

Laurus Trust - Student outcomes and Progression

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Executive summary

The Laurus Trust, established in 2012, operates multiple schools across Stockport, Manchester, Tameside and Cheshire East. In 2017/18 the Trust introduced a wide-ranging extra-curricular (EC) programme to enhance student opportunities within and beyond the classroom. Activities included but were not limited to several sports and performing arts clubs, debating associations, and the possibility for students to participate in The Duke of Edinburgh Award and various theatre and international visits.¹

This research examines the impact associated with attending Laurus Trust secondary schools since the rollout of the EC programme. We have compared educational attainment and progression between Laurus Trust students at different points in time, and to students in other schools, who on average will not have had access to the same level of EC provision. We compared GCSE exam results, absence rates, post-16 destinations, post-18 higher education destinations and completion. As well as a direct comparison which does not take into consideration students' characteristics, we also use matching methods to account for the fact that the demographic of Laurus Trust students may differ from that of other schools, and that these differences could be driving differences in outcomes.

For outcomes in secondary education, we found that:

- Laurus Trust students, on average, achieved higher GCSE results (Attainment 8 scores)
 than other students in England and Greater Manchester.
- When controlling for student characteristics, we found that students who attended the Laurus Trust after the rollout of the EC programme achieved Attainment 8 scores 6.2 points higher than their peers who attended the Trust before the EC rollout, and 3.1 points higher than their peers nationally. A difference of one point is broadly equivalent to an average increase of one grade in a GCSE subject.
- Compared with similar students in England, disadvantaged students who attended the Laurus Trust after the rollout of the EC programme achieved higher Attainment 8 scores by 5.3 points, on average. This is equivalent to an average increase of one grade in five GCSE subjects.
- Laurus Trust schools had a lower percentage of persistently absent students (those who
 miss more than 10 per cent of sessions) than other schools in England and Greater
 Manchester. However, in our modelled analysis we found no statistically significant
 differences in the likelihood of students in the Laurus Trust being persistently absent,
 compared to similar students nationally.
- When comparing similar students within the Trust, we found that those who attended
 after the introduction of the EC programme had lower rates of persistent absence (a
 decrease in odds of 87 per cent). For example, if 9/100 students were persistently absent

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¹ Ofsted (2023), 'Inspection of Laurus Ryecroft'

before the rollout of the EC programme, this change in odds would correspond roughly to 1/100 students afterwards.

For post 16 outcomes, we found that (without controlling for student characteristics):

- Cheadle Hulme High School students chose to study A levels more commonly (67 per cent), than other students in England (49 per cent) and Greater Manchester (45 per cent).
- 40 per cent of students from Cheadle Hulme High School, the first school in the Trust for which we have most data, continued their studies in the school's sixth form.

Having controlled for characteristics, Laurus Trust students that attended after the EC rollout were more likely to enter A levels than those attending beforehand, and this difference was statistically significant. The difference was equivalent to an increase in the odds of entering A levels of 220 per cent. For example, if 60/100 students entered A levels before the rollout of the EC programme, this change in odds would correspond to around 83/100 students afterwards. We did not find a statistically significant result to suggest that that the likelihood of entering A levels differed between Laurus Trust students and similar students in other schools.

For post 18 outcomes, we found that (without controlling for student characteristics):

- Students at the Laurus Trust were, on average, more likely to enter higher education than other students in England and Greater Manchester.
- After the rollout of the EC programme, 17 per cent of students at the Laurus Trust entered Russell Group universities, compared with 14 per cent before the rollout.
- Laurus Trust students had higher university completion rates than their peers in England and Greater Manchester. However, once we controlled for student characteristics, we did not find a statistically significant difference in the likelihood of completing higher education between Laurus Trust students and similar students in other schools.

In summary, when comparing similar students in the Laurus Trust at different points in time, we found that attending the Trust *after* the rollout of the EC programme was associated with:

- higher Attainment 8 scores;
- lower levels of persistent absence; and
- a higher proportion of students entering A levels.

When comparing these students with their peers nationally, attending the Laurus Trust was associated with higher Attainment 8 scores, and the effect was larger for students who attended the Trust after 2017/18 and among disadvantaged students. Our matched, modelled analysis did not find statistically significant differences in our other outcome measures after the roll out of the EC programme.

These estimates cannot be entirely attributed to the introduction of the EC programme, as there may be unobserved student factors for which we were unable to control (such as differences in attitudes or motivation), or other changes within the Laurus Trust over the same time period. However, considered alongside existing research, our findings provide further evidence consistent with the idea that extra-curricular activities at school may bring additional or longer lasting benefits to students.

Introduction

The Laurus Trust is a Multi-Academy Trust operating schools across Stockport, Manchester, Tameside and Cheshire East. The Trust opened in 2012, including just one school at the time: Cheadle Hulme High School. Today, the Trust operates three primary schools and six secondary schools, four of which have an attached sixth form, providing education to thousands of students in England.

In 2017/18, the Laurus Trust rolled out an extensive extra-curricular (EC) programme, designed to give students more opportunities both in and outside of the classroom. There is some research to indicate that these activities provide long-lasting benefits to students relating not only to their physical and mental health, but also to their academic performance. Recent Education Policy Institute research shows that students who attended sports clubs during secondary school were more likely to progress to employment or continue education than their peers, and those who attended clubs for hobbies, arts and music were more likely to progress to higher education.

In this research we focus on the Laurus Trust's secondary schools. We aim to answer the following research questions:

- 1. What are the educational attainment and progression outcomes for students from Laurus Trust schools, and how have these changed with the roll-out of their EC programme?
- 2. How do these outcomes compare with students with similar characteristics in other schools who may not have experienced the same EC provision?

We did not have data on participation in EC activities for individual students in the Laurus Trust, nor in the other schools to which we compared. However, given the broad EC programme that was rolled out, our underlying assumption is that students in the Laurus Trust since 2017/18 will have had more exposure to EC activities compared to previous students in the Trust, and to the average student in other state funded schools.

Where we had sufficient sample sizes, we also examined differences in these outcomes amongst economically disadvantaged students, and those with identified special educational needs.

Our findings cannot be fully interpreted as causal as we are not able to control for all factors known to be associated with attainment and progression outcomes. Nor can we match students perfectly based on their likelihood of attending the Laurus Trust, had they lived within the catchment area. Differences could also be related to other changes within the Laurus Trust over the same time period, or broader, unobserved differences between the Laurus Trust and the schools attended by those in our comparison groups.

² Rotcliffe et al. (2023), 'The Impact of Typical School Provision of Physical Education, Physical Activity and Sports on Adolescent Mental Health and Wellbeing: A Systematic Literature Review'

³ Robinson (2024), 'Access to extra-curricular provision and the association with outcomes'

We have reported our results in three separate sections, relating to the phase of education being analysed:

- Section 1, secondary school outcomes, explores the differences in student outcomes by the end of key stage 4, focusing on GCSE results (measured by Attainment 8) and attendance records.
- Section 2, post 16 outcomes, focuses on the qualification or training which students progressed to after their GCSEs. This section focuses on the type of educational setting attended, level of study, and whether students opted for A levels or vocational/applied qualifications.
- Section 3, post 18 outcomes, considers the education destinations which students
 progressed to by age 18. We considered all educational pathways students may pursue at
 this age, with a particular focus on higher education.

