Amended protocol for the Evaluation of the 'Project SUCCESS' (December 2017)

AMENDMENTS

Following comments from the developers, and data collection with colleges, the following changes have been made to the initial (registered) protocol:

1. The date for exam resits has been amended from June/July 2018 to June 2018 (page 3)
2. The text has been edited to reflect changes in the randomisation approach – see comment box for further details (page 5)
3. Information about the primary outcome has been amended – this now specifies attainment in the subject students are receiving texts about, be that English or maths (page 7)

• Evaluation Summary	
Age range	16-18 (pupils re-taking GCSE Maths and English)
Number of pupils	c. 3,750 (estimated)
Number of schools	30 FE colleges
Design	Multi-site randomised controlled trial, randomised at the individual level
Primary Outcome	Pass / fail GCSE Maths or English resit
Protocol date	12/12/2017
Version	2

Intervention

Overview

The intervention being evaluated is the Texting Students and Study Supporters programme (known as Project SUCCESS) developed by the Behavioural Insights Team (BIT). The intervention consists of 35 text messages a year sent to students resitting GCSE English and/or Maths and 'study supporters' (a peer or family member identified by the student). The aim is that the text messages, either through direct contact or via a dialogue with a study supporter, will prompt students to attend classes and exams, engage with study materials and form better study habits. The evaluation uses a randomised controlled trial (RCT) design with students randomised to one of four conditions/ trial arms:

1. Student receives text messages
2. Study supporter receives text messages
3. Both student and study supporter receive text messages
4. Control (no text messages).

Why: theory/rationale

Two recent trials have found an increase in FE college students' attendance through a programme of text messages sent to a nominated study supporter. The text messages encouraged interaction between the student and their supporter, specifically in relation to the students' learning and upcoming assessments[1]. This intervention builds upon previous trials by including text messages sent directly to students as well as to study supporters. The evaluation will therefore be able to assess the impact of directly engaging students, as well as through interactions with supportive peers or adults.

The logic model for Project SUCCESS is included as an appendix to this protocol document.

[1] Groot et al. (2017) 'I get by with a little help from my friends: Two field experiments on social support and attendance in further education colleges in the UK', available at: http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/04/Study-Supporter-WP_April-2017.pdf

Who: Intervention providers/implementers
The intervention will be implemented and delivered by the Behavioural Insights Team (BIT). BIT will take responsibility for recruiting colleges and students to take part in the project, and for providing instruction for tutors. Text messages will be sent via BIT's texting platform Promptable (https://promptable.com).

NatCen will conduct the impact and process evaluation of Project SUCCESS. The process evaluation aims to understand in detail how the intervention was implemented and delivered, and, in turn, how, why and for whom it works.

Who: recipients
Project SUCCESS is targeted at FE college students resitting English or Maths GCSEs, with the primary outcome of interest being GCSE resit results in one of these two subjects. The setting(s) for Project SUCCESS will be FE colleges rather than other post-16 education providers. This will ensure that study findings are informative for the largest proportion of students resitting GCSEs during their post-16 studies.

What: materials
Depending on which trial arm they are assigned to, students and/or study supporters will receive weekly text messages. These messages will contain information on: course content, academic resources such as practice websites, notifications about deadlines, details of extra tutorial sessions, and exam dates. This is a low-cost way of prompting attendance and academic engagement through direct contact and/or promoting a positive dialogue between students and supportive peers or adults.

College tutors at participating colleges will tailor the text messages. This will ensure they are fully relevant for students in terms of the college timetable and local curriculum.

When and how much: dosage
Students and study supporters will receive approximately 35 weekly messages. These will be sent from the point of randomisation at the end of October 2017 until students take their resit GCSE exams in June 2018.

Significance
Recent government policy requires all students aged 16 to 18 who do not hold a GCSE grade 9 to 4[2] in Maths or English to continue studying these subjects. Students with Maths or English GCSE attainment at grade 3 are required to also enrol in a GCSE qualification (in Maths and/or English as appropriate) in order to achieve at least a grade 4.

