Amended protocol for evaluation of the 'University of Sussex: Writing About Values' programme (August 2016)

AMENDMENTS

Following the pilot trial, the following changes have been made to the initial protocol:

1. The non-attainment survey instrument has been revised and the convergent and predictive validity of the scales, as well as their internal consistency have been tested. A decision has now been made about the most appropriate non-attainment outcome. This will be the pupils' perceived self-efficacy measured using the subscales from the Motivated Strategies for Learning Questionnaire (Pintrich et al. 1993). This is reflected in the Evaluation Summary table on p. 2
2. The outcome measures will therefore now include perceived self-efficacy as the non-attainment outcome (see p. 7).
3. The sub-group analysis will now include an analysis of self-efficacy as the non-attainment outcome (see p. 8).
4. The research questions will therefore include self-efficacy as the non-attainment outcome (see p. 6)
5. The method of randomisation is confirmed with pupils being individually randomised stratifying by year group and FSM status only. Stratification by class is no longer relevant (see p. 7).
6. Given the recent changes in the GCSE exams, it is anticipated that there might be a delay in obtaining pupils' GCSE results. To pre-empt this, the unamended GCSE scores will be used and to be sure that these results are available in time for analysis, the date of completion for Report 1 will now be February 2018 (instead of January 2018) and February 2019 (instead of January 2019) for Report 2. These changes are reflected in the time-line (p.13).

Evaluation Team
Dr Beng Huat See
Dr Nadia Siddiqui
Prof Stephen Gorard
Dr Rebecca Morris

School of Education
Durham University
Leazes Road
DH1 1TA

Project Team
Dr Matthew Easterbrook
Prof Peter Harris

Prof Robin Banerjee
Dr Marlon Nieuwenhuis
Kerry Fox

University of Sussex
School of Psychology
Falmer, Brighton
BN1 9QH

EVALUATION SUMMARY

Evaluation Summary	
Age range	Year 10 and Year 11 (age 14 to 16)
Number of pupils	7,500
Number of schools	25 secondary
Design	Randomised controlled trial, with randomisation at the individual level, stratifying by year and FSM status
Primary Outcomes	• Attainment 8 at GCSE for EverFSM pupils after 1 year of treatment (Year 1 report) • Attainment 8 at GCSE for EverFSM pupils one year after end of intervention (Year 2 report)
Secondary Outcomes	• Attainment 8 at GCSE for All pupils after 1 year of treatment (Year 1 report) • Attainment 8 at GCSE for All pupils one year after end of intervention (Year 2 report)
Non-attainment outcome	• Pupils' perceived self-efficacy

BACKGROUND

There is already considerable policy and practice activity being undertaken on the assumption that an individual's aspirations, attitudes and behaviour (motivation, self-concept, self-belief and locus of control) can be influenced to improve educational outcomes. Most of the research conducted in this area is based on correlational studies using path analysis as a pseudo-measure of causality (e.g. Marsh and Martin 2011). The evidence of a causal effect remains unclear.

The question is whether pupils with high motivation or aspiration perform well, whether high performance leads to higher motivation, aspiration and self-belief, or whether both are a consequence of something else. The ongoing debate about the sequence of events cannot be resolved without some more closely controlled and independent trials. This was one of the main recommendations in the report to the Joseph Rowntree Foundation based on a review of 166,000 studies (Gorard, See and Davies, 2012).

The “Writing About Values” intervention and other similar interventions are based on the hypothesis that students from some stigmatised groups are aware that they are the target of a negative stereotype regarding their academic performance (Steele 1997). This can *a*) lead to anxiety about confirming this negative stereotype during school assessments, which can undermine performance, or *b*) elicit a defence mechanism, known as *disidentification,* in order to protect their self-concept from being devalued by the negative stereotype. Disidentification results in academic achievement being discounted or devalued (Crocker & Major 1989; Major et al. 1998), and can reduce learning and motivation. The “Writing About Values” strategy has been employed to alleviate the effects of stereotype threat on low performing students, especially those from ethnic minority backgrounds, (Oyserman et al. 2006; Cohen et al. 2006; Miyake et al. 2010) by getting them to write positive statements about themselves (Sherman & Cohen, 2006; Steele, 1988). It is believed that this can help ameliorate the detrimental effects of stereotype threat on academic performance. If this approach is found to be effective in raising attainment for disadvantaged children it can prove to be very attractive as it is almost cost-free, simple to implement and would appear to generate few contra-indications.