Methodology

Data

Our analysis utilised a range of data sources which allowed us to analyse the outcomes of students at the Trust on a wide range of measures, how these changed since the introduction of the extracurricular (EC) programme, and how they compared to similar students in other state funded schools.

We used:

- The Spring School Census to identify the cohorts of interest, and whether students attended a Laurus Trust school in any given year.
- The National Pupil Database to access students' key stage 4 results and absence data.
- The Spring School Census, Post-16 Learning Aims (PLAMs) and ILR (Individualised Learner Record) datasets to identify the post-16 pathways students enrolled on; and further education destinations of students aged 18.
- Higher Education Statistics Agency (HESA) data to identify students' university records.

We analysed outcomes of students pooled across several years in order to achieve sufficient sample sizes. For example, we looked at Attainment 8 outcomes for students finishing key stage 4 in 2017 to 2019, and 2022 (excluding teacher and centre assessed grades awarded during the pandemic).

For most of our analysis, we included all year 7 cohorts starting from when the Trust formed, in 2012. Of these, our measures include the students that were old enough to have a valid outcome by 2021/22 (the latest year of data we had access to). For example, those completing key stage 4 in 2022 would not yet have had a post 16 outcome that we could measure in our data. We included all secondary schools in the Laurus Trust that were open at the point in time our outcome measures related to. Those finishing key stage 4 in 2020 and 2021 have been excluded throughout our analysis due to the disruption caused by COVID-19.

When analysing university completion and classifications, the year 7 in the 2012/13 cohort were the first old enough to have complete outcomes by 2021/22. For these measures only, we also included students who began year 7 in 2011/12, and thus started their secondary education shortly before the formation of the Laurus Trust. Both of these cohorts finished key stage 4 before the introduction of the EC programme. This means the results reflect the association between attending the Laurus Trust up until 2016/17, and university completion, but they do not allow us to infer anything about attending the Laurus Trust in more recent years.

Underlying counts, showing the number of students included in each of our descriptive statistics and models are included in Annex A.

Outcome measures

We analysed three main sets of variables to understand how the outcomes of Laurus Trust students changed since 2017/18, and differed from otherwise similar students in other schools. The first related to their performance during secondary school, the second to their 16-19 education, and the last to their post-18 destinations. The following outcome measures were used:

Secondary school

- Key stage 4 Attainment 8 (a point score measure capturing students' results over their best 8 GCSEs, with additional weighting given to English and maths)
- Persistent absence (missing more than 10 per cent of required sessions)⁴

16-19 education

- Highest level of qualification studied towards (A level, other level 3, level 2 or below)
- Post-16 destinations: sixth form, apprenticeship or FE/sixth form colleges
- Entry into apprenticeships

Post-18 education

- Highest level of qualification
- Entry into higher education, of which Russell Group universities
- Completion of university degree, of which first class degree

Descriptive statistics

To establish a foundational understanding of the data, we first present descriptive statistics showing unadjusted outcomes of Laurus Trust students on each of the above measures, before and after the introduction of the EC programme. We compared these outcomes to all other students in Greater Manchester (the area where most of the Trust's schools are located), and to all students in England.

Differences in the outcomes or progression of Laurus Trust students compared to others may be driven by underlying variation between school intakes. For example, university entry rates are known to vary by region, and to be associated with socio-economic status. If students in the Laurus Trust differed significantly from students elsewhere, then these underlying differences may be what has driven the variation we see in outcomes, rather than the fact that they attended the Laurus Trust. We therefore adopted a matched, modelled approach to account for these underlying differences, as best as we were able with the available admin data.

⁴ Where relevant, we calculated absence rates based only on data from years subsequent to the introduction of the extra-curricular programme, rather than all data back to when students were in year 7. For example, when analysing students that finished year 11 in 2018/19, their absence will be calculated based on the 2017/18 and 2018/19 academic years only. Absence records from 2019/20 and 2020/21 have been excluded throughout due to the disruption caused by COVID-19.

Modelled analysis

To account for these underlying differences, we adopted a propensity score matching (PSM) approach. PSM is a quasi-experimental method which allows us to get closer to estimating the causal impact of a 'treatment' than descriptive statistics alone. Under PSM results can be deemed as causal only under conditions where confounding factors or "selection bias" into the 'treatment group' are absent. We have made diligent efforts to address confounding based on the information available in the research datasets used. However, it is plausible that there are still unobserved differences that we have not been able to account for that limit the interpretation of our results as causal.

Our analysis included multiple 'treatment groups', consisting of students who attended the Laurus Trust both before and after the rollout of the EC programme. To provide the best possible understanding of the outcomes of Laurus Trust students with the data available, we constructed three sets of models, pertaining to the three propensity score matches:

- Match 1, Laurus post-EC v Laurus pre-EC: In which we compared students within the Trust, before and after the roll out of the EC programme. Students who attended a school in the Trust for at least one year from 2017/18 onwards are in the 'treatment group' while those who attended the Trust entirely before are in the 'control group'.
- Match 2, Laurus pre-EC v similar students in other schools: In which Laurus Trust students entirely before the roll out of the EC programme were compared to their peers in other schools.
- Match 3, Laurus post-EC v similar students in other schools: In which Laurus Trust students for at least one year from the rollout of the EC programme (2017/18) onwards were compared to their peers in other schools.

The variables (covariates) we accounted for in our PSM analysis were as follows:

Student characteristics:

- Gender
- Ethnicity
- Disadvantage status at the end of key stage 4
- Any identified special educational needs or disabilities (SEND) at the end of key stage 4
- Prior attainment: Percentile rank in the distribution of key stage 2 results
- Year in which they finished key stage 4

School-level characteristics:

- School type
- School size
- Average prior attainment of other students in the same school and year group

Area factors:

- Type of area where the school was located (urban, rural, etc.)
- Level of deprivation in the area the student lives (Decile of the Index of Multiple Deprivation)

Prior to performing the matches, a "propensity score" for each student was calculated using a logistic regression model. This represents the probability of a student belonging to the treatment group based on the covariates listed above. For the models comparing Laurus Trust students to those in other schools, 'treated' students were matched with 'untreated' students with similar propensity scores, using a nearest neighbour matching algorithm without replacement. This means that each 'treatment group' student was paired with the 'control group' student with the nearest propensity score to them, provided they had not already been matched to another student. For the model comparing Laurus Trust students after the introduction of the EC programme with earlier Laurus Trust students, a Mahalanobis matching algorithm with replacement was used. This approach still ensured the pairing of students with the most similar covariates but produced a better overall match in our analysis working with a smaller control group.