Several studies conducted have shown that text messages sent to parents can have a positive impact on pupils' attainment and attendance. For example, the large-scale multi-site cluster RCT Parent Engagement Project (PEP) - funded by EEF - found that secondary school pupils whose parents received text messages encouraging them to talk to their child about studying for an upcoming test, saw improvement in maths performance and

[2] This refers to the new GCSE grading structure introduced from 2017 for Maths and English. According to this new grading system, a GCSE grade 9 to 4 is considered equivalent to GCSE grades A* to C in the old grading system.

attendance[3]. A similar RCT by Kraft and Rogers found that weekly text messages from tutors to parents suggesting specific issues to discuss with their child helped prevent drop-out and reduce absenteeism.[4]

Project SUCCESS builds on two previous evaluations that tested the premise that social support from family and peers can influence educational success[5]. In these evaluations, students nominated a study supporter to help them in their learning. Study supporters were sent a series of text messages encouraging them to ask the student how revision is progressing, to praise the effort the student is making and to wish the student luck ahead of exams and assessments. Results from these two evaluations demonstrated that text messages sent to nominated study supporters can generate improvements in college attendance.

Project SUCCESS extends the scope of the intervention to send text messages to students themselves - as well as to study supporters. This will enable an exploration of the impact of directly engaging students as well as promoting positive relationships with supportive peers or adults. The impact evaluation of Project SUCCESS will measure attainment, specifically GCSE resit results, as well as attendance.

Methods

Research questions

The evaluation of Project SUCCESS aims to answer the following research questions:

- To what extent does the receipt of text messages (either by the student, a study supporter, or both) improve students' college attendance and GCSE maths or English resit results - compared to those who do not receive text messages?
- To what extent, if at all, do impacts differ for students who have ever been eligible free school meals (as a measure of disadvantage) and gender?

Design

The evaluation uses a randomised control trial (RCT) design, with individual-level randomisation into four trial arms:

1. Student receives text messages
2. Study supporter receives text messages
3. Both student and study supporter receive text messages
4. Control (no text messages).

A randomised controlled trial (RCT) uses the mechanism of randomisation to assess the causal impact of an intervention. Random assignment of students to treatment and control groups ensures that, in principle, the two groups have the same baseline characteristics (any differences at baseline being the result of chance and accounted for in the statistical analysis). As a result, any difference in outcomes at the end of the trial can be attributed to the intervention itself. As an efficacy trial, the evaluation aims to test the potential of the

[3] Miller et al. (2016) *Texting Parents: Evaluation report and executive summary*, available at: https://educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/EEF_Project_Report_Texting_Parents.pdf

[4] Kraft, M. A., & Rogers, T. (2015) 'The underutilized potential of teacher-to-parent communications: Evidence from a field experiment', *Economics of Education Review*, 47, pp. 49-63.

[5] Groot et al (2017), ibid.

intervention under as close to ideal conditions as possible, restricting variation in implementation (fidelity) and in the study population.

It is important to note that the evaluation is designed to test the intervention(s) against the control, but not to draw comparisons between trial arms. This means that the trial is able to indicate which, if any, of the three intervention types significantly improve attainment and attendance, but not to identify which trial arm has the largest impact.

Randomisation

Students agreeing to participate in the trial will be allocated to one of the three treatment arms or to the control group using stratified block randomisation. This means that all students who consent to take part in the trial will be randomised (in a block) as soon as baseline data has been collected.

The anticipated randomisation strategy accommodates issues identified during college data collection. Essentially there are a substantial number of students with no tutor group, or in very small tutor groups making randomisation unfeasible. Therefore we will opt for the simpler 'within-college' randomisation design.

