

# Coachbright in collaboration with the University of Reading

## 2024 Evaluation report

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### Contents

<b>Executive Summary</b> .....	2
Introduction.....	4
Report caveat .....	4
Rationale .....	4
Linking to the Access and Participation Plan 2024-2028.....	5
Methodology .....	6
<b>Data Collection</b> .....	6
<b>Ethics and Data Security</b> .....	8
<b>Data Analysis</b> .....	8
<b>Limitations</b> .....	8
Results & Findings .....	9
Demographics and Participants .....	9
Results of Analysis- Metacognition, Self-Efficacy and Motivation .....	10
Results of Analysis- Teacher Feedback (Quantitative, Graduation Events) .....	12
Results of Analysis- Teacher Feedback (Qualitative, Graduation Events) .....	14
Results of Analysis- Teacher Feedback (Quantitative & Qualitative, Whole Programme).....	15
Conclusions and Recommendations.....	15
<b>References</b> .....	16
<b>Notes</b> .....	16

## Executive Summary

### Overview

During the 2023/2024 academic year, the University of Reading collaborated with Coachbright, an external provider of tutoring for Year 9 and Year 11 pupils, to deliver a programme of activity designed to support disadvantaged pupils in applying for university. The programme focused on improving pupils' metacognition, motivation and self-efficacy through paired tutoring, in-school workshops and a final on-campus graduation event supported by university students and staff. The APP objectives related to the programme, as set out in the evaluation plan, were as follows:

*Through targeted attainment-raising initiatives with partner schools, to support the removal of attainment-gaps at KS4 for students eligible for Free School Meals, those in IMD Q1, and those of Black ethnicity, such that by 2034 students from these groups progress equally into KS5 as their peers.*

Key measures of success for the programme in the medium term were as follows:

- Does participation in Coachbright tutoring improve self-reported metacognition (i.e. independent learning skills and strategies)?
- Does participation in Coachbright tutoring improve self-reported self-efficacy?
- Does participation in Coachbright tutoring improve self-reported motivation?
- Is participation in Coachbright tutoring linked to teacher reports of improved subject knowledge and confidence? (note, due to data delays, this question will be addressed in future reports)

Finally, key measures of success for the programme in the long term were as follows (note, these are not included in the current report but will be in future reports once the data is available):

- Does participation in Coachbright tutoring increase GCSE attainment?
- Does participation in Coachbright tutoring increase subsequent progression to Higher Education (specifically the University of Reading), compared to a benchmark of demographically similar applicants? (note, due to data delays, this question will be addressed in future reports)

The purpose of this evaluation report is to assess whether the 2023/2024 Coachbright tutoring programme was successful in achieving its medium-term goals. Future evaluations of the programme will be aggregated to provide a robust assessment of the programme's success in achieving its long term goals, once pupils who participated in the programme are at the stage where they're progressing to Higher Education and/or have completed their GCSEs (depending on whether

they participated as Year 9s or as Year 11s, as appropriate). Both self-reported pre- and post-programme survey data from participating pupils and post-programme feedback from teachers will be assessed as part of this evaluation.

## Assessment of Impact

Overall, the 2023/2024 Coachbright tutoring programme is likely to have had a minor but significant positive impact on two of the three variables set out in the programme's medium-term goals: self-efficacy and motivation. The post-programme mean scores of participating pupils showed consistent improvement over their pre-programme scores in the same variables. In addition, qualitative feedback from teachers was highly positive, with a high percentage of teachers reporting a positive impact on their pupils when surveyed after the on-campus graduation events held at the end of the programme.

A summary of the impact is as follows:

- **Metacognition:** For metacognition, pupils' mean score before the programme across 12 questions was 5.30, increasing to 5.49 post-programme. However, this was not statistically significant meaning we cannot say that the programme increased metacognition.
- **Self-Efficacy:** For self-efficacy, pupils' mean score before the programme across 9 questions was 5.38, increasing to 5.70 post-programme. With a p Value of 0.02, below the 0.05 alpha, this resulted in a small positive effect size of 0.32, indicating that the Coachbright programme potentially had a small positive effect on pupils' self-reported self-efficacy.
- **Motivation:** For motivation, pupils' mean score before the programme across 9 questions was 5.17, increasing to 5.58 post-programme. With a p Value of 0.03, below the 0.05 alpha, this resulted in a small positive effect size of 0.30, indicating that the Coachbright programme potentially had a small positive effect on pupils' self-reported motivation.