Regression modelling was then undertaken to estimate how the education and progression outcomes varied between the matched groups of students, accounting for any remaining variation in the covariates listed previously. We then used G-computation to derive an estimate of the average treatment effect from these models.

These estimates represent the benefit to students associated with attending a Laurus Trust school, before or after the EC programme was introduced.

For each set of models outlined above, we also produced an estimate based only on those from economically disadvantaged backgrounds (based on free school meal status) and students with special educational needs and disabilities (SEND). Some models for these subgroups were based

on small samples of students and did not give reliable results. We have only reported on models with greater than 50 observations, and balance diagnostics are provided in Annex B.

Some of the outcomes for which we produce descriptive statistics were not included in our modelled analysis. This was primarily due to low sample sizes.

For models analysing post-18 destinations and outcomes, we constructed a second version including Attainment 8 as an additional covariate. By doing this, we try to answer the question: do Laurus Trust students have increased progression to higher education because they have better GCSE results, or is there a broader benefit of attending the trust associated with progression to higher education?

Results

Secondary School Outcomes

In this section, we present our analyses of Laurus Trust students' outcomes during secondary school. We have focused on students' Attainment 8 scores and their levels of absence and have estimated how these differed both from other students in England, and since the rollout of the extra-curricular (EC) programme in 2017/18.

We first present descriptive statistics, which represent a raw comparison between students in the Trust and their peers. Figures for Greater Manchester and England are provided throughout and relate to the average over all years covered in the pre- and post-EC Laurus Trust columns.

The years labelled on the charts relate to the academic year in which students finished key stage 4.

We then present our matched, modelled analysis adjusted for the characteristics outlined in the methodology section, which are known to be associated with students' academic achievements and progression. As mentioned, for each outcome we defined three sets of models to estimate the effect associated with being in the Laurus Trust at different points in time.

Figure 1: Average Attainment 8 scores, Laurus Trust students compared to all other students in England and Greater Manchester⁵

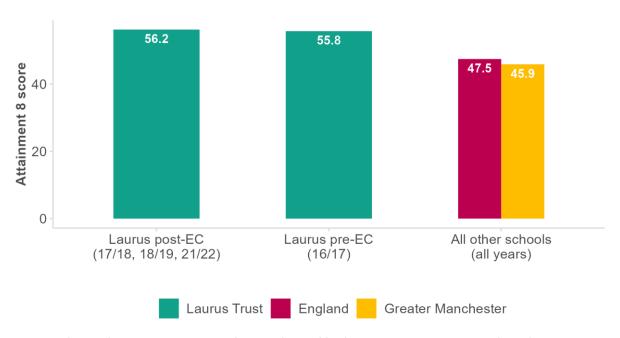
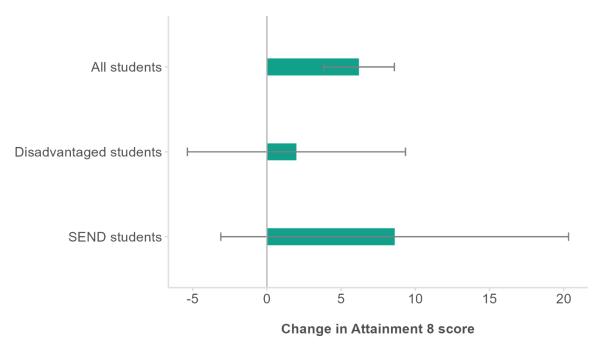


Figure 1 shows that Laurus Trust students achieved higher Attainment 8 scores than their peers in Greater Manchester and in England. There has been a slight increase within the Trust since the introduction of the EC programme (equivalent to about half a grade in one GCSE per student, on average), although there have been equivalent increases nationally.⁶

⁵ We have removed data pertaining to key stage 4 results in 2019/20 and 2020/21, however 2021/22 GCSE grades were still higher than before the pandemic. Note that throughout our modelled analysis, we control for year of study where possible to account for this effect.

⁶ Department for Education (2024), 'Key stage 4 performance'

Figure 2: Attainment 8 scores, changes since the rollout of the EC programme, compared to similar students within the Laurus Trust pre-EC programme



While Figure 1 displayed a simple raw difference in students' Attainment 8 scores, our modelled analysis accounted for characteristics known to be associated with students' outcomes through the propensity score matching method outlined in the methodology section. From Figure 2, we can see how Attainment 8 scores of Laurus Trust students post EC programme were higher than those of similar students who attended the Trust before 2017/18. The difference was statistically significant when we considered all students in our dataset, with an increase of 6.2 points in their score (equivalent to an increase of one grade in six subjects per student on average, or three grades across English and Maths which are double weighted). We also found positive effects for SEND and disadvantage students, but these results were not statistically significant.

Note that our match which paired similar students within the Laurus Trust before and after the EC programme was introduced, by definition, could not match students with those who finished key stage 4 in the same academic year. Part of the increase seen in Attainment 8 scores since the rollout of the EC programme may therefore reflect the increased grades in 2021/22, as a result of the COVID-19 pandemic.

Figure 3: Attainment 8 scores, Laurus Trust students compared with similar students in other schools

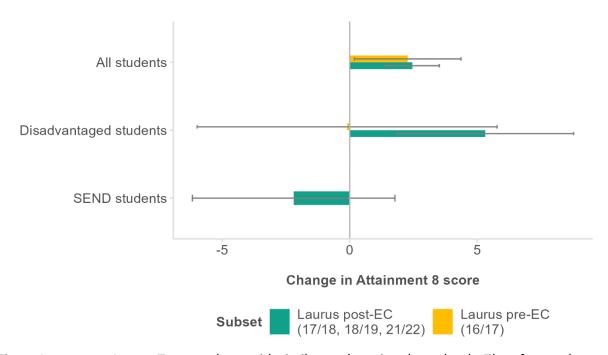


Figure 3 compares Laurus Trust students with similar students in other schools. Therefore, rather than estimating the effect of the changes that took place since 2017/18, these models provide an account of value added for students in the Laurus Trust, and we consider this both before and after the rollout of the EC programme. The chart shows that students at the Trust perform better than similar students elsewhere both pre- and post-EC programme. Both effects were statistically significant, with that for the "post-EC" group being slightly larger. These two values are not directly comparable as we use two different control groups to estimate the treatment effect. They do however provide useful evidence that is consistent with the conclusions reached using the models which analyse changes within the Laurus Trust. We also found a positive, statistically significant effect among disadvantage students who attended the Trust after the rollout of the EC programme. The effect size was equivalent to an increase in one grade in both English and Maths, and one other subject at GCSE level. We did not find a statistically significant result for students with an identified special educational need or disability.

When analysing absence data, we consider absence records from 2017/18 onwards for post EC programme students. For example, for those in year 11 in 2018/19 we take absence data from when they were in year 10 and 11 only.

