



## **Literacy Octopus**

### **Active trial protocol amendments**

07.06.16: Following the publication of both the Literacy Octopus Active Trial and Literacy Octopus Passive Trial protocols, the following clarifications are required for the Active Trial protocol document. These are:

- P.5 – Section 3.2.1 – the trial will run until May 2018
- p.10 – Section 3.4 – use of amended Key Stage 2 data available in December 2016 (rather than unamended Key Stage 2 data available in September 2016)
- p.12 – Section 3.6 – the addition of two further strands to the process evaluation, 7) light touch case studies, and 8) control group interviews
- p.14 – Section 3.6.6. – clarification that case study visits will focus on high-engaged schools from the active arms
- p.15 – Section 3.6.7 – the addition of light touch case studies (by telephone) to focus on high-engaged schools from the passive arms
- p.15 – Section 3.6.8 – the addition of interviews with control schools
- p.15 – Section 3.7 – bi-annual (rather than quarterly reports to EEF)
- p.15 – Section 3.7 – report and further addendum report dates altered by 3 months to reflect EEF and DfE's preferred use of amended Key Stage 2 data (which is available 3 months after unamended data)
- p.16/17 – Section 4 – Overall timeline amended to reflect EEF and DfE's preferred use of amended Key Stage 2 data. Report deliverables amended to: February 2017 draft report; June 2017 final report; early February 2018 draft addendum report; May 2018 final addendum report.

# **Protocol for the evaluation of communicating research findings: trialling different approaches (a multi-armed RCT)**

## **Active trial protocol**

*Note: This protocol excludes aspects of the evaluation that are the sole responsibility of providers and are not requirements of the EEF or NFER.*

### **1 Introduction**

The Education Endowment Foundation (EEF) has commissioned a number of providers to use a range of different methods of communicating research findings and evidence to teachers and schools. EEF wish to compare these approaches under the umbrella of a multi-armed RCT. The focus will be on literacy in Key Stage 2, including common elements on cooperative and collaborative learning. NFER has been commissioned to design and manage the RCT, including recruiting schools, undertaking the process evaluation, and assessing impact using Key Stage 2 data from NPD.

Through a separate commission on measuring the impact of research on schools and teachers, NFER will develop survey tools (baseline and outcomes) to measure schools' dispositions towards research and the degree to which research information is informing teaching and learning. These tools will be used in this active multi-arm trial to assess outcomes for teachers and schools.

### **2 Active trial: the interventions**

The different communication methods are:

1. **The Institute for Effective Education at York University** propose to look at the impact of:
  - a. *Passive arm:* Printed and electronic materials that explain research findings and identify effective interventions. The IEE already produces

research summaries as part of its remit to improve the use of evidence in the profession, including magazines that bring together evidence on particular topics (for example, assessment, or struggling readers) and fortnightly emails summarising new research findings. It recently launched a new website, Evidence 4 Impact, providing a searchable database of evidence-based education programmes.

- b. *Active arm:* An evidence fair that gives schools an opportunity to discover more about interventions that can help primary school pupils with their literacy. Senior leaders from schools will attend the events, and meet with proponents of evidence-based programmes and hear from other schools that have used them. There will also be pre and post conference support. Schools will also receive the materials from the passive arm.

2. **Teaching How2s**, in partnership with Campaign for Learning (an existing EEF grantee), will compare:

- a. *Passive arm:* Giving schools log-ins to the Teaching How2s website. This provides a large number of visual guides to evidence-based teaching techniques. These are carefully designed, step-by-step presentations that walk teachers through activities that they can use in their classroom. The idea is that visual guides can accurately communicate evidence-based teaching strategies to teachers and help implement them in practice.
- b. *Active arm:* Schools will receive access to the website, but will also receive additional support on how to use the How2s as part of their school improvement and teacher training plans. This includes advice on how to use its communication and management tools to allow a school to track the use of the different guides, and gives teachers an opportunity to learn from others' use of the guides. Participating schools will receive an initial face to face induction, and ongoing emails suggesting how to effectively use the resources.

