Education
Endowment
Foundation

Tutor Trust Secondary

Evaluation report and Executive summary

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Independent evaluators:

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The Education Endowment Foundation (EEF)

The Education Endowment Foundation (EEF) is an independent grant-making charity dedicated to breaking the link between family income and educational achievement, ensuring that children from all backgrounds can fulfil their potential and make the most of their talents.

The EEF aims to raise the attainment of children facing disadvantage by:

- identifying promising educational innovations that address the needs of disadvantaged children in primary and secondary schools in England
- evaluating these innovations to extend and secure the evidence on what works and can be made to work at scale
- encouraging schools, government, charities, and others to apply evidence and adopt innovations found to be effective.

The EEF was established in 2011 by the Sutton Trust, as lead charity in partnership with Impetus Trust (now part of Impetus—The Private Equity Foundation) and received a founding £125m grant from the Department for Education.

Together, the EEF and Sutton Trust are the government-designated What Works Centre for improving education outcomes for school-aged children.

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About the evaluator

The project was independently evaluated by a team from the National Foundation for Educational Research. The lead evaluator was Helen Aston.

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Contents

Executive summary

The project

The Tutor Trust is a Manchester-based charity that aims to provide affordable small group and one-to-one tuition, predominantly to disadvantaged pupils in schools in challenging communities. The tutors are university students and recent graduates, enabling tuition to be provided at a competitive rate on a not-for-profit basis.

This three-year evaluation assessed the impact of the Tutor Trust on the English and mathematics GCSE results of 1,029 Year 11 pupils. Tuition took place in the academic years 2011–2012 to 2013–2014. Students received different numbers of hours of tuition, and some received tuition in multiple academic years between Year 9 and Year 11. The evaluation also explored schools' perceptions of the need for affordable tuition and their assessment of the quality of the service provided.

Qualitative fieldwork took place in eight schools and was based on interviews with senior leaders, classroom teachers, tutors and pupils.

The project was funded by the Education Endowment Foundation (EEF), Manchester City Council and payments from participating schools. A separate evaluation of the impact of the tuition on the English and mathematics attainment of Year 6 and Year 7 pupils is available on the EEF website.

Key conclusions
1. Due to the limitations of the study design and the absence of a high-quality comparison group, this evaluation has not provided a secure estimate of the impact of the project on academic outcomes.
2. Participating pupils achieved slightly higher mathematics GCSE scores than pupils in the comparison group, and lower English GCSE scores than pupils in the comparison group. However, it is not possible to attribute either change to the tuition provided.
3. Schools involved in the qualitative interviews were positive about the tuition, keen to work with the Tutor Trust again, and largely confident that the tuition was beneficial for their pupils.
4. Teachers believed that there was a need for more affordable high-quality tuition, and that the Tutor Trust helped meet this need.
5. It is recommended that the Tutor Trust continues to monitor tutor performance and identifies mechanisms to increase the consistency of tuition. Schools should be active participants in this process and classroom teachers need to be involved in the planning and management of tuition to ensure that in all cases tuition complements work in the classroom.

Security rating

Security rating awarded as part of the EEF peer review process

Overall, the findings from this evaluation have very low security. The evaluation was set up as an effectiveness trial, meaning that it aimed to test the approach under realistic conditions in a large number of schools. Impact data were obtained from 24 schools for mathematics and 19 schools for English. However, limitations of the evaluation design and observable differences between the students in the intervention and comparison groups meant that it was not possible to establish a high-quality comparison group against which to assess the impact of the tuition provided. Consequently, the findings are deemed too insecure to assess the impact of the programme on pupil attainment.

The evaluation used a quasi-experimental design, which aimed to enable a comparison to be made between participating pupils and other pupils who were similar in terms of their demographic and socio-economic characteristics. However, it was not possible to control for a number of potentially influential variables, which the evaluators had planned to do. These variables were pupil-level special educational needs (SEN); English as an additional language (EAL); ethnicity; and looked after children (LAC) status. They were excluded from the final analysis due to a change in the level of

consent required to obtain this data, which occurred after the data collection phase of the trial had been completed.

Security was further weakened by differences in the prior attainment of pupils in these schools and those in comparison schools. Although some differences were accounted for through statistical analysis, the presence of such marked differences indicated that the comparison group was unlikely to be of a high quality. In addition, it was not possible to identify with confidence which pupils in the comparison group would have received tuition.

Finally, it was not possible to take into account unobservable factors between pupils that received tutoring and those who did not, such as their motivation or the quality of the leadership in their schools. To overcome this weakness, an alternative design, such as a randomised controlled trial, would have been necessary.

Results

- In general, teachers in participating schools were positive about the tuition provided and a large majority of the senior leaders interviewed were keen to work with the Tutor Trust again.
- Tuition was perceived to be most effective when tutors possessed strong pedagogical skills and subject knowledge; engaged and interacted successfully with pupils; and targeted sessions appropriately.
- On average, pupils receiving mathematics tuition achieved slightly higher mathematics GCSE scores than pupils in the comparison group. On average, pupils receiving Tutor Trust English tutoring achieved lower English GCSE scores than pupils in the comparison group. However, it is not possible to attribute these differences to the tuition provided. Specifically, the absence of a high-quality comparison group made it impossible to rule out the possibility that the differences observed were due to differences between pupils who received tuition and those who did not. The quality of the comparison group was further compromised by being unable to use pupil-level information about SEN, EAL or LAC status in the evaluation.

How much does it cost?

The Tutor Trust charged £18 per hour of tuition in 2011–2012, irrespective of the size of the tutoring group. In 2012–2013, 1:1 tuition was charged at £18 per hour; 1:2 at £20 per hour, and 1:3 at £26 per hour. Based on groups of three pupils receiving 25 tuition sessions, the total cost is estimated at approximately £217 per pupil.

Group	Effect size	Estimated months' progress	Security rating	Cost
All pupils (mathematics)	+0.05	+1 months		**£££**
All pupils (English)	−0.16	−2 months		**£££**
FSM pupils (mathematics)	+0.09	+1 months	na	na
FSM pupils (English)	−0.03	−1 months	na	na

Introduction

Intervention

The Tutor Trust is a charity based in Manchester that aims to provide affordable small group and one-to-one tuition to schools. It was established in 2011 following a £180,000 grant from the Education Endowment Foundation. The Trust recruits university students and recent graduates, which enables it to provide tuition at a competitive rate. It predominantly aims to support schools in challenging communities and pupils who are looked-after or eligible for free school meals.

The Tutor Trust rigorously screens tutor applicants to ensure that they have the appropriate mix of academic skills, teaching ability, and interpersonal skills. It accepts around 30% of applicants. It also delivers structured training to equip tutors with the ability to: decide on a long-term tuition plan for pupils; assess pupils' grades/levels; plan a tuition lesson tailored to the needs of the pupil (this includes using the seven-point tuition plan structure); manage pupil behaviour; give praise and encouragement effectively; identify a pupil's preferred learning style(s) and alter tuition accordingly; and teach English and mathematics appropriately. The Tutor Trust also ensures that tutors have valid Disclosure and Barring Service checks and organises the tuition sessions.

In this project, Tutor Trust tutors were paid to deliver tuition to pupils in Years 9, 10, and 11. All tutoring took place on the premises of the participating schools. Most schools chose to use small group tuition, rather than one-to-one tuition. The tuition was designed to meet the needs of individual schools and pupils—hence the format and content of sessions varied (though tutors were provided with a model on which to broadly base tuition sessions). The schools chose which pupils would receive tuition; there were no prescribed selection criteria.

Tuition in Phase 1 took place in the Academic Year 2011–2012; in Phase 2 in the Academic Year 2012–2013; and in Phase 3 during the Academic Year 2013–2014. According to data provided by participating schools, in Phase 1, 74 pupils received tutoring in English, and 242 received tuition in mathematics, one pupil received tutoring in both. In Phase 2, 275 pupils received tutoring in English, and 323 in mathematics, with 20 of these pupils receiving tutoring in both subjects.[1] In Phase 3, 199 pupils received tutoring in English, 263 in mathematics and 140 received tutoring in both subjects.

Background evidence

The rationale for establishing the tuition programme was based on the effectiveness of private tuition according to previous academic studies. The evidence synthesised within the Sutton Trust—EEF Toolkit[2] suggests that one-to-one tuition, where a student receives intensive tuition, generates five months of additional progress on average, and that small group tuition generates four months of additional progress on average. The evidence base related specifically to tuition delivered by university students is weaker. However, a small number of US studies have found that programmes led by college students can lead to improvements in student outcomes (Elbaum *et al.*, 2000), suggesting that this is an area worthy of further evaluation in the UK.

The EEF commissioned this independent evaluation to establish whether the Tutor Trust is achieving its aims, and the extent to which the model is perceived to be sustainable, in relation to demand and delivery of low-cost tutoring in schools in Manchester. The evaluation was set up as an efficacy trial, meaning that it aimed to test the approach under ideal conditions in a moderate number of schools. The Trust has expanded since its inception, and in the four years it has been operating has delivered

[1] Note that not all of the pupils who received tuition were included in the analysis. This is because when the data provided by the schools was matched to NPD data some pupils' data could not be matched. This means that the numbers of pupils who received tuition does not match the numbers of pupils included in the analysis.
[2] Available: **http://educationendowmentfoundation.org.uk/toolkit/one-to-one-tuition/**

over 40,000 hours of tuition to more than 8,000 pupils across over 100 primary and secondary schools. It has 500 tutors, who work in all ten Greater Manchester local authorities.

Our evaluation focuses specifically on tuition of GCSE pupils. An efficacy study looking at the effect of the Tutor Trust's tutoring on Year 6 and Year 7 pupils' English and mathematics results is available separately on the EEF website.

Evaluation objectives

The central objective of the study was to address the question:

- Do young people receiving tuition in English and mathematics obtain higher GCSE results than might otherwise be expected?

The process evaluation focused on the model and its implementation, including the following:

- Is the service fulfilling an identified need (i.e. lack of high-quality affordable tuition)?
- Why do some schools decide not to take up the offer of tuition?
- Are the tutors 'high quality'?
- Are the tutors delivering the tuition sessions in line with schools' expectations?
- Is the Tutor Trust meeting its recruitment targets?

Project team

NFER directed and led the process and impact evaluations. Helen Aston was Project Director. Emily Buchanan led the process evaluation with the support of Matthew Walker. Jo Morrison led the impact evaluation with the support of Rose Cook. Nick Bent, Director of the Tutor Trust was responsible for gaining schools' consent to participate in the evaluation and collecting specified pupil data.

Ethical review

The evaluation was delivered in accordance with NFER's Code of Practice. The Tutor Trust secured schools' consent to participate in the evaluation (see Appendix 1). Additionally, NFER sought and secured consent from all interview participants to collect and use their anonymised data (see Appendix 2). Given the age of the pupils, it was deemed appropriate for head teachers to act in loco parentis and to give their consent for pupils' involvement.

Methodology

Impact evaluation design

The evaluation used a quasi-experimental design to evaluate the impact of tutoring on test scores. Given the strong existing evidence base related to tuition (particularly one-to-one tuition) this design was judged to be appropriate. In essence, the evaluation was designed to enable the evaluation team to check whether the effects were broadly similar to those found in previous studies. However, as there was no randomisation at either the school or pupil level, there are limitations (discussed further below) to the extent that we can interpret the measured differences in test scores as the causal impact of tutoring.

The Tutor Trust recruited schools to the evaluation. The Trust was particularly keen to engage schools in deprived communities in Greater Manchester,[3] and contacted schools directly to publicise the tuition and to encourage schools to buy into the service. The intervention group was therefore self-selecting.

The NFER team designed pupil data forms which were administered to schools by the Tutor Trust (an example is provided in Appendix 3). These forms asked schools to provide information on the tuition in their school, including pupil names and background characteristics, tuition subject, number of tuition sessions, and whether or not tutees missed lessons for their tuition. The analysis was based on the information provided in these forms, matched with additional pupil-level data from the National Pupil Database.