Figure 4: Percentage of students who were persistently absent, Laurus Trust students compared to all other students in England and Greater Manchester

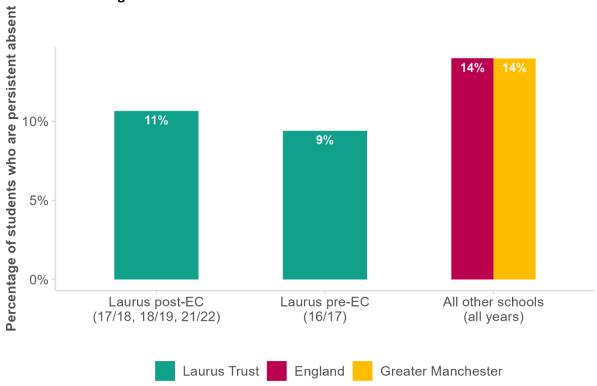
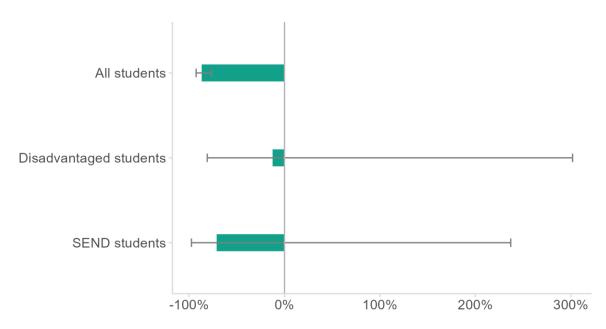


Figure 4 shows that Laurus Trust students had lower levels of persistent absence than their peers in other schools in both England and Greater Manchester. We see that there was a slight increase in the proportion of students who were persistently absent within the Laurus Trust following the rollout of the EC programme. However, this should be considered in the context of national trends in absence rates, which were much higher nationally in 2021/22 after the effects of COVID-19. Official statistics show that national persistent absence rates in state funded secondary schools were stable at around 14 per cent up until 2018/19. However, in 2021/22, the equivalent figure was 27.7 per cent. It is therefore likely that the small increase in absence post the EC programme (data based on 2017/18, 2018/19 and 2021/22) may have been driven by this national trend rather than changes specific to the Laurus Trust.

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⁷ Department for Education (2023), 'Pupil absence in schools in England'

Figure 5: Rate of persistent absence, changes since the rollout of the EC programme compared to similar students within the Laurus Trust pre-EC programme

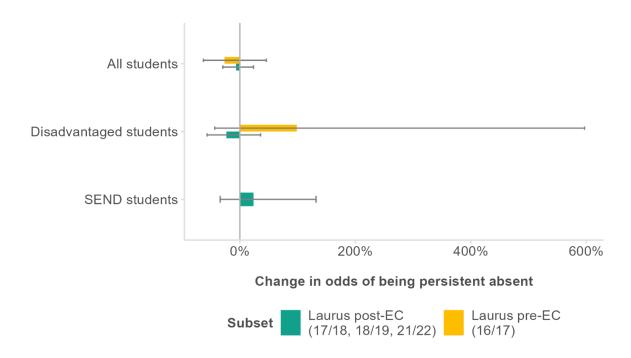


Change in odds of being persistent absent

Our matched analysis produced findings contrary to what the descriptive statistics seemed to suggest. Figure 5 shows that attending the Laurus Trust after rather than before the rollout of the EC programme reduced the odds of being persistently absent by 87 per cent. This is equivalent to going from having 9/100 to 1/100 students who were persistently absent. We found similar effects for disadvantaged and SEND students, although neither of these results were statistically significant.

So, whilst the descriptive statistics suggest a worsening in absence levels in the Laurus Trust, once changes in student intake are adjusted for in our modelling, absence rates within the Trust appear to have improved at a time when they worsened nationally.

Figure 6: Rate of persistent absence, Laurus Trust students compared with similar students in other schools



As we can see from Figure 6, we found no statistically significant effects on students' absence levels when we compared Laurus Trust students with their peers across the country.

Overall, we found that absence rates within the Laurus Trust were better than those of students in other schools. However, our modelled analysis suggests that this was likely to be driven by demographic differences in school intakes. That said, absence rates within the Laurus Trust appear to have further improved since the introduction of the EC programme, compared to similar students in the Trust beforehand.

16-19 outcomes

We now shift our focus to the progression of Laurus Trust students after they had completed their GCSEs. We specifically investigate the study pathways students pursued following their key stage 4 exams, based on the type and level of qualifications chosen. The analysis in this section is based on students' education provider and planned study programme in the academic year in which they turned 17.

Within the Laurus Trust, only the Cheadle Hulme school had a sixth form open in the years to which our analysis relates. We therefore focussed only on students who attended this school when considering how likely students were to stay on at their sixth form. For consistency, we also focussed on Cheadle Hulme students in our descriptive statistics analysing post 16 qualification choices.

The years labelled relate to the academic year in which students finished key stage 4.

Figure 7: Proportion of Cheadle Hulme students who continued study in the Cheadle Hulme sixth form compared to other study destinations, 2016/17-2017/18

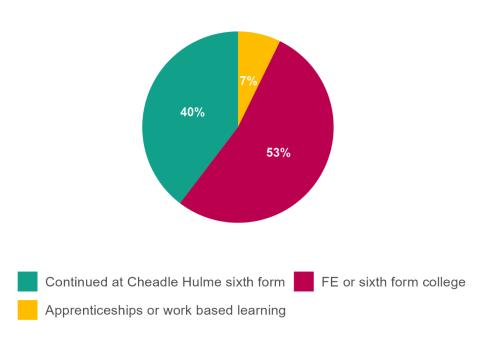


Figure 7 shows that around 4 in 10 Cheadle Hulme students continued their studies in their school's sixth form. Note that there was a very small number of Cheadle Hulme students who attended a sixth form attached to a different school. The low count meant we have had to suppress this value, so these students have been excluded from this chart.

75% - 67% 49% 45% 22%

21%

England

Greater Manchester

Below Level 3

Figure 8: Post-16 student destinations by type and level of qualification, 2016/17-2018/19

17%

25%

0%

Figure 8 shows post-16 destinations by level of qualification, with A levels split out from other level 3 qualifications. It shows that Cheadle Hulme students choose to study A levels far more commonly (67.4%) compared with students in England (48.9%) and Greater Manchester (44.9%). Cheadle Hulme students were also far less likely to enter qualifications below level 3, which is likely to be associated with the higher Attainment 8 scores observed for these students in the secondary outcomes section.

A Level or AS Level Other Level 3

Combined with Figure 7, Figure 8 confirms that many Cheadle Hulme students who attended an FE or sixth form college would have been studying towards an A level programme in this setting.

Looking beyond level of qualification, our analysis also shows that the greater proportion of Laurus Trust students studying A levels was mirrored by a below average proportion of students on apprenticeships: 17.3 per cent of students in the Trust compared with 21.5 per cent and 22.2 per cent for England and Greater Manchester respectively.