Participants

College eligibility is determined by two factors:

- Institution status on EduBase: Further Education Corporations are eligible, but Sixth Form Corporations are not. Specialist Designated Colleges (e.g. land-based providers) are to be omitted unless the overall target of 30 colleges cannot be recruited from Further Education Corporations;
- The number of eligible students: Colleges with at least 100 eligible students will be targeted in the first instance. The rationale for this decision being that the greater the number of participating students, the greater the statistical power in the analysis of student outcomes.

Students are eligible to take part in the trial if they are:

- Enrolled at a participating college in September 2017;
- Due to resit GCSE maths and/or English in the academic year 2017/18 academic year.

Colleges will be recruited by the developer (BIT) using a targeted recruitment strategy. The recruitment process includes an initial screening call to gauge colleges' interest in participating in Project SUCCESS and to ascertain key information such as the number of eligible students. Colleges expressing an interest will be sent a Memorandum of Understanding (MOU) to sign. The MOU provides an overview of the intervention, details requirements for colleges and collects consent to be involved in the study (a signed copy being returned to BIT).

Colleges signing the MOU will be asked to not send any text messages with motivational content to students during Project SUCCESS. Colleges may continue to send procedural text messages – for example on room changes and missed assignment notifications (this might include texts relating to student absence to parents/carers).

BIT will provide training workshops for project leads/tutors at each participating college. Training workshops will include instructions on how to administer the student recruitment process.

Students will be recruited in September / early October 2017 through an online survey, which BIT will provide to college project leads to administer with students. In the survey, students will be provided with details of what Project SUCCESS involves and what is expected of them - so they can give their informed consent. Students will also be asked to name a study supporter and provide their contact details, as well as additional background information about their relationship with the study supporter. The survey will include questions on students' attitudes towards learning and their motivation to study.

Sample size calculations

The sample size calculations in Table 1 are aimed to enable the detection of a 7 percentage point increase in the GCSE pass rate, from (an estimated) 30% to 37%[6]. Table 1 presents the intention-to-treat minimum detectable effects (MDE) - defined as the minimum detectable difference in the probability of passing GCSEs between the treatment group and the control group - for different assumed GCSE resit pass rates in the absence of the intervention.

Table 1: Minimum detectable effects – intention-to-treat analysis[7]

Number of FE colleges	30
Number of students per FE college	125
Number of students per trial arm per FE college	31
Number of students per trial arm	937
Total number of students	3750
Assumed GCSE resit pass rates (%) in the absence of programme	30%
MDE main effect (detectable % point difference)	**6.8**
MDE sub-group effect: Study subject/topic (%)	9.6
MDE sub-group effect: EVERFSM status (%)	12.4
Assuming equal proportions in each treatment arm; equal sample sizes in each college; 80% power; two-sided tests; overall alpha at 0.05; individual comparison alpha at 0.0167[8]; equal ratio of GCSE Maths and English students; no college-level and 25% student-level attrition[9]	

[6] A 10% difference is achievable with a low level resource, whereas power calculations to reach a 5% level of difference suggest considerably more intensive resource requirements. Therefore, the compromise of 7% was agreed, giving a realistic and achievable measure of detectable difference which can be measured within the logistical and budgetary constraints.

[7] MDE calculations based on formulas for the calculation of sample sizes for binary outcomes outlined in McConnell and Vera-Hernández (2015) Going Beyond Simple Sample Size Calculations: a Practitioner's Guide. IFS Working Paper W15/17. Institute of Fiscal Studies. Available at: https://www.ifs.org.uk/uploads/publications/wps/WP201517.pdf

[8] Account for multiple hypothesis testing using the Bonferroni correction, assuming 3 primary comparisons.

[9] The 2016 Statistical First Release (SFR) for Level 1 and 2 attainment in English and maths by students aged 16-18 (see link below) indicates that on average 81% of GCSE Maths Entrants and 88% of GCSE English Entrants in FE colleges resit GCSE exams. However, as these data cover the academic year 2014/15, these percentages precede the recent government requirements for all students who obtain a GCSE grade D / grade 3 at KS4 to resit GCSEs in post-16 settings. Given these, we anticipate a slightly higher attrition rate of 25% as the 2017/2018 cohort will include students that would not have otherwise volunteered to resit GCSEs.

