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University of York 2019 Tutoring Programme: Evaluation Report

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Contents

      A. Attainment data specification
      B. Pupil pre and post surveys
      C. Parent and guardian pre survey
      D. Interview questions for senior teachers
      E. Interview questions for subject teachers
      F. Student tutor post survey

1. Introduction

1.1 The Maths and English Tutoring programme

The tutoring programme and evaluation were established as part of the University of York's 2018/19 Access Agreement, which was prepared for the Office for Fair Access (OFFA). Building on a smaller-scale tutoring programme that took place in 2017/18 (Hancock, 2019), the 2018/19 tutoring programme sought to support the attainment of pupils who would not otherwise have access to tutoring. Four schools in York participated in the tutoring programme. Each identified up to 20 pupils eligible for the Pupil Premium to receive tuition. By focusing on attainment in General Certificate of Secondary Education (GCSE) Maths, English Language and English Literature, the tutoring programme aimed to help broaden the educational and vocational opportunities of these pupils after they leave school.

Why tutoring?
In a landmark paper, Bloom (1984) noted that one to one tutoring could improve class marks by two standard deviations; a considerable effect. A substantive body of research has since confirmed this potential (Dietrichson et al., 2017; Education Endowment Foundation (EEF), 2017). Following a recent review of evidence, the EEF (2017) concluded that under the correct conditions, one to one tuition can accelerate pupils' learning by five additional months' progress.

Families with sufficient economic resources are increasingly employing private tutors. It is estimated that one quarter of all state school pupils in the United Kingdom (UK) now have a private tutor, while in London, almost half of all state school pupils do (Sutton Trust, 2016, 2019). Parents with children at independent schools are also increasingly likely to be 'topping up' their child's education with a private tutor (Sutton Trust, 2016, 2019). Yet because private tuition is expensive, children from less affluent families who cannot afford these services are risk of becoming further disadvantaged in what Elliot & Major (2018) refer to as the 'educational arms race.'

Defining tutoring
For the purposes of this programme, tutoring is defined as two to one tuition, whereby an undergraduate at the University of York tutored two secondary school pupils in Year 11 in an effort to provide intensive, tailored support in GCSE Maths and/or English Language and Literature. To be recruited, the undergraduates must have studied for a General Certificate of Education Advanced Level (A Level) in the subject in which they would be tutoring.

In their review, the EEF (2017) noted that 'short, regular sessions' over a set period of 6 - 12 weeks results in 'optimum impact.' The University of York's tutoring programme therefore involved eight one-hour sessions over the course of eight weeks in early 2019. Since the EEF (2017) also noted the importance of: a) explicitly linking tutoring material to what is being taught in pupil's lessons; and b) well trained tutors, staff from the University of York's Widening Participation & Access team worked closely with each school to prepare the tutors and ensure that the tutoring material was complementary to pupils' lessons.

1.2 Focus of this report

This report shares findings from the second year of the tutoring programme. The evaluation approach is set out in the following chapter. Chapter 3 describes the pupil sample; Chapter 4 presents findings; and Chapter 5 offers concluding remarks and recommendations for future tutoring programmes.

2. Evaluation methods

The evaluation framework established for the tutoring programme has a number of aims. It seeks to enable the University of York and participating schools to closely monitor pupils', tutors' and teachers' experiences of the tutoring programme; to understand its effectiveness; and, if necessary, to adapt practices during subsequent tutoring programmes. This is particularly important since most of the research into one or two to one tuition has involved primary school pupils (Dietrichson et al., 2017; EEF, 2017). In addition, the evaluation framework responds to the expectations set out by OFFA for evaluating the impact of university outreach programmes. The ways in which this evaluation aligns with OFFA's standards of evidence is discussed at the end of this chapter.

Evaluation design
The evaluation collected data from a number of groups involved with the tutoring programme and employed a variety of quantitative and qualitative data collection methods. These methods are outlined in table 2.1, below. Research instruments can be found in the report appendix. The evaluation design was reviewed and approved by the University of York's Education Ethics Committee. Informed consent was obtained from all of the participants in this evaluation. Parents and guardians were asked to provide informed consent on behalf of the pupils, since most (79.2%) were not aged 16 at the beginning of the evaluation.

Data source	Method	Detail and analysis
Attainment data	Prior, predicted and post attainment provided by school	Quantitative analysis of pre- and post-differences
Pupils	Pre- and post-surveys	Pre- and post-surveys with closed and open questions exploring self-rated subject knowledge and skill confidence, post-school plans and aspirations for higher education
Parents and guardians	Pre-survey	Survey with closed questions recording demographic characteristics and family circumstances, and pupils' aspirations for higher education
Senior and subject teachers	Interview	Qualitative interview exploring reflections on the programme; recorded, transcribed and inductively analysed
Student tutors	Post-survey	Survey with closed and open questions exploring motivations for tutoring, experiences and recommendations

Table 2.1. Overview of evaluation design

All pre-surveys were distributed to pupils, as well as parents and guardians, before tutoring began. All post-surveys and interviews were conducted shortly after the tutoring concluded, so that participants' perspectives on the tutoring remained recent. Pupils' attainment and responses to pre- and post-surveys, together with the demographic information provided by the parent or guardian, were linked using surnames into one dataset, which has subsequently been anonymised.

Sample

As noted, four schools in York participated in the tutoring programme. In accordance with ethical requirements, these, as well as participants, are anonymised in this report. Each school identified up to 20 pupils eligible for the Pupil Premium across Key Stage 4 Maths and English. In this report, the analysis is limited to pupils for whom parental or guardian consent was obtained. As is discussed in more detail in the next chapter, this resulted in a pupil sample of 53, with 20 at school A, 17 at School B and 16 at School C. School D returned no informed consent forms. Altogether, data was collected from some 81 individuals involved in the tutoring programme. Additional detail on each source of data are provided in Chapter 3 and in the presentation of the research findings in Chapter 4.

Standards of evidence

The mixed method evaluation design is intended to provide a rich insight into the experiences and impact of the tutoring programme, as perceived by those involved in it. With reference to OFFA's standards of evidence on the evaluation on university outreach, there are a number of noteworthy considerations. Firstly, it is important to acknowledge that the tutoring programme is not an isolated intervention and that the evaluation does not make use of a control group. Many of the pupils in this programme also participated in a number of other interventions during their final year of school. Secondly, with a sample of this size (<30 tutees for each subject), it is important to treat findings with a moderate to high degree of caution. Nevertheless, it is intended that collecting more robust quantitative data in future years as the programme grows will be possible. Had School D returned informed consent forms, as well as the pre- and post-surveys and attainment data, it would have been possible to make inferences much more confidently. Phrasing these considerations another way, it is suggested that the current evaluation approach meets OFFA's 'Level 2' standards of evidence; that is, in addition to a narrative account of change, quantitative evidence of pre- and post-intervention differences are reported, though this does identify causal relationships between the intervention and outcomes. It is hoped that with more data over a longer period of time, the evaluation should move towards the Level 3 requirement (Crawford, Dytham & Naylor, 2017).

3. Pupil sample

Pupils' demographic characteristics

The distribution of pupils by school and tutoring subject is displayed on Table 3.1a, below. At school A, 20 pupils received tuition; half received English tuition, while half received maths tuition. At School B, 17 pupils received tuition; just under half (41.2%) received English tuition, while the remainder (58.2%) received maths tuition. At School C, 16 pupils received tuition; just under half (43.8%) received English tuition, around a third (37.5%) received maths tuition and just under a fifth (18.8%) received both English and maths tuition. Consequently, 28 pupils received English tuition, while 28 received maths tuition.

	Tutoring subject			
	English	Maths	Both	Total
School				
A (*n*)	10	10	0	20
%	50.0	50.0	0.0	100.0
B (*n*)	8	9	0	17
%	47.1	52.9	0	100.0
C (*n*)	7	6	3	16
%	43.8	37.5	18.8	100.0
Total (*n*)	25	25	3	53
%	47.2	47.2	5.6	100.0

Table 3.1a. Tutoring subject of pupils by school
Notes: *n* = 53; numbers are italicised. Percentages displayed.

Each school employed shared eligibility criteria when recruiting for the tutoring programme in the sense that they recruited pupils who were both eligible for the Pupil Premium and who they thought would benefit from tuition. Pupils from across the academic ability spectrum where therefore recruited. Pupils' demographic characteristics are displayed on Table 3.1b, overleaf. It is important to note, however, that School B gathered a limited range of information on pupils' parental or sibling background.

Schools A and C recruited a smaller proportion of male pupils than School B. All of the parents who stated their ethnicity clearly were 'White British'. Less than a tenth (5.5%) of pupils at Schools A and C had a graduate parent, while less than a fifth (19.4%) had a sibling in higher education. Few of the pupils' parents were employed in professional or managerial occupations (5.5%), with most (44.4%) being either unemployed (22.2%) or employed in semi- (11.1%) or routine (11.1%) occupations. What this suggests is that most of the pupils for whom background information was obtained originated from what could be broadly described as lower socio-economic backgrounds.

	School			
	A	B	C	Total
Age				
15	80.0	82.4	75.0	79.2
16	20.0	17.6	25.0	20.8
Gender				
Male	30.0	64.7	43.8	45.3
Female	70.0	35.3	56.2	54.7
Ethnicity				
White British	30.0	64.7	43.8	43.4
Inadequately described	70.0	25.3	56.2	56.6
In care	0.0	Unknown	0.0	0.0
Graduate parent	5.0	Unknown	6.2	3.8
Parent social class				
nagerial and professional occupations	0.0	Unknown	0.0	0.0
nagerial and professional occupations	5.0	Unknown	6.3	5.5
Intermediate occupations	10.0	Unknown	12.5	11.1
l employers and own account workers	25.0	Unknown	0.0	13.9
supervisory and technical occupations	0.0	Unknown	0.0	0.0
Semi-routine occupations	10.0	Unknown	12.5	11.1
Routine occupations	10.0	Unknown	12.5	11.1
ever worked or long-term unemployed	25.0	Unknown	18.8	22.2
Not classified	15.0	Not applicable	37.5	25.0
Sibling in higher education	20.0	Unknown	18.8	19.4

Table 3.1b. Demographic characteristics of pupils by school

Notes: *n* =53. Percentages displayed. Parental social class was calculated using the Office for National Statistics' 'simplified method' (on the basis of self-reported parental job title).

All of the pupils were studying mandatory GCSEs in Maths, English Literature, English Language and Science. The most commonly studied optional GCSEs included Foreign Languages (54.7%), History (39.7%) and Geography (60%). Few pupils, however, studied Physical Education (22.6%) or artistic subjects such as Art (13.2%), Drama (17%), Music (5.7%) or Photography (7.5%). The only subjects that have been examined in this evaluation include those which at least 40% of pupils studied; that is: Maths (100%); English Literature (100%); English Language (100%); Science (100%); Foreign Languages (51%); History (41.5%) and Geography (60.4%).