The comparison group was formed of pupils in the same year group from schools within Manchester's statistical neighbours.[4] To enable comparison with similar pupils, we controlled for available background factors in a multilevel regression model.[5] We controlled for prior attainment (KS3 Teacher Assessment level in English or mathematics); gender; and free school meal (FSM) eligibility. The analysis also controlled for school-level factors: school type; percentage of pupils in the school who are eligible for FSM; percentage of pupils gaining 5+ GCSEs at grade A*–C; size of the Key Stage 4 cohort; percentage of pupils in the school with SEN; number of full-time equivalent teachers; and schools' average of the pupils' total GCSE point score. Note that in a deviation from the original planned analysis, we were unable to control for a number of potentially influential variables. These comprised: pupil-level special educational needs (SEN); English as an additional language (EAL); ethnicity; and looked after children (LAC) status. These variables were excluded from the final analysis due to a change in the level of consent required by the NPD in order to release this data, after we had completed our data collection in schools.

Unlike in a randomised controlled trial, we cannot be confident that unobserved background characteristics that are a factor in schools' decisions to nominate pupils for tutoring (such as a pupil being particularly motivated to learn), or the unobserved characteristics of the schools the pupils attend, are balanced between the intervention and the comparison group at baseline. This means that our estimates of the impact have to be interpreted carefully: any differences in outcome could also be the result of underlying differences that were not taken into account in selecting a comparison group because we had not measured those characteristics.

[3] The Tutor Trust did not define 'deprived communities', meaning that there were no strict inclusion criteria.

[4] 'Statistical neighbours' are local authorities which have similar characteristics. Manchester's statistical neighbours are: Nottingham, Greenwich, Liverpool, Barking and Dagenham, Birmingham, Salford, Middlesbrough, Kingston upon Hull, Southampton, and Newcastle upon Tyne.

[5] To explore if tuition was associated with improved GCSE results, the study assumed that GCSE results were related to a set of variables, including tuition, and estimated the relationship between tuition and GCSE scores.

Eligibility

The Tutor Trust sought to recruit secondary schools in Manchester to receive the tutoring. Any secondary school in Manchester was eligible to receive tuition and the sample was self-selecting at the school level. A core part of the model was that schools had freedom to select whichever pupils they wanted to receive tuition. There were therefore no pupil-level eligibility criteria. We asked schools to identify why they had selected individual pupils to receive tutoring from a list of options (see 'Participants' section in Results).

The Tutor Trust secured schools' consent to participate in the evaluation (see Appendix 1). Additionally, NFER sought and secured consent from all interview participants to collect and use their anonymised data (see Appendix 2). Given the age of the pupils, it was deemed appropriate for head teachers to act in loco parentis and to give their consent for pupils' involvement in interviews.

Intervention

University pupils recruited and trained by the Tutor Trust delivered tuition to pupils in Years 9, 10, and 11. Our evaluation was concerned primarily with tuition delivered to GCSE students; Year 9 tuition is outside the scope of this study.

All of the tutors involved in the programme had to pass a two-stage recruitment process administered by the Tutor Trust. The process was designed to ensure that tutors had the appropriate mix of academic skills, teaching ability and interpersonal skills. The first round of recruitment consisted of a written, online application form modelled on the Teach First application form and designed in consultation with Teach First and Pricewaterhouse Coopers (PwC). There were also minimum qualification requirements: tutors had to have at least an 'A' at GCSE (or equivalent or higher) in the subject(s) they wished to tutor in. Additionally, tutors were asked to detail their previous experience working with children, to provide a personal statement explaining their motivation for working with the Tutor Trust, and to answer competency-based questions looking at humility, resilience, planning and organisation, and creativity. The second round of recruitment involved a short face-to-face interview with Tutor Trust staff to probe applicants' motives, experience, dependability and communication and interpersonal skills.

Tutors received a minimum of two-and-a-half days of structured and unpaid training before starting tutoring. The training sessions comprised:

- A three-hour evening session on safeguarding, professionalism, why tuition matters and working with the Tutor Trust. The session was led by Tutor Trust staff.
- A full-day session on lesson planning, learning styles, behaviour management, varying lessons, differentiation, creating a scheme of work for a tuition assignment and progress tracking across an assignment with the pupil. An educational consultant with extensive teaching experience led this session.
- A full-day session on teaching the relevant subject to pupils, delivered by educational consultants who were commonly current or former teachers or senior leaders. The focus was on subject-specific tasks; curriculum understanding; common mistakes and misconceptions pupils may hold; teaching tools; assessing the level that pupils are working at; and selecting suitable tuition material.

Tutors were also given access to additional CPD sessions; a range of Tutor Trust online resources; regular opportunities to interact informally and share problems and solutions with each other; and support from Tutor Trust staff as needed. All tutors were introduced to a seven-point tuition plan to structure tuition sessions (introduction, remember, model, try, apply, secure, reflect) during their training, but encouraged to deviate from it as appropriate. Hence, the nature and content of tuition sessions varied with the needs of individual schools and pupils.

Table 1 below sets out the periods during which tuition was provided. All tutoring took place on the premises of the participating schools. Schools chose to purchase small group or one-to-one tuition. The tuition was designed to meet the needs of individual schools and pupils, rather than following a set format. Pupils typically received tuition on a weekly basis and tuition sessions lasted approximately one hour.

Table 1: Tuition delivery periods

Activity	Delivery periods
Phase 1 tuition	February to June 2012 (Academic Year 2011-12)
Phase 2 tuition	September 2012 to July 2013 (Academic Year 2012-13)
Phase 3 tuition	September 2013 to July 2014 (Academic Year 2013–2014)

Outcomes

We selected English and mathematics GCSE results as the outcome measures for the study because the tuition is intended to aid GCSE performance in these subjects. GCSE data for participating pupils and other pupils, from which a comparison group could be selected, is also available on the National Pupil Database (NPD).

Sample size

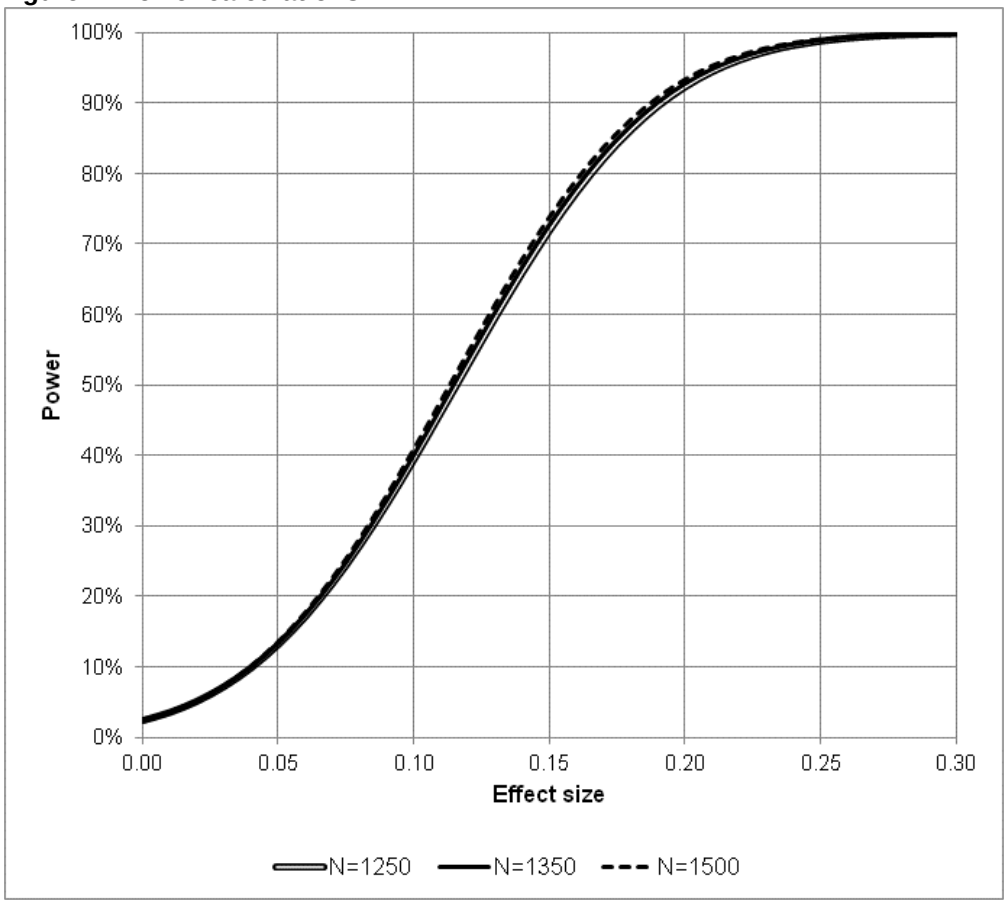
We calculated the power of the proposed statistical analysis at the outset using *estimated* pupil numbers. This is because it was not possible to accurately predict the actual numbers of pupils who would be receiving Tutor Trust tuition in subsequent academic years. As the evaluation has been rolled out incrementally for three years/phases, our calculations are for the overall evaluation i.e. using estimated sample size of year 11 pupils for the full three years. Using an average of 25, 27, and 30 GCSE-taking pupils per school, in 50 schools,[6] and assuming a comparison group of an equivalent size, an estimated intra-class correlation of 0.1 and a correlation between prior attainment (KS3) and outcome (GCSE) measures of 0.6, the power of the analysis to detect an effect size of 0.2 at the end of the study was greater than 90% (see Figure 1 below).

Taking into account the overlap in schools between the three phases, we have data from 31 schools. However, following matching to the NPD, data from 781 pupils and 24 schools remained in the dataset for mathematics. The English analysis included data from 409 pupils in 19 schools. The achieved sample size and power are therefore lower than planned.

Since tutoring is a pupil-level intervention, and not a whole-school intervention, it is not straight-forward to calculate the minimum detectable effect size (MDES) at 80%. The model contained comparison pupils both from Tutor Trust schools and non-Tutor Trust schools, meaning that the intervention varied at both the pupil and school level. We calculated the MDES at the point of analysing the data as if the intervention were a whole school intervention, giving a conservative estimate. The minimum detectable effect size was 0.45.

[6] The initial intention was for the Tutor Trust to deliver tutoring in 50 schools in the third year of this study.

Figure 1: Power calculations



Analysis

We carried out multilevel modelling, a development of a common statistical technique known as 'regression analysis'. This looks at the relationship between the 'dependent variable'—GCSE outcome—and a number of 'independent variables' including, in particular, a variable which indicated whether or not a pupil was in a school involved with Tutor Trust and was nominated for tutoring. Multilevel modelling is one of a number of techniques that can be used to take account of the clustering of the data—i.e. individual pupils being grouped within local authorities and schools—to produce accurate estimates of the differences between pupils, schools, and local authorities.

Multilevel modelling allowed us to identify any differences in performance between Tutor Trust pupils and the comparison pupils (similar pupils in similar schools) in their GCSE mathematics and English. The analysis identified the difference in GCSE points, whilst controlling for the influence of pupil characteristics known to affect GCSE performance that were available on the NPD and available school-level characteristics.

We controlled for prior attainment (KS3 Teacher Assessment level in English or mathematics); gender; and free school meal (FSM) eligibility. The analysis also controlled for school-level factors: school type; percentage of pupils in the school who are eligible for FSM; percentage of pupils gaining 5+ GCSEs at grade A*–C; size of the Key Stage 4 cohort; percentage of pupils in the school with SEN; number of full-time equivalent teachers; and the school's average of the pupils' total GCSE point score. Note that we were unable to control a number of potentially influential variables due to the sensitivity of the data. These were pupil-level special educational needs (SEN), English as an additional language (EAL), ethnicity, and looked after children (LAC) status.

It is important to note that the analysis only accounted for the characteristics of pupils that were captured in the data, and so it is possible that any differences identified between participating pupils and other similar pupils were caused by other unobserved factors.

Our analysis was done on an 'intention to treat' basis.[7]

In line with EEF guidance, the effectiveness of tutoring for pupils who are eligible for FSM was assessed using subgroup analysis.