Figure 9: Change in likelihood of entering A levels among Laurus Trust students, post-EC programme compared to similar students in the Trust pre-EC programme

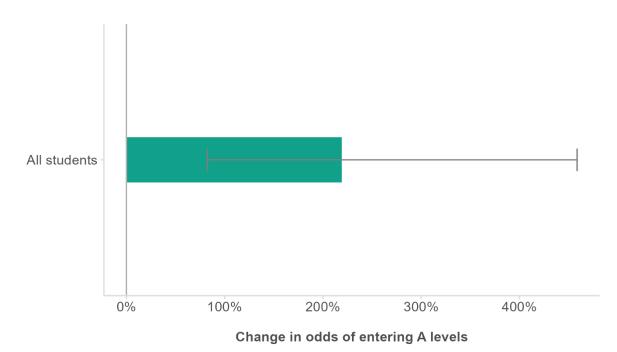
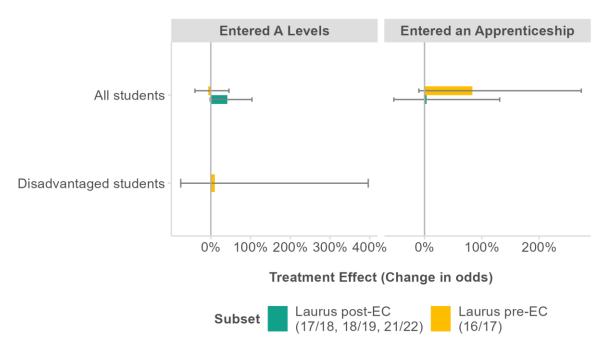


Figure 9 shows the effect associated with attending the Laurus Trust since the rollout of the EC programme on the likelihood of entering A levels, using our matched analysis and accounting for student characteristics. We can see that the odds of entering A levels increased by 219 per cent after the rollout of the EC programme, and this increase is statistically significant. This means that, if the probability that an average Laurus Trust student entered A levels was 60 per cent before the EC rollout, it would increase to 83 per cent after the introduction of these changes.

It should be noted that an increased likelihood of entering A levels doesn't necessarily reflect the most positive outcome for students. For many, applied or technical qualifications or apprenticeships may be a better route into employment, and this is likely to vary with local skills demand and the technical education offer in the area.

Figure 10: Post-16 destinations of Laurus Trust students compared with similar students in other schools



When we compared Laurus Trust students to similar students elsewhere in the country, we found that those who attended the Trust after 2017 were more likely to enter A levels compared with similar students elsewhere. This difference, however, fell just short of being statistically significant at the 95 per cent level. The effect size for students who attended the institution before the implementation of the EC programme was small and negative for all students, while positive for the disadvantaged subset, however neither of these findings were statistically significant.

Similarly, when looking at the likelihood of entering apprenticeships compared with similar students elsewhere, neither the pre- nor post-EC estimate was statistically significant.

Post-18 outcomes

In this final section, we present our analysis of post-18 student outcomes, looking at both university and continued study in FE colleges. When analysing university outcomes, we constructed models both with and without a control for students' Attainment 8 scores. Controlling for Attainment 8 scores allowed us to distinguish the effect on post-18 choices associated with attending the Trust, above and beyond that which could be explained by higher GCSE grades. The years labelled on charts relate to the academic year in which students finished key stage 4.

Figure 11: Proportion of Cheadle Hulme students finishing key stage 4 in 2016/17 – 2018/19, that continued in further education in the academic year they turned 19,8,9

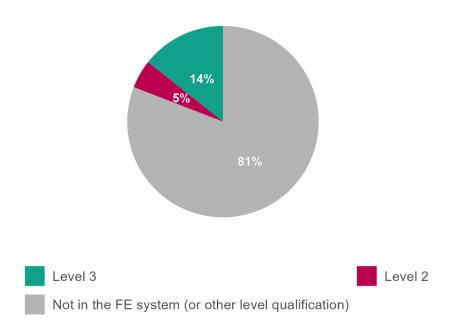


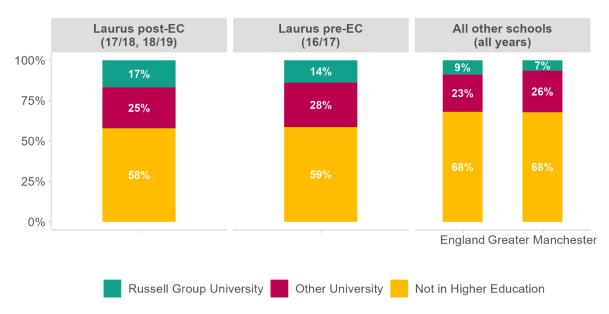
Figure 11 shows the percentage of students who attended a further education institution in the academic year in which they turned 19, the third year after completing secondary education.

We can see that Cheadle Hulme School students were unlikely to be in an FE college or sixth form in the academic year in which they turned 19. Of those that were, almost all were studying level 2 or level 3 qualifications. This implies that they were more likely to be finishing their 16-19 study programme by sitting a third year than to be starting an adult FE programme such as higher technical qualifications.

⁸ We have not produced a pre- or post-EC split for this breakdown due to small sample sizes.

⁹ There were a very small number of Cheadle Hulme students studying below level 2, or above level 3 qualifications in the academic year in which they turned 18. Due to the very low counts, we are not able to report these figures and they have been subsumed into the 'not in the FE system' category.

Figure 12: Proportion of students that entered higher education within two years of finishing key stage 4, of which Russell Group universities¹⁰



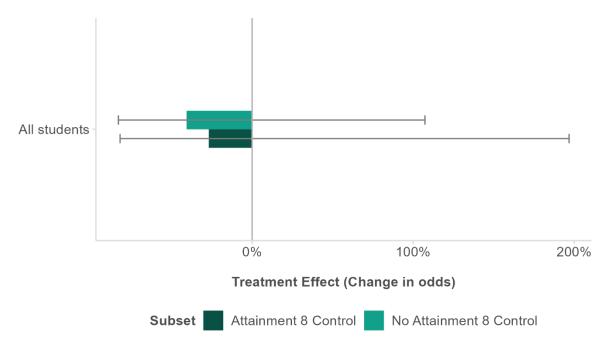
Focussing now on entry to higher education, Figure 12 shows that Laurus Trust students entered higher education more frequently than students in other schools, and there was a marginal increase since the rollout of the EC programme. Around six in ten students at the Trust did not enter higher education within two years, while seven out of ten students chose alternative pathways in England and Greater Manchester.

Among those who entered higher education within two years, we also looked at whether students were admitted into more selective universities, using Russell Group status as a proxy for selectiveness of higher education institutions. As we can see from the chart above, Laurus Trust students entered Russell Group universities more frequently than other students in the country and in Greater Manchester, and this difference increased after the rollout of the EC programme, with 17 per cent of all students at the Trust having continued their studies in a Russell Group institution.

¹⁰ We have looked at entry rates to higher education within two years of finishing key stage 4 to maximise the number of years we could include in our analysis. It should be noted that a significant number of students will also enter higher education after three years of post 16 study.

