



Department
for Education

Evaluation of the 16-19 Tuition Fund:

**Impact evaluation report
July 2026**

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Government
Social Research

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Executive Summary

Introduction

The COVID-19 pandemic caused significant disruption for all stages of education and learning. The disruption began with the first national lockdown in March 2020 and continued throughout the 2020 to 2021 academic year due to the continued prevalence of the virus, multiple national and local lockdowns, and changing restrictions. Students entering or continuing their post-16 education since the start of the pandemic were affected by lost learning time and notable changes to grading and assessments. This was the context in which the Department for Education (DfE) launched the 16-19 Tuition Fund in the 2020 to 2021 academic year, as part of the government's education recovery programme. The programme provided additional funding for schools, colleges and other 16-19 institutions to deliver small group tuition in English, maths, and other subjects where learning was disrupted, such as vocational courses where assessments were deferred. A total of £420m Government funding was allocated to the 16-19 Tuition Fund (£96m for the 2020 to 2021 academic year, £102m in 2021 to 2022, £110m in 2022 to 2023, and £112m in 2023 to 24).

The DfE commissioned Ipsos UK and the Education Policy Institute (EPI) to undertake an independent evaluation of the 16-19 Tuition Fund for the 2021 to 2022 academic year. The evaluation of the 16-19 Tuition Fund included an [implementation and process evaluation](#) and an impact evaluation. This report details the findings of the impact evaluation, which aimed to answer the following three questions:

1. What is the impact of the Tuition Fund on educational attainment outcomes?
2. Does the impact of the Tuition Fund vary by subject?
3. Does the impact of the Tuition Fund differ by institution characteristics and student characteristics?

Approach and data restrictions

To estimate the impact of the Tuition Fund on student outcomes in the 16-19 phase, we utilised data collected via the summer school census and Individualised Learner Record (ILR). These sources captured data (recorded by institutions) on whether students had received any tuition activities delivered via the 16-19 Tuition Fund within the 2021 to 2022 academic year. It did not capture data on the nature, duration and frequency of any activities received.

We considered three distinct outcome measures:

- **Outcome measure 1:** Average point score (APS) across all 16-19 qualifications awarded in the 2022 summer results season.
- **Outcome measure 2:** Grade achieved in English GCSE in the 2022 summer exam season (if entered).
- **Outcome measure 3:** Grade achieved in maths GCSE in the 2022 summer exam season (if entered).

We adopted a propensity score matching approach to estimate the impact of the 16-19 Tuition Fund on students' attainment outcomes. This approach involved matching students that received tuition to otherwise similar students that did not. If the quality of matching is high, analysis of the resulting matched sample allows for a robust estimate of the impact of tuition on students' attainment outcomes.

The original matching was successful. However, issues were subsequently identified with the source data. A number of post 16 institutions that received funding for 16-19 tuition did not record which students received it in the 2021 to 2022 academic year. This reporting issue meant that many students included in our matched sample may have benefitted from the 16-19 Tuition Fund even though the data suggested they had not, making the analysis unreliable. We therefore excluded the data for all students at institutions for which we did not have reliable data.

For school sixth forms, although many had to be excluded, we were still able to create a high-quality matched sample. For FE and sixth form colleges, there were too few institutions that did not opt in to the 16-19 tuition fund left in our data, and a reliable match was not possible. Further details are provided in the methodology and findings sections, but the implication is that we were only able to produce an impact estimate for students attending school sixth forms. Based on the reliable subset of the data, students at school sixth forms only accounted for around a third of students that benefitted from the 16-19 Tuition Fund in the 2021 to 2022 academic year.

School sixth forms are typically more selective than FE and sixth form colleges. This means that the students attending them who received tuition are unlikely to be representative of the broader population that benefitted from the 16-19 Tuition Fund. This is reinforced by looking at the prior attainment of these students. Prior to matching, 85 per cent of students in school sixth forms that received tuition under the 16-19 Tuition Fund already held a grade 4 GCSE in English and maths. This subset of students for which we were able to produce an estimate were not therefore the primary group that the policy aimed to target. We advise caution in interpretation of this analysis, given the further limitations outlined in the following sections, no meaningful policy conclusions can be inferred.

Findings

When restricted to the subset of students attending school sixth forms for which we had reliable data, the impact evaluation found a statistically significant, negative effect of the 16-19 Tuition Fund on educational attainment, measured via an average point score over all 16-19 qualifications (not just A levels). The effect was equivalent to around 15 per cent of an A level grade. However, we were not able to produce an impact estimate for students in FE and sixth form colleges. These students, on average, have lower GCSE results than those in school sixth forms and may have benefitted more from tuition.

The average point score finding *would* suggest that those who received tuition achieved worse exam grades across their 16-19 qualifications as a result. However, the substantial limitations of the data underpinning this analysis, in particular the selection effects outlined in more detail below, mean we cannot be confident in the estimate produced by our matching and modelling approaches.

For our models using English or maths GCSE outcomes, the matched sample sizes were unreliaibly small, and all estimates were statistically insignificant.

The findings from the [implementation and process evaluation](#) provided a more nuanced picture and found that institutions and learners perceived positive benefits from the Tuition Fund. Of those surveyed, 86% of institutions and 47% of learners agreed that the tuition had improved student confidence. Meanwhile, 88% of institutions agreed that the Tuition Fund had improved educational attainment, while 23% of students felt they had achieved better grades because of tuition. As such, it may be that improvements in shorter-term outcomes, such as confidence and study skills, were more prevalent whereas improvements in attainment could require a longer timeframe. Another takeaway from the process evaluation relates to how institutions delivered tuition. This varied significantly to meet the needs of students across a wide range of subjects. We know from the process evaluation that some students received one-off sessions in the run up to exams, whilst others received recurring sessions over a sustained period.

Variations in the nature, frequency and length of tuition sessions delivered to students are likely to be related to the impact it had on their attainment outcomes. The data collected via the school census and ILR only indicated if students had received tuition under the 16-19 Tuition Fund at some point during the academic year, so did not allow us to account for this.

In addition to the data quality issues, we anticipate that selection effects were likely to have occurred at two levels. Firstly, the 16-19 institutions who opted in to receive funding are likely to have differed systematically to those who did not, even if this was not observable in the data. For example, an institution who felt they had many students who stood to benefit from tuition would be more likely to opt in to receive funding than an institution who felt they had few students who stood to benefit.

Secondly, institutions could determine which learners received activities funded by the 16-19 Tuition Fund, within the eligibility criteria. This meant that those who were selected to receive tuition may have been different to those who were not, in ways that were not observable using administrative data, for example motivation or the direct impacts of COVID-19. Although we control for prior attainment through our matching approach and subsequent modelling, we are not able to control for these unobservable differences.

Students that finished 16-19 study in 2022 would predominantly have been awarded Centre Assessed Grades for their GCSEs in 2020. Centre Assessed Grades were generally considered to be less reliable than the usual exam-based assessments. This means our control for prior attainment may not have been as effective as in a usual year, making teacher discretion as to who received tuition especially important for this cohort.

If the 16-19 Tuition Fund had a sizable impact on students' attainment outcomes, we may reasonably have expected to identify this in our analysis despite the presence of selection effects, but the underlying data quality issues have prevented any meaningful conclusions.

Recommendations

The evaluation identified recommendations to inform how the Tuition Fund, or small group tuition in 16-19 educational settings more generally, could be delivered and evaluated in the future.