A few randomised controlled trials have been conducted suggesting that this approach is particularly effective in raising the attainment of ethnic minority groups (Cohen et al. 2009; Cohen et al. 2014; Sherman et al. 2013). Cohen et al. (2009), for example, found that although there were no overall gains in grade point averages across four core academic subjects in both treatment and control groups, the African-Americans in the treatment group improved their GPA by 0.24 points, and the low-achieving African-American students by 0.41. The intervention also appeared to reduce the likelihood of low achieving African-American students being assigned to a remedial program or retained in grade.

A longitudinal experiment (Sherman et al. 2013) showed that Latino American students using the “Writing About Values” approach earned higher grades and were more likely to continue to higher education than those in the control. White students were not similarly affected. A recent and larger study (Borman, Grigg and Hanselman 2015) also showed a small positive impact on minority pupils’ standardised maths test scores.

Positive effect was also reported for female college students. Mikaye et al. (2010) replicated Cohen’s study with female college students from more advantaged backgrounds. The women in the “Writing About Values” group achieved significantly higher grades than women in the control group. The gender gap between men and women was also reduced with the women moving up from average to above average range.

On the other hand there are studies which suggest no effects on both academic and other outcomes. Simmons’s (2011), study on 47 African American high school students, for example, found that students taught the strategy did not achieve higher GPAs nor were psychologically more engaged. Another study involving 2,500 7^{th} and 8^{th} graders (age 12-14) suggests that the writing exercise alone is not sufficient to raise the academic performance of minority students (Dee 2015). A supportive classroom environment may be needed for the intervention to have any impact.
Almost all these studies were in the US, on African American (mainly), Latino American students or college women. No independently randomised controlled trial of the impact of “Writing About Values” has been conducted in the UK on the academic outcomes of the general student population. The efficacy trial proposed here by the University of Sussex will be the first to be piloted in the UK to test the causal effect of the “writing activity” on academic attainment.

The intervention

The intervention used in this trial is modelled after that used by Cohen and his colleagues. Pupils are given 15 minutes within their normal classes to do a written exercise. The intervention group writes about values that are important to them while the control pupils write about values that are not important to them, but might be important to other people. This short intervention has been shown to reduce the impact of stereotype threat on performance.

The time point of implementation is important. It has been suggested that it is most effective if implemented just prior to a stressful event, such as before final exams. The exercise will therefore be conducted three times per year with year 10 and year 11, once towards the beginning of the academic year, once before mock GCSEs and once before GCSEs. This is both practical and consistent with research in this area. Since both control and treatment pupils will be doing similar writing exercises – different only in terms of the writing content – the intervention will be seen as part of their regular work, rather than a research project. Apart from the short writing exercise, pupils will be doing what they would normally do in their regular lessons.

The theory is that the writing activity gives pupils a sense of value, alleviating negative feelings associated with their perceptions of themselves. Initial effects might be that they feel less threatened, more confident and this can affect peers' and teachers' expectations to do better. Previous evidence suggests that the 'Writing About Values' can reduce the achievement gap between those who suffer from stereotype threat and those who do not by 50%, and there were claims that the effects could last for one to two years after the intervention.

The advantage of this approach is that no stigma is attached to individual pupil and the cost of delivery is minimal apart from the initial training of teachers and the costs of printing the exercise booklets and the teacher manuals.