4. Findings

4.1 Pupil outcomes

Confidence in study skills and GCSE subjects
In the pre- and post-tutoring surveys, pupils were asked to rate their confidence in their study skills (see Chart 4.1a, below, and Table 4.1a, Table 4.1b and Table 4.1c, overleaf). Specifically, pupils were asked to rate their agreement with the statement 'I am good at…' on a scale which ranged from 'strongly disagree' to 'strongly agree' in response to several different study skills. Chart 4.1a displays the percentage changes in pupils' self-reported confidence in their study skills after tutoring. Tutoring was associated with a notable increase in confidence in most (4 out of 7) study skills; that is, in literacy, problem solving and verbal and written communication. Regarding these study skills, the proportion of pupils strongly agreeing that they are good at them increased, while the proportion disagreeing or strongly disagreeing that they are good at them almost exclusively decreased.
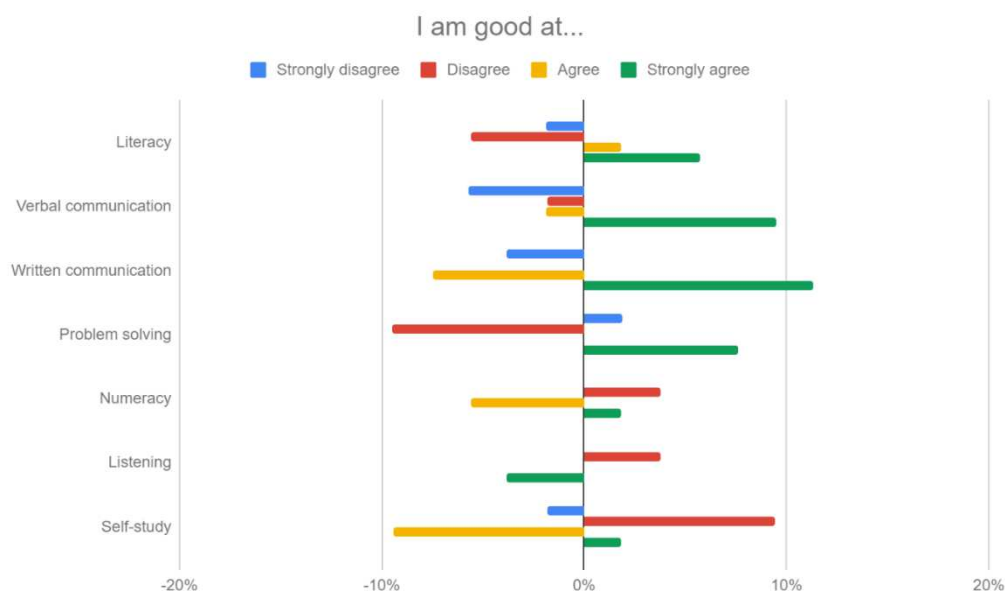
Chart 4.1a. Pre- and post-tutoring changes in pupils' self-reported confidence in their study skills
Notes: *n* = 53. Axes show percentage changes in all pupils' response to a series of 'I am good at…' statements after the tutoring had taken place.

On closer inspection, it appears that pupils generally became more confident in the study skills most closely related to the subject for which they received tuition (see Table 4.1b and Table 4.1c, overleaf). For example, an additional seventh (14.3%) of maths tutees either agreed (10.7%) or strongly agreed (3.6%) that they are good at problem solving after tutoring. Furthermore, an additional tenth (10.7%) of English tutees either agreed (3.6%) or strongly agreed (7.2%) that they are good at literacy after tutoring, while an additional sixth (17.9%) strongly agreed that they are good at written communication.

|	Strongly disagree	Disagree	Agree	Strongly agree
Baseline				
I am good at literacy	3.8	26.4	62.3	7.5
I am good at verbal communication	5.7	22.6	49.1	22.6
I am good at written communication	3.8	20.8	69.8	5.7
I am good at problem solving	0.0	20.8	67.9	11.3
I am good at numeracy	1.9	22.6	54.7	20.8
I am good at listening	1.9	7.5	69.8	20.8
I am good at self-directed study	7.5	28.3	58.5	5.7
Post-tutoring				
I am good at literacy	1.9	20.8	64.1	13.2
I am good at verbal communication	0.0	20.8	47.2	32.1
I am good at written communication	0.0	20.8	62.3	17.0
I am good at problem solving	1.9	11.3	67.9	18.9
I am good at numeracy	1.9	26.4	49.1	22.6
I am good at listening	1.9	11.3	69.8	17.0
I am good at self-directed study	5.7	37.7	49.1	7.5

Table 4.1a. Pre- and post-tutoring changes in pupils' self-reported confidence in their study skills

Notes: n = 53. Percentages displayed.

	Strongly disagree	Disagree	Agree	Strongly agree
Baseline				
I am good at literacy	3.6	32.1	57.1	7.1
I am good at verbal communication	7.1	21.4	46.4	25.0
I am good at written communication	3.6	21.4	67.9	7.1
I am good at problem solving	0.0	28.6	64.3	7.1
I am good at numeracy	0.0	28.6	60.7	10.7
I am good at listening	3.6	14.3	67.9	14.3
I am good at self-directed study	7.1	35.7	50.0	7.1
Post-tutoring				
I am good at literacy	3.6	28.6	53.6	14.3
I am good at verbal communication	0.0	25.0	46.4	28.6
I am good at written communication	0.0	28.6	57.1	14.3
I am good at problem solving	3.6	10.7	75.0	10.7
I am good at numeracy	3.6	28.6	53.6	14.3
I am good at listening	3.6	17.9	67.9	10.7
I am good at self-directed study	10.7	39.3	46.4	3.6

Table 4.1b. Pre- and post-tutoring changes in maths tutees' self-reported confident in their study skills

Notes: n = 28. Percentages displayed. Includes three pupils tutored in both English and maths.

	Strongly disagree	Disagree	Agree	Strongly Agree
Baseline				
I am good at literacy	3.6	17.9	67.9	10.7
I am good at verbal communication	3.6	28.6	46.4	21.4
I am good at written communication	3.6	17.9	71.4	7.1
I am good at problem solving	0.0	14.3	71.4	14.3
I am good at numeracy	3.6	17.9	50.0	28.6
I am good at listening	0.0	3.6	67.9	28.6
I am good at self-directed study	7.1	21.4	64.3	7.1
Post-tutoring				
I am good at literacy	0.0	10.7	71.4	17.9
I am good at verbal communication	0.0	17.9	46.4	35.7
I am good at written communication	0.0	10.7	64.3	25.0
I am good at problem solving	0.0	10.7	64.3	25.0
I am good at numeracy	0.0	25.0	42.9	32.1
I am good at listening	0.0	7.1	67.9	25.0
I am good at self-directed study	0.0	35.7	53.6	10.7

Table 4.1c. Pre- and post-tutoring changes in English tutees' self-reported confidence in their study skills

Notes: n = 28. Percentages displayed. Includes three pupils tutored in both English and maths.

Perhaps more importantly for the purposes of evaluating the effectiveness of the tutoring programme, pupils were also asked to rate their confidence in their GCSE subjects (see Chart 4.1b, below, and Table 4.1d, Table 4.1e and Table 4.1f, overleaf). Specifically, pupils were asked to state whether they were 'not at all', 'somewhat' or 'very' confident in each of the subjects that they were studying. Chart 4.1b displays the percentage changes in pupil's self-reported confidence in their subjects after tutoring. Tutoring was associated with a notable increase in confidence in Maths and English Language, in particular. Curiously, however, negligible changes were observed for English Literature.
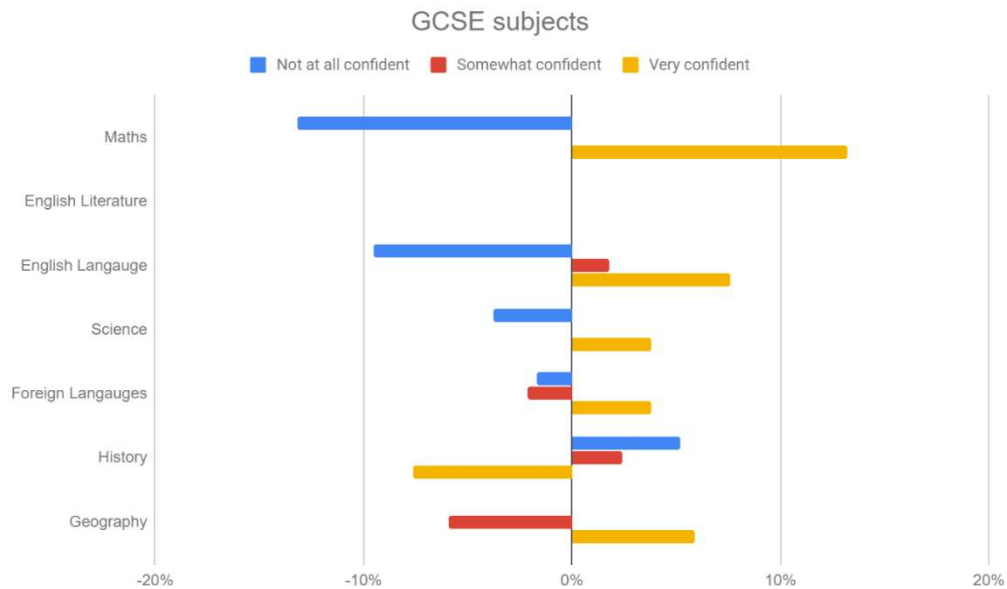

Chart 4.1b. Pre- and post-tutoring changes in pupils' self-reported confidence in their GCSE subjects
Notes: *n* = 53. Axes show percentage changes in response to GCSE subjects.

	Not at all confident	Somewhat confident	Very confident
Baseline			
Maths	22.6	64.2	13.2
English Literature	26.4	67.9	5.7
English Language	34.0	58.6	7.5
Science	32.1	58.5	9.4
Foreign Languages	50.0	40.0	10.0
History	9.1	50.0	40.9
Geography	9.7	80.6	9.7
Post-tutoring			
Maths	9.4	64.2	26.4
English Literature	26.4	67.9	5.7
English Language	24.5	60.4	15.1
Science	28.3	58.5	13.2
Foreign Languages	48.3	37.9	13.8
History	14.3	52.4	33.3
Geography	9.4	75.0	15.6

Table 4.1d. Pre- and post-tutoring changes in self-reported confidence in their GCSE subjects
Notes: $n = 53$. Percentages displayed.