We propose to conduct a trial in 30 FE colleges, with each college recruiting an average of 125 eligible students to participate in the trial[10]. Students retaking both maths and English will be assigned at random to either the maths or English strand of the intervention, so that approximately 50 per cent are participating in each stand. The minimum detectable difference is shown for each specific subject, as well as for participants classified as ever having received free school meals. The developers have capacity to recruit 30 colleges adding considerable power to detect significant differences between the intervention and control[11].

Outcome Measures

Primary outcome: GCSE resit attainment in Maths and English post-treatment will be taken from the National Pupil Database (NPD) in autumn 2018 for all students who participated in the programme in the 2017/18 academic year. Approximately 40 per cent of students participating in the trial are likely to resit both Maths and English GCSEs. In this instance, students will be randomly assigned to receive texts about either English or maths; the primary outcome will be attainment in the subject the student received texts about.

Baseline academic achievement will be assessed using college data from the BKSB/ ForSkills assessment taken by students at the start of the academic year following Key Stage 4 (KS4). BKSB and ForSkills are designed to fulfil the same purpose: providing a set of resources that colleges can use to assess the academic ability of students undertaking functional skills and GCSEs in English and/or maths.

Both systems follow the same approach of an 'Initial Assessment' followed by a level-specific 'Diagnostic Assessment'. Initial Assessments test the level at which learners are currently operating in English and maths - tracking the Functional Skills standards and assessing a learner's level from pre-entry to level 2. The result of the assessment will show whether a learner is operating at E1, E2, E3, L1 or L2. This information is fed into the Diagnostic Assessment which assesses the strengths and skills gaps for learners according to the level they are operating at. The assessment produces an overall percentage score (0-100%) for that level.

The proportion of students who do not take an assessment may be as high as 40%. We will make an assessment about the volume of missing data prior to analysis, and if needed will consider using multiple imputation to account for missing baseline data if missingness is low (~10 to 15%). If missingness is high then baseline data will be used for those who have it, with a missingness dummy entered into the final model. The inclusion of a dummy will limit drop out and thus fit with the intention to treat principle, and also make use of as much baseline data as possible to reduce variance.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/525119/English_and_maths_SFR_2016_FINAL.pdf

[10] Assuming approximately 70% of students sitting Maths and/or English GCSEs in FE colleges to be interested and eligible to participate in the trial, we recommend recruiting FE colleges with a minimum of 190 students sitting GCSE Maths and/or English in their first year of studies.

[11] The MDES for the originally proposed 15 colleges was 11%, reduced to 7% for 30 colleges, based on the same assumptions.

It is not possible to use KS4 (GCSE) data held on the NPD as it does not provide a sufficient level of detail (i.e. raw scores) for academic performance. KS4 data refers only to the overall grade and additional information on the raw score is not available for analysis.

Secondary outcomes: Students' records of attendance will be collected from colleges directly via a secure online platform. Data on student aspirations, confidence and attitudes to learning will be recorded as part of the process evaluation and does not constitute part of the impact evaluation.

Analysis plan

The primary outcome measure will be dichotomised to a binary variable: a KS4 re-sit pass is defined as attaining level four or above; a fail is defined as a no result (non-attendance) or reaching levels one to three. The secondary outcome of student attendance will be used as a continuous variable, the value representing the proportion of days the students attended college when expected to do so.

The effect size of the intervention on the primary outcome will be modelled using an intention-to-treat analysis on the sample of eligible students. A multilevel model will contain baseline attainment at level one and the college indicator as a fixed effect at level two in order to account for clustering effects within colleges. Multilevel logistic regression will estimate the odds ratio (the measure of effect) for passing a KS4 re-sit in the treatment group compared to the control group.