The intervention will be delivered by English language teachers in English classes. This will help ensure the fidelity of the treatment, reduce the logistics of implementations for schools, and enables individual randomisation within classes. These teachers will be trained to use the materials and implement the intervention, but not told what the outcome of the intervention is in order to avoid contamination. This is important because previous research has shown that knowledge about the purpose of the exercise reduces its efficacy (Sherman et al. 2009).

Teachers will be given scripts to use. Writing exercise booklets will be placed in named envelopes. Instructions on the booklets will be clear and self-explanatory. There is minimal input from the teachers. However, teachers need to be vigilant and explain that pupils should write exactly what is in the instructions.

RESEARCH PLAN

Research questions

1. What impact does the "Writing About Values" activity have on the academic attainment of disadvantaged pupils (EverFSM) using the individual pupil's Attainment 8 measure at GCSE after one year of treatment (for initial Y11)?

2. Is there a sustained impact of the "Writing About Values" activity on the Attainment 8 measure at GCSE for EverFSM pupils a year after the end of the intervention? (for initial Y10)
3. What impact does the "Writing About Values" activity have on All pupils (EverFSM and non-EverFSM) using the individual pupil's Attainment 8 measure at GCSE after one year of treatment? (for initial Y11)
4. Is there a sustained impact of the "Writing About Values" activity on the Attainment 8 measure at GCSE for All pupils (EverFSM and non-EverFSM) a year after the end of the intervention? (for initial Y10)
5. Is there a sustained impact of the "Writing About Values" activity on pupil's self-reported self-efficacy one year after the end of the intervention?

The project

The University of Sussex project being evaluated here is a one-year intervention comprising two phases: an initial pilot phase and the main trial. The main trial consists of two randomly controlled trials in the same schools. One trial involves Year 10 pupils and the other involves Year 11 pupils. The inclusion of the Y10 pupils enables evaluation of the long-term impact of the intervention – a year after the end of the intervention.

The pilot

Before the main trial, a pilot will be conducted in up to six schools to develop and test the materials, manual or protocol, and training regime. These schools will not form part of the main trial. Pilot schools will receive £500 to complete the pilot trial.

The pilot will trial intervention materials, such as the pupils' writing exercise booklets and the scripts used by the teachers. It will also assess whether teachers are able to use the scripts with fidelity. The booklets will be tested to make sure that they are age-appropriate, fit the context, and that instructions are clear. The pilot also provides opportunities to rehearse the randomisation process, the intervention delivery procedures and the plan for teacher training and for trialling the non-attainment survey instrument.

Prior to the pilot, one or two local secondary schools in Sussex will be approached at the beginning of 2016 to test the intervention materials. Only Y11 pupils will be piloted. This is because the project team want to look at the GCSE outcomes for this cohort.

The pilot intervention will begin with the training of teachers in April 2016. Focus groups with Y10 pupils and English teachers will inform the development of the writing task. Teachers will be provided with a one-hour training session to deliver the writing task.

The delivery of the treatment will be carried out in early May 2016 before the onset of the GCSE exams. Light touch process evaluation of the delivery from training of staff to implementation in the classroom will be carried out by Durham University in a random sample of 3 of the six pilot schools to test the fidelity of implementation, and assist where possible by providing suggestions and feedback. Formative feedback on the training, delivery of intervention, teaching materials will be relayed back to the project team. The pilot will also help ascertain whether the level of support and training is sufficient and what improvements are needed to ensure that the main trial runs smoothly. Any potential hiccups will be identified at this stage. The process evaluation will primarily be in the form of participant observations. The evaluators will also talk to staff and pupils in the pilot schools at the end of the trial to identify potential barriers to implementation, issues with data collection, possible resistance and also any potential risks of contamination. Lesson

observations will be very informal and as non-intrusive as possible. In cooperation with the project team, focus group interviews with teachers and pupils would be arranged to get feedback. Participants will be asked what they thought the writing task is about and whether they perceive any benefit from the task. This is to see if the activity gives a clue to teachers about the intervention. More specifically we will ask them about issues relating to the delivery/implementation, resources/materials used, and if there were suggestions for improvement.