Process evaluation methodology

The process evaluation focused on Year 11 tuition. We collected qualitative data from eight secondary schools that received tuition over the three years/phases of the evaluation. Three schools were revisited over the three years/phases of the evaluation to explore changes over time. All of the case-study schools were serving challenging communities in the Greater Manchester area. We selected schools that had received the most hours of tuition (based on data provided by the Tutor Trust) as we felt that they would be better placed to provide rich data on the implementation of the tutoring and its perceived impact than those schools which had only received a small volume of tuition. We also sought to include schools with a range of different characteristics, including pupil gender, type of school, and local catchment. In Phase 3, we avoided schools who were participating in the separate evaluation of the Tutor Trust transition programme. NFER researchers collected all of the data. The Tutor Trust was not involved in the selection process and was not told which schools participated. Interviewees were selected in discussion with the schools. Schools were asked to identify pupils for interview who exhibited a broad range of characteristics and experiences (as relevant to each school).

Interviews were carried out with senior school leaders; English and mathematics teachers, pupils who had received tutoring, and tutors. The interviews were carried out in the summer term of each of the three phases of the evaluation (2012, 2013, and 2014).[8] The interviews (largely carried out face-to-face) allowed us to explore all aspects of the tuition in depth, and to gain a school- and pupil-level perception of the tutoring and its effectiveness.

All of the case-study schools were offering tuition to Year 11 pupils in both English and mathematics. A full breakdown of the number of schools and interviewees involved in each phase of the evaluation is provided in the Table 2.

[7] This means that the analysis is based on the initial intentions to provide tuition, rather than whether or not pupils actually received tuition. So, if a pupil was intended to receive tuition, but for some reason did not, they would still be included in our analysis.

[8] We are able to comment on three years of impact data in this Phase 2 report as the tuition had taken place by the time of reporting. We will not get access to the impact data for Phase 3 until spring 2015. This will be included in the Phase 3 report.

Table 2: Breakdown of interviewees in the process evaluation

	Phase 1 (2012)	Phase 2 (2013)	Phase 3 (2014)	Total
Number of schools	4	4 (2 visited in Phase 1)	3 (1 visited in Phase 2)	**11** separate interactions (8 different schools)
Number of interviews with senior school leaders	4	4	3	**11**
Number of interviews with English/mathematics teachers	4	3	2	**9**
Number of interviews with pupils	20	5	3 (1 with a Year 10 pupil)	**28**
Number of interviews with tutors	4	4	5	**13**

The interviews with senior managers and classroom teachers covered the following topics:

- contextual data on the school and its intake
- how the tuition was implemented in school (e.g. number, frequency, duration, and length of sessions, reasons for offering tuition and how pupils were identified, tutor–pupil ratios)
- whether tuition took place as originally planned
- satisfaction with the quality of tutors and tuition
- satisfaction with the service provided by the Tutor Trust
- suggested improvements
- impacts on pupils
- whether the tuition would be beneficial in other schools and other areas.

Interviews with pupils covered:

- their experience of tutoring (e.g. whether they enjoyed it, what they thought of the tutors and the sessions)
- whether the tuition was beneficial or not (and the reasons behind their answers)
- if the tuition could be improved.

Interviews with tutors addressed:

- motivations for becoming a tutor
- the training and support received from the Tutor Trust
- whether they felt any improvements could be made to the training and support
- their experiences of tutoring
- impact on their tutees.

Subject to the permission of participants, interviews were recorded and interviewers took handwritten notes. Interviews were summarised for each question (including verbatim quotes). The data was analysed using thematic codes in relation to each question/section of the interview schedule. The qualitative fieldwork was relatively small in scale and the sample size was insufficient to analyse data by type of tuition delivered or received, which was not an aim of the evaluation.

We also collected data from schools that had declined the offer of working with the Tutor Trust. We collected responses via email and telephone from four schools in 2012, two schools in 2013, and four schools in 2014. The responses explored, what, if anything, would have made the Tutor Trust's offer more attractive to these schools.

Costs

The research team did not collect cost information; rather the tuition was delivered to schools using a fixed-price model. The Tutor Trust reported that it charged £18 per hour of tuition in Phase 1, irrespective of the size of the tutoring group. In Phases 2 and 3, the tuition rates changed according to the number of pupils in a tutoring session: one-to-one tuition was charged at £18 per hour; one-to-two at £20 per hour, and one-to-three at £26 per hour. Based on groups of three pupils receiving 25 tuition sessions, the total cost of the intervention is estimated as approximately £217 per pupil.

Impact evaluation

Timeline

In Phase 1, pupils received tutoring between February and June during the Academic Year 2011–2012. In Phase 2, tutoring took place between September 2012 and July 2013. In Phase 3, tutoring was delivered between September 2013 and July 2014. The Tutor Trust recruited schools in the run up to, and during, each of the Academic Years during which they delivered tuition. The evaluation of the programme ran from February 2012 to April 2015.

Participants

The Tutor Trust recruited schools through: directly approaching schools via letter, email, and telephone; word-of-mouth recommendations; repeat customers; and through Tutor Trust promotion at local-authority-wide events. The reasons given by schools for nominating the Year 11 pupils to receive mathematics and English tuition are set out in Tables 8 and 9 below.[9]

In Phase 1, pupils received 1,404 mathematics and 482 English tuition sessions delivered by Tutor Trust tutors to groups of two to three pupils across the participating schools. The number of mathematics and English tuition sessions delivered per pupil ranged from one to 13 and one to ten respectively. On average, each mathematics tutee received 6.1 hours of tuition and each English tutee received 6.2 hours.

In Phase 2, 4,159 mathematics and 1,817 English tuition sessions were delivered by Tutor Trust tutors to groups of two to three pupils across the participating schools. The number of mathematics and English tuition sessions delivered per pupil ranged from one to 30 and one to 15 respectively. On average, each mathematics tutee received 12.8 hours of tuition and each English tutee received 7.6 hours.

In Phase 3, pupils received 2,478 mathematics and 3,056 English tuition sessions. The number of mathematics and English tuition sessions delivered per pupil ranged from 1 to 28 and 1 to 58 respectively. On average, each mathematics tutee received 11.7 hours tuition and each English tutee received 12.7 hours. See Appendix 4 for further information.

On average across the three phases, more pupils received mathematics than English tuition.

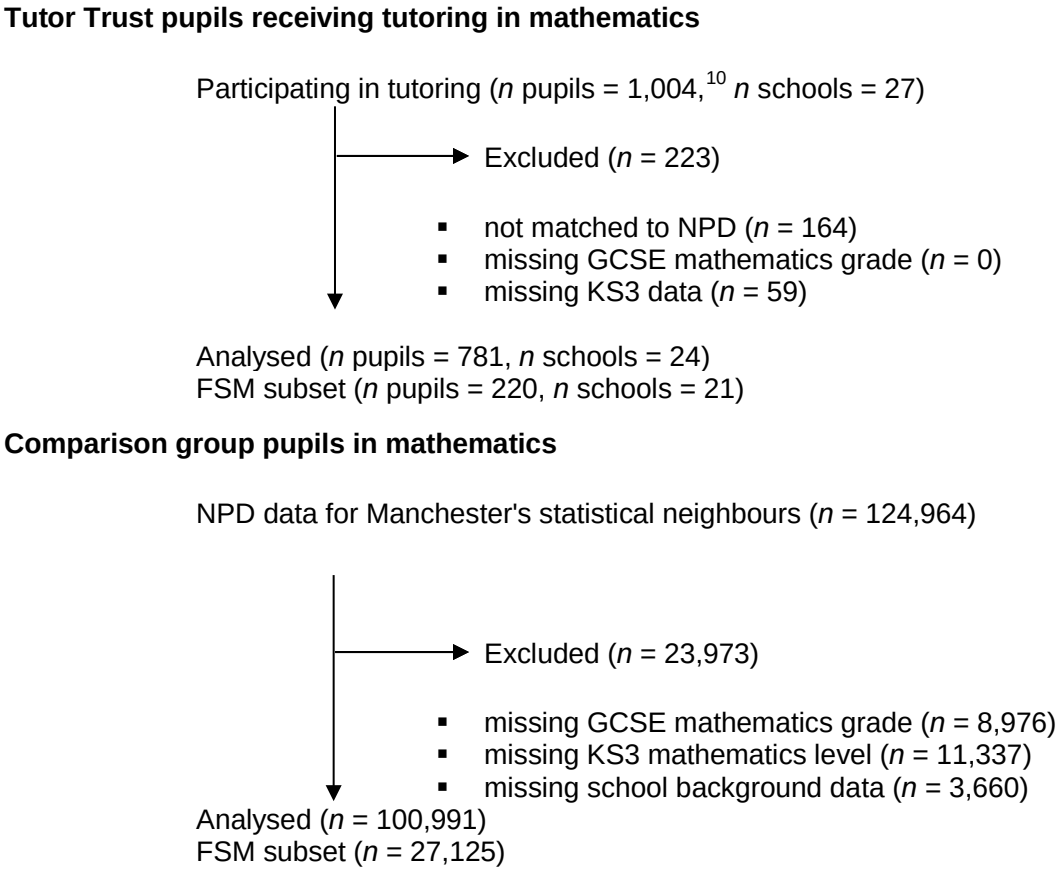
Participant flow

Figures 2 and 3 give the numbers of Tutor Trust and comparison pupils included in the analysis of pupils receiving mathematics and English tutoring, respectively.

There was no randomisation.

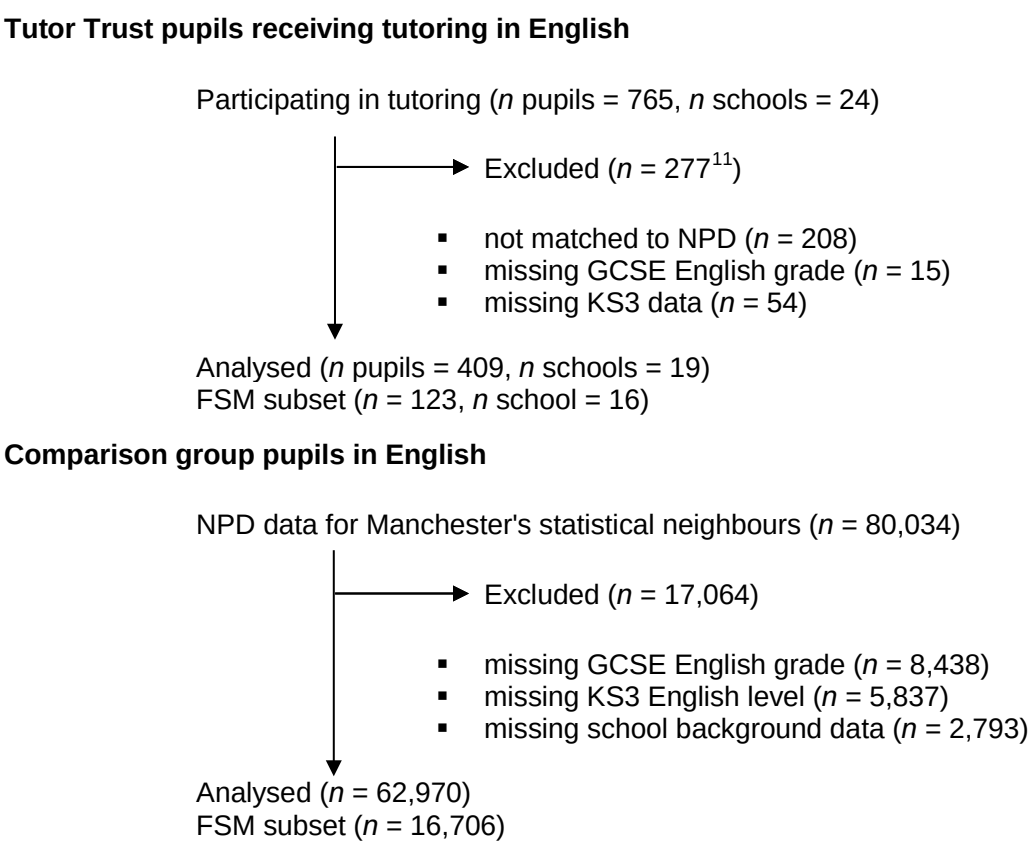
[9] English pupils and non-Year 11 mathematics tutees were not included in the analysis in Phase 1, so we have not included data relating to them in this table.