- 1. Future evaluations should collect basic monitoring information on the nature, type, and frequency of tuition delivered to students.** The lack of comprehensive monitoring requirements for the fund was understandable in the context of it being a COVID-19 response. However, it would be helpful to any future impact evaluation if more detailed information could be captured from institutions on the nature and format of tuition delivered (e.g. by length, frequency, duration, and mode). In the absence of this detail, it is likely that the overall assessment of impact has been diluted by the wide range of tuition approaches.
- 2. Provide more guidelines on minimum expectations for delivery, particularly in the absence of monitoring data.** There was wide variation between institutions on the duration, frequency and timing of tuition delivered, as well as the nature of this (e.g. by subject, group size). This was a key limitation as the evidence base shows differences in impact between those students who received fewer (including one-off) sessions and those who received more intensive tuition over an extended period. In future, it would be helpful to specify minimum expectations for delivery to ensure that all students included in the impact analysis received a baseline level of the intervention. Given a focus on offering institutions flexibility, it would be inappropriate to request one particular model of delivery, unless a future evaluation is designed to specifically test this. However, setting out

a small number of minimum expectations for delivery and examples could guide institutions towards a more common, evidence-supported model.

- 3. Align eligibility criteria for attracting funding and receiving tuition more closely with the scope of delivery and intended outcomes.** Teaching staff were able to determine which learners received tuition and this did not need to be aligned to the criteria for the funding. Moreover, the eligibility criteria were in part based on prior attainment in English and maths whereas delivery covered a wider range of subjects. In a year where prior attainment was determined by teacher-assessed grades, it was crucial that institutions were given the flexibility to determine who would benefit most from the tuition and the most appropriate subjects for this. However, for future programmes where an impact evaluation is planned, there should ideally be greater alignment between the eligibility criteria, specification for delivery, and outcome measures.
- 4. Consider testing the effectiveness and impact of different tuition models within a sample of institutions.** The Tuition Fund was open to all 16-19 institutions who receive annual funding allocations from the ESFA. This was appropriate in the context of it being a COVID-19 response, which would have made it unethical to withhold access, and also meant there was not time to test different approaches. However, it did create challenges in constructing a suitable comparison group of learners attending institutions where tuition was not offered. Trialling future interventions within a sample of institutions before rolling out nationally would create opportunities for constructing more robust comparison groups and generating stronger evidence of effectiveness and impact. This approach would also enable adaptations to be made in advance of full roll-out to help maximise impact.
- 5. Consider randomisation in future impact evaluations.** The context of the pandemic meant that randomisation would not have been appropriate for the 16-19 Tuition Fund. However, it could be an option to consider in future to further develop the limited evidence base on the effectiveness and impact of small group tuition within 16-19 settings.

1. Introduction

The Department for Education (DfE) commissioned Ipsos UK, in partnership with the Education Policy Institute (EPI), to undertake an independent evaluation of the 16-19 Tuition Fund for the 2021 to 2022 academic year.

This report details the findings from the impact evaluation strand. A separate report for [the implementation and process evaluation](#) was published in July 2023.

1.1. Context and rationale

The COVID-19 pandemic caused significant disruption for all stages of education and learning. The disruption began with the first national lockdown in March 2020 and continued throughout the 2020 to 2021 academic year due to the continued prevalence of the virus, multiple national and local lockdowns, and changing restrictions. Students entering or continuing their post-16 education since the start of the pandemic (including the 2021 to 2022 academic year) were affected by lost learning time and notable changes to grading and assessments¹. This was the context in which the 16-19 Tuition Fund was introduced, with the rationale to mitigate both immediate and longer-lasting effects of the pandemic. For example, one such challenge affecting students in the 2021 to 2022 academic year was that many were sitting formal exams for the first time in 2022, following the transition from teacher-assessed grades back to exam-based assessment.

It is also worth highlighting that the pandemic introduced new challenges that widened the disadvantage attainment gap by disproportionately impacting poorer students. While research on the disadvantage attainment gap has typically focused on pupil outcomes at secondary school level and below, EPI conducted exploratory research (funded by the Nuffield Foundation) to measure the 16-19 disadvantage attainment gap. The research, which used data that pre-dated the pandemic, highlighted prolonged educational inequality with older students facing further attainment losses as they enter adulthood. It found that poorer students in school and college sixth forms and FE colleges had worse educational outcomes than their more affluent peers by as many as three A-level grades across their best three qualifications². Furthermore, those with special educational needs and disabilities (SEND), who tend to have lower key stage 4 attainment, continued to have lower 16-19 attainment, most notably for disadvantaged students with SEND. The findings, which were published in March 2021, provided further evidence of the need for interventions and government funding to support disadvantaged students.

¹ <https://www.gov.uk/government/publications/pupils-progress-in-the-2020-to-2022-academic-years>

² https://www.nuffieldfoundation.org/wp-content/uploads/2021/03/Measuring-the-16-19-disadvantage-attainment-gap_EPI-2021.pdf

The 16-19 Tuition Fund

Overview

As part of the government's education recovery programme³, the DfE launched the 16-19 Tuition Fund in the 2020 to 2021 academic year to mitigate the disruption to learning caused by the COVID-19 pandemic. The programme provided additional funding for schools, colleges and other 16-19 institutions to deliver small group tuition in English, maths, and other courses where learning was disrupted, such as vocational courses where assessments were deferred. A total of £420m Government funding was allocated to the 16-19 Tuition Fund (£96m for the academic year 2020 to 2021, £102m for 2021 to 2022, £110m for 2022 to 2023, and £112m for 2023 to 2024).

The ultimate aim of the fund was to improve students' academic outcomes, which include improved attainment, recovered learning disrupted by COVID-19, improved academic skills (such as sitting exams), improved attendance, retention and engagement, and reduced dropout. It is also anticipated to affect non-academic outcomes relating to personal development (such as improved confidence, motivation and life-skills), wellbeing and improved transition to adulthood.

It is worth highlighting that the continued disruption of the pandemic during the 2020 to 2021 academic year affected institutions' plans to deliver tuition. As such, institutions were allowed to carry forward underspend into the 2021 to 2022 academic year, though many continued to face further disruptions.

Existing evidence base

The rationale for the 16-19 Tuition Fund (and the National Tutoring Programme, the programme for school age pupils in years 1-11) is grounded in existing research and evidence, which shows that one-to-one and small group tuition can be highly effective in supporting learning outcomes. The Education Endowment Fund's (EEF) Learning and Teaching Toolkit summarises the evidence base for small group tuition as having 'moderate impact for low cost based on moderate evidence'.⁴ Based on 62 studies (across education phases), the average impact of small group tuition is four additional months' progress over the course of a year.

The guidance for the 16-19 Tuition Fund, which is detailed in the sub-sections on group size and subject, was informed by research findings. For example, findings have shown that smaller groups of up to six or seven students are generally more effective, and low attaining pupils particularly benefitting from small group tuition⁵. Evidence from previous

³ <https://www.gov.uk/government/publications/education-recovery-support>

⁴ <https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/small-group-tuition>

⁵ <https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/small-group-tuition>

studies also suggests that frequent sessions, three times a week or so, lasting up to an hour over about 10 weeks typically show the greatest impact on educational progress⁶.

Institution eligibility

All 16-19 institutions who received annual funding allocations from the Education and Skills Funding Agency (ESFA) for the provision of 16-19 education were eligible for the Fund. The amount of funding is calculated using proxy measures for disadvantage and then distributed through their wider 16-19 funding allocation (see Box 1). The 2021 to 2022 funding was released from December 2021 to March 2022 and ring-fenced for 16-19 small group tuition only.

Box 1: Funding calculations

The two existing proxy measures for disadvantage, which were used to calculate the number of instances attracting funding, were:

- **Students with low prior attainment**, meaning those who did not have a GCSE grade 4 or above in English and/or maths at age 16. The calculation of the disadvantage block 2 (DB2) element of 16 to 19 tuition funding is based on the DB2 figures in an institution's 2021 to 2022 16 to 19 funding statement and the English and maths instances data in the 'programme' sheet of the Allocation and Calculation Toolkit (ACT) file.
- **Students from the 27% most economically deprived areas** of the country based on the index of multiple deprivation. To calculate the number of instances per student from the 27% most economically deprived areas, DfE used data on the proportion of students funded in the 2019/20 academic year with a disadvantage block 1 (DB1) uplift and then applied this to the number of funded students for 2021 to 2022.