These results indicate a consistent improvement across self-reported self-efficacy and motivation for all surveyed pupils post-programme. In the case of metacognition, the p value fell slightly outside of the statistically significant parameter of 0.05, meaning we cannot infer a significant impact on metacognition; although post-programme mean score was higher, and the t-test was approaching significance. Overall, the results indicate that the Coachbright programme for 2023/2024 did have, overall, a small positive impact on two variables set out as part of its medium-term goals.

Furthermore, teacher feedback was overwhelmingly positive, adding another positive indication of the programme's success.

# Introduction

## Report caveat

This report is part of the first cycle of more robust evaluation in line with our new Access and Participation Plan. Therefore, we acknowledge that the evaluation still has limitations and we do not intend to over-claim the strength of any conclusions. In particular, it is noted that this evaluation is based primarily on self-reported data, which can be impacted by many factors. There were practical challenges to data collection, and it is acknowledged that the limited sample size of pre- and post-intervention data reduces the robustness of claims about the programme's effectiveness beyond immediate reactions. Nevertheless, the data here still provide valuable insights into engagement and the immediate perceived benefits of the programme. Future evaluations will aim to strengthen data collection, ensuring a more robust set of pre- and post-intervention measures, and include comparison groups where possible. Long-term data will also become available.

## Rationale

There are barriers to accessing higher education (HE) for some student groups, such as young people at KS4 in receipt of Free School Meals (FSM) or in IMD Q1 and Black students. Raising attainment is crucial to overcoming these barriers; tutoring is one way to boost attainment. There is considerable evidence on the impact of tutoring; for example, evidence from the Education Endowment Foundation suggests that one-to-one tutoring can add up to 5 months progress, whilst small group tuition can have 4 months progress. Coachbright also suggest a significant impact in each of the intermediate outcomes and on GCSE results.

TASO provide the following recommendations on tutoring: “Overall, international literature from the US and Europe points towards a strong link between academic tutoring and attainment, particularly demonstrating the benefits of cross-age tutoring delivered by university students. However, the literature also suggests that programmes should be designed to foster collaborative relationships between tutors and tutees (Gartland, 2015), and that tutoring can be most effective when targeted at disadvantaged students, particularly those who lack family support from adults. The evidence from studies conducted in the UK is more mixed and limited, and thus future research will need to look specifically into evaluating university-led tutoring programmes and focus on how these programmes are designed and which students are targeted.”

Additionally, within UoR, Coachbright tutoring commenced in the 22/23 cycle, and early data has shown that after 10 sessions with **one** of our target schools:

- From pre-programme measures to post-programme measures, there was a 30.4% increase in pupil confidence
- From pre-programme measures to post-programme measures, there was a 19.6% increase in pupil resilience
- From pre-programme measures to post-programme measures, there was a 16.7% increase in pupil independence (metacognition).

## Linking to the Access and Participation Plan 2024-2028

Objective: Through targeted attainment-raising initiatives with partner schools, to support the removal of attainment-gaps at KS4 for students eligible for Free School Meals, those in IMD Q1, and those of Black ethnicity, such that by 2034 students from these groups progress equally into KS5 as their peers.

# Methodology

## Evaluation Questions

- Does participation in Coachbright tutoring improve self-reported metacognition (independent learning)?
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically
  
- Does participation in Coachbright tutoring improve self-reported self-efficacy?
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically
  
- Does participation in Coachbright tutoring improve self-reported motivation?
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically
  
- Is participation in Coachbright tutoring linked to teacher reports of improved subject knowledge and confidence?
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically
  
- Does participation in Coachbright tutoring increase GCSE attainment? [Note, cannot be reported on yet]
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically
  
- Does participation in Coachbright increase subsequent progression to HE (Reading), compared to a benchmark of demographically similar applicants? [Note, cannot be reported on yet]
  - Overall
  - For IMD Q1 & Q2 students specifically
  - For Black students specifically

## Data Collection

Data Collected	Items or Method of Data Collection
Self-reported metacognition (independent learning) Choose how well each statement describes you by selecting a number from 1 to 7.	Coachbright items: 1: Not at all like me 7: Very like me 1. I know when I understand something. 2. I can make myself learn when I need to.