The survey instrument, the trial materials and the mode of delivery will be revised in the light of the formative feedback.

The Main Trial

The main trial is an efficacy trial running for two years involving two randomised trials: one with Y10 pupils for two years, and another with Y11 pupils for one year. Delivery of intervention for both groups stops at the end of the first year (that is July 2017). Evaluation of impact for Y11 will be undertaken at the end of the first year after the GCSE results, while impact evaluation for the Y10 will be at the end of the second year to test the sleeper or sustained effect.

This will be a double-blind experiment where both pupils and teachers will not be told what the intervention involves. Lessons will be conducted as per normal. One person from the University of Sussex project team will be present in the classroom during the first time each teacher distributes their first writing exercise.

Randomisation

All Y10 and Y11 pupils in the participating schools will be randomised at the individual level to either the treatment group or to the active control group, stratifying by year group and FSM status. All participating schools will receive an incentive payment of £1,000 for completing the trial. Stratification will greatly reduce the risk of imbalance in the most important variables.

Since all pupils will be doing the writing exercises, the programme will not be seen as a new intervention. There is less likely to be a Hawthorne effect.

Randomisation will be conducted as soon as data from schools are available using a pseudo-random generator, but results will not be revealed to schools. By stratifying the groups by FSM it will be possible to estimate the valid effects within that group. It was decided that randomisation would be carried out immediately instead of waiting till the new term in September for logistic reasons. Since the two groups of pupils will be doing different exercises the project team needs to know the number of pupils in each arm of the intervention to get the right number of exercise booklets ready for when the term starts in September.

As randomisation will be carried out in the summer before the new school year begins, it is anticipated that there will be some movements of pupils: some will have left and new ones arrived. Pupils who have left before September 2016 will be excluded from the trial. New pupils as of September 2016 will participate in the writing task, but will not be included in the analysis.

Participants

Schools will be recruited from the Southeast of England (areas in and around Sussex and Buckinghamshire) through Local Authorities, academy chains, or direct contact. Eligible schools are those not in special measures, with a minimum of 10% of pupil population eligible for FSM and large school population. The latter is to ensure that a sufficient number of FSM pupils per school, and the 10% threshold is considered to be a more realistic figure given the areas from which the schools will be recruited. However, priority will be given to schools with a high proportion of FSM children.

The University of Sussex team will recruit c. 25 schools with support from Durham University. Participants will be Y10 (aged 14/15) and Y11 pupils (aged 15/16).

Outcome measures

Primary outcomes

- Attainment 8 at GCSE for FSM pupils (based on EverFSM) after 1 year of treatment (for initial Y11 pupils).
- Attainment 8 at GCSE for FSM pupils (based on EverFSM) after 2 years (one year after the end of the intervention) for pupils who received the intervention when they were in Y10.

Secondary outcomes

- Attainment 8 at GCSE for All (EverFSM and non-Ever FSM) pupils after 1 year of treatment (for initial Y11 pupils).
- Attainment 8 at GCSE for All (EverFSM and non-Ever FSM) pupils after 2 years (for pupils who received the intervention when they were in Y10).

Non-attainment outcome

Pupils' perceived self-efficacy

This will be measured using the subscales from the Motivated Strategies for Learning Questionnaire (Pintrich et al. 1993).

The non-attainment outcome survey will be conducted with Y10 pupils at pre- and post-time points. The post-survey will be taken at the end of Y10 after the school exams (June/July 2017). This will help estimate effects of the writing task on non-attainment outcomes after one year of exposure. Depending on feasibility Y11 pupils may take the post-test after the GCSE exams in 2017, but their results will not be included in the EEF report.

The non-attainment surveys will be collected and electronically marked by the project team, but analysed by the independent evaluators.