Figure 2: Participant flow for pupils receiving tutoring in mathematics



[10] We removed any duplicates from the dataset when the data provided by schools was matched to the National Pupil Database. Therefore, within the 781 pupils included in the analysis, no pupils are counted twice. However, a small number of the 223 pupils excluded from our analysis may have been counted twice. This is because some schools listed pupils with their UPN and again with their name.

Figure 3: Participant flow for pupils receiving tutoring in English



The characteristics of the participating secondary schools are provided in Table 3. They are compared with the average respective characteristics of all secondary schools in England. The Tutor Trust secondary schools have more pupils eligible for FSM than the average school in England (58% of Tutor Trust secondary schools fall into the highest 20% of schools for their FSM eligibility, compared with 20% of secondary schools in England). However, the Tutor Trust secondary schools had similar levels of GCSE attainment to all secondary schools in England—there were no significant differences in the proportions of schools at each level of attainment.

There was a much larger percentage of academies among the Tutor Trust schools than in all secondary schools in England (50% of Tutor Trust secondary schools were academies, compared with 11% of secondary schools in England[12]).The Tutor Trust schools were also more likely to be located in urban areas (96% compared to 73% of secondary schools in England). Tutor Trust secondary schools were more likely to be rated by Ofsted as 'requiring improvement' or 'inadequate'.

[11] We removed any duplicates from the dataset when the data provided by schools was matched to the National Pupil Database. Therefore, within the 409 pupils included in the analysis, no pupils are counted twice. However, a small number of the 277 pupils excluded from our analysis may have been counted twice. This is because some schools listed pupils with their UPN and again with their name.

[12] These figures related to 2013.

Table 3: Characteristics of participating schools

		All secondary schools (%)	Tutor Trust secondary schools (%)
GCSE total point score (quintile)	Lowest 20%	36	38
	2nd lowest 20%	16	15
	Middle 20%	16	19
	2nd highest 20%	16	8
	Highest 20%	16	19
Free school meals (quintile)	Lowest 20%	20	4
	2nd lowest 20%	20	0
	Middle 20%	20	12
	2nd highest 20%	20	27
	Highest 20%	20	58
School type	Community school	41	23
	Voluntary aided	16	15
	Voluntary controlled	10	0
	Academy	11	50
	Other	21	12
Urban	Rural	27	4
	Non-rural	73	96
Ofsted rating	Outstanding	20	4
	Good	59	48
	Requires improvement	19	32
	Inadequate	2	16
Number of secondary schools		**24,991**	**26**[13]

Note: totals may not sum to 100% due to rounding. Chi-squared test of significance, p-values: GCSE quintile = 0.82, FSM quintile = 0.00, school type = 0.00, urban/rural = 0.02, Ofsted rating = 0.00.

Intervention delivery

Table 4 sets out the proportion of pupils who received individual, small group, or large group tuition and were included in our Phase 3 analysis. A tutor–pupil ratio of 1:3 was the most common choice in this cohort.[14]

[13] Note that the information in this table relates to the number of pupils and schools in the final matched dataset. The number of schools in the final modelling is different due to missing data on model variables.

[14] Note that we did not collect this data for Phases 1 and 2. We began to collect the data in Phase 3, because some of the earlier evaluation evidence had pointed to some tutors working with larger groups of pupils than intended.

Table 4: Tutor: pupil ratios in Phase 3

Tutor–pupil ratio	Mathematics (%)	English (%)
No information given	10	13
1:1	4	20
1:2	26	13
1:3	55	47
1:4	1	5
1:5	4	1
1:6	0	0
***N* pupils**	403	339

Table 5 summarises the numbers of pupils involved in tutoring across the three phases of the intervention.[15]

Table 5: Numbers of pupils receiving tuition

	Phase 1	Phase 2	Phase 3	All phases
English only	76	328	199	603
Mathematics only	249	330	263	842
Both English and mathematics	1	21	140	162

Tables 6 and 7 provide further information about English and mathematics tuition delivery, based on the data provided by the schools who participated in the evaluation. In Phase 2, the volume of tuition delivered increased, as was intended. The data we received indicated that there was considerably more mathematics tuition than English tuition. In the Phase 3 dataset, however, there were fewer mathematics sessions than in Phase 2, while the number of English sessions delivered increased again. Overall, 8,041 mathematics and 5,355 English tuition sessions were delivered. On average, pupils in receipt of English tuition received 8.8 hours of tuition, while those in receipt of mathematics tuition received slightly more than this: 10.2 hours on average. In Phase 1 all English tuition took place outside of lessons,[16] but in Phases 2 and 3 around 40% of pupils missed lessons to attend tuition. For mathematics, the proportion of pupils missing lessons was slightly lower across all phases: around a third.

[15] These numbers differ to those used in the analysis due to the matching process with NPD data. Further, some tutees appear in more than one phase.

[16] Note that we did not collect data about which lessons pupils missed in order to attend tuition sessions.

Table 6: Mathematics tuition sessions

	Phase 1	Phase 2	Phase 3	All phases
Total number of tuition sessions delivered	1,404	4,159	2,478	8,041
Average number of sessions per pupil (and range)[17]	6 (1–13)	13 (1–30)	11 (1–28)	10
Average number of tuition hours per pupil	6.1	12.8	11.7	10.2
Number of pupils missing lessons to attend tuition	90	119	125	334
Number of pupils attending tuition outside of lessons	160	208	265	633

Table 7: English tuition sessions

	Phase 1	Phase 2	Phase 3	All phases
Total number of tuition sessions delivered	482	1,817	3,056	5,355
Average number of sessions per pupil (and range)[18]	6 (1–10)	8 (1–15)	11 (1–58)	8
Average number of tuition hours per pupil	6.2	7.6	12.7	8.8
Number of pupils missing lessons to attend tuition	0	113	94	207
Number of pupils attending tuition outside of lessons	75	136	238	449

Tables 8 and 9 set out the reasons why schools selected pupils to receive tuition. Pupils were mainly selected for tuition if they were at lower levels of predicted GCSE attainment. The majority of all pupils and of pupils eligible for FSM were selected for mathematics and English tuition because they were either at the grade D/C borderline or struggling to attain grade D/C. It is interesting that for the English tuition, compared to mathematics tuition, a greater proportion of pupils were selected for reasons other than the three options concerning their predicted attainment at GCSE.[19]

[17] The range shows the minimum and maximum number of sessions received by pupils within the relevant phase, based on the data schools provided to the Tutor Trust. Further information on the number of sessions received by pupils is available in Appendix 4.

[18] The range shows the minimum and maximum number of sessions received by pupils within the relevant phase, based on the data schools provided to the Tutor Trust. Further information on the number of sessions received by pupils is available in Appendix 4.

[19] We did not collect data on what the 'other' reasons were.

Table 8: Reasons given by schools for selection of Year 11 mathematics tutees

	All pupils		Pupils eligible for FSM	
Reasons for receipt of mathematics tuition	***N***	**%**	***N***	**%**
Potential to get grade B or above	56	6.6	11	4.6
At grade D/C borderline, aiming for grade C	449	53.2	114	48.1
Struggling to attain grade D/C borderline	174	20.6	63	26.6
Other (not specified)	101	12.0	28	11.8
Missing	64	7.6	21	8.9
Total[20]	**844**	**100.0**	**237**	**100.0**

Table 9: Reasons given by schools for selection of Year 11 English tutees[21]

	All pupils		Pupils eligible for FSM	
Reasons for receipt of English tuition	***N***	**%**	***N***	**%**
Potential to get grade B or above	35	5.2	6	4.2
At grade D/C borderline, aiming for grade C	282	42.2	60	42.0
Struggling to attain grade D/C borderline	146	21.9	48	33.6
Other (not specified)	195	29.2	27	18.9
Missing	10	1.5	2	1.4
Total	**668**	**100.0**	**143**	**100.0**

Pupils receiving tutoring were compared to other pupils from schools within Manchester's statistical neighbours. We do not know what other initiatives the comparison pupils have been involved in. It would be unreasonable to expect that they experienced no initiatives, so the analysis compares Tutor Trust tuition with what would otherwise have taken place. Some pupils missed lessons to receive tutoring, so for some pupils the tuition was in addition to their regular lessons while for others tuition was in place of regular lessons. Where pupils missed lessons to receive tuition, their classmates benefitted from smaller class sizes. However, the vast majority of the comparison group were in LAs that were not participating in Tutor Trust tutoring, where class sizes would remain unaltered.

The process evaluation highlighted a number of fidelity issues. For example, tuition sessions were not always small group or one-to-one sessions. The interview data also revealed that some whole class sessions were delivered, but were not identified in the information about tutoring provided by the

[20] Note that the information in this table relates to the number of pupils in the final matched dataset. The number of schools in the final modelling is different due to missing data on model variables.

[21] Note that FSM data in this table is only for Phases 2 and 3, as English tuition data was not matched to NPD so this information is not available.

schools in the pupil data forms. Indeed, the findings from the process evaluation suggest the data provided by schools may not be an accurate record of the tuition that actually took place. This is discussed later in the report under the sub-heading 'Limitations'. A further fidelity issue concerns the quality of tutors. The Tutor Trust programme is intended to provide high-quality tuition, but some schools from all three phases of the process evaluation have raised issues regarding tutor quality in a small number of cases. More information is provided under the sub-heading 'Fidelity' below.

Pupil characteristics

The characteristics of the pupils included in the impact analysis[22] are provided in Tables 10 and 11.

Table 10: Demographic data for mathematics pupils

	Pupils nominated for Tutor Trust mathematics tutoring		Comparison group	
	%	*N*	%	*N*
Sex				
Boys	42	352	50	52,382
Girls	58	488	50	52,285
Eligible for FSM				
No	73	610	73	76,864
Yes	27	230	27	27,803
Missing	0	0	2	1,782
School type				
Comprehensive	52	437	61	63,518
Grammar	0	3	3	3,381
Academy	48	400	34	35,440
Special school	0	0	2	1,698
Other	0	0	0	0
Single sex / Co-educational school				
Mixed	82	685	80	83,212
Boys school	2	14	7	7,522
Girls school	17	141	13	13,933
Attainment	**Mean**	**SD**	**Mean**	**SD**
Raw average GCSE points score	35.6	7.6	38.2	11.8
Maximum GCSE points score	58 (equivalent to an A*)	–	58 (equivalent to an A*)	–
Average KS3 points score	33.12	5.5	36.33	7.9
Total	**840**		**104,667**	

[22] Note that the modelling takes account of the differences as measured by these variables between Tutor Trust and comparison group pupils.

The differences between the average GCSE point scores and the average KS3 point scores for pupils receiving tutoring and the comparison group were tested using *t*-tests and were found to be statistically significantly different.

Table 11: Demographic data for English pupils

	Pupils nominated for Tutor Trust English tutoring		Comparison group	
	%	***N***	**%**	***N***
Sex				
Boys	54	251	50	32,741
Girls	46	212	50	33,208
Eligible for FSM				
No	71	327	74	48,572
Yes	29	136	26	17,377
Missing	0	0	1	764
School type				
Comprehensive	21	96	53	35,197
Grammar	0	2	3	2,099
Academy	79	365	42	27,493
Special school	0	0	1	850
Other	0	0	0	282
Single sex/Co-educational school				
Mixed	100	463	80	52,517
Boys school	0	0	7	4,578
Girls school	0	0	13	8,854
Attainment	**Mean**	**SD**	**Mean**	**SD**
Raw average GCSE points score	37.4	6.0	39.7	9.0
Maximum GCSE points score	52.0	–	58.0	–
Average KS3 points score	33.9	4.4	35.0	6.2
Total	**463**		**65,949**	

The differences between the average GCSE point scores and the average KS3 point scores for pupils receiving tutoring and the comparison group were tested using *t*-tests and were found to be statistically significantly different.

While there are differences, as measured by these variables, between the pupils nominated for tuition and the comparison group, these are accounted for in the models used in the analysis (by including these characteristics as background factors we are comparing like with like).

Numbers analysed

We included 781 Tutor Trust pupils from 24 schools in the analysis of mathematics GCSE results. For the analysis of English GCSE results, 409 Tutor Trust pupils from 19 schools were included. The respective comparison groups were made up of 100,991 pupils with mathematics GCSE results and 62,970 pupils with English GCSE results from Manchester's statistical neighbours.