3. **Centre for Evaluation and Monitoring**, part of Durham University, want to compare:

- a. *Passive arm:* Sending out a handy, up-to-date, easy-to-read booklet on research-based strategies for teaching literacy in Key Stage 2, 'tips for teachers' cards and regular posters to foster engagement
- b. *Active arms:* Following up the booklet with various levels of training. One group will receive a light touch 'twilight' CPD session that reviews the material included in the leaflet. Another will receive further CPD session, diagnostic tests to identify individual pupils' literacy issues and support to learn from their fellow KS2 teachers through structured peer observations.

4. **ResearchEd and NatCen** will work together to deliver:

- a. *Passive arm:* Teachers will be invited to attend a conference on current research in literacy. The speaker list will largely be comprised of academics, researchers and associated school representatives.
- b. *Active arm:* Alongside the invitation to the conference, attendees will be invited to become part of an online community offering support and activities before and after the conference in order to help them to use research findings in their own schools.

## 3 Evaluation plan

### 3.1 Research questions

The primary research question is: What are the effects of different ways of communicating research evidence and findings to teachers and schools, and different ways of engaging them with research, on pupil attainment?

The secondary research questions are: What is the effectiveness of different communication approaches in terms of schools' dispositions towards research and the degree to which research information is informing teaching and learning? These will be explored using teacher baseline and outcomes surveys and the following lines of enquiry:

- 1) **Awareness:** tracking the impact that an approach has on schools' knowledge of an aspect of research
- 2) **Understanding:** ascertaining schools'/teachers' understanding of research and the implications of the research for classroom practice
- 3) **Action:** recording whether understanding research changes behaviour

We will also ask *how* are these outcomes achieved? What are the mechanisms that bring about improved research use for teachers and schools, what actions have they taken, and does this improve teaching and learning, and ultimately pupil outcomes? This will be explored through the process evaluation.

Lastly, we will ask whether certain pathways of research use within trial arms are more amenable to improved pupil attainment. This will use results of the outcomes survey and relate them to attainment through path analyses. Whilst such results will be unable to attribute causality, they should serve as useful indicators of which finer aspects of research use are important for improving pupil outcomes.

## 3.2 Overall design

### 3.2.1 Introduction

This multi-armed trial will start in May 2014 and will run until May 2018. The trial will be designed, conducted and reported to CONSORT standards (<http://www.consort-statement.org/consort-statement/>) and registered on <http://www.controlled-trials.com/>.

NFER will host dedicated webpages for the trial on the NFER website. These will have information to support recruitment of schools, the project protocol, timetable, information and FAQs for schools involved in the trial. The webpages will be updated with information about the interventions and the current and forthcoming evaluation requirements as the project progresses.

### 3.2.2 Inclusion criteria and sampling frame

Due to the requirement to establish a need for schools and geographical constraints imposed by some of the trial arms, the trial will take place with a specific population: primary schools with a year 6 in the south-east and north of England that are interested in improving literacy.

Schools in a selection of local authorities from the south-east and north of England will form the sampling frame. The precise make-up of this selection will be determined through a trade-off between number of schools and proximity to the location of proposed conferences/events (London and Leeds). Teachers should be able to travel to and from conferences within a day. Note that in some cases, schools are already in receipt of the very materials that are being trialled. Providers will send lists of schools with which they already communicate to NFER. These schools will be excluded from the sampling frame.

### 3.2.3 Level of randomisation and trial type

Since many of the research communication strategies involve whole-school 'mobilisation', only school-level randomisation is feasible here. We will therefore undertake a stratified school-randomised trial with ten arms. Stratification will be by geographical area to ensure an appropriate balance of schools is selected for each arm in the south-east and north of England.

### 3.2.4 Trial arms and sample size

Provider	Arm	Status	Minimum detectable effect size (versus control)	Number of schools
CEM	Evidence based materials (advice booklet, 'tips for teachers' cards and	Passive	0.121	60

	regular classroom posters).			
CEM	Evidenced based materials and in-service training	Active	0.121	60
CEM	Evidenced-based materials, in-service training, peer-to-peer observations and pupil diagnostic information	Active	0.121	60
IEE	Evidence material only	Passive	0.121	60
IEE	Evidence material and fair	Active	0.121	60
Research Ed	Conference invitation only	Passive	0.121	60
Research Ed	Conference invitation with pre- and post-conference support	Active	0.121	60
Teaching How2s	Login only	Passive	0.121	60
Teaching How2s	Login with support from grantee	Active	0.121	60
-	Control	-	-	240
			<b>Achieved sample size:</b>	<b>780</b>

Sample size calculations were based on Key Stage 2 outcomes with Key Stage 1 as a baseline using the following assumptions: average of 36 pupils per cohort per school; ICC=0.15 (reduced from 0.2 through the use of KS1 as a covariate); correlation between KS1 and KS2=0.7; power=80% and significance=5%.