The University of Sussex will be reporting separately on different outcomes and subgroups, including:

- Separate analyses of English and Maths GCSEs for all and EverFSM
- Assessment of intervention for various sub-groups (e.g. gender, ethnicity, low attainment groups)
- Moderation of the intervention by class and school-level variables (proportion of FSM, size, OFSTED rating etc.)
- Mediation analyses of non-attainment measures for Y10s
- Moderation analyses of non-attainment measures for Y11s.

Other data

Pupils' background characteristics such as age, date of birth, sex, ethnicity, first language, and SEN will also be collected from schools as a routine part of being entered into the randomisation. This data will be uploaded for all pupils at the outset from each school's SIMS or similar. These will eventually be linked via UPN to the individual post-test scores. Pupils' prior attainment at KS2 and FSM status will be collected from the National Pupil Database. This will be used as a pre-test to establish baseline equivalence. In addition, pupil attendance data will also be collected via NPD.

Sample size calculations

Assuming an average of 5 forms in each year group, there would 125 forms (25 X 5) per year group. Working on the assumption of an average of 30 pupils per form, there will be 3,750 pupils (30 X 125) for each year group. Randomising individual pupils to treatment conditions, there will be 1,875 pupils in each arm for each year group. Assuming around 10% of pupils EverFSM-eligible overall, this would mean around 200 pupils per arm of the trial. To increase the number of FSM pupils available for the evaluation, at least 400 FSM pupils will be recruited per arm of the trial, which we anticipate will require 25 schools and a total of 7,500 pupils

Traditional power calculations make a number of assumptions that are not warranted, and are defined in terms of the invalid significance testing approach. However, using Lehr's approximation a cell size of 400 cases per arm would usually be considered sufficient to detect an effect of +0.2. This would be sufficient for an efficacy trial, despite the clustered nature of the sample because the randomisation is still at the individual-level and pre-interventions scores are available. The likelihood of success could be improved by ensuring that the schools recruited have more than 10% EverFSM-eligible pupils overall.
Whatever the sample size, it is important that all allocated cases are retained (the concept of over-sampling in order to cater for subsequent attrition is a dangerous illusion).

Analysis

The analysis for the impact evaluation will be based on the difference between groups on post-test scores, using prior attainment as a covariate. This can be expressed as an effect size and converted to progress in months.

Two reports will be generated. The headline attainment results for Report 1 will be the effect on EverFSM pupils after 1 year (for Y11). The headline attainment results for Report 2 will be the effect on EverFSM pupils one year after the end of the intervention (for initial Y10).

Other secondary and subgroup analysis will be conducted for

- nonEverFSM after 1 year (report 1)
- EverFSM and nonEverFSM after 2 years (report 2)
- Self-efficacy (report 2)

On-treatment analysis will also be conducted linking completion of writing task (binary) to changes in attainment (report 1 and report 2).

To see how much variance could be explained by treatment allocation multivariate regression analyses will be conducted using post-test scores as the dependent variables and prior test scores and pupil background characteristics, EverFSM as predictors. These will be entered in chronological order with the binary variable representing allocation to treatment or control entered in a second step.

Implementation and process evaluation

The fieldwork for the process evaluation aims to provide formative evidence on all phases and aspects of the intervention from the selection and retention of schools, through initial training and conduct of the intervention, to evaluating the outcomes. This can be used to help assess fidelity to treatment, and the perceptions of participants including any resentment or resistance, and to advise on improvements and issues for future effectiveness trial.

Crucially, the process evaluation will enable evaluators to collect information on how teachers deliver the intervention, and possibility of contamination.

The process evaluation aims to assess:

- the fidelity to training
- teachers' delivery of the intervention
- the contents and use of any materials
- staff and students views of the intervention (at the end of first year for Y11 and end of second year for Y10)
- possible indication of contamination or diffusion
- barriers and challenges to implementation

The main method of data collection will be participant observations where the evaluators sit in the classroom and observe the process of delivery and administration of the non-attainment surveys and writing exercises. These will all be as simple and integrated and non-intrusive as possible. Classroom observations will assess whether teachers stick to the scripts and that the right pupils are given the correct writing activity. A sample of 12 classes in six schools will be selected at random for observations. The schedule of visits will be agreed with the project team and the schools. Schools will agree to be part of this evaluation when agreeing to be part of the intervention. Observations of surveys will be conducted in a small sample of schools just to get a feel of how the surveys are conducted and also to see if, in general, they are carried out consistently across schools and also if there are any potential irregularities.