The outcome measures were not imputed (substituted with another relevant value, if missing). Pupils with missing mathematics or English GCSE outcomes were excluded from the respective models and are therefore not included in the numbers cited in the paragraphs above. In total across phases, 78 pupils who were tutored in mathematics had a missing GCSE mathematics outcome and 15 pupils who were tutored in English had a missing GCSE English outcome.

Where pupils had missing categorical background data (school or individual level), we coded these as missing and included these missing categories in the models. Where pupils had missing continuous background data (e.g. prior attainment, school-level FSM rates) their missing data was replaced with mean values.

Outcomes and analysis

We used multilevel regression models to analyse the mathematics and English GCSE grades of pupils who were nominated to receive tutoring (so including a small number of pupils who were nominated but did not go on to receive tuition) in mathematics and English. We compared their results to a 'comparison' group comprised of pupils in Manchester's statistical neighbours. The multilevel models analysed the data at three levels—local authority, school, and pupil—taking account of the variation in GCSE point scores at each level. The models also took account of other background factors measured on the NPD including KS3 prior attainment, and also some school-level variables (school type, single sex/coeducational, school size, percentage of pupils eligible for free school meals, percentage pupils with EAL, percentage of pupils with any level of SEN, school average total GCSE point score and the percentage of pupils achieving 5 GCSE A*–C grades including English and maths). We also ran separate models based only on the subsets of pupils who were eligible for free school meals.

Table 12 presents a summary of results from the impact analysis, summarising the number of pupils in the analysis and the estimated effect size with confidence intervals.

Table 12: Summary of impact analysis results

Group	Effect size (95% confidence interval)	Number of intervention pupils	Number of comparison pupils
Mathematics tuition vs. comparison	0.051 (0.001, 0.101)	781	100,991
Mathematics tuition vs. comparison (FSM only)	0.090 (−0.008, 0.188)	220	27,125
English tuition vs. comparison	−0.161 (−0.291, −0.03)	409	62,970
English tuition vs. comparison (FSM only)	−0.026 (−0.219, 0.168)	123	16,706

Analysis of mathematics tutoring

Tables 13 to 16 set out the results of the main impact analysis for mathematics tutoring.

Table 13: Analysis of mathematics GCSE point score—base model fixed effects

	Coefficient	Standard error	95% confidence interval
Intercept	34.790	0.487	(33.835, 35.745)

Table 14: Analysis of mathematics GCSE point score—base model random effects

	Variance	Standard error
LA	0.498	0.992
School	56.411	4.602
Pupil	117.072	0.511

Table 15: Analysis of mathematics GCSE point score—final model fixed effects

	Coefficient	Standard error	95% confidence interval
Pupil-level variables			
Intervention	0.601	0.303	(0.02, 1.19)
Average Key Stage 3 points—mathematics	1.138	0.003	(1.13, 1.14)
Eligible for free school meals	−1.274	0.051	(−1.37, −1.17)
Eligible for free school meals—missing	−7.770	0.265	(−8.29, −7.25)
School-level variables			
Special schools	−3.041	0.624	(−4.26, −1.81)
Academy	−0.314	0.110	(−0.53, −0.09)
Girls' school	1.150	0.448	(0.27, 2.03)

% pupils with English as an additional language (EAL)	−0.061	0.008	(−0.08, −0.04)
Total GCSE points	0.004	0.001	(0.00, 0.01)
% 5 GCSE A*–C including English and mathematics	−0.034	0.004	(−0.04, −0.02)
Intercept	−3.585	0.554	(−4.67, −2.49)

Note: Number of pupils: intervention = 781, comparison = 100,991. Standard deviation of outcome: intervention = 7.44, comparison = 11.67. '% pupils with English as an additional language (EAL)', 'Total GCSE points' and '% 5 GCSE English and Mathematics A–C' all centred using sample mean.*

Table 16: Analysis of mathematics GCSE point score—final model random effects

	Variance	Standard error
LA	2.615	1.390
School	13.859	1.178
Pupil	45.778	0.203

The primary analysis aimed to test whether pupils who had received mathematics tuition achieved significantly higher GCSE mathematics point scores than comparison pupils. Table 12 shows that on average pupils who received tuition had slightly higher scores (0.6 points). This difference is statistically significant, though small (there are 6 GCSE points to one grade). The standardised effect size is **0.051** (95% confidence interval (0.001, 0.101)).

We also completed a sub-group analysis to test whether the intervention pupils made significantly more progress than the matched comparison pupils among a restricted sample of pupils eligible for FSM in the past six years. Tables 17 to 20 set out these results.

Table 17: Sub-group analysis of mathematics GCSE point score—base model fixed effects

	Coefficient	Standard error	95% confidence interval
Intercept	32.361	0.667	(31.054, 33.668)

Table 18: Sub-group analysis of mathematics GCSE point score—base model random effects

	Variance	Standard error
LA	3.081	2.105
School	34.023	3.207
Pupil	138.863	1.179

Table 19: Sub-group analysis of mathematics GCSE point score—final model fixed effects

	Coefficient	Standard error	95% confidence interval
Pupil-level variables			
Intervention	1.120	0.621	(−0.10, 2.34)
Average Key Stage 3 points—mathematics	1.195	0.006	(1.18, 1.21)
Female	−0.193	0.103	(−0.39, 0.01)
Eligible for free school meals—missing	0	0	(−8.29, −7.25)

School-level variables			
Special schools	−3.442	0.723	(−4.86, −2.02)
% pupils with special educational needs (SEN)	−0.007	0.006	(−0.02, −0.00)
Intercept	−6.447	0.445	(−7.32, −5.57)

Note: Number of pupils: intervention = 220, comparison = 27,195. Standard deviation of outcome: intervention = 7.9, comparison = 12.32. '% pupils with special educational needs (SEN)' centred using sample mean.

Table 20: Sub-group analysis of mathematics GCSE point score—final model random effects

	Variance	Standard error
LA	1.142	0.696
School	7.964	0.799
Pupil	58.865	0.506

The FSM sub-group analysis identified that pupils receiving tutoring achieved a higher GCSE mathematics grade than those in the comparison group, but this difference was **not significant** (the 95% confidence interval included zero). The standardised effect size was **0.090** (95**%** confidence interval (−0.008, 0.188)).

We conducted some further exploratory analysis to look at the impact of important features of the mathematics tutoring. We did this by substituting variables reflecting features of the tutoring received by pupils for the overall effect of tutoring. This analysis showed that:

- Each hour of mathematics tuition is associated with an increase of 0.14 in GCSE mathematics point score. This was a statistically significant difference (95% confidence interval (0.09, 0.18)). Each additional tuition session is associated with a similar increase.
- Substituting the reasons given for students receiving tutoring for the overall tutoring effect results in a significant effect for those with the potential to get grade B or above, but non-significant results for those struggling to attain grade D/C borderline and for those at the grade D/C borderline who are aiming for grade C. On average, students with the potential to get a grade B who received tutoring achieved almost five GCSE mathematics points higher than their peers. This was a statistically significant difference (coefficient = 4.53, 95% confidence interval (1.43, 7.63)).

However, given that we have concerns about the accuracy and completeness of the data provided by schools on the above variables, this analysis should be treated with considerable caution.

Analysis of English tutoring

Tables 21 to 24 set out the results of the main impact analysis for English tutoring.

Table 21: Analysis of English GCSE point score—base model fixed effects

	Coefficient	Standard error	95% confidence interval
Intercept	36.351	0.537	(35.298, 37.404)

Table 22: Analysis of English GCSE point score—base model random effects

	Variance	Standard error
LA	1.077	1.276
School	42.082	3.785
Pupil	66.535	0.366

Table 23: Analysis of English GCSE point score—final model fixed effects

	Coefficient	Standard error	95% confidence interval
Pupil-level variables			
Intervention	−1.413	0.584	(−2.56, −0.27)
Average Key Stage 3 points—English	0.949	0.004	(0.94, 0.96)
Gender—female	0.926	0.053	(0.82, 1.03)
Eligible for free school meals	−1.235	0.056	(−1.34, −1.13)
Eligible for free school meals—missing	−9.139	0.347	(−9.82, −8.46)
School-level variables			
Academy	−0.587	0.280	(−1.14, −0.04)
% pupils with English as an additional language (EAL)	0.036	0.008	(0.02, 0.05)
% pupils with special educational needs (SEN)	−0.065	0.008	(−0.08, −0.05)
Intercept	6.519	0.274	(5.98, 7.06)

Note: Number of pupils: intervention =409, comparison = 62,970. Standard deviation of outcome: intervention = 5.96, comparison = 8.80. '% pupils with English as an additional language (EAL)' and '% pupils with special educational needs (SEN)' centred using sample mean.

Table 24: Analysis of English GCSE point score—final model random effects

	Variance	Standard error
LA	0.000	0.000
School	8.387	0.786
Pupil	34.161	0.192

The primary analysis aimed to test whether pupils who had received English tuition achieved significantly higher GCSE English point scores than comparison pupils. Table 15 shows that on average pupils who received tuition achieved slightly lower scores (1.4 points). This difference is statistically significant, though small (there are 6 GCSE points to one grade). The standardised effect size is **−0.161** (95% confidence interval (−0.291, −0.03)).

We also completed a sub-group analysis to test whether the intervention pupils made significantly more progress than the matched comparison pupils among a restricted sample of pupils eligible for FSM in the past six years. Tables 25 to 28 set out these results.

Table 25: Sub-group analysis of English GCSE point score—base model fixed effects

	Coefficient	Standard error	95% confidence interval
Intercept	35.254	0.585	(34.107, 36.401)

Table 26: Sub-group analysis of English GCSE point score—base model random effects

	Variance	Standard error
LA	2.017	1.589
School	26.613	2.707
Pupil	74.358	0.800

Table 27: Sub-group analysis of English GCSE point score—final model fixed effects

	Coefficient	Standard error	95% confidence interval
Pupil-level variables			
Intervention	−0.230	0.89	(−1.97, 1.51)
Average Key Stage 3 points—English	0.934	0.970	(0.93, 0.97)
Female	0.656	0.111	(0.44, 0.87)
School-level variables			
Academy	−0.708	0.354	(−1.40, −0.01)
Grammar	3.237	1.271	(0.75, 5.73)
Special schools	−2.983	1.335	(−5.60, −0.37)
Boys' school	0.099	0.691	(−1.26, 1.45)
Girls' school	−0.742	0.572	(−1.86, 0.38)
Number of GCSE pupils	0.003	0.003	(0.00, 0.01)
% pupils eligible for free school meals (FSM)	0.016	0.017	(−0.02, 0.05)
% pupils with English as an additional language (EAL)	0.042	0.008	(0.03, 0.06)
% pupils with special educational needs (SEN)	−0.035	0.016	(−0.07, 0.00)
Total GCSE points	−0.004	0.003	(−0.01, 0.00)
% 5 GCSE A*–C including English and Mathematics	0.051	0.017	(0.02, 0.08)
Intercept	5.497	0.390	(4.73, 6.26)

Note: Number of pupils: intervention = 123, comparison = 16,706. Standard deviation of outcome: intervention = 5.68, comparison = 9.03. '% pupils eligible for free school meals (FSM)', '% pupils with English as an additional language (EAL) ', '% pupils with special educational needs (SEN)', 'Total GCSE points' and '% 5 GCSE English and Mathematics 5 A–C' centred using sample mean.*

Table 28: Sub-group analysis of English GCSE point score—final model random effects

	Variance	Standard error
LA	0.000	0.000
School	5.912	0.646
Pupil	40.205	0.441

The FSM sub-group analysis identified no convincing evidence/significant differences in progress between pupils in the intervention and comparison group that were eligible for FSM. The standardised effect size is **−0.03** (confidence interval (−0.22, 0.17)).

Cost

The Tutor Trust charged £18 per hour for tuition delivered in the Academic Year 2011–2012, although there was some scope for negotiation on this, depending on the school's overall tuition needs. The hourly charge was the same irrespective of whether tuition was delivered on a one-to-one, one-to-two or one-to-three basis. In the Academic Years 2012–2013 and 2013–2014, the tuition rates changed, depending on the ratio of tutors to pupils: one-to-one tuition was charged at £18 per hour; one-to-two at £20 per hour, and one-to-three at £26 per hour. Based on groups of three pupils receiving 25 tuition sessions, the total cost of the intervention is estimated at approximately £217 per pupil.