Each institution was allocated £100 per full-time student and £60 per part-time students, where either of the above criteria were met.

There were 2,506 eligible institutions in the 2021 to 2022 academic year, of which 1,567 institutions opted into the Fund (63%). This was a lower proportion relative to the 2020 to 2021 academic year, where 1,868 institutions of 2,422 eligible institutions opted in (77%). Due to continued pandemic disruption, institutions were permitted to carry over funding from academic year 2020 to 2021 to 2021 to 2022. As such, some institutions may have continued to deliver tuition throughout 2021 to 2022 but did not opt into the 2021 to 2022 Fund and were not counted. Furthermore, the 62% of institutions that did opt in represented the vast majority of instances of eligibility (approximately 94%).

⁶ <https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/small-group-tuition>

Student eligibility

In the first year of the Tuition Fund, institutions could use the funding for students on a 16-19 study programme who had not achieved a grade 5 at GCSE in English and/or maths. Young people with SEND aged 19 to 24 who had an Education, Health and Care (EHC) plan were also eligible for support.

The eligibility for students was broadened for the 2021 to 2022 academic year to include economic disadvantage. Institutions were expected to use the small group tuition for students who:

- had not achieved grade 4 or 5 at GCSE in English and/or maths⁷, or
- were from the most economically disadvantaged backgrounds⁸ and needed catch-up support.

It is important to note that institutions were not directed or required to provide small group tuition to the specific students that attracted the funding. This was deliberately intended to give institutions the flexibility to identify students who meet the eligibility criteria and would most benefit from tuition.

Subjects

Institutions could offer support in English, maths and other subjects that had been disrupted, including vocational and/or academic learning. Institutions had further flexibility around using the funding to help students with SEND catch up on vocational and academic skills, skills considered important for their preparation for adulthood, and pastoral support.

Group size

In response to feedback from the sector, another change for the 2021 to 2022 academic year was further flexibility in the number of students that could be included in small groups. In 2020 to 2021, the guidance specified groups of up to three and no more than five students. In 2021 to 2022, this was increased to allow up to seven students in exceptional circumstances.

Use of funds

The funding was intended to cover the actual staff costs of delivering small group tuition, or the costs of contracting a third party. It was not intended to cover costs such as diagnostic tools, room hire, equipment, laptops, transport, or stationery.

⁷ Guidance for institutions asked them to prioritise tuition for those students who had not achieved a grade 4 in maths and/or English in the first instance (in line with the proxy measure used to calculate funding amounts) and then subsequently provide tuition on the basis of a student not having received a grade 5 in maths and/or English.

⁸ An economically disadvantaged background is defined as students from the 27% most economically deprived areas of the country in the Indices of Deprivation.

Stakeholder groups

It is worth briefly defining the key stakeholder groups involved in the 16-19 Tuition Fund. These include:

- **DfE:** DfE was responsible for setting policy for the 16-19 Tuition Fund. This included the eligibility criteria, calculation of funding allocations, and working closely with ESFA on the design of key processes involved in the management and distribution of funding. DfE are accountable to HM Treasury for the allocated funding, for reporting on how it has been used, and the extent to which it has achieved the intended outcomes and impacts.
- **ESFA:** The Education and Skills Funding Agency (ESFA) was an executive agency of the Department for Education. It was responsible for the management and distribution of the funding, including liaising with eligible 16-19 organisations, managing the opt-in/out process, disbursement of the funding, recovery of any underspend and developing guidance for institutions on the use of funding. ESFA became part of the Department for Education in April 2025.
- **16-19 institutions and third-party providers:** This group expected to:
 - Opt-in/out of the Fund via a dedicated digital form – this was introduced in the 2021 to 2022 academic year to streamline and automate the process.
 - Identify, engage and recruit eligible students to receive tuition based on low prior attainment and/or economic disadvantage.
 - Select subject areas and types of activity to be delivered through the tuition, including accounting for the needs of students with SEND.
 - Manage resourcing of the delivery of Tuition Fund activities through existing staff, recruitment of new staff, and/or commissioning and managing third-party provider(s) where necessary.
 - Ensure that those delivering activities and support through the Fund have the necessary skills, knowledge and experience – providing training or additional support where necessary.
 - Identify and source suitable teaching spaces or venues to deliver the tuition activities and support and timetabling of these activities.
 - Deliver one-to-one and/or small group tuition to groups of up to 5-7 pupils in English, maths and other subjects that have been disrupted, including vocational learning.
 - Deliver non-academic learning such as pastoral support for students with SEND, where one-to-one or small group tuition was not considered appropriate to meet their needs.
 - Manage, record and monitor the use of the funding, taking necessary steps to ensure alignment with the criteria for the funding and to ensure quality.

- **Students:** This includes students aged 16-19 years old, or up to 24 for those with an EHC plan, who receive tuition and/or participate in academic, vocational, or pastoral activities delivered through the 16-19 Tuition Fund.

Theory of Change

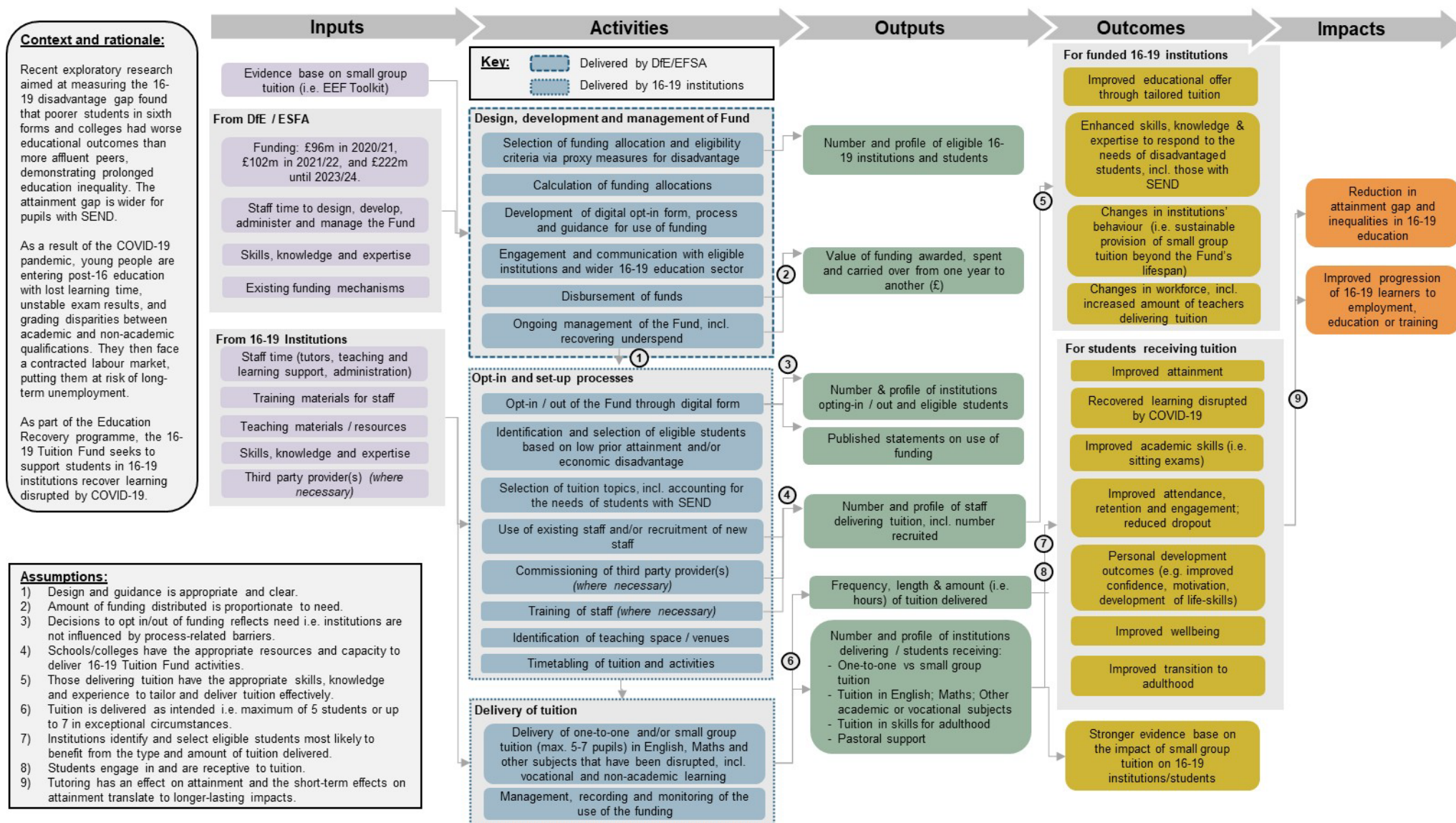
As part of the scoping and design stage of the evaluation (detailed in the [implementation and process evaluation report](#)), the evaluation team developed a Theory of Change (ToC) for the 16-19 Tuition Fund. This describes how key inputs and activities were expected to result in the intended outcomes and impacts for institutions and students. The ToC was developed to inform the design of the evaluation and to support an assessment of the effectiveness and impact of the 16-19 Tuition Fund.