This trial was originally designed to detect effect sizes of 0.2 in the active arms but this has been revised down due to likely treatment dilution when schools either send limited staff or no staff to attend the conferences. Furthermore, we have introduced a large control group which reduces the MDES from 0.153 (for a control group of 60) to 0.121 (for a control group of 240).

Note that these effect sizes are most probably over-estimates for the passive arms since a relatively small proportion of the schools are likely to use the evidence provided in this way. Instead, it may be more useful to explore the process of evidence use in these arms through analysis of secondary outcomes and only to expect attainment effects in the passive trial<sup>1</sup>. Note also that schools agreeing to take part in the active trial are likely to be more research-engaged in the first place.

<sup>1</sup> Running parallel to this trial will be a higher-powered trial on passive research dissemination methods.

Research use outcomes will be measured using a questionnaire instrument in addition to case-study visits and interviews. Assuming 60 schools per arm; one research use measure per school<sup>2</sup>; a correlation between pre- and post-survey of 0.6 for each of the three research use measures and power of 80% there is an MDES of 0.33 versus the larger control group of 240. Research use outcomes will also be analysed across arms, for example for the active arms collectively versus control. The larger control group of 240 schools would cater for such comparisons with MDES=0.21. Note whilst the achieved sample size at randomisation of 780 schools will be retained at follow-up for the primary outcome (Key Stage 2 results), there is likely to be some attrition for the research use survey. If attrition were as much as 30% (see section 3.5.2), the Minimal Detectable Effect Size (MDES) would increase to 0.39 versus the larger control group of 240 and 0.25 for the active versus control arms.

### **3.3 Recruitment strategy**

#### **3.3.1 An enhanced recruitment strategy**

The sampling approach described above lays out the number of schools that will be recruited and then randomised. The sample will be selected from NFER's Register of Schools, which is a database of schools across the UK, updated at least annually against Edubase, other national datasets and via live interaction with schools. A small proportion of the sample may come from schools wishing to register themselves, recruited through providers and other external agencies (e.g. EEF, DfE). Any such schools will be directed to NFER and matched to our database. It is almost certain that if a school is in the correct geographical area and has registered an interest, they will already be on the list of sampled schools. This information will be useful to help NFER target its recruitment at schools who are already interested. A common piece of text outlining the project will be given to providers to aid recruitment (and placed on the NFER project webpages). In addition, a common template will be given to providers to collate expressions of interest from schools, and pass to NFER at a specified time point.

Our recruitment approach will be based on the strategies that we know work well based on our extensive experience of working with schools. The important factors here are:

- presenting an engaging theme
- clear and concise communication
- recruiting to a tangible activity
- making it easy to take part
- reminding in writing and by telephone

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<sup>2</sup> Since attitudes to research use are likely to vary considerably by teacher, these are conservative assumptions as we are surveying more than one teacher per school.

- providing feedback and incentives

### **3.3.2 Focus**

We know that having an engaging topic is very important to schools when making a decision about whether or not to participate in research and so our principle message in our communications with schools would emphasise the focus on Key Stage 2 literacy improvement, and the communication and support approaches being offered by the providers in this trial. Research use would be a secondary theme in the recruitment strategy. NFER would produce a page on our website dedicated to this project, containing more information about the trial. Schools will be given links this website in the invitation emails and follow up letters.

### **3.3.3 Approaching schools**

Before contacting sampled schools, we would write to Local Authorities with lists of the sampled schools. This is part of NFER's Code of Practice, and it helps to engage LAs in encouraging schools to participate as well as highlighting any issues there might be with any sampled schools that are useful for us to be aware of.