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Figure 13: Entry into Russell Group universities, change since the rollout of the EC programme compared to similar students in the Laurus Trust pre-EC programme



After controlling for students' characteristics, Figure 13 shows that there was not a significant difference in the likelihood of entering Russel Group universities between Laurus Trust students before and after the introduction of the EC programme. This was true regardless of whether we controlled for Attainment 8 scores or not.

Figure 14: Entry into higher education within two years, of which Russell Group universities. Laurus Trust students pre-EC programme (finished key stage 4 in 2016/17) compared to similar students in other schools

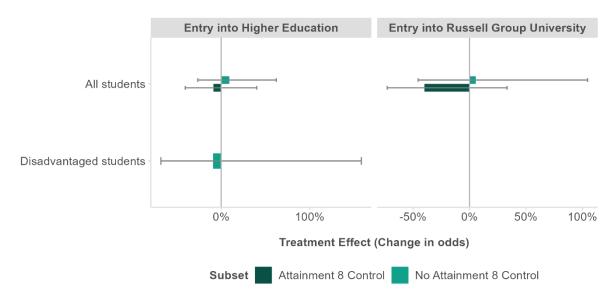


Figure 14 shows the results of the models which compared Laurus Trust students prior to the rollout of the extra-curricular programme to similar students elsewhere. We found no statistically

significant effects associated with attending the Trust before 2017/18 on the odds of entering higher education or entering a Russell Group university.

Figure 15: Entry into higher education within two years, of which Russell Group universities. Laurus Trust students post-EC programme (finished key stage 4 in 2017/18 or 2018/19) compared to similar students in other schools

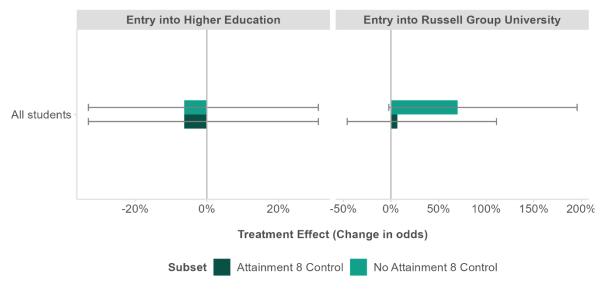
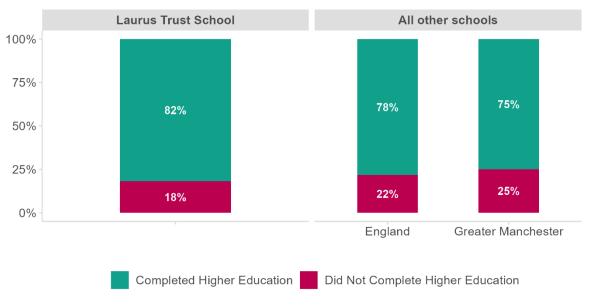


Figure 15 displays differences between students who attended the Laurus Trust after 2017/18 and similar students in other schools. There were no statistically significant differences between these two groups of students.

Figure 16: Higher education completion among Laurus Trust students who finished key stage 4 pre-EC programme (2015/16 or 2016/17) and started an undergraduate degree



Moving on to the final stage in students' academic careers, Figure 16 shows the proportion of pupils who did and did not complete higher education. Here, Laurus Trust students are not divided

into a pre-EC and post-EC group as the only cohorts who were old enough to complete higher education in our data were those who sat their key stage 4 exams in 2015/16 and 2016/17. This means that they could not have been exposed to the changes associated with the rollout of the EC programme. Only 18.2 per cent of Laurus Trust students who entered higher education did not end up completing their degree, compared to 22.2 per cent and 25.4 per cent of their peers in England and Greater Manchester respectively.¹¹

Figure 17: First-class degrees awarded, Laurus Trust students that finished key stage 4 in 2015/16 or 2016/17 (pre-EC programme) and completed a degree

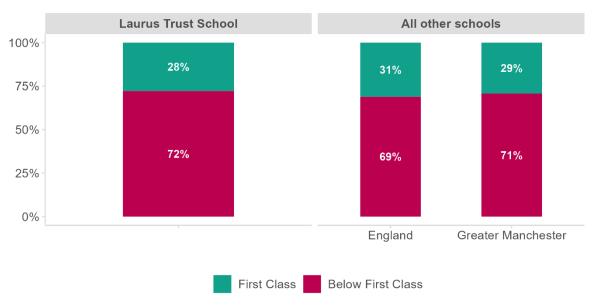


Figure 17 shows that among those who completed higher education, fewer students were awarded a first-class degree in the Laurus Trust pre-EC programme, compared to other students in England and Greater Manchester.

¹¹ Note that this analysis is based on undergraduate degrees only, as these students will not have been old enough to complete any post-graduate study. Students' most recent undergraduate record in HESA data up to 2021/22 has been analysed. Students continuing study towards an unfinished undergraduate degree are excluded. Only incomplete undergraduate degrees that students have stopped studying towards are counted. These differences in methodology mean these figures will not match official statistics.

Figure 18: Higher education completion, of which first-class degrees, Laurus Trust students pre-EC programme (finished key stage 4 in 2015/16 or 2016/17) compared to similar students elsewhere

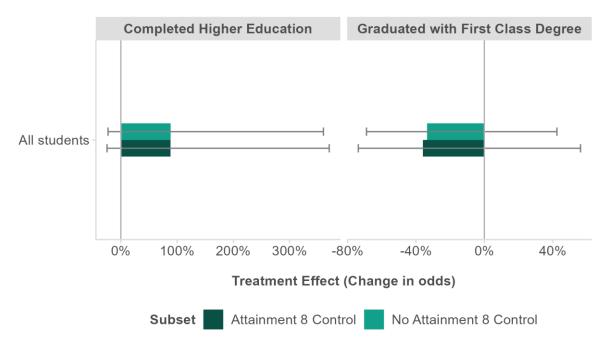


Figure 18 displays modelled results for university completion and the probability of being awarded a first-class degree. We found that Laurus Trust students pre-EC programme were more likely to complete higher education but less likely to graduate with a first-class degree, however neither result was statistically significant.

Conclusion

Overall, the findings presented in this report show that there were positive outcomes associated with attending the Laurus Trust, both before and after the introduction of the extra-curricular (EC) programme.

In particular, post EC programme Laurus Trust students achieved higher Attainment 8 scores than similar students in the trust before the EC programme was introduced, and compared to similar students in other schools.

The increased Attainment 8 scores for post-EC Laurus Trust students compared to similar students in other schools was also present for economically disadvantaged students. This strengthens the case to increase access to extra-curricular and enrichment activities for less well-off students, as previous research has indicated that they are less likely to have access or participate.¹²

Having adjusted for compositional differences, we found that absence rates within the Laurus Trust decreased since the rollout of the EC programme and that the likelihood of entering A levels at age 16 increased.