The effect sizes of each intervention will be estimated separately. The first regression will estimate the effect size for texting students; the second regression the effect size for students with study supporters receiving texts; the third regression the effect size for the group where students and supporter received texts. The significance level will be adjusted within the odds ratio estimation to account for the multiple comparisons.

Sub-group impacts will be estimated using interaction tests between the treatment indicator and gender, subject being re-taken (English/Maths) and whether the student had ever received free school meals. A test for the interaction between students sitting one or two subjects will be performed to examine whether the effect of the intervention differed between students with different workloads associated with resits. Significant interactions will be further explored by the use of separate regression models.

It is worth noting that sub-group analysis by subject treats the intervention as the same - regardless of subject taken. This is because dosage (the number of messages sent) will be the same for students re-taking English and Maths. There will be some variation in the content of texts (relating to differences in course content and schedule) but these differences are not measurable in such a way that could be factored into analysis. Any differences in the intervention by subject will be explored in the process evaluation.

The secondary outcome of college attendance will be modelled as continuous variable ranging between 0 and 100%. The effect size will be estimated using the standardised R script, *eefAnalytics* to derive a Hedges *g* coefficient of the mean standardised difference in attendance between intervention and control group.

Secondary CACE analysis will be used to account for the effects of non-compliance. In this instance, opting-out of the text messaging service and non-receipt of messages will be used as a proxy measure of non-compliance.

Implementation and process evaluation methods

An implementation and process evaluation will be conducted alongside an assessment of impacts. The main research questions that will be answered by the process evaluation are:

- How is the intervention implemented?
- How is the intervention interpreted and delivered across colleges and trial arms?
- To what extent does contextual variation affect fidelity? What adaptations are put in place?
- To what extent do students and study supporters engage with and act upon the messages they receive?
- What are the barriers to delivery and how are these addressed?
- What facilitates successful delivery?
- What is the cost of delivery?

The process evaluation will involve a number of elements, each of which is described in turn.

Observation of a tutor workshop

The NatCen team will attend one tutor workshop (July/ August 2017). Attending the tutor workshop will provide the research team with insight into the delivery of the programme, including important information about how the programme is implemented in the earliest stages. Information gained from these events will be used to develop research tools such as the topic guide for tutor interviews.

Descriptive analysis of characteristics and attitudes of students

Students will complete a short diagnostic survey as part of the online recruitment process. This survey will cover a range of themes relating to their studies, including:

- Factors associated with succeeding at college (personal motivation, home life, the role of tutors)
- The extent to which the student believes they work hard, engage with their studies and are responsible learners
- Level of interest in the subject(s) taken
- Long-term motivational factors such as career prospects and helping others

This information means that it will be possible to compare the characteristics of students agreeing to take part in the intervention with those who refuse. The results of the analysis will provide important contextual information for the process evaluation, specifically, a better understanding of the possible limitations of the intervention to reach to sections of its target group.

Telephone interviews with project leads

NatCen will carry out two rounds of interviews with the project lead in each participating college. This will be the member of staff designated the point of contact for the trial at the recruitment stage. It is anticipated that the project lead will be a member of the Senior Management Team (SMT) in each college with some responsibility for GCSE Maths and/ or English.

The first interview will be conducted with all project leads by telephone and take place pre-randomisation. This interview will aim to:

1. Understand planned 'business as usual' practice in the college in relation to improving attendance and attainment in GCSE resits. This will be a strategic priority for colleges and so a qualitative interview will allow a comprehensive exploration of existing and planned measures[12].
2. Discuss college MI data on attendance. The format and mode of MI data collected by colleges is likely to vary. As MI data on attendance is critical for the trial, this early scoping discussion will allow the team to confirm that the data required is collected and available in a workable format. Should the interviews suggest any potential gaps in the data; the team would make recommendations about how they could be filled.