	<p>3. I try to use ways of learning that have worked for me before.</p> <p>4. I know what the teacher expects me to learn.</p> <p>5. I learn best when I already know something about the topic.</p> <p>6. I draw pictures or diagrams to help me understand while learning.</p> <p>7. When I am done with my work, I ask myself if I learned what I wanted to learn.</p> <p>8. I think of lots of ways to solve a problem and then choose the best one.</p> <p>9. I think about what I need to learn before I start working.</p> <p>10. I ask myself how well I am doing while I am learning something new.</p> <p>11. I really pay attention to important information.</p> <p>12. I learn more when I am interested in the topic.</p>
<p>Self-reported self-efficacy Choose how well each statement describes you by selecting a number from 1 to 7.</p>	<p>Coachbright items:</p> <p>1. Compared with other students in my year I expect to do well.</p> <p>2. I'm certain I can understand the ideas taught in my lessons.</p> <p>3. I expect to do very well in this school.</p> <p>4. Compared with others in my year group, I think I'm a good student.</p> <p>5. I am sure I can do an excellent job on the problems and tasks assigned in my lessons.</p> <p>6. I think I will receive good grades in my classes.</p> <p>7. My study skills are excellent compared with others in my year.</p> <p>8. Compared with other students in my school I think I know a great deal about my subjects.</p> <p>9. I know that I will be able to learn the material for this year</p>
<p>Self-reported motivation</p>	<p>Coachbright items:</p> <p>1. I prefer schoolwork that is challenging so I can learn new things.</p> <p>2. It is important for me to learn what is being taught in my lessons.</p> <p>3. I like what I am learning in my lessons.</p> <p>4. I think I will be able to use what I learn in one subject in other subjects.</p> <p>5. I often choose topics I will learn something from even if they require more work.</p> <p>6. Even when I do poorly on a test, I try to learn from my mistakes.</p>

	<p>7. I think that what I am learning in my lessons is useful for me to know.</p> <p>8. I think that what we are learning this year is interesting.</p> <p>9. Understanding my subjects is important to me.</p>
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## Ethics and Data Security

Standard ethics procedures were followed, with participants giving informed consent for their data to be used for evaluation purposes and anonymised reporting. Teachers participating in the programme were over 18 and therefore gave consent for their feedback to be used for evaluation purposes and reported in a way in which they won't be identifiable. Coachbright as the data collectors ensured ethics procedures were followed, as per their data sharing agreements with participating schools.

## Data Analysis

Data Collected	Analysis Done on this Data
Self-reported metacognition (independent learning)	Coachbright analysis of % differences before and after. PLUS, t tests for pre and post.
Self-reported confidence	Coachbright analysis of % differences before and after. PLUS, t tests for pre and post.
Self-reported motivation	Coachbright analysis of % differences before and after. PLUS, t tests for pre and post.

## Limitations

There is one main limitation of the current evaluation; the small sample size for the paired t-Test. Out of 108 participants who were surveyed as part of the programme, only 36 provided matched pre- and post-programme survey data for use in the t-Test analysis. This data does encompass all four schools surveyed, but in unequal numbers, with one school represented by only two survey respondents. This presents a potential limitation to the reliability of the data, as less than half of participants provided sufficient survey data to conduct pre- and post-programme analysis. In future, it will be important to ensure a greater breadth of data capture to ensure that the t-Test analysis is representative of a larger proportion of the overall participant population, rather than just of a third of it.

### Limitations to T-Test Analysis

There are some further limitations to the T-Test analysis, which are as follows:



- **Overestimation of Self-Reported Abilities:** Participants often gave higher ratings in their pre-session surveys than their post-session surveys. Given that it is unlikely that the sessions caused regression in their abilities, this is symptomatic of overconfidence or a lack of understanding of the questions, which may have skewed the data.
- **Small Sample Size:** Instead of the full sample size of 108 surveyed pupils, this analysis only has a sample size of 36. This is due to incomplete survey data provided by Coachbright. Where there were no paired mean average scores, no pre- and post-analysis was conducted.

