



# The Economic Impact of the National Tutoring Programme

Methodology and results



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*Draft: 15th January 2023*

**PUBLICFIRST** 

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# Introduction

The National Tutoring Programme (NTP) provides government funding to primary and secondary schools to be used for targeted academic support, delivered by trained and experienced tutors and mentors. Originally conceived as a post-covid policy to help students particularly vulnerable to the negative educational effects of school disruption, the programme was started in June 2020 and is now in its fourth year. Since its inception, approximately 5 million courses have been started by students.

Public First have been commissioned to carry out an economic impact study of the NTP. To do this we have pulled together the existing evidence base and combined it with publicly available delivery data and data provided by tuition providers specifically for this project. This has allowed us to estimate the economic impact of the tuition provided by the NTP in the academic years 2021/22 and 2022/23, and in particular:

- Total impact on attainment through improved grades
- Aggregate economic impact in the form of additional lifetime earnings
- Increased tax revenues associated by the additional earnings

This report first outlines the method used to carry out this analysis, before summarising the results of our findings.

## Methodology

### Estimating the impact of the NTP on attainment

Our analysis first seeks to understand the impact that the tuition provided as part of the NTP has on GCSE grades. To do this we make use of meta-analysis carried out by the Education Endowment Foundation (EEF), which provides a summary of research into the effectiveness of small group tuition. This includes estimates of the impact on attainment from over 60 academic studies and an assessment of the robustness of each piece of research. This is provided by subject and by key stage allowing us to vary the effect size by the type of tuition provided<sup>1</sup>.

The effect size is presented as a standardised mean difference. We convert these effect sizes first from standard mean difference to months of additional progress, and then to the 1-9 GCSE grade scoring system. We do this using conversion factors provided by the EEF<sup>2</sup>. We then convert from this grading system to the old A\* - U GCSE grading system by assuming the 9 grades of the new system map proportionally to the 8 grades of the old system. This provides us with an estimate of the proportion of a GCSE grade by which students are expected to improve.

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<sup>1</sup> Note: due to the limited number of KS4 maths studies we use a combined KS2 and KS4 estimate of maths impact

<sup>2</sup> Source:

To calculate the total number of students that improve by a grade we assume a constant distribution of scores between grades. This means that our estimate of the proportion of students who improve by a grade is the same as the proportion of a GCSE grade by which students are expected to improve. We apply this proportion to the total students who received tuition to calculate our estimate of the total numbers of students who improved by a grade.

## Estimating the economic impact of the NTP through higher lifetime earnings

Next, we estimate the economic impact of improved attainment associated with the NTP in the form of additional lifetime earnings. To do this we apply estimated earnings returns of higher GCSE grades found in research carried out by the Department for Education<sup>3</sup>. This provides estimates of the marginal returns in discounted lifetime earnings associated with an improvement in GCSE grade, by subject. By applying this to the total number of grade improvements we estimate the aggregate return in discounted lifetime earnings<sup>4</sup>.

## Estimating the impact on the Exchequer through additional tax

Finally, we estimate the tax receipts that will be generated by the additional lifetime earnings. To do this we use HMRC receipts data that provides the total income tax, national insurance and VAT collected in 2021<sup>5</sup>. We then calculate each of these as a share of the total taxable income; data again provided by HMRC<sup>6</sup>. Finally, we apply these percentages to our estimates of additional discounted lifetime earnings to calculate additional tax.

# Results

## Impact on attainment

The economic modelling carried out as part of this report estimates that the NTP will lead to, or has already led to, a total of 390 thousand grade improvement due to tuition provided by the NTP in the academic years 2021/22 and 2022/23. In total 2.96 million students received on average of 11 hours of tutoring and 12.1% of students who received tuition have, or are expected to, improved by a grade<sup>7</sup>. This means that for every £1 million spent on the NTP over 580 students experience a grade improvement.

English tuition is responsible for 176 thousand grade improvements, or 46% of the total. This is higher than the 40% of tuition provided in this subject, which is explained by the higher average grade improvement made in this subject. Chart 1 compares the percentage of

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<sup>3</sup> [Source: GCSE attainment and lifetime earnings, DfE, 2021](#)

<sup>4</sup> Note: Lifetime earnings are discounted by 3.5% as per HMT Greenbook guidance and estimates given in 2021 prices

<sup>5</sup> [Source: Tax receipts and national insurance contributions for the UK, HMRC](#)

<sup>6</sup> [Source: Shares of total income and income tax for percentile groups, HMRC](#)

<sup>7</sup> [Source: NTP delivery data, DfE](#)

students who received each type of tuition by subject and key stage with the share of grade improvements made. Although maths tuition at both key stages is more common than English, KS2 English provides the highest share of grade improvements. For every £1 million spent on KS2 English, an estimated 850 students improve their GCSE grade.