All project leads will be asked to take part in a follow-up interview in summer 2018, at the end of the intervention period. The key aim of the follow-up interviews will be explore any issues in terms of implementation, fidelity and changes to business as usual, as well as to collect data on costs. Interviews will also be used as an opportunity to facilitate collection of attendance data needed for the impact evaluation[13].

Telephone interviews with study supporters who opt out of the intervention

Study supporters are given the option of opting out of the intervention at any point, by replying to Project SUCCESS texts with an opt-out message.

Those opting-out during the first six weeks of the intervention will be sent a follow-up text message asking if they would be willing to be contacted by NatCen about taking part in a short telephone interview. Those not willing to participate would be removed from the project records, and not contacted again.

The NatCen team would select 10 study supporters from the remaining sample to take part in a 15-minute telephone interview. Interviews would be used to explore the reasons study supporters had elected to opt-out. This would include understanding the types and quality of relationships between students and study supporters who opted-out, any issues with the format and content of the text messages, and supporters' (lack of) engagement with Project SUCCESS.

College case studies

Information gathered as part of the initial interviews with project leads will be used to purposively select a sample of six case study colleges. Case studies will be organised as a day visit to each college, spread over the intervention period.

Each case study will include:

- Interviews with the Maths/English lead(s) and one tutor who worked with intervention developers to define the content of texts. Interviews will explore views on development process; enablers and barriers; adaptation, i.e. whether the texts/lessons changed during implementation, and perceived impact on student outcomes.

[12] Existing research with FE colleges has shown a range of delivery models are in place to respond to the new GCSE requirements, with different workforce and timetabling configurations.

[13] For case study colleges the substantive interview will take place as part of the case study visit in March/April 2018. In this instance, the follow-up will only be used to collect cost information, and prompt collection of attendance data.

- Interviews with two students in each active trial arm.
- Interviews with two study supporters in each relevant trial arm. Supporters will be matched to student interviewees, consent permitting.

Interviews with students will explore their attitudes and impressions of the text messages, whether they felt the intervention changed their behaviour, improved motivation, encouraged attendance and whether they shared the information included in the texts with their peers. Corresponding interviews with supporters will focus on the effect of texts on their own behaviour, whether they encouraged interaction with the student, what form this interaction took, as well as any perceived impacts on student behaviour (including negative effects).

Costs

When evaluating the per student cost of the intervention, the approach set out in EEF's published guidance will be followed. Calculating the average cost of delivery enables comparisons to be made with other interventions based on both the average effectiveness and costs incurred. The total cost per student will be calculated based on information provided by colleges after the completion of Project SUCCESS.

A simple cost sheet will be provided to colleges for them to use over the course of the project to log information on direct costs incurred and time spent on the intervention. This cost sheet will be collected from all colleges in summer 2018 and will be discussed in the follow-up interviews with project leads. Cost data will also be collected from the delivery team at BIT.

Ethics and registration

The ethical approval process

NatCen has a robust ethics governance procedure. Research projects are scrutinised by the NatCen Research Ethics Committee (REC). The committee consists primarily of senior NatCen staff. If necessary, external research experts or professional experts may also be invited to review individual studies. Depending on the nature of the research and the perceived level of risk, projects undergo either an expedited review (scrutiny by the REC Chair) or a full review by the sitting REC. For this evaluation we believe that a full review is appropriate given the scale of the project, the range of research of tasks and the age of the participants.

The REC procedure is designed to provide ethical advice and guidance, and to ensure that all research undertaken by NatCen is ethically sound and meets the ethical standards funders. The process provides reassurance to potential research participants and, where relevant, to gatekeepers through whom they are approached.

The REC has reviewed the design of this project, provided guidance that has been incorporated into this final protocol, and will continue to be involved on an ongoing basis. For example, the REC will review any changes to the study and consent and recruitment materials as they are developed.