Figure 1 depicts the logic model for the 16-19 Tuition Fund. A more detailed diagram and description of each ToC component can be found in the implementation and process evaluation report.

The assumptions that underpin the model include:

- The ability of 16-19 institutions to deliver tuition is based on the assumption that the design of the Tuition Fund and guidance provided by the DfE/ESFA regarding eligibility criteria and opt-in/out processes is clear (Assumption 1).
- The amount of funding distributed to institutions is proportionate to the needs of students (Assumption 2)
- Institutions' decisions to opt-in/out of the Fund reflect their need and are not influenced by process-related barriers (Assumption 3)
- Schools and colleges have the appropriate resources and capacity to deliver the activities (Assumption 4)
- Tuition is delivered as intended with a maximum of five students or up to seven in exceptional circumstances (Assumption 6).
- In order for intended outcomes to be realised, the model assumes that those delivering tuition have the appropriate skills, knowledge and experience (Assumption 5); institutions identify and select eligible students most likely to benefit from the type and amount of tuition being delivered (Assumption 7); and students engage in and are receptive to tuition (Assumption 8).
- Tuition has an effect on attainment and the short-term effects on attainment translate to longer-lasting impacts (Assumption 9).

Figure 1: 16-19 Tuition Fund logic model



Source: Ipsos UK

1.2. Evaluation questions

The evaluation of the 16-19 Tuition Fund included an implementation and process evaluation and an impact evaluation. The focus of the evaluation was the 2021 to 2022 academic year. The evaluation aimed to answer six overarching key evaluation questions (KEQ).

The implementation and process evaluation aimed to answer the following three questions:

1. How has the Tuition Fund been used by institutions?
2. How has the Tuition Fund been supporting eligible students?
3. How can the Tuition Fund be improved for future years?

The impact evaluation focused on the following three questions:

4. What is the impact of the Tuition Fund on educational attainment outcomes?
5. Does the impact of the Tuition Fund vary by subject?
6. Does the impact of the Tuition Fund differ by institution characteristics and student characteristics?

This report provides detail on the impact evaluation.

1.3. Structure of this document

The remainder of the document is structured as follows:

- Chapter 2 outlines the methodology for the impact evaluation.
- Chapter 3 details the findings from the impact evaluation.
- Chapter 4 concludes the report by summarising the key messages and recommendations.
- Appendix A provides data tables.

2. Data and methodology

This chapter details the methodology employed for the impact evaluation of the 16-19 Tuition Fund.

2.1. Data sources

To estimate the impact of the Tuition Fund on student outcomes in the 16-19 phase, we utilised data collected via the summer school census and Individualised Learner Record (ILR). These data captured whether students had received any tuition delivered via the 16-19 Tuition Fund within the 2021 to 2022 academic year, recorded by their institutions. However, a key limitation of this was that it did not tell us the frequency or regularity of tuition received, which is likely to be related to any observed effect on attainment outcomes.

We restricted the data to include only students that were:

- aged 16-18 at the start of the 2021 to 2022 academic year;
- attending a school or college sixth form or further education (FE) institution included in the DfE's Get Information About Schools (GIAS) database;
- For each outcome measure in question, we further restricted the cohort to students who were awarded relevant qualifications (i.e. for the English resit measure, only those that entered an English resit GCSE are included) in the summer 2022 exam season, to allow for meaningful comparisons.

Some of the data were found to be unreliable. Specifically, some providers that received funding under the 16-19 Tuition Fund did not record which students received it in their school census or ILR returns. This reporting issue meant that we could not accurately allocate students at these providers to our treatment or comparison group. **Once the unreliable data were excluded, it was not plausible to construct a meaningful comparison group for students attending FE colleges or sixth form colleges. For the impact estimates, we have therefore further restricted the data to include only students attending school sixth forms.**

2.2. Attainment measures

We created several measures using the key stage 5 National Pupil Database (NPD) student and exam files, to allow us to compare the attainment of students between groups.

Outcome measure 1: Average point score (APS) across all 16-19 qualifications awarded in the 2022 summer results season.

Our first outcome measure used an APS across all qualifications approved for 16-19 funding, not just those approved for reporting in 16-19 performance tables.

We opted for an APS measure rather than a total point score measure. This was so as not to bias comparisons in favour of those that had already completed their studies, who were likely to hold more qualifications.

We restricted the coverage of our APS (and all subsequent) measures to include only qualifications awarded in the summer 2022 exam season. This was to ensure that we only included qualifications awarded post tuition, as data did not allow us to ascertain when in the academic year tuition was received. Based on data collected in the implementation and process evaluation, many institutions did not begin delivering tuition activities until they were informed about their funding allocation offer in September and October 2021 and received the funding between December 2021 and March 2022. Institutions were therefore getting provision in place to deliver the tuition during the academic year, including recruitment, appointment of external providers, or confirmation of additional hours for existing staff. In many cases, this limited the length and duration of tuition that was possible, contributing to a concentration of tuition being delivered in the final term ahead of exams.

Outcome measure 2: Grade achieved in English GCSE in the 2022 summer exam season (if entered).

Outcome measure 3: Grade achieved in maths GCSE in the 2022 summer exam season (if entered).

Tuition was likely to be focussed on English and maths, as low attainment in these subjects at the end of key stage 4 was one of the core eligibility criteria for institutions to receive 16-19 tuition funds. A survey of institutions for the implementation and process evaluation confirmed this, with almost all respondents reporting that they used the funding to provide tuition in maths (95%) and/or English (86%).

2.3. Methodology

We adopted a propensity score matching approach, with receipt of 16-19 tuition as the 'treatment' or 'intervention' which we wished to measure the impact of.

Randomised controlled trials are the preferred method when wishing to infer causality of estimates. However, in the absence of randomisation, propensity score matching still allows researchers to infer causality, where many modelling techniques such as linear regression do not.

Interpreting estimates as causal is reliant on there not being confounding factors or 'selection effects' related to allocation to the treatment group, and the outcome variable of interest. We made extensive efforts to avoid selection effects and accounted for such factors as far as is possible within the research datasets available. However, as discussed in the findings section of this report (Chapter 3), this will have been imperfect.