Evaluators will also talk to teachers casually when there is an opportunity (e.g. during break times) to see if they observe any changes in pupils' behaviour without direct reference to the intervention. Interviews with staff and focus groups with pupils will only be conducted with the initial Y11 group after their GCSE (where pupils are available after GCSE). This is to minimise the potential of interference with the intervention.

Informal interviews with both control and treatment pupils and teachers will be conducted after the trial to find out what they thought of the writing exercises and if they felt differently after the activity. These will be both ad hoc as well as pre-arranged focus groups (to be arranged by the school). To minimise loss of teaching time, these interviews will be no more than 30 minutes each. Interviews with teachers will take place after GCSEs are completed.

In addition, the project team will keep a log of the number of exercises completed by each pupil.

Costs

The costs of the trial will be the amount that the school will incur if they were to implement the intervention in their school. This will be calculated per pupil using the following estimates:

Cost of setting up

- Cost of delivering training to teachers
- Training of research assistants (RA) to support teachers (one RA per 5 schools)

Cost of delivery

- Printing of resources (e.g. exercise books), teacher manual
- Stationery costs
- On-going monitoring and support (RA fees)

Other non-monetary costs

Time taken away from regular lessons for organising the administration and collection of the booklets and the writing activities.

This information will be collected with input from the project team, interviews with research assistants and feedback gathered from the pilot.

ETHICS AND REGISTRATION

This evaluation, as distinct from the intervention to be conducted by the project team, raises few additional ethical issues. Key Stage tests happen as a matter of course in schools. In addition, there will be a survey questionnaire, which will be designed in co-operation with the project team. All participants in interviews and observations will be informed that participation is voluntary and that they can withdraw consent at any stage. The work will be conducted in accordance with BERA's professional Code of Practice, and approved by Durham University's Ethics Committee.

Parental opt-out consent forms will be used to indicate agreement to participate. Pupils whose parents opted out will be offered the control writing exercise. This exercise will not be included in the analysis. School level agreement will be collected via signed Memorandum of Understanding.

(Durham University ethics approval reference number: 2091)

PERSONNEL

Evaluation Team

Dr Beng Huat See will be responsible for final delivery of all outputs and meeting deadlines. She will lead in day-today organisation of the study, arranging fieldwork, communicating with EEF, arranging access to the study researchers, collecting data for the impact evaluation, the model for incorporating the process evaluation, and report writing. Her role is dedicated to EEF evaluations and similar opportunities.

Dr Nadia Siddiqui will assist with fieldwork, data collection and cleaning, arranging fieldwork, and assist with communicating with the study researchers, analysis and report writing. Her role is dedicated to EEF evaluations and similar opportunities.

Professor Stephen Gorard will be responsible for the design and analyses of the impact evaluation, and will assist with all other elements, especially report writing.

Research assistants will be employed as and when needed for parallel fieldwork and to relieve pressure on the principal researchers, including cleaning and preparing data, coding, and literature searches. They will play a large part in monitoring the testing process. They will also do the bulk of administration of the surveys.

Project Team

The University of Sussex team will be responsible for school recruitment and collecting opt-out consent from parents. They will be in direct contact with schools maintaining on-going relationships with schools and informing parents of the intervention (if necessary). They will be responsible for staff training, baseline data collection and follow-up data collection of the non-attainment survey. These tasks will be conducted with the support of the Durham team. The intervention team will also be responsible for arranging the electronic marking of the non-attainment survey in the main trial.

As the intervention is relatively simple and straightforward, there will be no formal training sessions as such, but the intervention team will brief teachers on how the exercises are to be delivered when the team drops off the first baseline questionnaires.