	Not at all confident	Somewhat confident	Very confident
Baseline			
Maths	25.0	64.3	10.7
English Literature	28.6	64.3	7.1
English Language	32.1	57.1	10.7
Science	39.3	57.1	3.6
Foreign Languages	50.0	43.8	6.3
History	7.7	53.7	38.5
Geography	6.3	87.5	6.3
Post-tutoring			
Maths	7.1	67.9	25.0
English Literature	32.1	60.7	7.1
English Language	32.1	57.1	10.7
Science	35.7	53.6	10.7
Foreign Languages	50.0	43.8	6.3
History	16.7	41.7	41.7
Geography	6.3	68.8	25.0

Table 4.1e. Pre- and post-tutoring changes in maths tutees' self-reported confidence in their GCSE subjects
Notes: $n = 28$. Percentages displayed. Includes three pupils tutored in both English and maths.

	Not at all confident	Somewhat confident	Very confident
Baseline			
Maths	25.0	60.7	14.3
English Literature	21.4	71.4	7.1
English Language	32.1	60.7	7.1
Science	21.4	64.3	14.3
Foreign Languages	52.3	29.4	17.6
History	10.0	40.0	50.0
Geography	18.8	68.8	12.5
Post-tutoring			
Maths	14.3	60.7	25.0
English Literature	17.9	78.6	3.6
English Language	17.9	60.7	21.4
Science	25.0	60.7	14.3
Foreign Languages	43.8	31.3	25.0
History	9.1	63.6	27.3
Geography	11.8	82.4	5.9

Table 4.1f. Pre- and post-tutoring changes in English tutees' self-reported confidence in their GCSE subjects
Notes: $n = 28$. Percentages displayed. Includes three pupils tutored in both English and maths.

Disaggregating the sample, it appears that the largest increases in confidence were experienced by pupils in the specific subjects for which they received tuition (see Table 4.1e and Table 4.1f, above). For example, an additional sixth (17.9%) of maths tutees stated that they felt either somewhat (3.6%) or very confident (14.3%) in Maths after tutoring, while an additional seventh (14.3%) of English tutees stated that they felt very confident in English Language.

Looking specifically at maths tutees' confidence in Maths, it is clear that while none became less confident, several expressed more confidence (see Chart 4.1c, below). Indeed, when controlling for the four maths tutees for whom it was not possible to become more confident, it appears that an additional third (8 out of 24; 33.3%) of maths tutees became more confident in Maths.
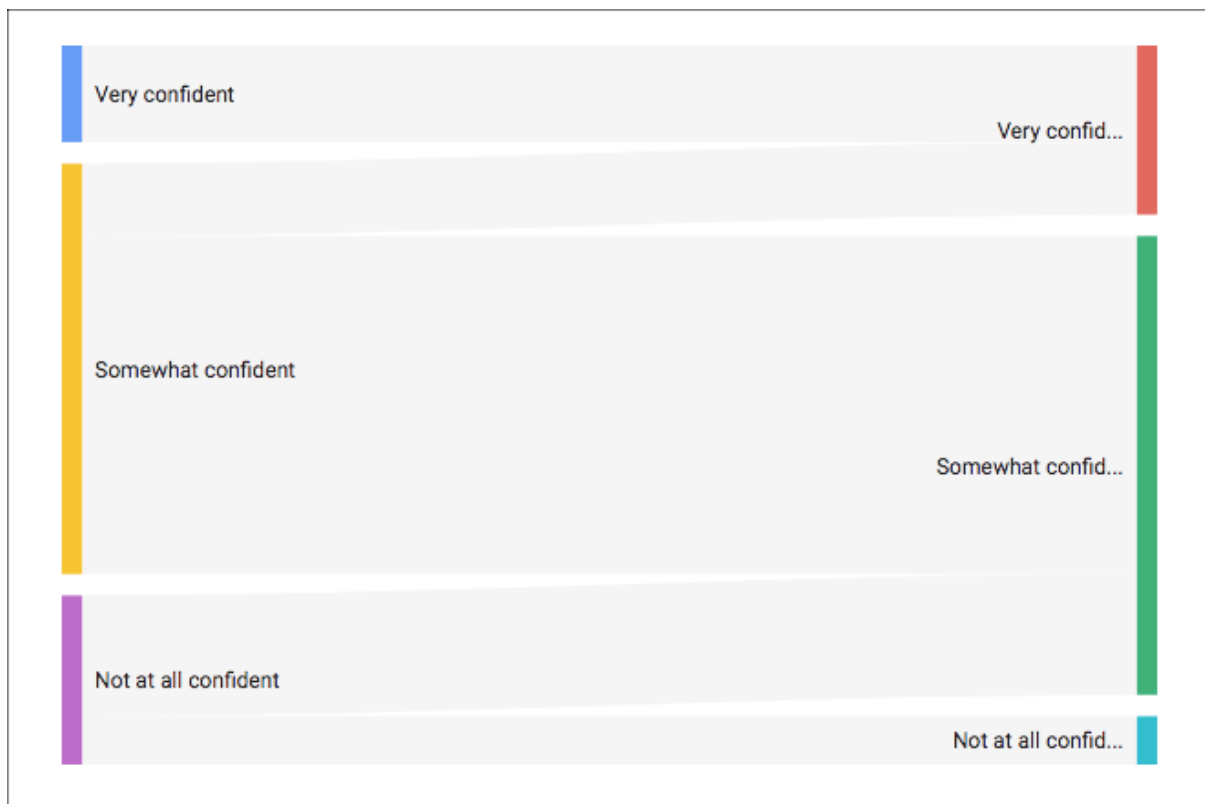

Chart 4.1c. Pre- and post-tutoring changes in maths tutees' self-reported confidence in GCSE Maths
Notes: maths tutees $n = 28$. Includes three pupils tutored in both English and maths.

The picture was less clear for English tutees in English Language and English Literature, however: some lost confidence, while others gained or expressed the same amount.

In response to the open questions on the post-tutoring survey, the vast majority of pupils referred to becoming more confident in their academic abilities. Illustrating this, pupils described what they most enjoyed about tutoring:

> Learning the process you should go through to answer each specific question - it made me feel more confident when answering questions
> (Female pupil; tutored in English at School A)

> Getting more confident with my English
> (Female pupil; tutored in English at School C)

> Being able to recap on a subject I was not confident with
> (Male pupil; tutored in maths at School A)

> Becoming more confident in answering more complex questions
> (Female pupil; tutored in maths at School C)

When asked what their proudest achievement had been, pupils again tended to refer to becoming more confident, as well as experiencing success in academic tasks:

> I've seen an improvement in my work and confidence
> (Female pupil; tutored in maths at School A)

> Being able to do the higher mark questions with more confidence
> (Female pupil; tutored in English at School B)

> Doing quite high tier questions - and getting them right!
> (Male pupil; tutored in maths and School B)

> Being able to answer things I couldn't before
> (Female student; tutored in English at School C)

While a degree of caution should be taken before inferring a causal relationship between tutoring and increased confidence due to a relatively small sample size and absence of a control group, responses to the pre- and post-tutoring surveys suggest that tutoring may have performed an important role in enhancing pupils' confidence in the specific subjects, and associated study skills, for which they received tuition.

Attainment

An arguably more concrete measure of the effectiveness of the tutoring programme can be found by examining the pupils' attainment before and after the tutoring programme took place. Pupils' attainment in mock examinations prior to the tutoring programme has been compared with their actual attainment (released in August) in an attempt to identify changes. As noted earlier in the report, changes have not been tested for statistical significance because the sample size for each group (i.e. with and without tuition) falls short of the minimum threshold of 30. The results presented in this report should therefore be interpreted as indicative of potential causal relationships, with more extensive analysis needed in future iterations of the evaluation before robust conclusions can be drawn.

Table 4.1g, below, provides an overview of attainment change for all of the pupils. Positive trends are depicted, with pupils' mean attainment score increasing across the board. It rose from 3.6 to 4.2 in Maths, 3.8 to 4.1 in English Language and 3.1 to 3.8 in English Literature.

	August result	Grade change	Standard deviation
Maths	4.2	0.6	1.5
English Langauge	4.1	0.3	1.7
English Literature	3.8	0.7	1.5

Table 3.1g. Average attainment results across the sample.
Notes: *n* = 53. Mean grade calculated.

Tables 3.1g and Table 3.1.h, overleaf, separate the sample by tuition received. Table 3.1h shows Maths attainment only. Importantly, in addition to performing marginally better than those who did not receive maths tuition in their actual Maths examination, maths tutees also made more progress between their mock and actual Maths examinations than their counterparts. While maths tutees' mean attainment improved by an entire grade (1), the mean attainment of those who did not receive maths tuition improved by just a fifth (0.2). In addition, maths tutees' Maths attainment was less varied than that of their counterparts, with the majority (71.5%) of maths tutees achieving a 4 (28.6%) or 5 (39.3%), equal to a standard or strong pass, respectively. In contrast, less than half (48%) of those who did not receive maths tuitions received a 4 (28%) or 5 (20%), with a third (32%) falling short falling short of a pass. (In comparison, a quarter (25%) of maths tutees fell short of a pass in Maths.)

For both English Language and English Literature (see Table 3.1i), pupils' mean attainment increased by an almost identical amount, regardless of whether they received English tuition or not. For English Language, English tutees' mean attainment increased by just a fifth (0.2), while in English Literature, it increased by a more noticeable two thirds (0.7). In both subjects, however, the mean attainment of pupils who did not receive English tuition increased by approximately the same amount (0.3 and 0.8, respectively), meaning that it is much more difficult to infer a potentially causal relationship.

	August result	Grade change	Standard deviation
Maths (with tuition)	**4.3**	**1**	**1.1**
Maths (without tuition)	4.2	0.2	1.8

Table 3.1h. Average attainment results for Maths (with and without tuition).
Notes: With tuition $n = 28$; Without tuition $n = 25$. Mean grade calculated.

	August result	Grade change	Standard deviation
English Langauge (with tuition)	**4.3**	**0.2**	**1.7**
English Langauge (without tuition)	3.9	0.3	1.6
English Literature (with tuition)	**4**	**0.7**	**1.3**
English Literature (without tuition)	3.6	0.8	1.6

Table 3.1i. Average attainment results for English Language and Literature Maths (with and without tuition)
Notes: With tuition $n = 28$; Without tuition $n = 25$. Mean grade calculated.

While a degree of caution should be still taken before inferring a causal relationship between maths tuition and improved attainment in Maths due to a relatively small sample size and absence of a control group, the results suggest that tutoring may have enhanced maths' tutees attainment in Maths. It is not, however, possible to detect such a change with reference to English tutees performance in England Language and English Literature. Yet it is still worth noting that, at the very least, English tutees' attainment did not appear to suffer as a result of the tutoring.