Our analysis of higher education take-up and completion produced more tentative findings, most of which were not statistically significant. This is likely to be a product of small sample sizes, as few cohorts of students since the introduction of the EC programme were old enough to have entered higher education.

We cannot fully disentangle the effects associated with the introduction of the EC programme from unobserved factors or other changes in the Laurus Trust over the same time period. However, these findings should be considered in the context of the existing evidence base. In this light, they further support evidence that such activities can bring a wide range of benefits and should not be considered simply as a bonus for the students who can afford them or happen to have them accessible.

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¹² Robinson (2024), 'Access to extra-curricular provision and the association with outcomes'

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Annex A: Underlying student counts¹³

Table 1: Underlying student counts for Attainment 8 and absence statistics (Figures 1 and 4)

	Laurus pre-EC (16/17)	Laurus post-EC (17/18, 18/19, 21/22)	England (all years)	Greater Manchester (all years)
Attainment 8	289	1,117	2,077,889	112,321
Absence	287	1,116	2,064,792	111,900

Table 2: Model statistics, Attainment 8 outcomes, change within the Trust post-EC, 2016/17-2018/19 and 2021/22 (Figure 2)

	Treatment effect	Lower confidence interval	Upper confidence interval	Observations
All students	6.20	3.82	8.59	1,272
Disadvantaged students	1.99	-5.36	9.34	182
SEND students	8.61	-3.10	20.32	131

Table 3: Model statistics, Attainment 8 outcomes, Laurus Trust students compared to similar students in other schools, 2016/17-2018/19 and 2021/22 (Figure 3)

	Treatment effect	Lower confidence interval	Upper confidence interval	Observations
All students (Laurus pre-EC)	2.27	0.18	4.36	578
All students (Laurus post-EC)	2.45	1.40	3.51	2,234
Disadvantaged students (Laurus pre-EC)	0.10	-5.98	5.78	88
Disadvantaged students (Laurus post-EC)	5.31	1.85	8.78	308
SEND students (Laurus post-EC)	-2.20	-6.17	1.78	236

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¹³ Year groups quoted relate to the year in which students finished key stage 4.

Table 4: Model statistics, Persistent absence outcomes, change within the Trust post-EC, 2016/17-2018/19 and 2021/22 (Figure 5)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students	-86.8%	-92.6%	-76.5%	1,271
Disadvantaged students	-12.5%	-80.9%	301.9%	182
SEND students	-71.1%	-97.5%	237%	131

Table 5: Model statistics, Persistent absence outcomes, Laurus Trust students compared to similar students in other schools, 2016/17-2018/19 and 2021/22 (Figure 6)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (Laurus pre-EC)	-26.6%	-63.1%	45.9%	575
All students (Laurus post-EC)	-6.7%	-29.5%	23.5%	2,233
Disadvantaged students (Laurus pre-EC)	98.6%	-43.4%	597%	87
Disadvantaged students (Laurus post-EC)	-23.4%	-56.8%	35.9%	307
SEND students (Laurus post-EC)	23.6%	-34.2%	132%	236

Table 6: Underlying student counts for post-16 destinations, by institution type, 2016/17-2018/19 (Figure 7)¹⁴

	Cheadle Hulme High School (16/17, 17/18, 18/19)
Same school's sixth form	197
FE College	264
Apprenticeship or work-based learning	36

¹⁴ The year groups of Cheadle Hulme High School students in Table 3 do not correspond to those in Table 2 and Table 4, therefore the totals are different

Table 7: Underlying student counts for post-16 destinations, by level of qualification, 2016/17-2018/19 (Figure 8)

	Cheadle Hulme High School (16/17, 17/18, 18/19)	England (all years)	Greater Manchester (all years)
A- or AS-levels	511	719,527	35,591
Other level 3 qualification	131	315,812	17,607
Below level 3 qualification	116	436,071	26,103

Table 8: Model statistics, Entry to A Level, change within the Trust post-EC, 2016/17-2018/19 (Figure 9)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students	219.2%	82.4%	458.7%	665

Table 9: Model statistics, Entry to A Level, Laurus Trust students compared to similar students in other schools, 2016/17-2018/19, (Figure 10, left-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (Laurus pre-EC)	-6.5%	-39.9%	45.7%	540
All students (Laurus post-EC)	41.5%	-1.7%	103.6%	942
Disadvantaged students (Laurus pre-EC)	9.9%	-75.6%	395.9%	73

Table 10: Model statistics, Entry to apprenticeships, Laurus Trust students compared to similar students in other schools, 2016/17-2018/19, (Figure 10, right-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (Laurus pre-EC)	83.4%	-9.9%	237.4%	555
All students (Laurus post-EC)	3.6%	-53.6%	131.1%	956

Table 11: Underlying student counts for post-18 destinations, by level of qualification, 2016/17-2018/19 (Figure 11)

	Cheadle Hulme High School (16/17, 17/18, 18/19)
Not in the FE system	626
Level 3 qualification	111
Level 2 qualification	37

Table 12: Underlying student counts for entry into higher education within two years, of which Russell Group university, 2016/17-2018/19 (Figure 12)

	Laurus pre-EC (16/17)	Laurus post-EC (17/18, 18/19)	England (all years)	Greater Manchester (all years)
Russell Group university	40	90	132,700	5,285
Other university	80	135	351,515	20,790
Not in higher education (but old enough)	170	310	1,032,340	55,145

Table 13: Model statistics, Entry to Russell Group university, change within the Trust post-EC, 2016/17-2018/19 (Figure 13)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	-40.7%	-83.1%	107.3%	300
All students (Attainment 8 control)	-26.9%	-82%	196.9%	300

Table 14: Model statistics, Entry to higher education, Laurus Trust students pre-EC programme (finished key stage 4 in 2016/17) compared to similar students in other schools, (Figure 14, left-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	-9.2%	-26.5%	62.2%	575
All students (Attainment 8 control)	-8.8%	-40.6%	40.1%	575
Disadvantaged students (No Attainment 8 control)	-9.3%	-68.1%	158.2%	90

Table 15: Model statistics, Entry to Russell Group university, Laurus Trust students pre-EC programme (finished key stage 4 in 2016/17) compared to similar students in other schools, Figure 14, right-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	5.5%	-45.6%	104.7%	230
All students (Attainment 8 control)	-40%	-72.9%	33.2%	230

Table 16: Model statistics, Entry to higher education, Laurus Trust students post-EC programme (finished key stage 4 in 2017/18 or 2018/19) compared to similar students in other schools, (Figure 15, left-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	-6.3%	-33.1%	31.1%	970
All students (Attainment 8 control)	-6.3%	-33.1%	31.1%	970

Table 17: Model statistics, Entry to Russell Group university, Laurus Trust students post-EC programme (finished key stage 4 in 2017/18 or 2018/19) compared to similar students in other schools, Figure 15, right-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	70%	-2.2%	195.6%	390
All students (Attainment 8 control)	67.9%	-45.9%	110.9%	390

Table 18: Underlying student counts for university completion, 2015/16-2016/17, (Figure 16)