The evaluation team from Durham will be present at some schools for the briefing sessions, and will take the opportunity to talk to the lead teachers about what is required of schools (e.g. provision of data, updating project team on attrition, training of teachers and maintaining contact with the teams) and how the three parties (school, intervention team and evaluation team) can work together. As it is not feasible to visit all schools, Sussex will convey this information in the Memorandum of Understanding.

Reporting/publications

The first publication of the report will be authored by Durham, but Sussex University will have the opportunity to add their comments and make clarifications where appropriate. This first report will be published on the EEF website.

Since both teams will want to work on the data resulting from the trial, a data sharing agreement and protocol will be devised that suits both teams equally. This will be an on-going discussion. It has been decided that any study that is produced with data from the EEF report will be co-authored by both teams from Sussex and Durham with authors' names in alphabetical order.

RISKS

As a team, we have conducted scores of evaluations, and have always completed them successfully and on time. The biggest risk to the evaluation probably stems from temporary unavailability of any of the evaluating team, through illness for example. To a very great extent they can substitute for each other. If Beng Huat See was unavailable for any reason, then Stephen Gorard would lead, for example, and Nadia Siddiqui would take on more responsibility for this project. Carole Torgerson, a senior member of the evaluation team at Durham is also available if needed. A pool of researchers with the relevant skills and experience is available within the School of Education, Durham University.

One of the risks associated with the intervention, which was highlighted by the intervention team, is the risk of a deleterious effect on pupils who identify with groups associated with high achievement. This risk, although small, will be assessed in the trial. A more substantial risk is that the intervention fidelity may not be maintained throughout the two years of the trial. The non-attainment outcome surveys may be considered burdensome for schools to

administer, resulting in non-response and drop out. For this reason, the survey instrument will be kept as simple and short as possible while maintaining the integrity of the test.

The most likely risk is therefore schools dropping out or not cooperating in providing data or conducting the survey. Maintaining good relationships with schools is key to minimising this risk to get their full commitment. It is thus important to explain all aspects of the potential burden to schools in the recruitment communication and the MOU.

TIMELINE

Pilot starts in Jan 2016 with up to 6 schools.

Main trial begins in September 2016.

	July 2015	• First meeting with EEF and project team to discuss the intervention, implementation and time scale for the pilot and main trial. • Discuss issues with design, measures, survey instrument and sample size.
	January 2016	• Project team recruit 1 to 2 'friendly' secondary schools to help in the formative process of finalising materials for the pilot.
	November 2015 to March 2016	• Project team to recruit 2 to 6 pilot schools • Recruitment of 25 secondary schools (in the South East of England) to go on simultaneously.
Pilot Phase	February to March 2016	• Collect pupil data for pilot (Sussex) • Randomise pilot pupils
	April 2016	• Observe training of teachers in pilot schools • Collect and evaluate training and teaching materials • Administer pilot non-attainment survey instrument
	May 2016 (before GCSE)	• Delivery of treatment in pilot schools • Light touch observation of delivery of intervention in pilot schools • Interviews with teachers and pupils to identify potential risks • Collect feedback about the instrument from pupils and teachers
	May to June 2016	• Revise survey instrument (Sussex)
	June to July 2016	• Meet with developers and EEF to discuss the pilot results • Resolve issues (if any) with the teaching materials and the intervention in general
	August 2016	• Update protocol to include the non-attainment measure after the pilot