Future plans and aspirations

This section considers changes in pupils' post-schools plans and higher education intentions before and after tutoring. Prior to tutoring, most pupils intended to continue in full-time vocational education (BTEC) post-school. This continued to be the case after tutoring (see Table 3.1g, overleaf). Just under half (41.2%) of pupils selected continuing in full-time vocational education (BTEC) as their preferred post-school option, while around a third (31.4%) chose an apprenticeship and a quarter (25.5%) opted for continuing in full-time academic education (A-Levels). The proportion of pupils intending to do a BTEC, apprenticeship or traineeship increased by 5.3% after tutoring, while the proportion of pupils intending to do A-Levels decreased by the same amount. What this suggests is that increases in pupils' academic subject-related confidence may not neatly translate into an increased desire to pursue an academic post-school route.

	Pre-tutoring				Post-tutoring				Pre to post
	A	B	C	Total	A	B	C	Total	change
Post school plans									
Full-time education (A Levels)	50.0	6.3	31.3	**30.8**	36.8	6.3	31.3	**25.5**	-5.3
Full-time education (BTEC)	30.0	62.5	38.5	**38.5**	36.8	50.0	37.5	**41.2**	2.7
Apprenticeship	20.0	31.3	31.3	**30.8**	26.3	37.5	31.3	**31.4**	0.6
Traineeship	0.0	0.0	0.0	**0.0**	0.0	6.3	0.0	**2.0**	2.0
Part-time employment or volunteering alongside education or training	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0
Intention to enter higher education									
Yes	50.0	25.0	26.7	**35.3**	45.0	17.6	31.3	**32.1**	-3.2
No	10.0	37.5	33.3	**25.5**	20.0	47.1	31.3	**32.1**	6.6
Undecided	40.0	37.5	40.0	**39.2**	35.0	35.3	37.5	**35.8**	-3.2

Table 3.1g. Post-school plans and higher education intentions

Notes: School A *n* = 20; School B *n* = 17; School C *n* = 16. Percentages displayed.

Turning to higher education, prior to tutoring, most (74.5%) pupils either intended (35.3%) or were undecided (39.2%) about whether to enter higher education. After tutoring, the proportion of pupils not intending to enter higher education increased from 25.5% to 32.1%, while the proportion intending - or undecided about whether to - enter higher education decreased slightly. 76% of pupils reported that they felt no more or less informed about higher education after tutoring (see Table 3.1h, below). Importantly, however, while a fifth or less of pupils in Schools A and C felt more informed about higher education after tutoring, almost half (43.8%) at School B did. In addition, most (68.8%) of the pupils at School B had either changed their mind (12.5%) about higher education or were unsure (56.3%) as to whether they had, in comparison to just 45% and 33.3% at Schools A and C, respectively.

	Post-tutoring			
	A	**B**	**C**	**Total**
Do you feel more informed about higher education?				
Less informed	0.0	0.0	6.7	**2.0**
More informed	5.0	43.8	20.0	**21.6**
No difference	95.0	56.3	73.3	**76.5**
Have you changed your mind about higher education?				
No	55.0	31.3	66.7	**51.0**
Yes	5.0	12.5	13.3	**9.8**
Unsure	40.0	56.3	20.0	**39.2**

Table 3.1h. Understanding and perceptions of higher education
Notes: School A $n = 20$; School B $n = 17$; School C $n = 16$. Percentages displayed.

In response to an open question, pupils at School A, in particular, reported that they did not talk about higher education with their tutors:

> The programme didn't explain anything about university
> (Male pupil; tutored in maths at School A)

> They haven't talked about going to university
> (Female pupil; tutored in English at School A)

> Tutoring about GCSEs, no further
> (Female pupil; tutored in English at School A)

> It has helped me more with my English work than my opinion on university
> (Female pupil; tutored in maths at School A)

Almost half (43.8%) of the pupils at School C did not respond to the question asking them to elaborate. Those who did, however, either reported that they either remained unsure about whether they would benefit from higher education or noted that they had made plans prior to tutoring which had not since changed.

Interviews with teachers at School B revealed that pupils had been permitted to take 15 – 20 minutes to talk casually with tutors, and have refreshments, before tutoring began. (Refreshments consisted of tea, coffee, hot chocolate and biscuits). It may be for this reason that the pupils at School B were more likely to report feeling more informed about higher education

after tutoring. It could be, for example, that during such time was higher education was discussed. Two pupils from School B commented:

> My tutor explained how you have time for what you need to do and the support that you need. But you also have time for yourself and to have fun
> (Female pupil; tutored in English at School B)

> Sounds like it is fun and can get working experience from it
> (Male pupil; tutored in maths and School B)

Having noted this, however, other pupils at School B also reported that they did not talk about higher education with their tutors.

Table 3.1i, below, displays pupils' motivations for their post-school plans. As would be expected with a large proportion of pupils intending to pursue a vocational post-school route, gaining practical experience, developing particular skills and embarking on a particular career were consistently highly cited. It is also worth noting, however, that after tutoring an additional tenth (9.5%) of pupils cited advice from friends and family as a motivation, and that the proportion of pupils citing an ambition to enter higher education declined by a similar amount (7.5%).

	Pre-tutoring	Post-tutoring	Pre to post change
Reason for post school plans			
Gain practical experience	32.0	45.3	13.3
Develop particular skills	50.9	56.6	5.7
Embark on particular career	66.0	58.5	-7.5
Enhance future earnings	54.7	56.6	1.9
Develop academic study	13.2	11.3	-1.9
Progress to HE	28.3	20.8	-7.5
To follow advice from friends or family	9.4	18.9	9.5
To follow advice froom a teacher or advisor	7.5	5.7	-1.8
To fit around other life commitments	11.3	13.2	1.9

Table 3.1i. Reasons for post-school plans
Notes: n = 53. Percentages displayed.

Table 3.1j and Table 3.1k, overleaf, display the reasons why pupils were undecided about whether, or not intending, to enter higher education. Due to a poor response rate, however, a high degree of caution should be taken before inferring from the information provided. What does appear clear, however, is that a consistently large minority of undecided pupils were unsure about the financial costs associated with entering higher education, as well as what they would study.

	Pre-tutoring	Post-tutoring	Pre to post change
Unsure about HE			
Unsure of academic demands	45.0	15.8	-29.2
Unsure what to study	45.0	36.8	-8.2
Unsure where to study	10.0	5.3	-4.7
Unsure how to fit with other commitments	20.0	10.5	-9.5
Unsure about financial costs	30.0	26.3	-3.7
Unsure whether HE will help me to achieve my goals	25.0	21.1	-4.9

Table 3.1j. Undecided about higher education: reasons why
Notes: pre-tutoring *n*= 20; post-tutoring *n* = 19. Percentages displayed.

	Pre-tutoring	Post-tutoring	Pre to post change
Not intending to enter HE			
Don't think I'll meet academic requirements	23.1	17.6	-5.5
Don't want to stay in education	53.8	17.6	-36.2
Don't think I'm suited	30.8	11.8	-19.0
It's too expensive / don't know how to fund it	30.8	11.8	-19.0
Don't know what it will lead to	7.7	5.9	-1.8
Want to focus on something else	38.5	11.8	-26.7
Personal reasons (caring responsibilities, for example)	7.7	0.0	-7.7

Table 3.1k. Not intending to enter higher education: reasons why
Notes: pre-tutoring *n* = 13; post-tutoring *n* = 17. Percentages displayed.

Reflections

Tutoring appears to have enhanced pupils' confidence in the specific subjects, and associated study skills, for which they received tuition. In addition, maths tutees made more progress than, and outperformed, their counterparts in Maths. While the same cannot be said English tutees in English Language and English Literature, it is still worth noting that, at the very least, their attainment did not appear to suffer as a result of the tutoring. While less than a fifth of pupils at School A and C felt more informed about higher education after tutoring, almost half of those of School B did, perhaps due to the weekly opportunity that the pupils had to interact informally with their tutors. The vast majority (96.2%) of pupils reported that they would recommend the programme to someone else, while the remainder reported that they were unsure as to whether they would. When asked to explain their reasoning, pupils predominantly referred to confidence-enhancing and enjoyable nature of the tutoring programme, as well as its helpfulness:

> It was really helpful in helping me understand what is required for each question
> (Female pupil; tutored in English at School A)

> Super fun and enjoyable
> (Male pupil; tutored in maths and School B)

> It really helps with confidence and to ask for help because I never really asked for it
> (Male pupil; tutored in English and maths at School C)

In contrast to findings from the evaluation of the 2018 tutoring programme (Hancock, 2019), no pupils referred to the tutoring as awkward. When asked for suggestions on how to improve the programme, the vast majority (96.2%) of pupils reported that they could not think of any. One did, however, suggest greater use of practice examination questions, while another (from School A) suggested the provision of refreshments.

3.2 Undergraduate tutors

Demographic characteristics
23 of approximately 40 tutors completed the online survey aimed at exploring their experiences of the tutoring programme (a response rate of approximately 57.5%). 11 (47.8%) respondents tutored in maths, while 12 (52.2%) tutored in English. Respondents studied a variety of subjects, including: Chemistry; English Literature; History; Mathematics; Physics; Politics, Economics and Philosophy; and Psychology. Just under half tutored at School D (43.5%), while the remainder tutored at Schools A (26.1%), B (8.7%) or C (21.1%). 15 (62.2%) were female, 8 (37.8%) were male. Respondents appeared to predominantly, but not exclusively, originate from privileged social class backgrounds. Just under one fifth (17.4%) reported having attended an independent school; almost two thirds (60.8%) reported having at least one graduate parent; and most had at least one parent in a professional or managerial occupation.

Prior experience of tutoring
Just under half (47.8%) of the respondents reported that they had tutored before. Most (72.7%) had done so on a voluntary basis, although three (27.7%) reported that they had previously been paid to do so. Responses to open-ended questions indicated that the vast majority of tutoring that the tutors had previously done was at GCSE level. Around two thirds (65.2%) of the respondents had previous experience of working in an educational setting, either as a tutor, teaching assistant, primary school teacher or student volunteer as part of the University of York's York Students in Schools (YSIS) programme.

Reasons for volunteering
Tutors' reasons for volunteering varied. While the vast majority (73.9%) cited a desire to contribute to the University of York's local community, around two thirds cited a desire to gain practical experience (60.9%) and enhance their CV (60.9%). Just under half cited a desire to gain practical skills (47.8%) or support their progression into a teaching career (47.8%), while less than a fifth cited a desire to enhance their subject knowledge (17.4%).