Our initial matching approach was successful; however, issues were later identified with the source data. A number of post 16 institutions that received funding for 16-19 tuition did not record which students received it in the 2021 to 2022 academic year. This reporting issue meant that many students included in our matched sample may have benefitted from the 16-19 Tuition Fund even though the data suggested they had not, making the analysis unreliable.

Having removed data that the Department for Education identified to be unreliable, we were only able to produce an impact estimate for a subset of students attending school sixth forms, who were not representative of the overall population that received tuition under the 16-19 Tuition Fund.

For transparency, we still present our methodological approach and findings. However, even for students in school sixth forms, the prevalence of selection effects and other limitations noted mean **these results do not allow for any meaningful policy inference to be drawn.**

The process involved matching each student recorded as having received tuition to an 'otherwise similar' student in a provider where tuition under the 16-19 Tuition Fund was not offered. Attainment outcomes were then compared between the two groups to derive a 'treatment' effect, measuring the impact of the Tuition Fund upon 16-19 outcomes.

Prior to matching, a 'propensity score' was calculated for each student, estimating the probability that they received tuition. These probabilities are derived from a logistic regression model based on students' demographic characteristics, prior attainment, institution characteristics, and geographic factors.

Those that received tuition were each matched to a student in a comparison group of students that attended an institution where it was not offered, using a nearest neighbour matching algorithm, without replacement. This means that for each student who received tuition, a match was created to the student in the comparison group with the closest propensity score to their own, provided they had not already been matched to another student.

Our initial treatment and comparison groups were not well balanced. This means that even after matching, our treatment group were not similar to our comparison group in terms of the characteristic variables used in the model. To counter this, we applied a caliper to the match, and forced an exact match on key, coarsened variables of interest, such as prior attainment. In this context, a caliper is an upper bound on the distance between two students' propensity scores, which must not be exceeded in order for them to form a valid matched pair.

The variables on which an exact match was forced were:

- Disadvantage status at the end of key stage 4,
- Age, and
- Prior attainment.

An exact match was forced on disadvantage status and prior attainment as these were key variables, known to be strongly associated with our outcome measures, that were not initially well balanced. Prior attainment was 'coarsened' such that instead of forcing an exact match on both English and maths key stage 4 results, the average of English and maths on a 9-1 scale, rounded to the nearest integer was used for matching.

We additionally forced an exact match on age (roughly a proxy for whether the student was in year 12, 13 or 14) because it is preferable to compare students who were at the same stage of their 16-19 education. This is because all else being equal, we would expect students that have spent longer in education to be further ahead.

As with using a caliper, forcing specific variables to match in order to form a matched pair meant that the quality of matches was higher, but that a match could not be found for all students that received tuition.

The full list of variables included in the model were:

- Average prior attainment (mean of English and maths key stage 4 results, rounded to the nearest whole number)
- Whether grade 4 in English and maths had been achieved
- Age at the beginning of the 2021 to 2022 academic year
- Any identified special educational needs (SEND) at the end of key stage 4
- Disadvantage status at the end of key stage 4
- Whether students lived in the 27% of most deprived neighbourhoods based on the index of multiple deprivation (IMD)
- Type of school sixth form attended
- Gender

- Whether or not English was recorded as students' first language
- The total size of their qualifications awarded in the summer 2022 results season, based on guided learning hours associated with the qualifications awarded
- The proportion of their qualifications awarded in the summer 2022 results season that were academic
- Region
- The average prior attainment of all students in the same year group attending the same institution
- The average proportion of disadvantaged students in the same year group within the institution attended
- Size of institution attended (number of students in the same year group)

Full balance statistics for the match using a caliper and forced exact matching on selected variables are provided in Annex A.

Prior to matching, we filtered the data so that students that received tuition could only match to a student in a provider where no tuition under the 16-19 Tuition Fund was offered. This approach was taken to minimise the impact of selection effects. Within schools that offered tuition, if two students appeared similar based on the available data but only one received tuition, it is probable that there were unobserved differences between them that informed this decision. For example, a teacher may have been able to identify that one student was further behind the other, even though they had similar prior attainment. By matching tuition students to other students that did not attend a provider where tuition was offered, we mitigate some of this effect.

Once the matching was complete, a linear regression model was fitted using our attainment measure as the dependent variable. The independent variables were the same as those used in the logistic model listed above, with the addition of the flag showing whether students received tuition under the 16-19 Tuition Fund (which was the dependent variable in the pre-matching logistic model).

We do not interpret coefficients directly from these fitted models. Rather than look at the coefficients which compare outcomes relative to the comparison group, we use g computation to estimate the marginal, average treatment effect on the treated (ATT). This corresponds to the average change in the outcome variable which we estimate could be attributed to the treatment (16-19 tuition), amongst those that received it. In practice, this makes an adjustment to the estimate which makes it equivalent to comparing to a comparison group that had **exactly** the same observed characteristics as the treatment group.

Our matching approach discarded some students that received tuition from the analysis in order to improve the match quality. We also restricted to students in school sixth forms only, as discussed earlier in this chapter. This means that the estimate does not relate to

the intended treatment group, but a subset of students for which data were reliable and we were able to form a matched pair. This does not map precisely onto a target group of interest, but for convenience, we continue to refer to this estimate as the ATT.

3. Findings

This chapter details the findings from the impact evaluation.

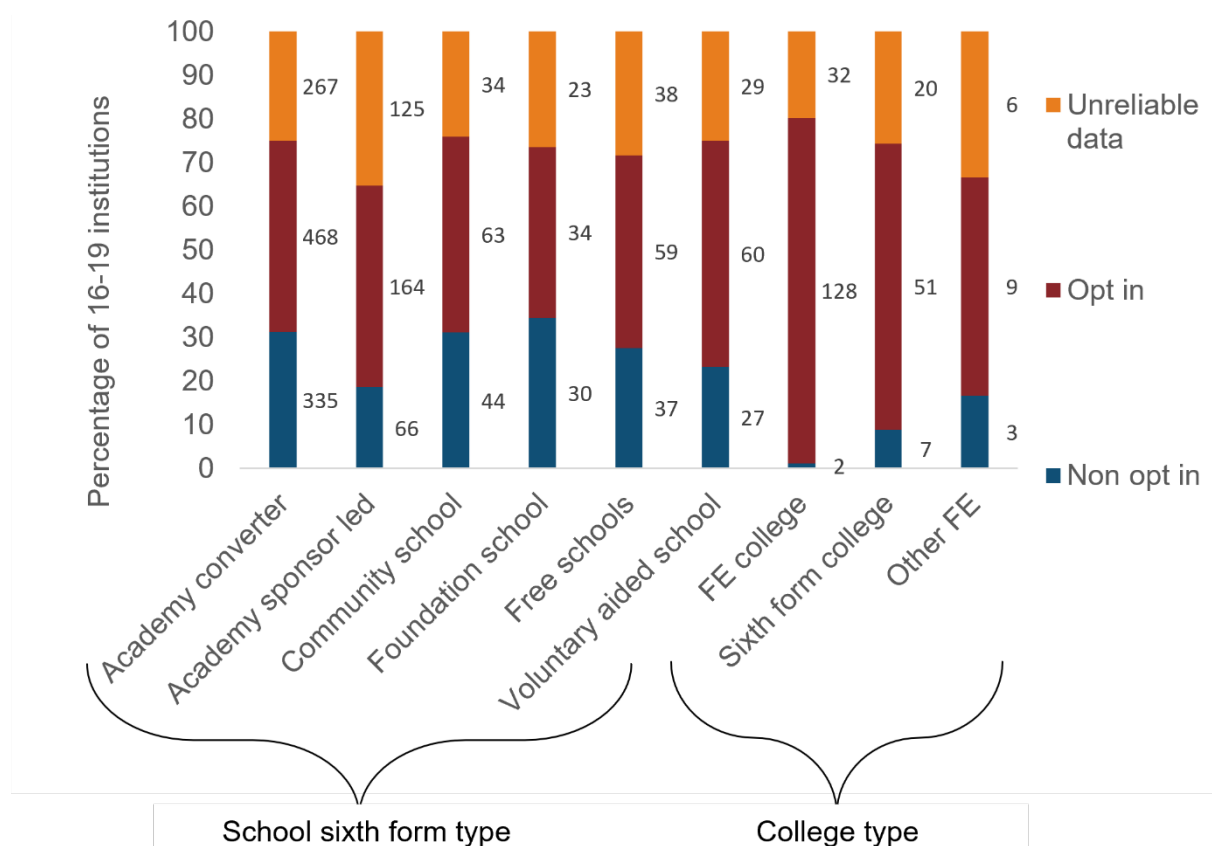
As discussed in the Methodology chapter, these findings only relate to a subset of students in school sixth forms who are unlikely to be representative of the broader population that benefitted from the 16-19 Tuition Fund.