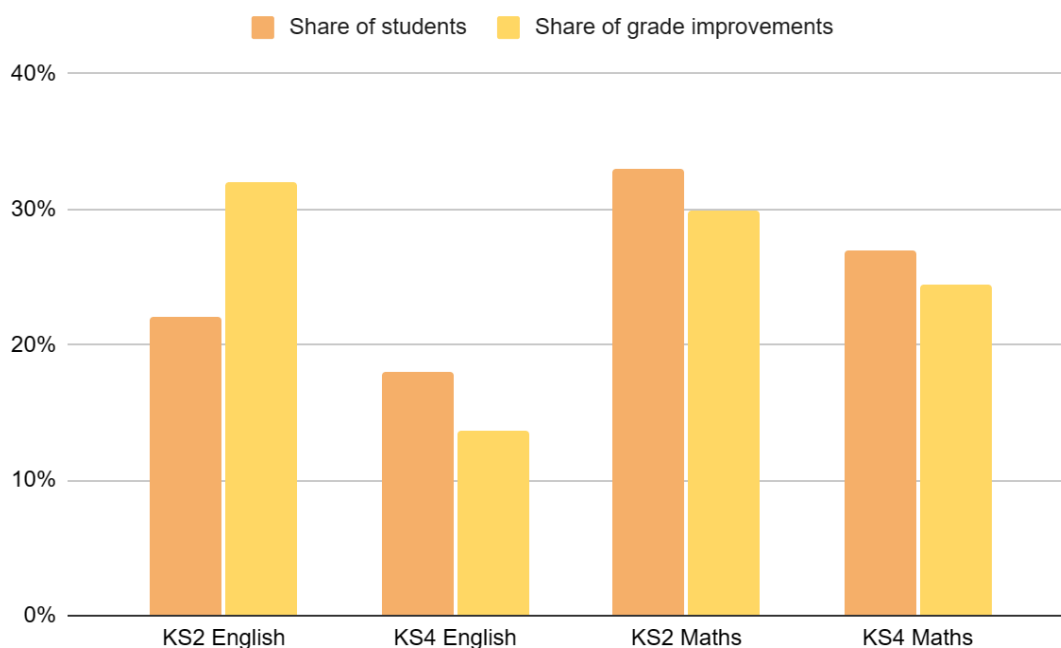


Chart 1: Share of students compared to share of grade improvements, by type of tuition

## Impact on earnings

The additional discounted lifetime earnings resulting from tuition provided in 2021/22 and 2022/23 is estimated at £4.34 billion. The funding during this period is estimated as £660 million which leads to a benefit cost ratio of 6.58<sup>8</sup>. The average cost of providing 11 hours of tuition for each student was £223 for an average return of £1,470.

The total additional earnings from maths tuition is £3.06 billion. This is 70% of the total additional earnings and is significantly higher than the share of students who received maths tuition, at 60%. This is due to the much higher returns of £14,580 per additional maths grade compared to £7,260 per English grade.<sup>9</sup> Because we have assumed the cost of funding English and maths tuition is the same, the share of funding for maths tuition is 60% and the returns to maths tuition are higher than for English. Chart 2 describes estimates and illustrates the English and maths shares of: The total numbers of tuition starts; the total number of grade improvements; and, the total additional lifetime earnings. The total number of English grade improvement benefits from higher attainment returns to English, but these are outweighed in the earnings estimates by the much higher returns to improvements in maths grades.

<sup>8</sup> [Source: UK Parliament written questions and answers](#)

<sup>9</sup> [Source: GCSE attainment and earnings. DfE, 2021](#)

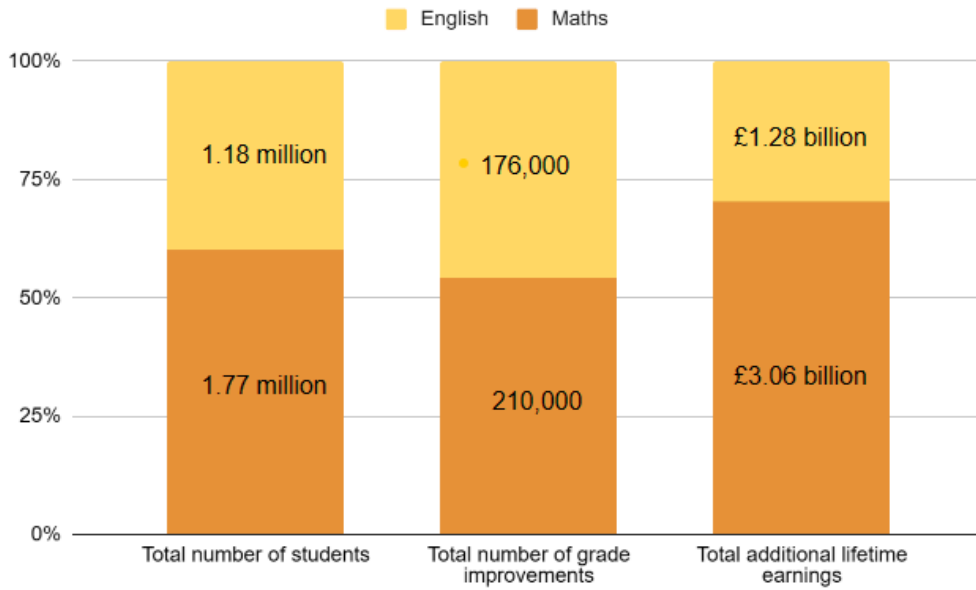


Chart 2: Total number of students, grade improvements and additional earnings, by subject

## Impact on the Exchequer

Our estimate of the total additional tax collected by the Exchequer due to the increase in earnings is: £775 million in income tax; £554 million in national insurance, and an estimated £499 million in value added tax through additional consumer spending. This is a total gain to the Exchequer of approximately £1.83 billion.