Process evaluation

Outcomes

The process data gathered across Phases 1 to 3 of the evaluation showed that, overall, pupils, school staff, and tutors were positive about the impact of the intervention. Note, however, that as the process evaluation draws on qualitative data, the findings are not intended to provide a basis for generalisation. It is instead about improving understanding of the distinctive nature of key stakeholders' experiences and outlooks.

Pupil attainment: Teaching staff generally believed that the tuition was contributing to gains in pupil attainment, and most of the pupils and tutors reported seeing visible improvements in pupils' performance. However, many teachers were unclear or unsure about the *extent* to which the tuition was having an impact on pupil attainment. These reservations appeared to stem from the fact that other intervention work was also being undertaken with the tutored pupils, which made it difficult to attribute the impacts to one intervention over another.

Most interviewees reported that the tuition had helped to develop pupils' understanding of different topics within the relevant GCSE syllabi and had contributed to developing their skills and examination technique. One pupil explained: 'It's helped a lot. Like, in class we might not have done it yet, but if we've done it with the tutor, we've got like an edge on the others.' A teacher in another school was more direct about the impacts on attainment: 'Out of the 30 pupils who received tuition, 22 got their Cs. The eight who didn't were the ones that didn't turn up.' There were no discernible differences in interviewees' views on the effectiveness of the tuition on pupil attainment in mathematics and English.

Pupil confidence: There was general agreement that the programme had had a positive effect on pupils' confidence in both mathematics and English. Pupils reported gaining confidence in their abilities: 'It's made me more confident. I've got a better overall understanding of the different parts of English and mathematics.' This was largely attributed to the small group environment, which afforded tutees the freedom to ask more questions and to expand on their answers: 'It makes you feel more confident—I might not have put my hand up to ask a teacher, but now I might.'

Pupil enjoyment: All of the pupils enjoyed the tuition and said they would recommend it to their friends.[23] One explained: 'It feels that it is a nicer atmosphere than class: it is more relaxed and you can concentrate more.' Similarly, teachers reported that most pupils enjoyed the tuition, with some reporting that their pupils had asked for the tuition to be extended. Some pupils in earlier rounds of tuition reported they were enjoying their mathematics and English classes more: 'I now love mathematics!' However, for most pupils, there was little evidence to suggest the tuition had raised their interest in or made them more enthusiastic about mathematics and English beyond their tuition session.

Pupil attendance and behaviour: The evidence was mixed on the impact of the tuition on pupils' attendance and behaviour in school. In some cases, the attendance and behaviour record of the targeted pupils was already reported to be good, which was one of the reasons why they were selected for the tuition in the first place. Pupils' behaviour during the tuition sessions was generally reported to be good, although there was a high degree of drop out in some cases (see section on 'Fidelity'). In the most recent round of tuition, one teacher observed that while his pupils were well behaved with their tutor, they continued to 'play up' in class. He remarked that it would be interesting to see if, in the longer term, this improved behaviour with the tutor would be carried over into the classroom.

[23] It should be noted that all of the pupils we interviewed were still receiving the tuition. Unfortunately, it was not possible to speak to those pupils who had dropped out.

Pupil aspirations: Some pupils and tutors reported that the tutoring had helped to raise pupils' academic aspirations by contributing to improvements in their own knowledge and skills and through opportunities to discuss 'university life' with a current or recently graduated university student.

Tutors: The tutors reported they had enjoyed the experience and had found it rewarding. All of the tutors consulted would recommend it to their friends, and indeed many reported they had already signed up friends to the scheme.[24] Tutors viewed the experience as something positive to add to their CVs, while many said it had encouraged them to consider a career in teaching or had reinforced pre-existing decisions to pursue a career in teaching. Collectively the findings suggest that the Tutor Trust will be able to recruit more tutors to the programme should it be scaled up in the future.

Does tuition benefit all pupils equally?

There was no clear message from interviewees about the extent to which the tuition impacted on all pupils equally. Rather, interviewees felt that the quality of the tutor and their ability to relate to the pupils and to teach them appropriately was the cause of variations in impact. While amongst case-study schools D/C borderline pupils appeared to be those most frequently targeted for the tuition, other groups, including B/C borderline pupils and gifted and talented pupils were also said to benefit. Overall, it was the pupils who engaged most with the tuition who were reported to get the most out of it, irrespective of academic ability or social background.

In a minority of cases the tuition was reported to have some unintended consequences or negative effects. These largely stem from the way the tuition had been introduced and/or implemented in schools. For example, in one school, no mathematics or English teachers had been involved in the decision to use the tutors, or in managing their deployment. Instead, the liaison with the Tutor Trust and tutors had remained at Senior Leader level, and was not devolved. This had resulted in some resentment amongst teachers about the role of the tutors. Similarly, in at least two other schools there had been a clash with the timetabling of tuition with after-school revision sessions. This led to some of the teachers of those lessons questioning the value and timing of the tuition, preferring instead for the pupils to attend their own after-school sessions. Despite this small number of unintended consequences, overall, school staff were positive about the tuition.

Implementation

Is the service fulfilling an identified need (i.e. high-quality, affordable tutoring)?

Most of the teachers felt that the tutoring represented good value for money. They all agreed that there was a need for affordable tuition in Greater Manchester: 'Children in our area do not have the money to have this kind of tuition outside of school'. Most agreed that the tuition from the Tutor Trust could help meet this need. Where teachers expressed reservations about its value for money, this was associated with limitations in how the tutoring had been implemented in schools. For example, the tutoring would have represented better value for money had the costs been spread amongst more pupils in the schools where drop out had been a problem. In addition, while case-study schools appeared to like the perceived light-touch nature of their involvement in coordinating the tutoring in schools, some teachers suggested their schools may have leveraged greater value from the tutoring had they invested more time in the programme: 'Ideally the school would invest more time in coordinating it but not all teachers have this time to give'.

Why do some schools decide not to take up the offer of tuition?

The tutoring programme was largely attractive to schools, evident in the number of schools who request tuition year on year. Most school staff reported they valued the professionalism of the tutors and flexibility provided by the scheme. However, some schools chose not to take the Tutor Trust up on their offer of tuition. We collected responses via email and telephone from a total of ten such

[24] It should be noted that all of the tutors we interviewed were still delivering the tuition. We did not speak to any tutors who had dropped out of the programme.

schools between 2012 and 2014. The main reasons cited for why these schools had decided not to purchase the Tutor Trust tuition included:

- it was too expensive
- schools already had successful tuition programmes in place
- schools had had bad experiences of tuition programmes in the past
- concern that the Tutor Trust would be unable to deliver at a level that was suitable for their D/C borderline pupils. Their perception was that the tuition was aimed solely at more able learners.

Despite this, most of the schools reported they would consider paying for Tutor Trust tuition in the future. Some schools reported that offering the tuition at lower cost would make the Tutor Trust's offer more attractive to their schools, while others reported they would like more information from the Tutor Trust about the intervention, including evidence of impact in other similar schools.

Are the tutors 'high quality'?

In most cases, the school staff we spoke to reported that the quality of tutors was generally high and that the quality of tutors greatly influenced the impact of the programme. For teaching staff, 'high quality' meant possessing the relevant pedagogical skills; being able to engage and interact successfully with pupils and target sessions appropriately; having good subject and curriculum knowledge; and being committed, reliable, flexible to changing needs, and willing to work with a range of different pupils. The Tutor Trust advertises its tutors as high quality; indeed, each tutor is subject to a recruitment process, a training programme, and ongoing support and (in the last year) quality assurance workshops. However, during eight of the 11 visits to schools senior managers raised concerns about tutor quality. Issues related to tutors' knowledge of the curriculum, their ability to relate to and engage their tutees, and their ability to tutor and 'teach' the pupils. These findings should be seen in the context of a generally positive reaction from teachers to the quality of tutors; where problems were reported, these were in relation to a small minority of tutors. All of the schools in which interviews took place in Phase 3 had replaced at least one tutor during their involvement with the programme. The requests to change tutors were attributed to a range of issues, including tutors having poor English language skills, acting unprofessionally, or being late for sessions. Where tutors did not meet the expected quality standards, schools felt that this could have negative impacts on their tutees.

Are tutors delivering the tuition sessions in line with schools' expectations?

The tuition sessions were generally delivered in line with schools' expectations. Schools were able to prescribe the frequency and the timing of the tuition, and the Tutor Trust appear to have responded appropriately to these requests.

By Phase 3, the Tutor Trust had expanded significantly, and schools reported that the Trust had no difficulty in meeting the demand for tuition, clearly having the capacity to provide a number of tutors who were flexible over their availability.

The tutors have been deployed in different ways in different schools and staff like the flexibility offered by the scheme: *'The tutoring is flexible. You can discuss and set up a package that that suits you. This is useful because different schools have different needs'*. The fact that most tutors were happy to accommodate schools' changing needs and requirements was viewed as a strength of the programme.

Is the Tutor Trust meeting its recruitment targets?

At the inception of the evaluation, the Tutor Trust provisionally intended to work with 50 schools in Phase 3. It nearly met this target, working with 46 schools in Phase 3, according to its internal records. Over the course of the evaluation the Tutor Trust reports that it worked with 55 schools. This demonstrates the Tutor Trust's ability to recruit schools and to deliver tuition at volume.

There is also evidence to suggest that the Tutor Trust has been successful in recruiting secondary schools in deprived communities. 58% of the Tutor Trust secondary schools who provided data for the impact analysis fell into the highest 20% of schools for their FSM eligibility.

Barriers to delivery

School staff reported the following barriers to delivery:

- Some schools that chose to provide after-school tuition experienced a drop off in pupil attendance. This attrition was due to pupils prioritising other subjects as it got closer to the exam period (e.g. drama final assessment; art portfolio); pupils' school attendance dropping off in general; and some pupils from some of the schools stopped attending tuition as they felt it was of little benefit.
- In the final phase of the evaluation, unwillingness of some tutors to work with pupils across the range of abilities (specifically, the least able). In at least one school this restricted the types of pupils that could be offered tuition.
- Not having enough time to properly brief the tutors and/or collect feedback from the tutors following the tuition sessions.
- Variations in tutor quality: 'My impression is that some of the tutors spent time on things they felt comfortable doing, rather than on what the pupils needed to cover.' Also see 'Fidelity', below).

Key factors for success

From the qualitative data, the Tutor Trust tuition is likely to be most successful in bringing about an increase in attainment when:

- the tutors are high quality and able to respond appropriately to and interact successfully with their tutees. Tutors need to be committed, reliable, flexible to changing needs, and willing to work with a range of different pupils. Where tutors are of poorer quality, this can have negative impacts on their tutees.
- the tuition is scheduled at times most convenient for staff and pupils (e.g. earlier in the year, before the GCSE examinations). In some schools, providing tutoring during the school day, rather than after school, may have reduced attrition: 'The pupils wanted to have help although the reality was that many weren't prepared to stay behind after school to be helped'. Clashes with popular and/or important after-school activities should be avoided.
- English and mathematics teachers are involved in the planning and management of tuition so that it is not viewed as a 'bolt-on', or unrelated to their classroom teaching. The tuition appeared to work best where class teachers (or Heads of Department) had been fully involved in its design and implementation. It is important that liaison with tutors and the Tutor Trust is devolved to staff who can ensure that the tuition is targeted at those pupils that stand to benefit most, and ensure that tuition is better integrated with class provision.
- school time is continually invested in working closely with their tutors, monitoring progress and establishing feedback mechanisms.
- there is continuity in the tutor–tutee relationship throughout the tutoring period. Most of the teachers and tutors interviewed reported that it can take several weeks for a tutor to build a

relationship with a pupil, to earn their trust, and to diagnose and understand their learning needs. Schools that hosted a number of different tutors with the same child did not appear to gain the same benefit from the programme as those which retained the same tutors over the course of the intervention.