The extent to which tutors felt that they had achieved what they had hoped to through the programme is displayed on Chart 3.2a, overleaf. All of the tutors hoping to develop subject knowledge and gain practical experience considered these aims to have been entirely achieved, while the majority of those hoping to enhance their CV (91.7%); work with young people (80%); support their progression into a teaching career (77.7%); develop particular skills (62.5%); or contribute to the University of York's local community (78.6%) also considered these aims to have been entirely achieved.
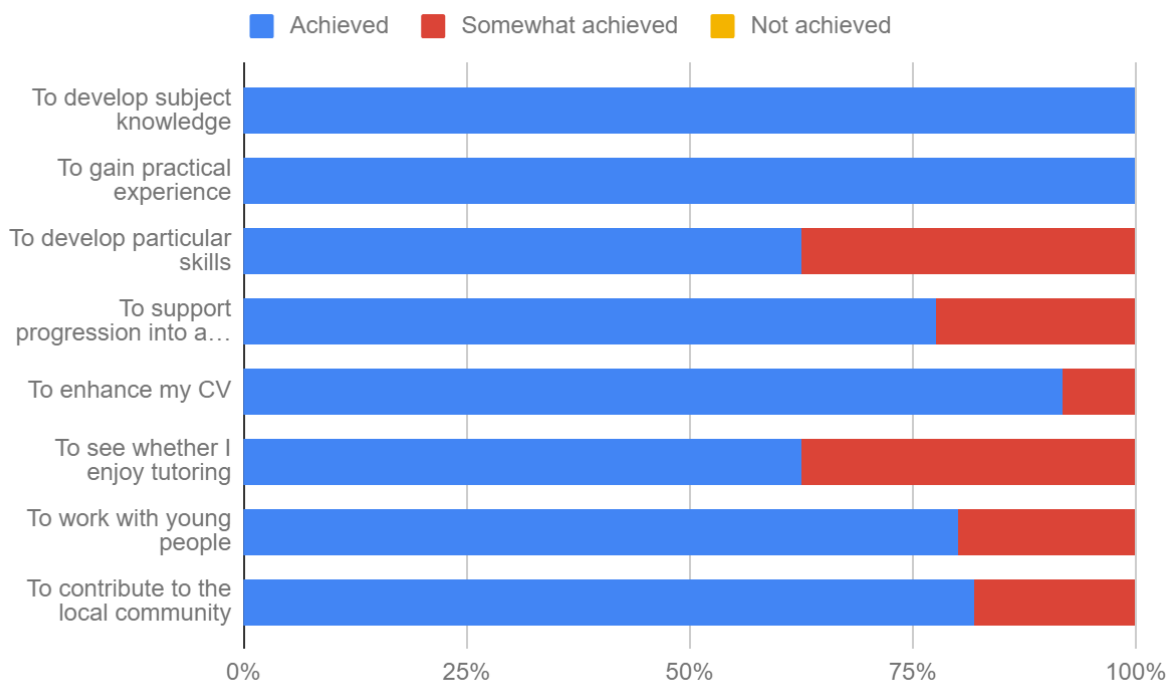
Chart 3.2a. Student volunteers' realisation of reasons for undertaking tutoring
Notes: *n* = 23. Respondents rated the realisation of objectives identified as a reason for undertaking tutoring.

Skills development

With regards to developing specific skills, most respondents cited a desire to improve their awareness of the school environment (65.2%), as well as their ability to work with young people (82.6%); communicate (82.6%); convey ideas (69.6%); and manage their time (52.2%). Just under half cited a desire to become more resilient (39.1%), as well as better at problem-solving (47.8%) and reflecting (43.5%). Just over a quarter (26.1%) cited a desire to improve their social and cultural awareness.

The extent to which the tutors felt that they had developed the skills that they had hoped to through the programme is displayed on Chart 3.2b, overleaf. All of the tutors stated that their skills had been either somewhat or well developed through the programme. Painting a positive picture, the majority of respondents who cited a desire to improve their awareness of the school environment (76.9%), as well as those who cited a desire to improve their ability to work with young people (75%); communicate (61.1%); and convey ideas (57.1%) considered these skills to have been well developed. Furthermore, all of the respondents who had cited a desire to become more resilient considered this skill to have been well developed, while the majority of those who cited a desire to become better at problem-solving (60%); reflecting (55.5%); and managing their time (70%) also considered these skills to have been well developed. None of the respondents considered themselves to have failed to develop a skill that they had hoped to.
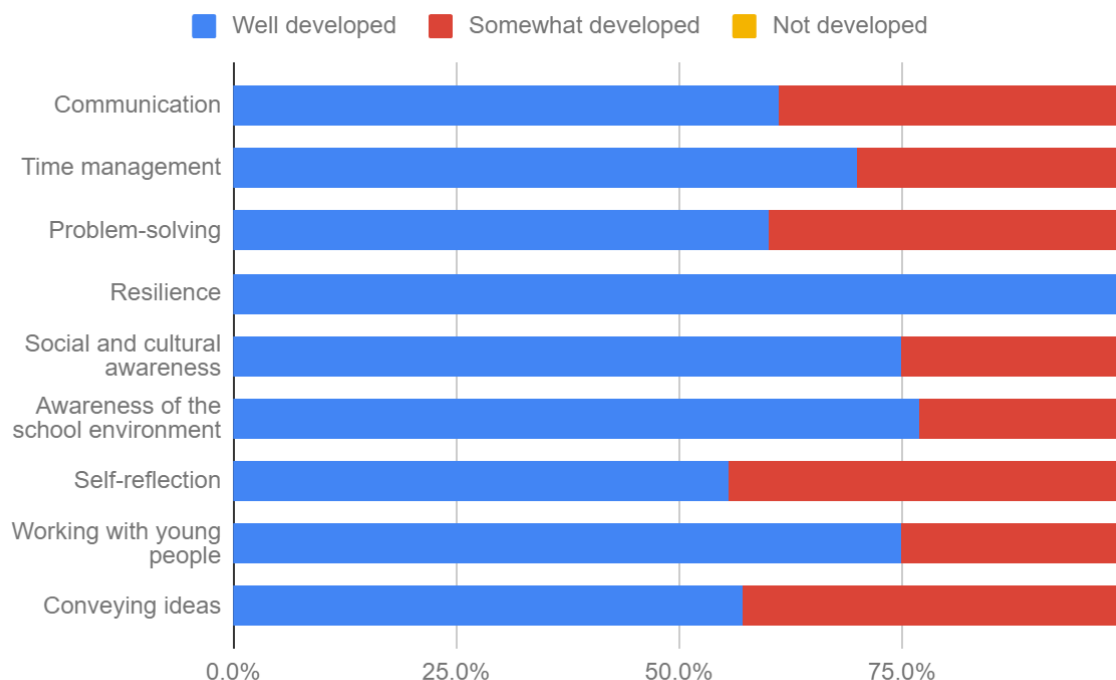
Chart 3.2b. Student volunteers' development of skills through tutoring
Notes: *n* = 23. Respondents rated the development of skills they had intended to enhance through tutoring.

Preparation for tutoring

The vast majority (90%) of respondents reported feeling either mostly (65%) or extremely well prepared (25%) for tutoring. In response to an open question, most tutors described the training as helpful:

> The training sessions helped with communication with younger pupils
> (Tutor at School A)

> I found the training very useful, and felt that all aspects were covered. It was helpful to go into the school before starting to get used to the environment. The resources that we were given before beginning the tutoring were detailed and easy for me to familiarise myself with
> (Tutor at School B)

> The training sessions covered everything - not just how to teach things, but how to act around young people and what to do in various scenarios. There's nothing I can think of that was missed
> (Tutor at School C)

> Well trained in dealing with students from tough backgrounds and how to deal with personal issues as well as helpful educational techniques
> (Tutor at School D)

Those who felt fairly unprepared suggested that more information about safeguarding and behavioural management would have been welcome, in addition to more examples of how to tutor specifically in maths rather than English.

Experiences of tutoring

All of the respondents found the tutoring programme either extremely (65%) or somewhat (35%) enjoyable. While challenging, most tutors described their experience as nonetheless rewarding:

> It was a delight to see the students begin to understand concepts that they were struggling with before
> (Tutor at School A)

> The whole experience was very rewarding and I enjoyed getting to know the students and help them prepare for the challenge of exams
> (Tutor at School B)

> I got to help the local community, as well as specifically helping some young people. Seeing them happy when they understood something was a very rewarding experience, and I'm glad I was able to help and be a part of it
> (Tutor at School C)

> I really enjoyed working with the pupils. It was a very different teaching experience to the one I already had
> (Tutor at School D)

When asked to reflect on their experiences, comparative to their initial expectations, most (80%) considered the programme to have been as or better than expected, with the remainder (20%) considering it to have been more challenging than expected. Having noted this, however, all of the tutors considered their workload to have been manageable. When asked what they found most challenging about the programme, respondents referred to finding it difficult to keep the pupils focused and engaged. While the vast majority (90%) of respondents reported that they had felt well supported by their school, a small proportion offered conflicting accounts of the quality and timeliness of resources.

Reflections

It appears that the majority of respondents found the programme enriching, considering it to have: a) enhanced their skills and preparedness for the graduate labour market; and b) enabled them to contribute to the University of York's local community:

> It is a great experience and a great CV builder, it is also just a really nice thing to be able to do to help the local community and doesn't take that much time out of your day to make a positive impact on someone else
> (Tutor at School A)

> I think that the opportunity to help prepare students for their exams where otherwise they wouldn't have access to the support is hugely rewarding
> (Tutor at School B)

> The experience is rewarding, it's a good thing to have on a CV, you get to help young people in the local community, so there's really no downside in my opinion
> (Tutor at School C)

> An incredibly worthwhile experience through which I have developed skills that will be applicable to whichever career path I choose (Tutor at School D)

Around a third (60.9%) of the respondents reported that they would participate in the programme again, while the remainder either reported they would consider doing so (26.1%) or did not respond to the question (23%). All of the respondents stated that they would recommend the programme to someone else, while several cited the positive impact that they considered themselves to have had on pupils' confidence, enthusiasm and preparedness for their GCSEs as a highlight of the programme. From the perspective of improving tutors' experiences, the takeaway messages appear to be that it is particularly important ensure that: a) the tutors are supplied with appropriate resources in a timely manner; and that b) the tutees perceive themselves to be able to contact a teacher for feedback or assistance when necessary.

3.3 Teacher perspectives

Interviews with teachers were conducted with either subject teachers or the Assistant Headteacher or Community and Transitions Coordinator at Schools A, B and C shortly after the tutoring had taken place. During the interviews, teachers' perspectives on the quality of tutors; the impact of the tutoring; challenges that had arose; and suggestions for the future were discussed.