Student consent

DfE considers young people aged 16+ to be the owners of educational data that relates to them. This includes information held in the National Pupil Database (NPD). As eligible students will be aged 16+ at recruitment, parental consent will not be required to link to NPD

data. Consent for data linkage will be sought directly from the students as part of BIT's recruitment process.

Recruitment will be carried out through an online survey (as detailed earlier in this document) to ensure that students are able to give fully informed consent to take part in Project SUCCESS. The online survey tool will provide comprehensive details on:

- What student data will be gathered and from what sources (including NPD data)
- Which organisations will collect and share/receive student data
- How the data will be stored after the project's completion.

Trial registration
The International Standard Randomised Controlled Trial Number (ISRCTN) for this project is: ISRCTN70011940

Personnel

Project team at BIT:
The project is managed in the Research and Evaluation unit. The trial manager will be Bibi Groot (Advisor), assisted by Sara Halkiopoulos (Research Assistant), with oversight from Michael Sanders (Head of Research and Evaluation).

Evaluation team at NatCen:
The project is managed in the Children, Families and Work team at NatCen. The trial manager will be Julia Griggs (Research Director), assisted by Peter Hall (Senior Researcher). Peter and Julia will be supported by other researchers in their team. The researchers will work closely with other departments and specialists at NatCen including the evaluation team, statisticians and the Operations Department. Neil Smith, an evaluation expert at NatCen will lead on randomisation and impact analysis.

Risks

Recruitment of colleges and students
30 colleges will need to be recruited and an average of 125 students will need to sign up at each college to power the study as planned.

It may be difficult to recruit such a large number of colleges. To mitigate this risk, BIT will assign a dedicated officer to liaise with colleges. They will also over-recruit colleges to protect against attrition and/or boost the overall number of student participants. NatCen will support the recruitment process by providing clear, concise information on the information requirements that will be placed on participating colleges. BIT will provide regular updates to the NatCen evaluation team and to EEF during the recruitment period so that progress can be monitored closely.

It may also be difficult to recruit a sufficient number of students within each college. BIT will conduct workshop training sessions with project leads and class tutors at each participating college. This will equip project leads and tutors with appropriate knowledge of the study so they can facilitate student recruitment effectively and handle any queries students might have. It will also be important to ensure that the online survey that will be used for recruitment is user-friendly, visually appealing, clear and easy to understand so that students are not deterred from completing the survey and giving their consent to take part.

Delays to collection of data for randomisation from colleges
Colleges will be asked to supply the NatCen team with information about students (e.g. name, UPN) and the tutor groups they belong to by the end of the first half term. This data is needed for the randomisation process, and is therefore essential to the success of the evaluation.

There is a risk that colleges will not supply/ be able to provide data within this timeframe. Typically, the first half term involves late enrolment, movement between classes and changes to tutor groups, all of which increase the risk of non-delivery.

In order to minimise this risk, BIT will ensure colleges are aware of exactly what information is required and when. This will be part of the MOU and detailed in an 'information requirements' sheet supplied by NatCen. The NatCen team will also take a proactive approach to collecting data, engaging project leads in information requirements as part of the initial interviews, and using project administrator time to contact and support colleges through this process.

Student and study supporter attrition
There is an assumption that a proportion of students (and study supporters) will opt out of the study. As stated, an average of 125 students from each college will be required to power the study as planned – therefore minimising attrition is of vital importance. Ensuring that colleges and students are fully informed about what taking part entails at the outset will help to prevent attrition. Opt-outs will also be monitored closely, and any potential issues escalated early.

Contamination
There are a number of ways in which contamination could occur:

- Motivational text messages outside of Project SUCCESS being sent to participating students. Colleges will continue to send procedural text messages to participating students during Project SUCCESS, but have agreed not to send messages relating to course content. Motivational texts sent to students in any trial arm will affect dosage and must be avoided. Colleges will be provided with clear guidance about what constitutes motivational content by BIT during the recruitment process.