We first provide counts of the types of institutions that opted into the fund and provided tuition. We compare this to the counts of institutions that did not opt into the fund, and the providers for whom data was considered to be unreliable⁹, which were removed from the analysis.

⁹ Students attending a provider that received 16-19 Tuition Funding but did not record who received it in the census or ILR

3.1. Descriptive statistics

Figure 2: Percentage and number of 16-19 institutions that opted into the 16-19 Tuition Fund, by institution type, 2021 to 2022¹⁰¹¹



Source: EPI analysis of DfE data in the Office for National Statistics' secure research service

Figure 1 shows that for every 16-19 institution type in our data, a substantial proportion of data was unreliable. Once the unreliable data (which was previously categorised into our comparison group) had been removed, only two FE colleges, seven sixth form colleges (including 16-19 academies) and three Other FE providers that did not opt in to the 16-19 Tuition Fund in the 2021 to 2022 academic year remained. This meant we had very few students in our comparison group for these institution types. We tested a matching approach with replacement to boost the sample size for these institution types. However, it was naturally reliant on matching the same students from our comparison group over and over, resulting in a prohibitively small effective sample size.

In agreement with the Department for Education, we chose to produce impact estimates for students in school sixth forms only. We produced one overall estimate but accounted

¹⁰ For the purpose of this analysis, opt in institutions are defined as those that recorded at least one student as having received tuition

¹¹ Figures for studio schools and voluntary controlled school sixth forms have been suppressed and secondary suppressed respectively, due to the low underlying count of students receiving tuition.

for the type of school sixth form (Academy converter, Academy sponsor led etc.) through our matching specification and subsequent modelling.

School sixth forms are typically more selective than FE and sixth form colleges. This means that the students attending them who received tuition are unlikely to be representative of the broader population that benefitted from the 16-19 Tuition Fund. In addition to the other limitations listed previously, this means that the results cannot be generalised to the broader 16-19 student population.

3.2. Modelled results

We first present the underlying counts for the matched data that underpinned our modelled analysis.

Note that the counts provided in tables 1-3 are based on data that has been further filtered to include only students that were awarded 16-19 qualifications in the summer 2022 exam season. Separate matches were completed for disadvantaged students, and those with low prior attainment.

The English and maths GCSE matches in tables 4 and 5 are based on those that entered the relevant GCSE in the summer 2022 exam season.

These counts are based on students at school sixth forms only, after the unreliable data had been removed. Full balance statistics for the matched cohort in table 1 are provided in Annex A.

Table 1: Counts of students in comparison and treatment groups, before and after matching

	Comparison	Treatment
All	68,113	18,069
Matched	14,768	14,768
Unmatched	53,345	3,301

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

Table 2: Counts of students in comparison and treatment groups before and after matching, for those who were disadvantaged at the end of key stage 4¹²

	Comparison	Treatment
All	8,628	5,924
Matched	4,303	4,303
Unmatched	4,325	1,621

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

Table 3: Counts of students in comparison and treatment groups before and after matching, for those who had not achieved grade 4 English and maths GCSEs by the end of key stage 4

	Comparison	Treatment
All	2,158	2,646
Matched	1,510	1,510
Unmatched	648	1,136

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

Table 4: Counts of students in comparison and treatment groups before and after matching, for those who had entered a summer English GCSE resit

	Comparison	Treatment
All	1,095	1,851
Matched	615	615
Unmatched	480	1,236

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

¹² Disadvantage defined as those that had claimed free school meals in the last 6 year, or were looked after/adopted from care.

Table 5: Counts of students in comparison and treatment groups before and after matching, for those who had entered a summer maths GCSE resit

	Comparison	Treatment
All	2,198	3,906
Matched	1,635	1,635
Unmatched	563	2,271

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

Table 1 shows that the match rate for those that received tuition in our cut down sample of students attending school sixth forms was over 80 per cent. Although non-perfect, we consider this matching approach to be optimal. When we ran the match without the additional constraints of the caliper and coarsened exact matching on certain variables, a better match rate was achieved, but at the cost of a well-balanced sample. When restricted to disadvantaged students only, as shown in table 2, the match rate reduced to 72 per cent.

Table 3 shows the match rate when the data was first restricted to those that had not achieved grade 4 English and maths by the end of key stage 4.

The total number of students included in this sample prior to matching declined substantially and the match rate reduced to 57 per cent. School sixth forms are primarily selective institutions, and many will require a good pass in English and maths as an entry requirement. It is therefore not surprising that only a small proportion of students in our data did not have grade 4 English and maths, nor that it was harder to find a match for these students.

Table 4 and 5 show that when we restrict to students that entered a post 16 English or maths GCSE prior to matching, our sample sizes reduce similarly to Table 3. This is expected as most students entering an English or maths GCSE will be those that did not achieve grade 4 in school, so are required to continue study under the English and maths condition of funding policy.

Table 6: Estimates of the average treatment effect on the treated (ATT) derived from our matched samples, and 95 per cent confidence interval

Outcome measure	Estimate of the ATT	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Average point score (APS) across 16-19 qualifications	-1.49	-1.72	-1.27
APS (Disadvantaged students only)	-1.19	-1.60	-0.77
APS (students without grade 4 English and maths only)	-0.94	-1.53	-0.36
English GCSE	0.03	-0.09	0.15
Maths GCSE	0.03	-0.03	0.09

Source: EPI analysis of DfE data in the Office for National Statistics' secure research service
School sixth forms only, unreliable data removed

On our APS measure, a difference of 10 points is roughly equivalent to 1 A level grade (although all 16-19 qualifications are included, not just A levels).

The estimate of the Average Treatment Effect on the Treated (ATT) is negative, but modest. Students in our matched sample that received tuition under the 16-19 Tuition Fund, on average, achieved around 15 per cent of a grade less than similar students who did not.

As discussed in the Methodology chapter, the difficulty in matching means that these estimates do not apply to the overall cohort that received tuition under the 16-19 Tuition Fund. For students in FE or sixth form colleges, it is plausible that the impact was positive, but the data did not enable us to produce these estimates.

The ATT estimate on our APS measure for disadvantaged students and those without grade 4 English and maths were still negative, although smaller in magnitude.

The estimates relating to English and maths GCSE results are measured in GCSE grades. The estimate of 0.03 grades was not statistically significant on either measure. This is not

surprising given the small sample size, but regardless, an estimate of just 3 per cent of one GCSE grade does not reflect a meaningful difference.

We advise caution in the interpretation of these results, which do not allow for any meaningful policy inference to be drawn. In addition to the matching issues discussed, particular limitations of this analysis include:

1. **Selection effects are still likely to be prevalent.** Although we have defined our comparison group and control variables to be as robust to selection effects as possible, we are not able to account for this completely. We have made comparisons to similar students in institutions that did not offer 16-19 tuition, rather than students for which teachers decided tuition was not warranted. However, the students that did receive tuition are likely to be further behind than the average student, even in comparison to those with similar prior attainment, or have other unobservable differences that create barriers to attainment. This is because institutions not opting in are likely to have had a mix of students that they would and would not have put forward for tuition, had they applied for the funding.