Quality of tutors
All of the teachers praised the tutors for their enthusiasm, patience and professionalism, pointing out that it had been a pleasure to work with them:

> …one of the things that I'd really like to say is how professional and really wonderful the tutors were. You know, they were incredibly perceptive. They were keen to do what was right for the pupils. They were warm and friendly. Everything about them made them look like they would be successful. They really presented themselves brilliantly. They were just really, really nice and interested. We talked a lot about the school and the community and the issues that the pupils face. I think that they were really engaged in that and were really keen to help us fight those battles. So… I'd really like to express my personal thanks to them because they came in really willing to engage with what we're doing
> (English teacher at School A)

> The tutors were extremely skilled in what they did. So, if [the pupils] were struggling with what they did, the tutors had such a lovely way of not seeing them as failures, and actually building them up, building up that resilience to carry on with the problems that they were trying to solve… [The tutors] were highly professional, I'd have them as teachers. I couldn't fault any of them
> (Community and Transitions Coordinator at School C)

Impact of the tutoring
All of the teachers spoke highly of the tutoring programme, identifying ways in which they thought that it had benefited the pupils during the lead up to their GCSE examinations. In particular, the teachers felt that the tutoring had contributed to building the pupils' subject knowledge and confidence in their academic abilities:

> I think it's getting that time, one on one or two on one, with a maths specialist. In a class of thirty, if you spend two minutes with each pupil, there's your hour gone after two minutes of input. I think with a subject like maths, if you're revising questions and you're getting them wrong, then you're not actually improving. You're just cementing the mistakes. So spending that time meant they could get their questions answered there and then, and therefore move on easier. I think it's made them more confident
> (Maths teacher at School B)

> I think there was a definite increase in confidence in every one of them… in terms of raising aspirations for themselves, and what they can achieve and what level they may aim for in Maths and English. It certainly helped with that
> (Assistant Headteacher at School B)

> It gave them confidence, and it also made the kids feel a little bit special… To have someone from outside to come in, who clearly cared, it's a self-esteem thing as much as anything. Their confidence grew not only because they were enjoying the sessions, but also because their assessment grades in lessons went up as well. So there was impact. You know, so maybe the first couple of sessions felt

> like a bit of a drag for them, but once they'd seen their grades go up, they were more than happy to come back 'cause they could see that things had happened
> (Community and Transitions Coordinator at School C)

In addition, several teachers thought that the tutoring programme had allowed the pupils to work independently in a way that had not previously been familiar to them, and that this had influenced their attitude toward learning in general:

> I think it was just quiet study in the library which sounds strange, but it's a novelty to them. I mean, the library tends to get used in my previous schools by the sixth formers. So I think, 'cause it felt different rather than just, 'Oh, here's more of the same stuff and the same teacher.' I think it added that little bit extra. I think some of the students who went there now have better study habits because they now realise just sat reading a book isn't going to help. When they've done revision in sessions, they didn't just highlight notes and keep reading, they actually did questions and they've come back saying, 'Oh, I couldn't that question, but now I can.' It's when they make that connection, when they realise that if 'I just do some questions and I'm getting it right and I'm getting better', they do more of them. So I think it's helped the study techniques, not only in library but when they go home as well
> (Maths teacher at School B)

> [Some of the pupils are] much less likely to have somebody at home sitting with them and doing their revision with them than other students would. So it put in place some of that, which isn't always in place at home. And then they carried that forward, I felt, into other subjects as well. So for me, it was forming of good study habits at the right moment which was really useful… just the idea that, you know, you sit down and concentrate
> (Assistant Headteacher at School B)

> Their attitude to learning in the sessions themselves grew as it went on, it was almost business-like by the end of it. Towards the end it was literally, in, learn, learn, learn, learn
> (Community and Transitions Coordinator at School C)

Challenges

Few challenges arose during the tutoring programme. One teacher (from School A) pointed out that some pupils appeared tired after school, while other teachers pointed out that a handful of pupils did not attend the tutoring sessions regularly and therefore had to be withdrawn from the tutoring programme and evaluation.

Following findings from the evaluation of initial tutoring programme (Hancock, 2019), several changes were made in response to challenges that had arisen. Namely, that doing tutoring during the school day was not desirable, and that tutors' interactions with pupils could be improved. In contrast to the initial tutoring programme, the present tutoring programme took place after, rather during, school. In addition, tutoring took place on a two (pupils) to one (tutor) basis, rather than on a one to one basis. In response to the first point, all of the teachers approved of tutoring taking place after, rather than during, school, because it meant that pupils did not miss their usual lessons. On the second point, teachers commented on how the two to one setup meant that it had been less awkward for the pupils, since they had another pupil to 'bounce off'.

Suggestion

As mentioned earlier on in this report, interviews with teachers at School B revealed that the pupils had been permitted to take 15 – 20 minutes to talk casually with tutors, and have refreshments, before tutoring began. During this period, pupils and tutors had an opportunity to interact casually with one another before the tutoring began. According to the Maths Teacher and Assistant Headteacher at School B, this brought about three perceptible benefits. First, the refreshments and relaxed period of time meant that the pupils were offered an opportunity to rejuvenate between the end of the school day and the beginning of tutoring. Secondly, the opportunity for the pupils to speak to the tutors allowed them to get to know and consequently feel more at ease around them. Third, the conversations that the pupils and tutors had opened up an opportunity for the pupils to learn more about higher education. As the Assistant Headteacher from School B summarised:

> I never had to chase them, [the pupils] arrived straight away. They really enjoyed the bit of social time. When we set it up, we envisaged this time when [the pupils] would come and chat with their tutors, and we were delighted by how many of the pupils gravitated towards the tutors straight away. As soon as they got their drink, they went and sat with their tutors. Not all of them, but a lot of them. They went and sat and chatted with the tutors. And I think that's where some of the positive impact that you were hoping to have around their aspirations to go to university and so on, that's where that might have taken place
> (Assistant Headteacher at School B)

In light of reports at School A that: a) some pupils seemed tired after school, but that b) conducting tutoring after school is preferable to conducting it during school, it may be advisable to introduce a period of 15 – 20 minutes for pupils to have refreshments and speak casually with tutors before the tutoring begins at all of the schools in future editions of the tutoring programme. It may also help pupils to become more informed about higher education.

4. Conclusion and recommendations

Conclusion

From the perspective of this evaluation, it is a tremendous shame that School D returned no informed consent forms. In failing to do so, the sample size was effectively shrunk by around a quarter in comparison to what it could have been. Had the informed consent forms from School D been returned, conclusions about the effectiveness of the tutoring programme could have been drawn much more confidently.

Despite this, however, the second year of the University of York's tutoring programme appears to have simultaneously consolidated and enhanced the success that it experienced in its initial run (Hanckock, 2019). For the majority of tutees, tutoring was associated with enhanced their confidence in the specific subjects, and associated study skills, for which they received tuition. In addition, maths tutees made more progress than, and outperformed, their counterparts in Maths. While the same cannot be said English tutees in English Language and English Literature, it is still worth noting that, at the very least, their attainment did not appear to suffer as a result of the tutoring. Finally, the vast majority of tutees used predominantly positive language to describe their experience of the tutoring programme and suggested that they would recommend it programme to someone else.

All of the tutors considered themselves to have achieved, to at least some extent, what they had hoped to achieve through the tutoring programme, and suggested that they would recommend participating in it to someone else. The majority felt well supported by both the University of York and school staff, with the takeaway messages being that to improve their experiences, it is important to ensure that: a) the tutors are supplied with appropriate resources in a timely manner; and that b) the tutees perceive themselves to be able to contact a teacher for feedback or assistance when necessary.

The teachers who were interviewed spoke overwhelmingly highly of the tutors and expressed a strong desire to see the tutoring programme continue. The decision to host the programme after, rather than during, school has also been welcomed, as has the decision to tutor on a two to one, rather than one to one, basis. The programme should therefore seek to embed these features into the programme in the future.

Recommendations

1) There is a continued need to work closely with schools to ensure that the number of pupils participating in the evaluation is increased. While participation in the evaluation must remain a voluntary decision for pupils, their parents and guardians, the quality of the evaluation is affected by the sample size. Consideration should therefore be given to whether to afford schools that persistently fail to return informed consent forms or data the opportunity to participate in the tutoring programme in the future.

2) In order to better understand the effectiveness of the tutoring programme, it would be helpful for schools to provide the University with information about other interventions that tutees are also participating in during their final year of school.

3) A 15 minute period for pupils and tutors to access refreshments and interact casually before the tutoring begins could be introduced at all of the schools in future tutoring programmes. Doing so appears to have worked to good effect at School B, would be not excessively resource depleting and could bring about several benefits. Namely, it could: a) offer pupils an opportunity to rest and rejuvenate between school finishing and tutoring beginning; b) allow pupils and tutors to get to know one another better and build rapport; and c) potentially help pupils learn more about higher education from tutors.

4) Tutoring should continue to take place after, rather than during, school. For the most part, attendance remained high, while teachers clearly stated that they preferred for pupils not to be taken out of their timetabled lessons.

5) Tutoring should continue to take place on a two to one basis. In contrast to in the initial tutoring programme, pupils did not complain of awkwardness. Furthermore, conducting tutoring on a two to one basis has meant that the number of pupils that have received tutoring has been doubled at seemingly no cost to their learning.

6) Since negligible changes in pupils' confidence were observed for English Literature, tutoring tailed specifically towards English Language as opposed to English in general could be considered. Tailoring tutoring specifically towards one subject rather than the other could enhance pupils' ability to learn and would make it easier to evaluate the effectiveness of the tutoring programme.

7) In order to support tutors as best as reasonably possible, it is important to continue good practice and ensure that: a) the tutors are supplied with appropriate resources in a timely manner; and that b) the tutees perceive themselves to be able to contact a teacher for feedback or assistance when necessary. Tutors should also continue to be offered taxis to and from tutoring, since this simplifies their logistical concerns and, as a result, decreases the likelihood of attrition or missed sessions.

References

Bloom, B. (1984). The 2 Sigma Problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher, 13*(6), 4-16.

Crawford, C., Dytham, S. and Naylor, R. (2017). The Evaluation of the Impact of Outreach. Office for Fair Access.

Dietrichson J., Bøg, M., Filges, T., and Jørgensen, A. (2017). Academic interventions for elementary and middle school students with low socioeconomic status: a systematic review and meta-analysis. *Review of Educational Research, 87*(2), 243-282

Education Endowment Foundation (2017). One to one tuition tooklit. Retrieved from https://educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit/one-to-one-tuition

Hancock, S. (2019). *University of York Maths and English Tutoring Programme: Evaluation Report*. York: University of York, Department of Education.