	Cheadle Hulme High School (15/16, 16/17)	England (all years)	Greater Manchester (all years)
Completed higher education	180	249,120	12,890
Did not complete higher education (but old enough)	40	69,295	4,310

Table 19: Underlying student counts for degree classification, 2015/16-2016/17, (Figure 17)

	Cheadle Hulme High School (15/16, 16/17)	England (all years)	Greater Manchester (all years)
First class degree	50	75,520	3,715
Below first-class degree	130	167,770	9,975

Table 20: Model statistics, higher education completion, Laurus Trust students pre-EC programme (finished key stage 4 in 2015/16 or 2016/17) compared to similar students in other schools, (Figure 18, left-hand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	88.5%	-22.8%	360.2%	260
All students (Attainment 8 control)	88.3%	-24.6%	370.5%	260

Table 21: Model statistics, degree classification, Laurus Trust students pre-EC programme (finished key stage 4 in 2015/16 or 2016/17) compared to similar students in other schools, (Figure 18, righthand side)

	Change in odds	Lower confidence interval	Upper confidence interval	Observations
All students (No Attainment 8 control)	-33.5%	-69%	42.5%	230
All students (Attainment 8 control)	-36%	-73.8%	56.3%	230

Annex B: Balance of matched data sets

As discussed in the methodology section, we adopted a propensity score matching approach in order to create a control group with more similar characteristics to students in the Laurus Trust.

The tables below show the proportion of students with each characteristic in the 'treatment' and 'control' group after each of our matches. For continuous variables such as prior attainment, the mean average within each group is shown. If good balance has been achieved, the values in the 'treatment' and 'control' group will be similar.

Where counts for certain categories were low, we have condensed them into broader groups. For example, we report school type as academy converter, or 'other school type'.

For some matches, not all covariates were well balanced between groups. For example, in some instances it was not possible to achieve a good match on the year students finished key stage 4. This implies that these variables were less predictive of the likelihood of attending the trust, compared to other factors such as local area level of deprivation.

Our regression modelling of the matched data further adjusts for all of the covariates in these tables, accounting for any remaining differences between the 'treatment' and 'control' groups.

Table 22: Balance diagnostics of models comparing similar students within the Laurus Trust

		Laurus post-EC (17/18, 18/19, 21/22)	Laurus pre-EC (16/17)
	Average Index of Multiple Deprivation (IMD) Decile	7.1	7.0
CONTINUOUS VARIABLES	Average prior (KS2) attainment percentile	53.5	58.4
	Average school's prior attainment percentile	53.3	61.1
	Average school size	280	260
CENDED	Male	49.6%	53.5%
GENDER	Female	50.4%	46.5%
FTUNICITY	White – British	83.2%	83.2%
ETHNICITY	All other ethnicities	16.8%	16.8%
DICADVANTACE	Not disadvantaged	86.2%	84.5%
DISADVANTAGE	Disadvantaged	13.8%	15.5%
SEND	Not SEND	89.4%	91.6%
SEND	SEND	10.6%	8.4%

Table 23: Balance diagnostics of models comparing Laurus Trust students post-EC programme (finished key stage 4 in 2017/18 or 2018/19) to similar students in other schools

		Laurus post-EC (17/18, 18/19, 21/22)	All other schools
	Average Index of Multiple Deprivation (IMD) Decile	7.1	7.1
CONTINUOUS VARIABLES	Average prior (KS2) attainment percentile	53.5	51.6
	Average school's prior attainment percentile	53.3	52.9
	Average school size	280	278
GENDER	Male	49.6%	48.4%
GLNDLK	Female	50.4%	51.6%
	White – British	82.9%	80.3%
	Any Other Asian Background	2.2%	2%
	Any Other Mixed Background	2%	2.8%
ETHNICITY	Any Other White Background	1.6%	1.7%
	Chinese	1%	0.9%
	Pakistani	3.7%	4.7%
	White and Asian	1.5%	2.3%
	White and Black Caribbean	1.4%	1.7%
	All other ethnicities	4.7%	4.6%
DICADIMATE	Not disadvantaged	86.2%	85.6%
DISADVANTAGE	Disadvantaged	13.8%	14.4%
	Not CEND	00.40/	00.20/
SEND	Not SEND SEND	89.4% 10.6%	86.2% 13.8%
	JEND	10.0%	13.0%
	2016/17	0.0%	11.5%
ACADEMIC YEAR	2017/18	23.6%	13.2%
FINISHED KS4	2018/19	24.4%	14.4%
	2021/22	52.0%	60.9%

Table 24: Balance diagnostics of models comparing Laurus Trust students pre-EC programme (finished key stage 4 in 2016/17) to similar students in other schools

		Laurus pre-EC (16/17)	All other schools
CONTINUOUS VARIABLES	Average Index of Multiple Deprivation (IMD) Decile	6.8	7.1
	Average prior (KS2) attainment percentile	59.5	57.2
	Average school's prior attainment percentile	60.2	62.3
	Average school size	253	249
GENDER	Male	50.5%	61.9%
	Female	49.5%	38.1%
ETHNICITY	White – British	88.9%	92.7%
	All other ethnicities	11.1%	7.3%
DISADVANTAGE	Not disadvantaged	84.8%	86.5%
	Disadvantaged	15.2%	13.5%
SEND	Not SEND	92.7%	94.1%
	SEND	7.3%	5.9%
	CLID	1.070	0.070
ACADEMIC YEAR	2016/17	92.7%	89.6%
FINISHED KS4	Any other year	7.3%	10.4%
SCHOOL TYPE	Converter Academy	92.4%	93.1%
	Other school type	7.6%	6.9%

Table 25: Balance diagnostics of models comparing Laurus Trust students pre-EC programme, with an additional cohort for university completion outcomes (finished key stage 4 in 2015/16 or 2016/17), to similar students in other schools

		Laurus pre-EC (15/16, 16/17)	All other schools
CONTINUOUS VARIABLES	Average Index of Multiple Deprivation (IMD) Decile	6.8	6.7
	Average prior (KS2) attainment percentile	59.3	54.9
	Average school's prior attainment percentile	59.5	59.8
	Average school size	270	272
GENDER	Male	48.5%	43.1%
	Female	51.5%	56.9%
ETHNICITY	White – British	86.3%	84.0%
	Pakistani	3.5%	4.9%
	White and Black Caribbean	1.7%	2.2%
	All other ethnicities	8.5%	8.9%
DISADVANTAGE	Not disadvantaged	86.6%	80.4%
	Disadvantaged	13.4%	19.6%
SEND	Not SEND	88.3%	83.8%
	SEND	11.7%	16.2%
	SEND	11.170	10.270
ACADEMIC YEAR FINISHED KS4	2015/16	50.3%	22.7%
	2016/17	46.0%	9.3%
	Any other year	3.7%	68.0%
SCHOOL TYPE	Converter Academy	95.5%	96.0%
	Other school type	4.5%	4.0%