Although we consider our choice of counterfactual to be the best available, it is probable that institutions choosing not to opt-in is acting as a selection effect in itself. These institutions may have felt they did not need to provide extra tuition, already had plans in place to deliver tuition (or other support) for students they perceived to be falling behind, or had very few eligible students. A small number of institutions who did not opt in took part in the survey for the implementation and process evaluation, which sheds some light on why they decided not to opt in. Two of the primary reasons were low numbers of eligible students and funding allocations being too low to be worthwhile considering the administrative burden. Supporting this, analysis of the funding allocation data examined 477 institutions that opted in for 2020 to 2021 but chose not to in 2021 to 2022. It found that these institutions had typically received smaller funding allocations. The funding received by these institutions in 2020 to 2021 ranged from less than £150 to greater than £400,000, which was in line with the vast majority of other funding allocations. However, while 51% of all institutions received funding under £5,000 with a median of £4,900, this was the case for 72% of these institutions with a median of just over £2,500.

2. **For many 16-19 students in the 2021 to 2022 academic year, prior attainment related to GCSEs taken in 2020.** As grades in 2020 were inflated, this meant that many students with good grades recorded in English and maths, may not have been at the same standard as in a 'normal' year. Given the lack of an external benchmark, teacher judgment as to which students would benefit from tuition would have been more important in this year than most, meaning selection effects are likely to have been heightened. This is supported by findings from the implementation and process evaluation where some senior leaders echoed

concerns about the validity of teacher assessed grades i.e. questioning whether they were a true reflection of students' level of performance.

Furthermore, while two in three (65%) institution survey respondents agreed that the Tuition Fund eligibility criteria targeted the right students, 17% of respondents disagreed and wanted to see more flexibility to account for reasons that cannot be captured in the eligibility criteria. For example, respondents highlighted students with mental health needs, caring responsibilities, or who were more significantly affected by COVID-19 (e.g. bereavements), do not have a supportive family, or space to study at home, all of which could influence their ability to catch-up after lost learning.

Interviewees described consulting with heads of departments and teachers, especially those in English and maths, about student performance including formative and summative assessments. Some also reported working with the pastoral and welfare team who were sometimes aware of students that asked their pastoral link for extra help. Finally, some also engaged with parents and students themselves to get a sense of their interest. All of these additional processes beyond the eligibility criteria are likely to have introduced unobservable differences.

3. **The nature of the tuition provided was not uniform.** The research datasets available only allow us to identify whether a student was flagged as having received tuition at some point during the academic year. However, from the implementation and process evaluation we know that there was wide variation in the duration and frequency of sessions provided. Some students received one off sessions in the run up to exams, while others received recurring sessions over a sustained period. The implementation and process evaluation case studies provided examples of how the total amount of time per student varied and largely depended on whether tuition was delivered as a drop-in session for students or a more formal programme of support. The available evidence base for small group tuition suggests frequent sessions (three sessions per week) up to an hour over 10 weeks typically show the greatest impact. Based on the implementation and process evaluation, most students received much fewer hours overall.

Some students are just dipping in and out of that support, so they might have just 1 or 2 weeks where they're going for an extra session. Other students will be on a regular weekly programme of support. It's all really dependent on the student and what the teachers have identified as being their need. [...] Our teachers have identified students who would really benefit from an intensive, 5-week block of support, and so students have 2 hourly sessions each week in their subject with MyTutor. – *Senior leader, Academy*

4. Another key area of variation in the surveys and case studies related to the number of students in a tuition group session, with a notable proportion of respondents reporting that this exceeded the guidance of up to five students or seven in

exceptional circumstances. The available evidence base on small group tuition suggests this could have an impact on the benefits of tuition. The surveys and case studies also revealed a wide range of subjects covered as well as mode of delivery (in person, online, or a mix). If we had more precise information about the kind of tuition that was received, we may have been able to identify the settings and scenarios in which tuition was most or least effective.

4. Conclusions and Recommendations

This report has presented the findings from the impact evaluation of the 16-19 Tuition Fund. This final chapter presents summary conclusions based on this analysis and recommendations for consideration in the design, delivery, and evaluation of future interventions.

The impact evaluation found a negative effect of the 16-19 Tuition Fund on educational attainment. However, data limitations meant it was only possible to produce this estimate for a subset of students attending school sixth forms, which are typically more selective than FE and sixth form colleges. This means that the students attending them who received tuition are unlikely to be representative of the broader population that benefitted from the 16-19 Tuition Fund.

The negative estimate was statistically significant and equated to around 15 per cent of an A level grade. However, as discussed, there were still substantial limitations with the remaining data meaning we cannot be confident in results, which do not allow for any meaningful policy inference to be drawn.

The evaluation did find a small positive effect on maths and English GCSE attainment. However, this effect was not statistically significant and was too small to reflect a meaningful difference.

When restricted to disadvantaged students or those that had not achieved grade 4 English and maths, the effect estimate was still very small and negative, equating to 12 and 9 per cent of a GCSE grade respectively.

In addition to the data quality and match rate issues, we anticipate that selection effects were likely to have occurred at two levels. Firstly, those 16-19 institutions who opted in to receive funding are likely to have systematically differed to those who did not in ways that it was not possible to account for in the impact model, and which could have affected educational outcomes. For example, they may have felt that their students did not require extra tuition, or they may have decided to deliver other types of support to help students catch up on learning lost during the pandemic. Secondly, institutions could determine which students received support funded by the 16-19 Tuition Fund. This means that those who were selected to receive tuition may have been different in some (unobservable) ways that could not be accounted for in the matching to a comparison group.

For most 16-19 students in the 2021 to 2022 academic year, prior attainment related to GCSEs taken in 2020, when grades were teacher-assessed. As these grades were considered less reliable than a 'usual' year, it would have made teacher discretion especially important when deciding which students received tuition. This issue was alleviated in part by the inclusion of additional eligibility criteria to extend tuition to disadvantaged students.

Variations in the nature, frequency and length of tuition sessions delivered to students also limited the impact evaluation findings. The assessment was based on whether a student received tuition at some point during the academic year. However, we know from the implementation and process evaluation that some students received one-off sessions in the run up to exams, whilst others received recurring sessions over a sustained period. Furthermore, students may have attended tuition in any subject or multiple subjects. As monitoring data was not collected on the nature of tuition received, it was not possible to control for these variations within the model or to explore the impact of different types of tuition on student attainment.

It is important to note that the impact findings look at the average effect, which means that some students receiving tuition will have improved whilst others will have stayed the same or declined. This aligns with findings from the implementation and process evaluation, which found that around one quarter of students surveyed (23%) said they had achieved better grades as a result of receiving tuition. It also found that other outcomes were more prevalent including improved confidence (47%), study skills (42%), and feeling more prepared for exams (39%). Institutions tended to be more optimistic about impacts, with 88% of those surveyed agreeing that the Tuition Fund had improved students' educational attainment and 86% agreeing that the fund had improved student confidence.

Recommendations

This section details some recommendations for consideration by DfE in the design of future interventions, where the intention is to deliver a robust impact evaluation. The requirements to deliver such an evaluation will always need to be balanced against ensuring that the priority needs of students are being met and that interventions do not result in onerous administrative burdens. For these reasons, most of the recommendations would not have been appropriate for the 16-19 Tuition Fund in the context of it being a COVID-19 response. However, they could be considered for future tuition-based interventions aimed at improving educational attainment within 16-19 settings, particularly where there is limited existing evidence on effectiveness and impact.