Fidelity

The Tutor Trust model of tutoring is flexible by design, and schools are free to decide how best to deploy the tutors with their pupils. They are also free to choose the year group(s) and support needs of the pupils receiving the tutoring. All of the case-study schools intended to use either one-to-two or one-to-three support. Approximately half of the case-study schools timetabled the tuition to take place within the school day, with the other half choosing to run it after school. The evaluation focused on the impacts of the tutoring on Year 11 pupils (although other year groups may have also received support from a tutor).

Given the parameters of the intervention described above, both the process and impact evaluation revealed that the deployment of tutors was rather more fluid than was anticipated. For example, while most schools had expressed a preference for tutors to work with groups of two or three pupils, some tutors reported they had worked with pupils on a one-to-one basis due to other pupils not turning up to their sessions. This appeared to be particularly the case for after-school sessions and sessions scheduled close to Year 11 examinations, where attrition was greater. In at least one school, tutors had been deployed in a wider range of roles, including to support marking and assessment (away from pupils) and to provide in-classroom support in a role more akin to that of a teaching assistant.

A small scale but ongoing issue with programme fidelity concerns the quality of tuition. Given that the quality of the tutor and tuition is considered key to leading to impact it is imperative that continued attention is given to ensuring all tutors are high quality.

Formative findings

How could the programme be improved?

- The Tutor Trust should continue to address variations in tutor quality to ensure that all tutors are up to the required standard of conduct and performance. Building in additional quality audits, or establishing more formal feedback or performance reviews would be welcomed by schools and tutors alike.
- Schools should consider better utilising subject teacher time to get more out of the tuition. Focusing on connecting the tutor sessions more effectively with classroom activities and pupils' areas for development would be beneficial.
- Schools might usefully invest more time in setting up systems to monitor the content and progress made in tuition sessions.
- Schools might better utilise the opportunity to liaise with tutors at the initial tutor meeting (suggested by the Tutor Trust). Such 'start-up' or 'get to know you' events enable staff and pupils to meet tutors and begin to build relationships.

The Tutor Trust should continue to provide good practice guidance to schools with practical steps for how schools can make the most out of tuition.

Conclusion

Key conclusions
1. Due to the limitations of the study design and the absence of a high-quality comparison group, this evaluation has not provided a secure estimate of the impact of the project on academic outcomes.
2. Participating pupils achieved slightly higher mathematics GCSE scores than pupils in the comparison group, and lower English GCSE scores than pupils in the comparison group. However, it is not possible to attribute either change to the tuition provided.
3. Schools involved in the qualitative interviews were positive about the tuition, keen to work with the Tutor Trust again, and largely confident that the tuition was beneficial for their pupils.
4. Teachers believed that there was a need for more affordable, high-quality tuition, and that the Tutor Trust helped meet this need.
5. It is recommended that the Tutor Trust continues to monitor tutor performance and identifies mechanisms to increase the consistency of tuition. Schools should be active participants in this process and classroom teachers need to be involved in the planning and management of tuition to ensure that in all cases tuition complements work in the classroom.

Limitations

In order to attribute any effect directly to the study, we would have carried out a randomised controlled trial (RCT). As this was not possible, we cannot *attribute* any effect to the tutoring. In an RCT the control group is an ideal estimate of what would have happened on average if the intervention group had not received the intervention. All the observed and, crucially, the unobserved characteristics of the two groups will be balanced on average at the start of the trial. This means that when outcomes are measured, the differences can be attributed to the intervention. Interpreting the model relies on the assumption that everything that matters for pupil outcomes is balanced on average between the two groups at baseline. Since receipt of tuition was not decided by random allocation, if unobserved characteristics are a determining factor of whether the pupil gets tutoring and also correlate with test score outcomes, then the impact estimates could be biased, and the extent of the bias is unknown. Note that in a deviation from the original planned analysis, we were unable to control a number of potentially influential variables. These comprised: pupil-level special educational needs (SEN); English as an additional language (EAL); ethnicity; and looked after children (LAC) status. These variables were excluded from the final analysis due to a change in the level of consent required by the NPD in order to release this data, after we had completed our data collection in schools. Failing to account for important variables (known and/or unobserved) has been shown to result in spurious effects, certainly those of a magnitude we see here (Coe, 2009).

The analysis is also based on (often retrospective) school-level data. The process evaluation revealed that some schools did not keep accurate records of their tuition sessions (e.g. number of sessions per pupil, the pupil–tutor ratio). It is therefore likely that the data provided by schools may not be an accurate record of the tuition that actually took place.

The impact analysis is based on data from 22 schools for mathematics and 17 schools for English—lower than the 50 schools on which our power calculation was based. The number of pupils included in the analysis was lower than anticipated, but sufficient to detect a statistically significant effect for the all-pupils analysis. However, despite this, it was not possible to provide a secure estimate of the programme's impact on pupil attainment due to the weaknesses noted above. In addition, the lower pupil numbers reduced the likelihood that the evaluation would be able to detect an effect of a similar size for the subset of pupils who were eligible for FSM.

The Tutor Trust model of tuition provision could be extended to other areas, although geographical proximity to a university or college could be a limiting factor.

Interpretation

Due to the limitations of the study design noted above, this evaluation has not provided a secure estimate of the impact of the Tutor Trust on academic attainment or made a substantial contribution to the existing evidence bases on one-to-one or small group tuition. It is also important to recognise that our evaluation did not seek to assess the quality of individual tutors or, indeed, to identify any differential effect of different group sizes within the impact analysis. More granular research into the different models of tutoring, to include data on tutor quality and group size, may provide more illuminating and definitive evidence.

While acknowledging the methodological limitations of the study, it is not clear from our evaluation why the tuition appears to have been effective in improving pupil outcomes in mathematics, but not in English. There are a number of possible reasons:

- unmeasured or unobserved differences in the implementation of the tuition (e.g. quality of the tutors, one-to-one or small group tuition, group sizes, number of hours or sessions, after-school sessions with a greater drop-out in attendance).
- unmeasured or unobserved differences in the pupils selected for tuition (e.g. motivational differences, differences in selection criteria for mathematics and English, whether students were selected based on how much the school perceived they would benefit from English tuition or for 'other' reasons). Selection was not random and it is easy to conceive that the method of selection is correlated with the outcome.
- some schools told us their pupils took their English GCSE early in Year 10. It was not possible to identify early GCSE takers from the data alone.[25] If this was a common occurrence for English and not mathematics (a higher proportion of Year 10 pupils received tuition in English), it is not unreasonable to expect to see lower grades than had the GCSEs been taken at the end of Year 11.
- the inherent nature of mathematics compared to English as a subject. If the mathematics tuition is more closely aligned to the mathematics outcome measurement (GCSE attainment) than English tuition is to the English GCSE assessment, then it is more likely to see a stronger relationship between intervention and outcome in mathematics.

The process evaluation has provided useful insights. Generally, teachers in participating schools were positive about the tuition provided across both subjects and a large majority of the senior leaders we interviewed were keen to work with the Tutor Trust again. Moreover, school staff reported that the tuition offered good value for money and believed that it was contributing to positive impacts for their pupils. It is evident that the Tutor Trust has repeat customers, perhaps testament to their conviction of its worth. The teaching staff we interviewed generally believed that the tuition was contributing to gains in pupil attainment, and most of the pupils and tutors reported seeing visible improvements in pupils' performance. However, many teachers were unclear or unsure about the *extent* to which the tuition was having an impact on pupil attainment, largely due to other intervention work being undertaken with the tutored pupils, which made it difficult to attribute the impacts to one intervention over another.

The findings from the process evaluation suggest the Tutor Trust tuition was perceived to impact most successfully on 'softer' outcomes such as pupils' confidence in mathematics and English, and on their aspirations to continue on to further study. However, this in large part hinges on the quality of the tutors and the way the tuition is managed and delivered in school. As other research has suggested, when the right design and administrative structures are implemented, volunteer tutoring programmes can be effective (Tepper Jacob *et al*., 2014). The Tutor Trust need to continue their efforts to ensure that only the best quality tutors make it through their recruitment and training programme. At the same

[25] All GCSE results, including those taken early, are given at the end of Key Stage 4. Year 10 pupils in our datasets could be early GCSE takers or they could be pupils receiving tuition in Year 10 in readiness for Year 11.

time, schools can help to drive up tutor quality by liaising more closely with their tutors, and providing more instruction and feedback. If the improvements set out in the process section of this report continue to be implemented, and schools communicate more closely with their tutors; devolve responsibility for those who are running the tuition in school to the subject teachers themselves; and better integrate the tutoring into the pupils' classroom learning, then we would hypothesise that the tuition might have a greater effect.

Future research and publications

Further research is needed to be able to determine the effect of the tuition. Ideally the research design would take the form of an RCT, to attribute any effect to the tuition. It would draw on a larger sample of pupils who were eligible for FSM, so that the effects on FSM pupils could be robustly measured. The findings from the process evaluation suggest that the tuition is having an impact on 'softer' outcomes, such as pupils' subject-level confidence and aspirations to continue on to further study. It would be useful to explore these softer impacts in more detail as part of any future analysis. One of the strengths of the Tutor Trust model (from schools' perspectives) is its flexibility. However, differences in implementation may lead to differing effects and it might be useful to explore the effects of different models of delivery, such as the relative impact of different group sizes, level of integration of tuition with learning and teaching within the school, quality of tuition, and whether tuition was in addition to or a part replacement for subject lessons. Drawing on the learning from this evaluation, securing the buy-in of schools to participate in the evaluation will be crucial. A cost effectiveness analysis would also be a beneficial addition to future research.

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Appendix 1: Consent statement in Tutor Trust contracts with participating schools

Use of pupil data

The School shall assist with the independent monitoring and evaluation of the Tutor Trust's work, which is being carried out by the National Federation for Educational Research (NFER) on behalf of the Education Endowment Foundation (EEF). This includes providing reasonable assistance to the University of Durham which is evaluating the impact of all of the work funded by the EEF (or any other third party that may be appointed to evaluate the EEF's work from time to time).

The School shall at its own cost:

- complete pupil data forms in the format requested by the Tutor Trust providing complete and accurate data on all pupils nominated to receive tuition services (irrespective of whether pupils go on to receive tuition) (the Pupil Data) by agreed deadlines; and
- accommodate any reasonable requests for case study visits from NFER (or any other third party that may be appointed to evaluate the EEF's work from time to time) for their evaluation.

In addition to the right of Tutor Trust to use and process any Pupil Data or other data provided by the School or any pupil from time to time for the purposes of providing the Services, the School grants its consent for all Pupil Data and or other data obtained by the Tutor Trust from time to time in the course of providing the Services to be:

- disclosed to third parties for analytical and statistical purposes from time to time (including the NFER, the University of Durham, the EEF and any other evaluators EEF may appoint from time to time); and
- stored in an anonymised form and made available for public access on the UK Data Archive.

The Pupil Data will be linked to other datasets such as the national Pupil Database (held by the Department for Education). This linking is solely for statistical purposes and no information that could identity individual pupils or schools will be made public. Only aggregated data will be used in evaluation outputs, such as reports or presentations.

The Tutor Trust shall keep the Pupil Data confidential and shall use reasonable commercial endeavours to procure that any third parties to whom Pupil Data is disclosed pursuant to clause 0 is kept confidential prior to such time as it is anonymised. Notwithstanding the foregoing, the Tutor Trust may disclose the Pupil Data:

- as permitted under clause 0;
- to its employees, officers, representatives, advisers, agents or subcontractors who need to know such Pupil Data for the purposes of carrying out the Tutor Trust's obligations under this Agreement;
- as may be required by law, court order or any governmental or regulatory authority.

Appendix 2: Example consent letters and interview introductions

Example of a consent letter for participating schools

Dear [insert name]

As you are aware, the National Foundation for Educational Research (NFER) is evaluating the mathematics and/or English tuition currently being delivered to some Year 11 pupils at your school by the Tutor Trust.

I understand that the Tutor Trust has made you aware of the evaluation, and of the fact that we may be contacting you to request that you help us with this work.

What will participation involve?

Participating in the evaluation would involve a researcher making a one-off visit to some schools who are receiving tutoring to speak to:

- you, as the lead contact for the Tutor Trust
- one teacher whose Year 11 pupil(s) have received tutoring
- one tutor (if present at the time of the visit)
- one young person in Year 11 who has received tutoring, OR a pair of young people in Year 11 who have received tutoring.