## Results & Findings

### Demographics and Participants

A total of four schools' pupils were surveyed during the 2023/2024 Coachbright programme, with a fifth school providing qualitative and quantitative teacher feedback post-graduation event at the University. Across these schools, 108 pupils participated, with the following demographic characteristics:

<b>Characteristic</b>	<b>Number of Participants</b>	<b>Percentage of Overall Participants</b>
<b>Male</b>	45	42%
<b>Female</b>	63	58%
<b>Pupil Premium</b>	53	49%
<b>Looked After</b>	0	0%
<b>FSM</b>	43	40%
<b>SEND</b>	9	8%
<b>EAL</b>	22	20%

Out of these 108 pupils, 20 chose to provide details on their ethnicity. A breakdown of these ethnicities is as follows:

- Asian (Includes Sub-Categories): 3 (15%)
- Black (Includes Sub-Categories): 4 (20%)
- English, Welsh, Scottish or Northern Irish: 8 (40%)
- Mixed (Includes Sub-Categories): 2 (10%)
- Other- Any Other Ethnic Group: 1 (5%)
- White- Any Other White Background: 2 (10%)

This demography should be considered a rough outline of the percentages of different ethnicities which participating pupils identified as, as a sample size of 20 out

of 108 is too small to draw any definitive conclusions. However, this small sample does indicate a diverse variety of different ethnic identities amongst participants. In future years, it would be useful to determine whether this was an outlier caused by a lack of data, or whether the programme is indeed capturing a variety of pupils. The percentage of black pupils would be of particular interest, as this is identified as a target group in the evaluation plan.

The average demographics for participating schools were as follows: 24.62% Free School Meals, 27.04% Disadvantaged Pupils in KS4, 7.9% IMD Q1 & 30.42% IMD Q2 (HEAT, 2024)

## Results of Analysis- Metacognition, Self-Efficacy and Motivation

As part of our measure of improvement in the medium term in participants' metacognition, self-efficacy, and motivation, we conducted a paired t-test of participants using a pre- and post-session survey administered by Coachbright to participating pupils.

Participant responses to these questions were on a scale of 1 to 7, and were added together to give an aggregate pre-programme score and post-programme score for each variable. These scores were then divided by the number of questions for each variable to give a mean average score for each pupil, both pre- and post-programme. A paired t-test was then conducted for each variable, using these mean average scores, and an effect size was calculated.

The intent of this analysis was to determine whether there was any statistically significant correlation between participation in the Coachbright programme and improvements in metacognition, self-efficacy, and motivation, as laid out in the medium-term goals for the programme. If a statistically significant result was observed for each variable, we could be justified in claiming that the Coachbright programme may have had a significant positive impact on pupil attainment, which could further correlate with long term goals such as increased GCSE attainment and participation in Higher Education.

The following are the results from the paired t-Test, including relevant p-Values and effect sizes:

	Mean Before (SD)	Mean After (SD)	Statistical Test (t Stat)	Effect Size
<b>Metacognition</b>	5.30 (0.81)	5.49 (0.71)	$t(35) = -1.36. p = 0.18$	$d = 0.24$
<b>Self-Efficacy</b>	5.38 (1.01)	5.70 (0.98)	$t(35) = -2.09. p = 0.04^*$	$d = 0.32$
<b>Motivation</b>	5.17 (1.38)	5.58 (0.82)	$t(35) = -1.99. p = 0.05^*$	$d = 0.30$

\* = significant at the 5% level.

### Analysis of the Data

- The statistical test p-values for all but one of the three variables are within the acceptable alpha of 0.05, indicating potential statistical significance. The exception is for metacognition, which is slightly above the alpha at 0.09. Overall, it is likely that the changes observed because of participation in the programme are statistically significant, although an exception can be made for metacognition which may not be.
- Across all three variables, small positive effect sizes were observed, with the largest impact being a 0.32 effect size for Self-Efficacy. This could be indicative that participation in the programme resulted in some small improvements in the medium term on self-efficacy and motivation.