Recommendation 1: Future evaluations should collect basic monitoring information on the nature, type, and frequency of tuition delivered to students.

It is likely that the overall assessment of impact in the analysis presented in this report has been diluted by the wide range of tuition approaches. The lack of comprehensive monitoring requirements for the fund was understandable in the context of it being a COVID-19 response. The priority was getting additional support in place for students who needed it most, recognising the pressures institutions were under. Furthermore, the DfE sought to deliberately minimise burden on institutions in this respect. However, it would be helpful to any future impact evaluation if more detailed information could be captured from institutions on the nature and format of tuition delivered (e.g. by length, frequency,

duration, and mode). This would enable the inclusion of additional variable and/or subgroup analysis to be undertaken to inform a more detailed assessment of what works.

Recommendation 2: Provide more guidelines on minimum expectations for delivery, particularly in the absence of monitoring data.

A key challenge for the impact evaluation was a lack of consistency across institutions in the approach taken to delivering tuition through the fund. There was wide variation between institutions on the duration, frequency and timing of tuition delivered, as well as the nature of tuition (e.g. by subject, group size). This was compounded by a lack of monitoring data, which meant that it was not possible to explore differences in impact by different types and intensities of tuition delivered. This was a key limitation as the evidence base shows differences in impact between those students who received fewer (including one-off) sessions and those who received more intensive tuition over an extended period. For example, the available evidence base for small group tuition suggests frequent sessions (three sessions per week) up to an hour over 10 weeks typically show the greatest impact. Based on the implementation and process evaluation, most students received much fewer hours overall.

In future, it would be helpful to specify minimum expectations for delivery to ensure that all students included in the impact analysis received a baseline level of the intervention. Given a focus on offering institutions flexibility, it would be inappropriate to request one particular model of delivery, unless a future evaluation is designed to specifically test this. However, setting out a small number of minimum expectations for delivery and examples could guide institutions towards a more common, evidence-supported model.

Recommendation 3: Align eligibility criteria for attracting funding and receiving tuition more closely with the scope of delivery and intended outcomes.

Teaching staff in funded institutions were given discretion to determine which students received tuition and this did not have to align with the eligibility criteria for attracting the funding. Moreover, the eligibility criteria for the funding were in part based on prior attainment in English and maths whereas delivery covered a wider range of subjects. These issues created challenges for the impact evaluation, particularly in relation to establishing an appropriate comparison group of similar students who did not receive tuition.

In a year where prior attainment was determined by teacher-assessed grades, it was crucial that institutions were given the flexibility to determine who would benefit most from the tuition and the most appropriate subjects for this. However, for future programmes where an impact evaluation is planned, there should ideally be greater alignment between the eligibility criteria, specification for delivery, and outcome measures. In line with one of the recommendations in the implementation and process evaluation, institutions could still have a degree of flexibility to identify those students who they think would benefit most.

Recommendation 4: Consider testing the effectiveness and impact of different tuition models within a sample of institutions.

The tuition fund was open to all 16-19 institutions who receive annual funding allocations from the ESFA. This was appropriate in the context of it being a COVID-19 response where it would have been unethical to withhold funding from some institutions and learners who could benefit. However, it did create challenges in constructing a suitable comparison group of learners who did not receive tuition. For example, those who did not opt-in may have considered that their learners did not need additional tuition.

Additional research and evaluation are critical to improving the limited evidence base on small group tuition in 16-19 settings, especially outside the context of the COVID-19 pandemic. Trialling future interventions within a sample of institutions before rolling out nationally would create opportunities for constructing more robust comparison groups and generating stronger evidence of effectiveness and impact. This approach would also enable adaptations to be made in advance of full roll-out to help maximise impact.

Recommendation 5: Consider randomisation in future impact evaluation.

The most robust approach to determining the impact of public policy interventions is to randomise individuals or institutions into treatment and comparison groups and compare their outcomes. This controls for selection effects and other (unobservable) factors that may influence the outcomes of interest. The context of the pandemic meant that randomisation would not have been appropriate for the 16-19 Tuition Fund. However, it could be an option to consider in future to further develop the limited evidence base on the effectiveness and impact of small group tuition within 16-19 settings.

Annex A: Balance statistics for the matched sample¹³ Standardised mean difference and variance ratio by characteristics used in match¹⁴¹⁵

Table 7: Full model balance statistics – Standardised mean difference and variance ratio post-match by treatment group (received tuition or not), and characteristics used in match

Students with at least one 16-19 qualification awarded in summer 2022 results season	Means Treated	Means Control	Std. Mean Diff.	Var. Ratio
Average English and maths prior attainment (rounded)	6.41	6.41	0.00	1.00
Achieved grade 4 English and maths	0.90	0.90	0.00	
Age at start of academic year	16.92	16.92	0.00	1.00
Identified Special Educational Needs at the end of key stage 4	0.09	0.09	-0.02	
Disadvantaged at the end of key stage 4	0.29	0.29	0.00	
Bottom 27% of IMD	0.37	0.39	-0.03	
Academy converter	0.55	0.54	0.02	
Academy sponsor led	0.18	0.19	-0.02	
Community school	0.07	0.07	-0.01	
Foundation school	0.04	0.04	0.02	
Free school	0.07	0.07	0.00	
Other school	SUPP	SUPP	SUPP	
Studio school	SUPP	SUPP	SUPP	
Voluntary aided school	0.08	0.08	-0.01	
Voluntary controlled school	0.00	0.00	-0.05	
Female	0.54	0.54	0.00	
Male	0.46	0.46	0.00	
White British	0.51	0.47	0.08	
Any other Asian Background	0.03	0.04	-0.02	
Any other Black background	0.01	0.01	-0.01	
Any other ethnic group	0.03	0.03	-0.01	
Any other mixed background	0.03	0.03	-0.01	
Any other White background	0.06	0.07	-0.04	
Bangladeshi	0.05	0.05	0.00	
Black African	0.09	0.09	-0.01	
Black Caribbean	0.02	0.02	0.00	

¹³ Matched sample with caliper, and forced exact match on selected variables.

¹⁴ Characteristic groups have been suppressed if any columns contain low counts. Secondary suppression has been applied where required. Where data has been suppressed, the value “SUPP” has been put in place of the data.

¹⁵ Variance ratios are only defined for continuous variables. Categorical variables have this column left blank

Students with at least one 16-19 qualification awarded in summer 2022 results season	Means Treated	Means Control	Std. Mean Diff.	Var. Ratio
Chinese	0.01	0.01	-0.02	
Gypsy/Roma	0.00	0.00	0.00	
Indian	0.04	0.05	-0.02	
Information not yet obtained	0.01	0.01	-0.02	
Pakistani	0.06	0.07	-0.01	
Refused	SUPP	SUPP	SUPP	SUPP
Traveller of Irish Heritage	SUPP	SUPP	SUPP	SUPP
White - Irish	0.00	0.01	-0.02	
White and Asian	0.01	0.02	-0.03	
White and Black African	0.01	0.01	-0.02	
White and Black Caribbean	0.01	0.01	-0.01	
English as first language	0.73	0.71	0.04	
Size of qualifications	2.77	2.79	-0.02	1.02
Proportion of qualifications academic	0.73	0.72	0.02	0.99
London	0.27	0.28	-0.02	
East Midlands	0.11	0.11	0.00	
East of England	0.10	0.11	-0.02	
North East	0.03	0.03	-0.01	
North West	0.09	0.07	0.07	
South East	0.13	0.14	-0.02	
South West	0.07	0.06	0.02	
West Midlands	0.12	0.11	0.02	
Yorkshire and The Humber	0.07	0.08	-0.03	
Proportion disadvantage in same institution	0.21	0.20	0.01	0.93
Average prior attainment in same institution	6.55	6.56	-0.01	0.91
Size of year group in same institution	132.36	129.99	0.02	1.47



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