We would be looking to visit each school in May 2014. Each visit will take no more than half a day. We are happy to discuss how much of the above agenda is feasible, however.

Please be assured that all the information collected as part of the visits will be treated in strict confidence and according to the rules laid down by the Data Protection Act and NFER's Code of Practice. No school or individual will be identified in any research publication resulting from this work.

Visiting your school would allow us to gain valuable information which will inform tuition delivery in future so that it can benefit other young people.

We will contact you soon to discuss the possibility of your school participating in the evaluation. In the meantime, please do not hesitate to contact me if you wish to discuss any aspect of the evaluation.

Example of a consent letter for non-participating schools

Dear [insert name],

NFER is currently evaluating the impact of Tutor Trust tuition on behalf of the Education Endowment Foundation (EEF). As part of the evaluation, we are keen to hear from schools such as yours, which have chosen not to buy tuition from the Tutor Trust in this academic year.

I would be extremely grateful if you would be willing to have a very brief telephone conversation with me about the reasons for your school's decision not to buy Tutor Trust tuition this year. This would only take approximately 10 minutes, and would be conducted at a time of your convenience.

Please be assured that all the information that you provide during our conversation will be treated in strict confidence and according to the rules laid down by the Data Protection Act and NFER's Code of Practice. We will not identify any school or individual in any report arising from the research.

My colleague Neelam Basi will contact you by telephone shortly to discuss booking the call. In the meantime, please do not hesitate to contact me on xxx if you wish to discuss any aspect of this work. In any event, I look forward to speaking with you soon.

Example wording used at the start of interview with headteachers

Thank you for agreeing to be interviewed and for your support for this evaluation. As you are aware, NFER is currently evaluating the effectiveness and impact of Tutor Trust tuition, on behalf of the Education Endowment Foundation.

As part of the evaluation we are carrying out case studies of schools that are receiving tuition from the Tutor Trust in this academic year. The purpose of this interview is to explore why you chose to buy tutoring, and your perceptions of the quality and impact of Tutor Trust tuition.

The information that you provide will be treated entirely confidentially and anonymously. We will not identify any individual or school in the outputs from our evaluation.

The interview will take up to 60 minutes. I would like to record it, to supplement my notes. The recording will be deleted once I have taken notes from it. Are you happy for me to do this?

Is there anything that you would like to ask me about the evaluation?

Example wording used at the start of interview with teachers

Thank you for agreeing to be interviewed and for your support for this evaluation. As you are aware, NFER is currently evaluating the effectiveness and impact of Tutor Trust tuition, on behalf of the Education Endowment Foundation.

As part of the evaluation we are carrying out case studies of schools that have chosen to buy tuition from the Tutor Trust in this academic year. The purpose of this interview is to explore your perceptions of the quality and impact of Tutor Trust tuition. We understand that one of more of your students has received Tutor Trust tutoring, is that right?

If yes... (if no, probe and end interview if none of teacher's students has been tutored)

The information that you provide will be treated entirely confidentially and anonymously. We will not identify any individual or school in our evaluation outputs.

The interview will take up to 40 minutes. I would like to record it, to supplement my notes. The recording will be deleted once I have taken notes from it. Are you happy for me to do this?

Is there anything that you would like to ask me about the evaluation?

Example wording used at the start of interview with pupils

My name is XXXX,

I'm a researcher for the National Foundation for Educational Research. I'd like to talk to you about the tuition that you've been getting from [name of tutor]. This will help me to understand how well the Tutor Trust tuition is working and if there's any way to improve it. There are no right or wrong answers to the questions I will ask you. The interview will take up to 30 minutes (40 minutes if paired interview).

All the information you give me in this interview will be treated confidentially within our research team. We will use your information to inform a research report into how effective the Tutor Trust is, but won't name you in the report. The report will go to the Education Endowment Fund and the Tutor Trust.

Are you happy for me to interview you? We can stop the interview at any time you like. Do you mind if I record this conversation? I will delete the recoding once I have typed up my notes.

Is there anything you would like to ask me before we start?

Example wording used at the start of interview with tutors

Thank you for agreeing to be interviewed and for your support for this evaluation. As you are aware, NFER is currently evaluating the effectiveness and impact of Tutor Trust tuition, on behalf of the Education Endowment Foundation. We're in the third year of our evaluation so we also spoke to some tutors in 2012 and 2013.

As part of the evaluation we are carrying out case studies of schools that are receiving tuition from the Tutor Trust in this academic year. The purpose of this interview is to explore your perceptions of the programme and the training you have received.

The information that you provide will be treated entirely confidentially and anonymously. We will not identify any individual or school in any of our reports.

The interview will take up to 40 minutes. I would like to record it, to supplement my notes. The recording will be deleted once I have taken notes from it. Are you happy for me to do this?

Is there anything that you would like to ask me about the evaluation?

Appendix 3: Example pupil data form

Tutor Trust Secondary Evaluation Pupil Data Form
Academic Year: 2013–2014

Name of School	
School postcode	
DfE number	

Please use this form to record data on all pupils who received Tutor Trust tuition in mathematics and English during the academic year 2013–2014, as well as those who were *identified* to receive tuition but did not actually receive it.
Please complete and return this form, with password protection, to the Tutor Trust by Friday 27th June 2014.

Part 1: Pupil information											**Part 2: Tuition information**						
Pupil's name			**Unique Pupil Number (UPN)**	**Date of Birth**			**Looked After Child**	**In which subjects did you intend this pupil to receive tuition in?**	**Reason for tuition: MATHEMATICS**	**Reason for tuition: ENGLISH**	**Tuition sessions and hours: MATHEMATICS**		**Tutor:pupil ratio: MATHEMATICS**	**Did pupil miss lessons to receive tuition?: MATHEMATICS**	**Tuition sessions and hours: ENGLISH**		**Tutor:Pupil ratio: ENGLISH**	**Did pupil miss lessons to receive tuition?: ENGLISH**
First name (personal)	Second name (personal) *if applicable*	Family or surname		dd 00	mm 00	yy 00	*Please select 'Yes' or 'No' from the drop-down list to indicate whether each pupil is looked-after or not.*	*Please select the appropriate subject(s) from the drop-down list.*	*Please add in the main reason why you selected this pupil to receive **mathematics** tuition.*	*Please add in the main reason why you selected this pupil to receive **English** tuition.*	*Total number of **mathematics** tuition **sessions** attended in academic year 2013–2014*	*Total number of **hours** of **mathematics** tuition received in academic year 2013–2014*	*From the drop-down list, select the tutor–pupil ratio for the mathematics tuition sessions that the pupil took part in. For example, if a tutor delivered tuition to two pupils, select '1:2'*	*Please select 'Yes' or 'No' from the drop-down list to indicate whether each pupil habitually missed a lesson to receive **mathematics** tuition*	*Total number of **English** tuition **sessions** attended in academic year 2013–2014*	*Total number of **hours** of **English** tuition received in academic year 2013–2014*	*From the drop-down list, select the tutor–pupil ratio for the English tuition sessions that the pupil took part in. For example, if a tutor delivered tuition to two pupils, select '1:2'*	*Please select 'Yes' or 'No' from the drop-down list to indicate whether each pupil habitually missed a lesson to receive **English** tuition*

Appendix 4: Total number of Mathematics and English tuition sessions

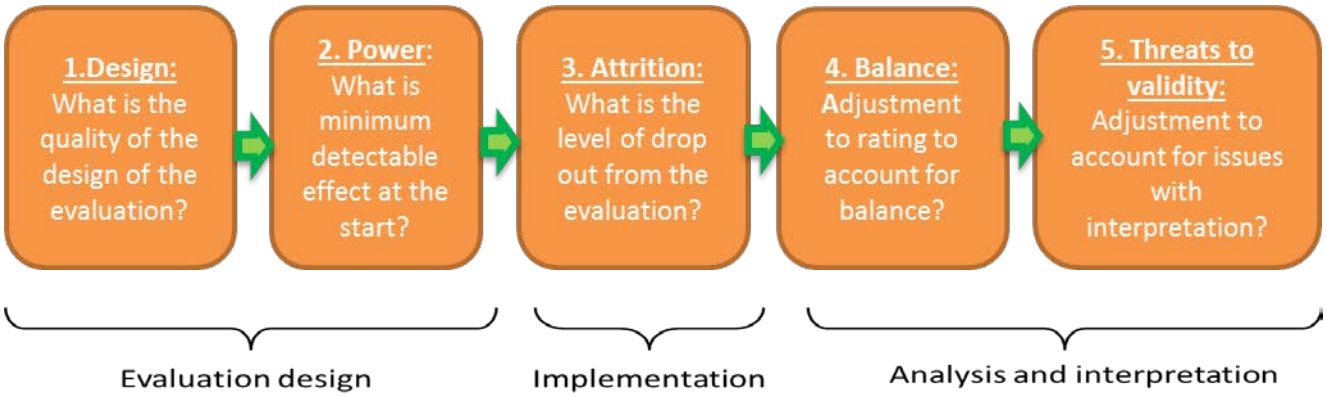
Table A1: Total number of Mathematics tuition sessions delivered to each pupil

Number of tuition sessions received	Phase 1	Phase 2	Phase 3
1	12	2	6
2	13	10	6
3	41	6	17
4	24	9	21
5	39	17	21
6	27	98	41
7	17	2	3
8	20	6	1
9	17	1	
10	16	10	53
11	5	2	
12	4	7	20
13	7	2	
15		48	
16		1	
18		1	
20		7	
22		8	
24		65	
25		3	19
27		15	
28			25
30		3	
Total	**242**	**323**	**233**

Table A2: Total number of English tuition sessions delivered to each pupil

Number of tuition sessions received	Phase 1	Phase 2	Phase 3
1	2	7	35
2	4	35	9
3	5	6	5
4	1	6	11
5	10	62	17
6	9	41	5
7	12	1	2
8	17	6	
9	11	1	
10	3	23	83
12		26	31
13		3	
15		33	
16		1	
17		1	22
25			19
30		21	
34			1
36			1
40			1
52			1
58			1
Missing		2	95
Total	**74**	**275**	**339**

Appendix 5: Security classification of trial findings



Rating	1. Design	2. Power (MDES)	3. Attrition	4. Balance	5. Threats to validity
5 🔒	Fair and clear experimental design (RCT)	< 0.2	< 10%	Well-balanced on observables	No threats to validity
4 🔒	Fair and clear experimental design (RCT, RDD)	< 0.3	< 20%		
3 🔒	Well-matched comparison (quasi-experiment)	< 0.4	< 30%		
2 🔒	Matched comparison (quasi-experiment)	< 0.5	< 40%		
1 🔒	Comparison group with poor or no matching	< 0.6	< 50%		
0 🔒	No comparator	> 0.6	> 50%	Imbalanced on observables	Significant threats

The final security rating for this trial is 0 🔒. This means that the conclusions have very low security.

- This evaluation was designed to have a matched control group, and therefore could have achieved a maximum of 3 🔒.
- The level of attrition was moderate—resulting in 3 🔒 for this criterion.
- The MDES is large, corresponding to a rating of 2 🔒.
- The matching was not optimal; in particular, the evaluators were unable to include pupil-level SEN, looked-after status, and EAL data in the matching or the statistical modelling, as they had planned. It was difficult to account for the pupil-level selection criteria in the analysis; in particular, pupils may have been selected because they were underperforming. Therefore, the design that the evaluators were able to execute is classified as 'poor' and awarded 1 🔒.
- Balance at baseline was high for many salient characteristics. However, for both the mathematics and the English analyses the control pupils had higher prior attainment scores. These differences were large (ES in the order of 0.2–0.5), and while recognising that prior attainment was included in the analysis, 1 🔒 is deducted from the overall score for this reasons.
- There were no major threats to validity.
- In conclusion, the overall security rating is 0 🔒.

Appendix 6: Cost rating

Cost rating	Description
£	*Very low:* less than £80 per pupil per year.
£ £	*Low:* up to about £200 per pupil per year.
£ £ £	*Moderate:* up to about £700 per pupil per year.
£ £ £ £	*High:* up to £1,200 per pupil per year.
£ £ £ £ £	*Very high:* over £1,200 per pupil per year.

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