Major, S. E., & Machin, S. (2018). *Social Mobility and Its Enemies*. London: Pelican.

Sutton Trust. (2019). Private tuition 2019. Retrieved from https://www.suttontrust.com/research-paper/private-tuition-polling-2019/

Sutton Trust. (2016). One in four pupils at state school also has a private tutor. Retrieved from https://www.suttontrust.com/newsarchive/one-in-four-pupils-at-state-school-also-has-a-private-tutor/

Appendices

Appendix A. Attainment data specification

Prior attainment

- End of year result in year 10

- Mock exam result (before tutoring)

Year 11 attainment

- Working at grade if estimated

- Predicted/ target grade

Actual attainment

- August GCSE results

- In all subjects taken

Appendix B. Pupil pre and post surveys

Maths and English tutoring scheme
Pre-tutoring survey

Name _____

School _____

Please complete as much of the survey as you can. All questions are optional.

Your current study at school

1. What subjects are you currently studying at GCSE? Please tick all that apply.

Maths		Religious Studies	
English Literature		ICT	
English Language		Other (please write below)	
Science			
Foreign Languages			
History			
Geography			
Design & Technology			
Music			
Art			
PE			

2. Please consider the following statements about your current skills-set, and indicate where you think you are on the scale.

	Strongly agree	Agree	Disagree	Strongly disagree
I am good at literacy				
I am good at verbal communication				
I am good at written communication				

I am good at problem solving				
I am good at numeracy				
I am good at listening				
I am good at self-directed study				

3. Thinking about your GCSE exams, how prepared do you feel for your exams in the following subjects?

	Very confident	Somewhat confident	Not at all confident
Maths			
English Literature			
English Language			
Science			
Foreign Languages			
History			
Geography			
Design & Technology			
Music			
Art			
PE			
Religious Studies			
ICT			
	Very confident	Somewhat confident	Not at all confident
Other (please write)			
Other (please write)			
Other (please write)			

The tutoring programme

These questions about the tutoring programme. Please write what you can - **a few key words for each question is fine.**

4. What are you most looking forward to about the tutoring?

5. Do you have any concerns about the tutoring scheme?

6. Thinking ahead to ten weeks' time, what would you most like to have achieved from the tutoring?

Thinking about the future

7. What do you hope to do after you leave school? Please tick only one answer.

Full-time education (A Levels)	
Full-time education (BTEC)	
An apprenticeship	
A traineeship	
Part-time employment or volunteering alongside part-time education or training	

8. Alongside these activities, will you be doing any of the following additional activities? Please tick all that apply.

Looking after the home	
Caring for dependants (including siblings, parents or grandparents)	
Other (please specify)	
None of the above	

9. From the following list, please select the **three** most important motivations for your post-school plans.

To gain practical experience	
To gain particular skills	
To enter a particular career	
To enhance my future earnings	
To continue academic study	
To progress to higher education	
To follow the advice of my family or friends	
To follow the advice of my teachers/ advisors at school	
To fit around other commitments in my life	
Other (please specify)	

10. Do you hope to go to university in the future? Select only one answer.

Yes	
No	
Undecided	

11. **If yes,** what subject do you hope to study? Tick only one answer.

Medicine	
Biology	
Physics	
Maths	
Computer Science	
Engineering	
Social sciences	
Law	

Languages	
Psychology	
Business studies	
Creative arts or music	
Undecided	
Other (please state)	

12. **If you are undecided about going to university**, why is this? Please select all that apply.

I'm unsure of the academic demands of university	
I'm unsure of what to study	
I'm unsure of where to study	
I'm unsure how to fit university around other commitments in my life	
I'm unsure about the financial costs of university	
I'm unsure whether university will help me to achieve my goals in life	
Other (please state)	

13. **If you do not want to go to university**, why is this? Please select all that apply.