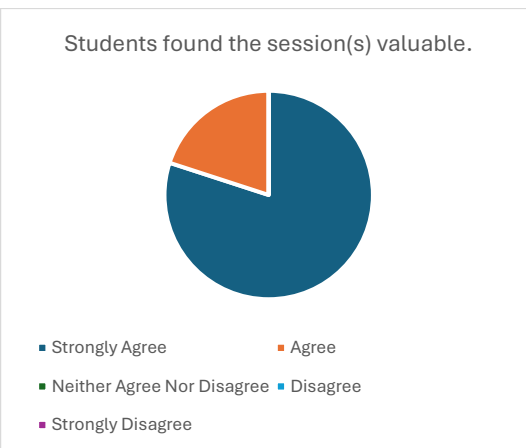
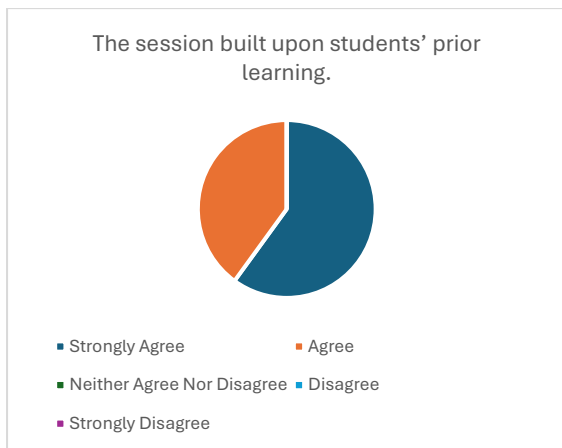
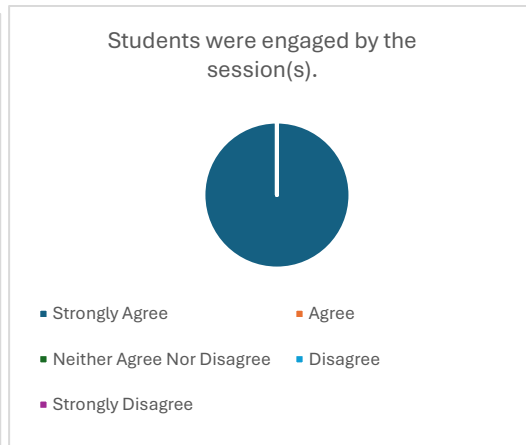
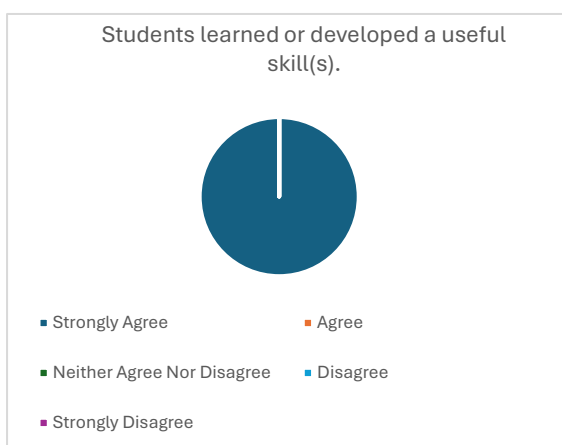
### Conclusions

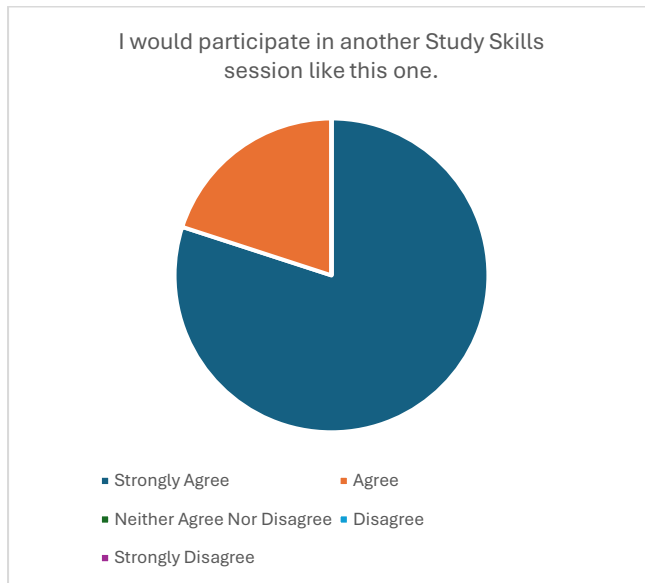
- The data indicates that there may be a statistically significant impact of participation in the Coachbright programme on self-efficacy and motivation. It could also indicate a negligible positive correlation between participation and improvements in metacognition, though this was not statistically significant.
- It could be argued, therefore, that for the 2023/2024 academic year the Coachbright programme has succeeded in its medium-term goals of improving two of the three tested variables amongst its participants. This may be limited, however, by the small sample size observed and tested.
- In future years, a larger sample size would be useful to produce more indicative t-test results, and to ensure that improvements are consistent across most of the participant base. In addition, this would help to detect if there is a statistically significant impact on metacognition.
- A more comprehensive data sharing agreement with Coachbright would be useful from the university's perspective to ensure a more comprehensive data set on which to base our conclusions, including an expansion of demographic data which could allow for paired t-tests to be conducted for different ethnicities and genders.