- College tutors behaving differently towards students as a result Project SUCCESS. As far as possible colleges should conduct 'business as usual' so that the impact of the Project SUCCESS can be evaluated. Colleges will be advised on the importance of continuing business as usual during Project SUCCESS to help reduce the risk of student behaviour being affected by atypical tutor behaviour. Tutors will not be told which of their students belongs to which trial arm.

- Students nominating other participating students as study supporters. It is possible for a student to nominate as their study supporter a fellow student who may have also agreed to take part in Project SUCCESS. This could lead to a situation where the student who was nominated as a study supporter is assigned to, for example, the control group. The text messages this individual receives in their capacity as a study supporter would affect their validity as a member of the control group. BIT will

encourage students to nominate study supporters who are outside their GCSE peer group.

- Students passing on information and advice. There is a risk that students pass on content from text messages they have received themselves or from interaction with their study supporter to students in the control group. This may affect outcomes for the control group, and therefore the evaluation's ability to detect an impact.

Contamination is something that will be explored as part of the process evaluation. In particular, interviews with students and tutors will be used as an opportunity to discuss behaviour towards students/peers, and in the case of students, whether information has been shared within/outside the GCSE cohort. This will form part of the assessment of the assessment of fidelity.

Data protection statement

NatCen has a range of policies and practices in place to ensure secure data handling. These are summarised below.

We categorise all data and files to 5 different levels, dictating how they are stored, handled and transmitted. The sample data for this study is Level 3 - 'Respondent Confidential'. Only those who carry out research tasks and those who need to check or process the data will have access to names and addresses. Our confidentiality measures for Level 3 data include:

Encryption

All staff and freelancer laptops that hold Level 3 respondent confidential data have a hard drive encrypted using PGP Whole Disk Encryption by Symantec. This means that should the laptop be lost or stolen, the data contained on the hard drive is inaccessible. The encryption used by PGP is certified to FIPS 140-2 standards. We also use encrypted digital recorders for qualitative interviews,

Password Policy for office based staff

- Complex passwords, change every 30 days
- 10 password history automatically enforced
- Account locked out after 5 wrong attempts

Access control

- Access to project data is managed via compliant segregation
- Strict access control policy, limited to named authorised individuals
- Unique serial numbers assigned to avoid use of personal information.

Data Security Plans

- Project data security plan detailing data security procedures.
- Rights of access recorded before granted.

File Systems Auditing

- File System Auditor used to monitor activities logging what was created, updated, moved, renamed and deleted and when.

NatCen processes for retention and destruction of personal data exceed ISO 20252 requirements on archiving and secure deletion.

Timeline

Date	Activity
April to June 2017	Preparation of materials, finalisation of eligibility criteria and outcome measures agreed (BIT & NatCen)
May 2017	Ethical approval for evaluation (NatCen)
May 2017	IDEA Workshop (BIT & NatCen)
July 2017	Protocol produced (NatCen)
May to July 2017	College recruitment, MOUs signed (BIT)
September 2017	Student and study supporter data collection, confirmation of consent from study supporters (BIT)
September 2017	Pre-randomisation interviews with college project-leads (NatCen)
October 2017	Baseline data collection from colleges. Multi-site individual level randomisation (NatCen)
October 2017 to June 2018	Intervention – texting students and study supporters delivered in 30 FE colleges (BIT)
November to December 2017	Process evaluation – telephone interviews with study supporter opt-outs (NatCen)
March to April 2018	Process evaluation – case study research in six FE colleges (NatCen)
May to June 2018	Process evaluation – follow-up interviews with project leads, MI and cost data collection (NatCen)
October 2018	GCSE resit outcome data from NPD (NatCen)
October to December 2018	Analysis (NatCen)
January 2019	Draft report (NatCen)
April 2019	Peer review, Final report (NatCen)

Appendix A – Project SUCCESS Logic Model