I don't think I'll meet the academic requirements for university	
I don't want to stay in education after 18	
I don't think I'm suited to university study	
It is too expensive/ I don't know how to fund it	
I don't know what it will lead to	
I want to focus on something else	
Personal reasons (e.g. relating to family, partners or dependants)	

```
┌─────────────────────────────────────────────────────────────┐
│ Other (please state)                                        │
│                                                             │
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```

Thank you for answering these questions.
We wish you every success for your tutoring!

Maths and English tutoring scheme
Post-tutoring survey

Name   _____

School   _____

Please complete as much of the survey as you can.
All questions are optional and your answers will not be shared with tutors.

Your current study at school

1. Please consider the following statements about your current skills-set, and indicate where you think you are on the scale.

	Strongly agree	Agree	Disagree	Strongly disagree
I am good at literacy				
I am good at verbal communication				
I am good at written communication				
I am good at problem solving				
I am good at numeracy				
I am good at listening				
I am good at self-directed study				

2. Thinking about your GCSE exams, how prepared do you feel for your exams in the following subjects?

	Very confident	Somewhat confident	Not at all confident
Maths			
English Literature			
English Language			
Science			
Foreign Languages			
History			
Geography			
Design & Technology			
Music			
Art			
PE			
Religious Studies			
ICT			
	Very confident	Somewhat confident	Not at all confident
Other (please write)			
Other (please write)			
Other (please write)			

The tutoring programme

These questions about the tutoring programme. Please write what you can - **a few key words for each question is fine.**

3. How many tutoring sessions did you attend? _____

4. What have you most enjoyed about the tutoring?

5. Is there anything you have found challenging during the tutoring?

6. What is your proudest achievement from the past ten weeks of tutoring?

7. Do you have any suggestions about how we might improve the tutoring programme in the future?

8. Would you recommend the tutoring programme to pupils in the year below?

Yes	
No	
Unsure	

Please explain your answer to the above in a few words.

Thinking about the future

9. What do you now hope to do after you leave school? Please tick only one answer.

Full-time education (A Levels)	
Full-time education (BTEC)	
An apprenticeship	
A traineeship	
Part-time employment or volunteering alongside part-time education or training	

10. From the following list, please select the **three** most important motivations for your post-school plans.

To gain practical experience	
To gain particular skills	
To enter a particular career	
To enhance my future earnings	
To continue academic study	
To progress to higher education	
To follow the advice of my family or friends	
To follow the advice of my teachers/ advisors at school	
To fit around other commitments in my life	
Other (please specify)	

11. Do you hope to go to university in the future? Select only one answer.

Yes	
No	
Undecided	

12. **If yes,** what subject do you hope to study? Tick only one answer.

Medicine	
Biology	
Physics	
Maths	
Computer Science	
Engineering	
Social sciences	
Law	

Languages	
Psychology	
Business studies	
Creative arts or music	
Undecided	
Other (please state)	

13. **If you are undecided about going to university**, why is this? Please select all that apply.

I'm unsure of the academic demands of university	
I'm unsure of what to study	
I'm unsure of where to study	
I'm unsure how to fit university around other commitments in my life	
I'm unsure about the financial costs of university	
I'm unsure whether university will help me to achieve my goals in life	
Other (please state)	

14. **If you do not want to go to university**, why is this? Please select all that apply.

I don't think I'll meet the academic requirements for university	
I don't want to stay in education after 18	
I don't think I'm suited to university study	
It is too expensive/ I don't know how to fund it	
I don't know what it will lead to	
I want to focus on something else	
Personal reasons (e.g. relating to family, partners or dependants)	
Other (please state)	

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15. Do you feel more informed about going to university as a result of the tutoring? Please select only one answer.

More informed	
Less informed	
No difference	

16. Has your view about going to university changed as a result of the tutoring?

Yes	
No	
Unsure	

Please explain your answer to the above in a few words.

<u>Thank you for answering these questions.</u>

Appendix C. Parent and guardian pre survey

<u>Evaluation of the University of York Maths and English Tutoring Scheme</u>

<u>Pupil information survey</u>

Please complete as much of the questionnaire as you can. All questions are optional.

Name of pupil	
School	
Age	
Gender	
Ethnicity	
Postcode of family home [first four digits only]	

For the following yes/ no questions, please circle the appropriate answer.

Is your child eligible for Free School Meals?   Yes   No

Does your child have any special educational needs or a disability?   Yes   No
If yes, please provide details:
_____

Is this child currently in care?   Yes   No

Please state the highest qualification of parents and/or guardians (e.g. GCSE or equivalent, A Level or equivalent, undergraduate degree, Master's degree, PhD)

Parent 1	
Parent 2	
Parent 3	
Parent 4	

Please state the current occupation of parents and/or guardians. If you are currently unemployed, please state the amount of time that you have currently been out of work.

Parent 1	
Parent 2	
Parent 3	
Parent 4	

Would your child like to go to university?   Yes   No   Undecided   Not discussed

If yes, please provide any further details that you can.

_____
_____

Does your child have any older siblings who are studying/ have studied at university?

Yes   No

<u>Thank you for completing this survey</u>

Please return this survey to the school as soon as it is complete.

Appendix D. Interview questions for senior teachers

- Check that the participant information sheet and informed consent has been received and returned before beginning. Ask if the teacher has any questions. Ensure that the audio recording is on before beginning the interview.

1. Thinking back to the beginning of the programme, what were you most hoping to achieve from the tutoring programme?

2. What has been the most valuable aspect of the programme for the pupils who participated?

3. Do you think that the tutoring has had a positive impact on pupils' attitudes to learning? If so, can you provide an example to support your answer?

4. Do you think that the tutoring has had a positive impact on pupils' aspirations? If so, can you provide an example to support your answer?

5. Do you expect that the tutoring will have a positive impact on pupils' attainment? If so, can you provide an example to support your answer?

6. Thinking about the future of the programme, what we might we improve? Please consider how satisfied you have been with the following: the content, delivery, organisation, the student volunteers? Probe: would you like more involvement in the development or delivery in future years?

7. In future years, we are hoping to expand the tutoring programme. Do you have any suggestions about how we might reach a larger number of pupils, or of any challenges we should be aware of?

8. Finally, is there anything in particular that your pupils and school would like support on in the future? How might we better tailor our activities to benefit your students, particular with regard to attainment raising? Probes: subject area, intervention style.

Thank you very much for your time: do you have any questions or final comments for us?

Appendix E. Interview questions for subject teachers

- Check that the participant information sheet and informed consent has been received and returned before beginning. Ask if the teacher has any questions. Ensure that the audio recording is on before beginning the interview.

1. What has been the most valuable aspect of the programme for the pupils who participated?

2. Do you think that the tutoring has had a positive impact on pupils' attitudes to learning? If so, can you provide an example to support your answer?

3. Do you think that the tutoring has had a positive impact on pupils' aspirations? If so, can you provide an example to support your answer?

4. Do you expect that the tutoring will have a positive impact on pupils' attainment? If so, can you provide an example to support your answer?

5. Are there aspects of the tutoring programme that your pupils have found challenging? Please can you provide an example to support your answer?

6. Thinking about the future of the programme, what we might we improve? Please consider how satisfied you have been with the following: the content, delivery, organisation, the student volunteers? Probe: would you like more involvement in the development or delivery in future years?

7. Finally, is there anything in particular that your pupils would like support on in the future? How might we better tailor our activities to benefit your students, particular with regard to attainment raising? Probes: subject area, intervention style.

Thank you very much for your time: do you have any questions or final comments for us?

Appendix F. Student tutor post survey

Evaluation of the University of York Maths and English Tutoring programme

This survey is intended for student volunteers who acted as tutors in the University of York Maths and English tutoring programme in 2017/18. This survey has been commissioned as part of a University of York study to better understand the impact of tutoring. Your answers in this survey will generate a better understanding of the positive and challenging aspects of tutoring - and how we might improve the scheme, including the training and support offered for tutors, for future years.

 Participation in this survey is entirely voluntary. Data will be collected anonymously - so to say, you will not be asked to provide your name or contact details at any point. Please note that this means that it will be not be possible to withdraw from the study once you have entered your survey response.

 Completing the survey
 This survey will ask about your experiences of being a tutor. Please answer each question as honestly as you can. All questions are optional.

 On average, the survey takes 20 minutes to complete, depending on how many questions are relevant to you. There are five sections in the survey.

 The information you provide will be treated in confidence and stored securely according to EU data protection regulation. This means that the information you provide will be used only for research purposes and will only be seen by the researchers. All data will be stored in password-protected files on secure University of York servers and encrypted disks during the life of the project. Anonymised data may be kept for up to seven years after completion of the evaluation.

 The survey has received full approval from the ethics committee of the Department of Education, University of York. No outputs arising from the project will cite findings in a way that enables you to be identified, nor will such details be passed to any other individuals or organisations.
 By beginning the survey, you acknowledge that you have read this information and agree to participate in this research.

 If you have any questions about the survey or the project, please contact sally.hancock@york.ac.uk

Page Break

Q20 Section 1: starting the tutoring experience.

Which subject did you tutor in?

○ Maths (1)

○ English (2)

○ Both (3)

Q32 Which school did you tutor in?

○ York High School (1)

○ Joseph Rowntree (2)

○ Both (3)

Page Break ───

Q31
Which of these statements best describe why you volunteered to be a student tutor? Please select all that apply.

☐   To develop my subject knowledge by teaching (1)

☐   To gain practical experience (2)

☐   To develop particular skills (3)

☐   To support progression into a teaching career after my degree (4)

☐   To enhance my CV (5)

☐   To see whether I enjoyed tutoring (6)

☐   To work with young people (7)

☐   To make a contribution to the local community (8)

☐   Other (please specify) (9)

_____

Q21 Which, if any, of the following skills did you hope to develop through tutoring? Please select all that apply.

- ☐ Communication (1)

- ☐ Self-management (i.e. punctuality, preparation and planning) (2)

- ☐ Problem-solving (3)

- ☐ Resilience (4)

- ☐ Social and cultural awareness (5)

- ☐ Awareness of school environment (6)

- ☐ Self-reflection (7)

- ☐ Working collaboratively (8)

- ☐ Working with young people (9)

- ☐ Conveying ideas to others (10)

- ☐ Following instructions (11)

- ☐ Other (please specify) (12)

_____

Page Break

Q22 Prior to your involvement in this programme, did you have any previous experience of tutoring?

    ⚪ Yes (1)

    ⚪ No (2)

Q23 **If yes,** was this tutoring:

    ⚪ Paid (1)

    ⚪ Voluntary (2)

    ⚪ Both (3)

Q24 If yes, can you please provide some details about the tutoring experience you had (e.g. context, subject, pupil ages and length of experience).

_____

_____

_____

_____

_____

Page Break

Q25 Prior to your involvement in this programme, did you have any previous experience in an educational setting ? (e.g. classroom assistant, after-school club)

○ Yes (1)

○ No (2)

Q26 If yes, can you please provide some details about the experience you have (e.g. context, activity, pupil ages and length of experience).

_____

_____

_____

_____

_____

End of Block: Block 1

Start of Block: Block 2

Q44 Section 2: preparing for the tutoring

To what extent did the training offered by the University prepare you for the tutoring?

○ I felt extremely well prepared (1)

○ I felt mostly well prepared (2)

○ I felt fairly unprepared (3)

○ I felt extremely unprepared (4)

Q39 Please offer some comments to explain your answer to the above.

_____

_____

_____

_____

_____

Q40 Do you have any suggestions for how we might improve the training sessions in future years?

_____

_____

_____

_____

_____

Q30 Section 3: the tutoring experience

To what extent did you enjoy being a tutor? (Please focus your answer on your experience of the tutoring sessions, and working with the school pupils).

○ Extremely enjoyable (1)

○ Somewhat enjoyable (2)

○ Not at all enjoyable (3)

_____

Q43 Please briefly explain your answer to the question above.

_____

_____

_____

_____

_____

Page Break

Q46 To what extent did the experience of being a tutor match your expectations?

○ The experience was as expected (1)

○ The experience went better than expected (2)

○ The experience was more challenging than expected (3)

Q40 How did you find the workload of being a tutor?

○ The workload was manageable (1)

○ The workload was mostly manageable (2)

○ The workload was difficult to manage (3)

Page Break

Q43 To what extent did you feel well supported when working in the schools?

○ Extremely well supported (1)

○ Somewhat well supported (2)

○ Not well supported (3)

Q39 Please briefly explain your answer to the question above.

_____

Q45
How would you rate the organisation of the tutoring programme?

○ Extremely well organised (1)

○ Somewhat well organised (2)

○ Not well organised (3)

Page Break

Q42 Is there a particular highlight from participating in the tutoring programme that you would like to share?

_____

_____

_____

_____

_____

Page Break

Q41 What were the most challenging aspects of participating in the tutoring programme?

_____

_____

_____

_____

_____

End of Block: Block 3

Start of Block: Block 4

Carry Forward Selected Choices from "Which of these statements best describe why you volunteered to be a student tutor? Please select all that apply. "

X→

Q34 Section 4: reflections and the future

Earlier in the survey, you stated that you volunteered to be a tutor for the following reasons.

Please indicate the extent to which you feel you have achieved these aims by being a tutor.

	Achieved (1)	Somewhat achieved (2)	Not achieved (3)
To develop my subject knowledge by teaching (x1)	○	○	○
To gain practical experience (x2)	○	○	○
To develop particular skills (x3)	○	○	○
To support progression into a teaching career after my degree (x4)	○	○	○
To enhance my CV (x5)	○	○	○
To see whether I enjoyed tutoring (x6)	○	○	○
To work with young people (x7)	○	○	○
To make a contribution to the local community (x8)	○	○	○
Other (please specify) (x9)	○	○	○

Page Break

X→

Q35 Earlier in the survey, you stated that you hoped to develop the following skills through tutoring.

Please indicate the extent to which you feel you have developed in these areas as a result of being a tutor.

	Well developed (1)	Somewhat developed (2)	Not developed (3)
Communication (x1)	○	○	○
Self-management (i.e. punctuality, preparation and planning) (x2)	○	○	○
Problem-solving (x3)	○	○	○
Resilience (x4)	○	○	○
Social and cultural awareness (x5)	○	○	○
Awareness of school environment (x6)	○	○	○
Self-reflection (x7)	○	○	○
Working collaboratively (x8)	○	○	○
Working with young people (x9)	○	○	○
Conveying ideas to others (x10)	○	○	○
Following instructions (x11)	○	○	○
Other (please specify) (x12)	○	○	○

Page Break

Q36 Would you volunteer for the tutoring programme again?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q37 Please briefly explain your answer to the question above.

_____

_____

_____

_____

_____

Page Break

Q42 Would you recommend the tutoring programme to other students at the University of York?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q45 Please briefly explain your answer to the question above.

_____

_____

_____

_____

_____

Page Break

Q2 Section 5: more about you

These final questions are designed to offer some information about you. Please remember that these data are collected anonymously, and will only be accessed by the researcher.

What is your current level of study?

▼ Undergraduate degree (1) ... Other (e.g. PGCE) (4)

Q3 What is your current year of study?

▼ 1 (1) ... 4 + (4)

Q4 Which subject area do you currently study?

▼ Medicine (1) ... Other (please state below) (13)

Q5 Please state 'other' subject if appropriate.

_____

Q18 Thinking back to when you were 14, which type of school did you attend?

○ State secondary (1)

○ Selective state secondary (e.g. grammar school) (2)

○ State secondary special school (e.g. for children with disabilities or special needs) (3)

○ Private/independent school (4)

○ Don't know (5)

○ Other (6) _____

Q19 Which of the following statements applies to you?

○ One or both of my parents/ guardians attended university and have a degree. (1)

○ My elder siblings were the first in my family to attend university. (2)

○ I was the first in my family to attend university. (3)

Page Break

Q17 This question is about the occupation of your parents. This includes natural parents, adoptive parents, step-parents, carers or guardians, who were <u>most involved</u> in your upbringing.

Thinking back to when you were 14 years old, which occupations did your parents have?

	Employment status	Job title
		(if applicable) (1)
Parent 1 (1)	▼ Employee (1 ... Prefer not to answer (7)	
Parent 2 (2)	▼ Employee (1 ... Prefer not to answer (7)	
Parent 3 (3)	▼ Employee (1 ... Prefer not to answer (7)	
Parent 4 (4)	▼ Employee (1 ... Prefer not to answer (7)	

Page Break

Q11 Which gender are you?

○ Male (1)

○ Female (2)

○ Prefer not to say (3)

Q15 What is your ethnic group?

○ White British (1)

○ Irish Traveller (3)

○ Gypsy or Traveller (4)

○ Other White background (5)

○ Black - African (6)

○ Black - Caribbean (7)

○ Black British (8)

○ Other Black background (9)

○ Asian or Asian British - Indian (10)

○ Asian or Asian British - Pakistani (11)

○ Asian or Asian British - Bangladeshi (12)

○ Chinese (13)

○ Other Asian background (14)

○ Mixed - White and Black Caribbean (15)

○ Mixed - White and Black African (16)

○ Mixed - White and Asian (17)

○ Other Mixed background (18)

○ Other Ethnic background (19)

○ Not known (20)

○ Prefer not to answer (21)

Page Break

Q38 If you have any further feedback on the tutoring programme that you think would be helpful to the evaluation team, please share your thoughts below.

Thank you again for taking the time to participate in this survey, and to share your valuable insights.

_____

_____

_____

_____

_____

End of Block: Block 5