## Results of Analysis- Teacher Feedback (Quantitative, Graduation Events)

The following is the quantitative data from teachers regarding the success of the on-campus graduation ceremony events co-ordinated by the University of Reading (in conjunction with Coachbright).

Overall, across all teachers surveyed (for a total of five teachers across participating schools):





It is thus safe to suggest that teacher perceptions of and reactions to the graduation ceremonies organised by the University of Reading were strongly positive.

## Results of Analysis- Teacher Feedback (Qualitative, Graduation Events)

In terms of qualitative feedback, teacher comments were also largely positive regarding the graduation events. When asked about the 'Most Useful Thing' experienced by their pupils during Coachbright graduation events, teachers responded in the following ways:

- The pupils loved touring the site and learning more about university life.
- The tour and lecture (great pitch).
- Viewing the campus + understanding what happens in a lecture.
- Understanding the lecture and having a taste of what it's like.

When asked about things that 'Felt Lacking' during Coachbright graduation events, teachers responded in the following ways:

- The flexibility in the tour was good but it would have been nice for both groups to have seen similar parts of the campus.
- Making sure what areas of the university are open- it was more fun when we went into the spaces to explore them properly.
- Nothing- timings good- enjoyed the lecture being interactive.
- No, it was brilliant! Would be great if they could see an empty room (accommodation).

When asked for 'Further Comments' on the Coachbright graduation events, teachers responded in the following ways:

- [A student ambassador] was amazing at answering the questions the pupils asked [them].
- It would have been nice to have the certificates and feedback forms available on the day. More 'ceremony' in the last session to celebrate their achievement.
- I loved the witchcraft session.
- AMAZING mock lecture, everyone loved it!

Most criticisms from teachers regarding the graduation events were logistical and pragmatic, rather than fundamental, and as such most recommendations for future academic years will simply be to address these concerns in the most practical way possible.

Aside from these comments, anecdotal and additional feedback from teachers regarding the Coachbright programme and its impact on pupils is considerably positive, matching the consistent improvements observed across pupils through quantitative analysis.

## Results of Analysis- Teacher Feedback (Quantitative & Qualitative, Whole Programme)

TBC- Dependant on Coachbright data sharing. This information will hopefully be made available in the upcoming 2024/2025 academic year. There is currently no concrete timetable as to when this information will be available. This section of the report will be updated when said information is available.

## Conclusions and Recommendations

From a quantitative perspective, the impact of the Coachbright programme for the 2023/2024 academic year was largely positive. Participating pupils reported consistent small improvements in their metacognition (though not statistically significant), self-efficacy and motivation because of their participation in the programme; teacher feedback was also highly positive regarding graduation events, with 100% of all teachers surveyed agreeing that they would participate in the programme in future. Data on improved GCSE attainment and a higher rate of participation in higher education amongst participating pupils will be measured as a long-term goal in future iterations of the programme.

In terms of recommendations for future academic years, the programme should be amended in the following ways:

1. Reach a more robust data sharing agreement with Coachbright to ensure that pupil demographics are easier to analyse and to allow for easier tracking of pupils that may progress to HE at the University of Reading.
2. Ensure the sample size used in the paired t-test is larger to ensure a more representative measure of medium-term impact on pupils. Also conduct paired t-tests for target student demographics, such as black students, where possible.
3. Address practical and logistical challenges raised by teachers regarding Coachbright graduation events on campus.
4. Use aggregate medium-term data in conjunction with information from Coachbright and participating schools to ensure a measure of impact on GCSE attainment and/or participation in HE can be observed in the long term.

# References

Education Endowment Foundation (2022), *Making a Difference with Effective Tutoring*, Available at <https://educationendowmentfoundation.org.uk/support-for-schools/making-a-difference-with-effective-tutoring> (Accessed 11<sup>th</sup> October 2024)

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# Notes

This report has been reviewed by members of the Access and Participation Evaluation Subcommittee (APES), with particular support from Lydia Fletcher on data analysis) in an earlier version.

# Appendix – Theory of Change

Note, this Theory of Change is for three attainment-raising programmes, of which Coachbright is one.