Preparation for Main Trial	December 2015	• Development of recruitment materials completed (Sussex)
	January to June 2016 (simultaneously while pilot is going on)	• Observe the recruitment of schools to main trial
	June/July 2016	• Schools sign MOU (Sussex) • Parental consent forms to be sent out (Sussex) • Collect pupil background data (UPNs, names, and FSM status) (Durham) • Reveal results of randomisation
Main Trial begins	September 2016	• Conduct non-attainment survey (undertaken by Sussex in the presence of evaluation team) • Observe training of teachers • Delivery of first writing task • On-going light touch process evaluation of delivery of intervention
	December 2016/January 2017	Delivery of second writing exercise before mock GCSEs
	May 2017	• Delivery of third writing exercise before GCSEs
	June to July 2017	• Conduct follow-up non-attainment survey for only Y10 pupils after school exams. • Interview Y11 pupils and teachers • Feedback to EEF and developers about the interim results
	July to August 2017	• Collect and enter survey responses (Sussex) • Analyse non-attainment outcome
	October 2017	• Analyse GCSE test scores (unamended) • Write end-of-year 1 report
	February 2018	• Complete Report 1
	October 2018	• Collect GCSE results from NPD for initial Year 10 pupils • Analyse outcome data • Synthesise impact evaluation outcomes with process evaluation data
	February 2019	• Complete Report 2

References

Borman, G.D., Grigg, J. and Hanselman, P. (2015) An effort to close the achievement gaps at scale through self-affirmation. Educational Evaluation and Policy Analysis, 0162373715581709, first published on June 17, 2015

Cohen, G. and Sherman, D. (2014) The Psychology of Change: Self-Affirmation and Social Psychological Intervention. *Annual Review of Psychology*, 65, 333-371

Cohen, G., Garcia, J., Purdie-Vaughns, V., Apfel, N. and Brzustoski, P. (2009) *Recursive Processes in Self-Affirmation: Intervening to Close the Minority Achievement Gap*, *Science*, 324, 5925, 400-440

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, 96, 608-630. doi:10.1037/0033-295X.96.4.608

Dee, T.S. (2015) Social identity and achievement gaps: Evidence from an affirmation intervention. *Journal of Research on Educational Effectiveness*, 8, 2, 149-168.

Gorard, S., See, B.H and Davies, P. (2012) *The impact of attitudes and aspirations on educational attainment and participation*, York: Joseph Rowntree Foundation, 103 pages, http://www.jrf.org.uk/publications/aspirations-educational-attainment-participation

Major, B., Spencer, S., Schmader, T., Wolfe, C., & Crocker, J. (1998). Coping with negative stereotypes about intellectual performance: The role of psychological disengagement. *Personality and Social Psychology Bulletin*, 24, 34-50. doi:10.1177/0146167298241003

Marsh, H. W., & Martin, A. J. (2011). Academic self- concept and academic achievement: Relations and causal ordering. *British Journal of Educational Psychology*, 81, 59-77. doi:10.1348/000709910X503501.

Mikaye, A., Kost-Smoth, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L. & Ilto, A. (2010). Reducing the gender achievement gap in college science: A classroom study of values affirmation. *Science*, 330, 1234-1237. doi:10.1126/science.1195996

Oyserman, D., Bybee, D., & Terry, K. (2006) Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91, 188-204. doi:10.1037/0022-3514.91.1.188

Pintrich, P.R., Smith, D.A.F., Garcia, T and Mckeachie, W.J. (1993) Reliability and predictive validity of the Motivated Strateties for Learning Questionnaire (Mslq). *Educational and Psychological Measurement*, 53, 3, 801-813.

Sherman, D., Hartson, K, Binning, K.R., Purdie-Vaughns, V., Garcia, J., Taborsky-Barba, S. Tomassetti, S. Nussbaum, A.D and Cohen, G. (2013) Deflecting the Trajectory and Changing the Narrative: How Self-Affirmation affects academic performance and motivation under identity threat. *Journal of Personal and Social Psychology*, 104, 591-618

Simmons, C.M. (2011) *Reducing stereotype thread in academically at-risk African American students: A self-affirmation intervention*. PhD thesis. Berkeley: University of California, Berkeley.

St Clair, R. and Benjamin, A. (2011) Performing desires: the dilemma of aspirations and educational attainment, *British Educational Research Journal*, 37, 3, 501-517

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629. doi:10.1037/0003-066X.52.6.613