After that initial approach we would write to the sampled schools inviting them to join the project. We find that schools react more positively when provided with a clearly tangible activity or topic at the first stage, and so we propose to combine the invitation with a request to complete the baseline survey at the same time. The baseline survey will include questions on Key Stage 2 literacy improvement as well as some questions on research engagement and research use.

### **3.3.4 Signing up to the trial**

The invitation will be sent to headteachers along with a memorandum of understanding which they will be asked to return indicating their willingness to participate in the trial and confirming their understanding of what is expected of their school and how their schools' data will be used in the trial. The headteacher will be asked to complete the baseline survey at this stage, and to ask members of their senior leadership team and the school/Key Stage 2 literacy coordinator to complete the survey, as well as other Key Stage 2 literacy teachers (see section 3.5.1). We would ensure that we achieve sign up from at least 780 schools at this point, including sufficient schools for 60 in each trial arm and 240 in the control group.

Schools that complete the survey and sign up to the study will go on to form the sample for randomisation. A proportion may complete the survey but not sign up for the study, but we would use the results from these schools as appropriate in the analysis to create an even larger pool of information from this survey than might otherwise have been unavailable.

The survey would be set up and run online, using Questback survey technology which allows teachers to complete the survey on computers, tablets or mobile phones, maximising the opportunities for them to complete. We will monitor response using the live reporting tool in this survey, which shows progress against sample



targets as well as responses by questions, and so both quantity and quality of response can be monitored.

As part of our enhanced recruitment strategy, and to boost recruitment further, our reminding strategy for the baseline survey will comprise two written reminders followed by telephone reminding. Telephone reminding will be carried out by a combination of research staff who will be knowledgeable about the trial, interspersed with our telephone unit staff. The researchers involved will phone alongside the telephone unit staff and so be able to input their knowledge and expertise during live phoning through discussion/interaction with the telephone unit team and through updating formal FAQs and notes used by the unit staff.

### **3.3.5 Feedback to schools**

The offer of feedback is one of the most important factors in engaging schools in research and so we would offer feedback from both the baseline and the outcomes survey to all schools; both intervention and control group. In order that the feedback does not influence behaviour between the two stages, we will need to only offer this after the outcomes survey has been completed. This will limit the impact of the feedback incentive, but it is still worth doing as it will help to maintain a positive sentiment towards EEF projects and perhaps a stronger ongoing interest in research use.

Finally, we would send a thank you to all participating schools after each stage of the process, which encourages ongoing positive relations and provides a vehicle for maintaining relationships with schools.

### **3.3.6 Incentives for schools**

As well as feedback provided to schools, we will have a package of incentives for schools. We do not feel that incentives are needed at the first stage of recruitment. However, after randomisation it will be important to keep the schools selected for the control group on board and then later on we will need to ensure a very good response to the outcomes survey and so we propose incentives for these two reasons. Firstly, after the randomisation, we will send a letter to all schools indicating their selection in the different groups. The control group schools will be sent a £30 book token for their school, in anticipation of their commitment to participate in the outcomes survey. All teachers asked to complete the outcomes survey will be offered a £5 'thank you' in the form of an e-amazon voucher or a donation to charity. Although this is a small amount, we find it works well as a token of appreciation. Initial communications with all sampled schools will mention all incentives, which in itself will help with initial recruitment.

### **3.3.7 Maintaining contact with schools**

Gaining the desired sample size for the first survey is critical and our approach, particularly in terms of reminder activity is very much focused on this first stage. After that, the ongoing participation of schools in the study will become a joint

responsibility with the providers who will need to keep the schools engaged in their activities. We will need to liaise with the providers during this time to ensure that school participation data is kept up to date by both parties. It will be important for providers to update NFER or for NFER to update providers should any of our schools wish to drop out or if any schools want to change the contact person or their details during the study (or to deal with any other respondent based issues that might arise). We propose to give providers a list of key issues to communicate with NFER, so that from the schools' point of view the communication process is seamless. Participation in the outcome survey and processes evaluation interviews and visits will be the responsibility of NFER.

### **3.4 Outcome measures and analysis**

The primary outcome for this trial is Key Stage 2 attainment in English as obtained from the NPD. Tests sat in summer 2015 (interim attainment outcome), summer 2016 (primary attainment outcome) and summer 2017 (follow-up outcome) will be used (using amended Key Stage 2 data available via NPD in December 2015, 2016 and 2017 respectively). Key Stage 1 attainment in English will be used as a baseline measure.

