This suggests that a Campus Visit may complement a sustained package of other activities.

Returning to Mentoring, a possible explanation for the apparently contradictory results may relate to the diversity across the sector around what is delivered and recorded under Mentoring. Mentoring activities differ in their operational design – for example they may be on or off campus, e-mentoring or face-to-face, and of different frequencies and duration. Further research is needed to understand the types of Mentoring that may be most effective.

Appendix

Appendix 1

Table A1: Composition of HEAT members contributing data to the dataset

Type of outreach provider	Number of outreach providers	Proportion of students contributed to dataset
Russell Group HEI	17	20%
Non Russell Group Pre-1992 HEI	12	16%
Post-1992 HEI	37	32%
NCOP	22	21%
Third Sector	4	12%
Total	92	100%

Appendix 2

Table A2: Number of Activities

	Count of Participants
Total number of participants	117550
	Activity Participation
Mean number of activities	2.3
Min number of activities	1
Max number of activities	48
Standard Deviation in number of activities	3

Table A3: Types of Activities

Type of Activity	Count of Participants	% of all Participants
Visit	36420	31%
Skills and Attainment	34390	29%
HE Subject Insight	24795	21%
Project	3790	3%
Summer School	8355	7%
Mentoring	10205	9%
General HE Information	36370	31%

Table A4: Location of Activities

Location of Activity	Count of Participants	% of all Participants
HE Campus	65741	56%
School	48945	42%
FE Campus	10897	9%
Public Venue	3336	3%
Other	14912	13%

Appendix 3

HEAT rounding and suppression policies have been applied to this report as follows:

In line with requirements from the DfE, HEAT implements a strategy in published and released tabulations designed to prevent the disclosure of personal information about any individual. This strategy involves rounding all numbers to the nearest multiple of 5, rounding numbers less than 2.5 to 0 and suppressing percentages based on fewer than 22.5 individuals.

Appendix 4

Output 1: Stepwise Linear Regression for HEAT Group analysis

Model	Variables Entered	Variables Removed	Method
1	Prior attainment at KS2 (band)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	School Attainment 8 score	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	FSM eligibility	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Acorn Category	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: KS4 Attainment 8 Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654 ^a	.427	.427	13.56402
2	.712 ^b	.506	.506	12.59296
3	.719 ^c	.517	.517	12.46155
4	.721 ^d	.520	.520	12.42077

a. Predictors: (Constant), Prior attainment at KS2 (band)

b. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score

c. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility

d. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility, Acorn Category

Output 2: Linear Regression (enter method) for Intensive Activity Package

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732 ^a	.536	.536	12.33361

a. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility, Acorn Category, Intensive Activity Package

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	19.494	.228		85.360	.000
	Prior attainment at KS2 (band)	15.207	.061	.549	250.149	.000
	School Attainment 8 score	5.101	.039	.290	131.419	.000
	FSM eligibility	-3.541	.090	-.088	-39.371	.000
	Acorn Category	-.887	.031	-.067	-29.064	.000
	Intensive Activity Package	3.402	.086	.084	39.674	.000

a. Dependent Variable: KS4_Attainment 8 Score

Output 3: Linear Regression (enter method) for Summer Schools

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.538	.528	12.31491

a. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility, Acorn Category, Intensive Activity Package, Attended Summer School

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	17.512	.253		69.142	.000
	Prior attainment at KS2 (band)	15.169	.061	.547	249.743	.000
	School Attainment 8 score	5.084	.039	.289	131.140	.000
	FSM eligibility	-3.590	.090	-.089	-39.951	.000
	Acorn Category	-.902	.030	-.068	-29.587	.000
	Intensive Activity Package	2.628	.096	.065	27.426	.000
	Attended Summer School	2.956	.164	.042	17.975	.000

a. Dependent Variable: KS4_Attainment 8 Score

Output 4: Linear Regression (enter method) for Campus Visits

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.537	.537	12.32941

a. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility, Acorn Category, Intensive Activity Package, Attended Campus Visit

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.647	.249		74.933	.000
	Prior attainment at KS2 (band)	15.177	.061	.548	249.298	.000
	School Attainment 8 score	5.095	.039	.290	131.289	.000
	FSM eligibility	-3.541	.090	-.088	-39.387	.000
	Acorn Category	-.880	.031	-.066	-28.838	.000
	Intensive Activity Package	3.382	.086	.083	39.448	.000
	Attended Campus Visit	.710	.083	.018	8.552	.000

a. Dependent Variable: KS4_Attainment 8 Score

Output 5: Linear Regression (enter method) for Mentoring

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.537	.537	12.32553

a. Predictors: (Constant), Prior attainment at KS2 (band), School Attainment 8 score, FSM eligibility, Acorn Category, Intensive Activity Package, Attended Mentoring

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	20.683	.249		82.945	.000
	Prior attainment at KS2 (band)	15.207	.061	.549	250.304	.000
	School Attainment 8 score	5.096	.039	.290	131.354	.000
	FSM eligibility	-3.529	.090	-.088	-39.258	.000
	Acorn Category	-.878	.031	-.066	-28.779	.000
	Intensive Activity Package	3.999	.099	.098	40.212	.000
	Attended Mentoring	-1.829	.155	-.029	-11.832	.000

a. Dependent Variable: KS4_Attainment 8 Score