The secondary outcomes will be measures of research use: awareness, understanding and action (see section 3.1). The baseline for secondary measures will contain questions about Key Stage 2 literacy improvement, as well as research engagement and research use based on elements of the current NatCen survey of research use (see section 3.5.1). The core research-use questions will be developed and piloted as part of a separate commission. Interaction between the baseline survey and outcomes of interest will need to be minimised at the design stage, and considered during analysis. The research-use outcomes survey will be developed and piloted as part of a separate commission (see section 3.5.2).

Primary outcome intention-to-treat analysis of 2016 attainment will use a multi-level model containing two levels (pupil and school) to account for the cluster randomisation. It will use Key Stage 1 baseline data as a covariate in the model. Separate treatment arm versus control comparisons will be complemented by active versus control and passive versus control comparisons. Pre-specified subgroup analyses will include FSM only. 2017 attainment will be incorporated as a repeated measure into the multi-level model; thus yielding a three-level model (time, pupil and school).

Path analysis will involve linking the extent of research use from the outcomes survey with attainment. Though causal conclusions will not be possible using this approach, the use of multi-level models with a variety of research use covariates may help to shed light on the mechanism of action of the various strategies being evaluated.

Secondary outcome analysis will also use a multi-level model containing two levels<sup>3</sup> (teacher and school). For each outcome measure of research use, models will use the equivalent baseline research use measure as a covariate.

## **3.5 Research use outcomes**

In addition to the primary outcome measure of pupil outcomes, a secondary outcome measure will also be applied in this trial, namely 'research use'. This secondary measure will assess teachers'/schools' dispositions towards research and the degree to which research evidence is informing teaching and learning.

### **3.5.1 Baseline survey (autumn term 2014)**

The baseline for this study will be an online survey of teachers in schools in the sample regions (north and south-east) involved in all arms of the trial. Schools will complete the survey in the autumn term of 2014. The headteacher, relevant SLT members and literacy coordinator who are directly involved in the intervention, and all other Key Stage 2 literacy teachers (i.e. approx five members of staff per school) will be asked to complete the survey. The total number of baseline survey responses associated with schools signed up to the trial is expected to be around 3000. Schools must complete this survey before they know which arm of the trial they are assigned to (i.e. before randomisation). The content of the survey will provide a baseline for the 'research use' outcomes survey to be administered in spring 2016. It will focus on questions relating to Key Stage 2 literacy improvement, and will also include questions on research engagement and use<sup>4</sup>, but not directly related to the proposed content of the delivery arms (to reduce an interaction effect between completing the survey and the interventions themselves).

### **3.5.2 Outcomes survey (spring term 2016)**

A research use outcomes survey will be administered in the early spring term of 2016. The survey will be completed by the headteacher/SLT member and literacy coordinator who are directly involved in the intervention, and all other Key Stage 2 literacy teachers (i.e. approx five members of staff per school). These will be the same staff who completed the baseline survey, to allow longitudinal analysis. We will aim to achieve responses from as many sampled schools as possible and from individual teachers within those schools. We would hope to achieve responses from at least 70% of the sampled schools (i.e. 550 schools). With approx. five surveys completed per school, this would entail around 2,700 responses. Our reminder strategy for this survey will include two written reminders, an email reminder and an intensive round of telephone reminding, calling around half of the schools up to three

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<sup>3</sup> If there are insufficient teacher questionnaires returned per school, it may not be possible to construct a multi-level model with adequate variance estimation at teacher level. In this scenario, a school-level regression model shall be used; each school measure being the mean of the teacher responses for that school.

<sup>4</sup> It may include questions similar in content to some of those in the current NATCEN survey.

times. Incentives and feedback to schools (see sections 3.3.6 and 3.3.5) will help support response rates.

The survey will be developed and piloted as part of a separate commission by EEF. It will include questions on awareness, understanding and action to assess the role of research in the schools' decision-making. It will explore any actions the school has taken in relation to a given theme (e.g. improving pupil attainment, improving Key Stage 2 literacy), and how awareness and understanding of research evidence has contributed to these actions. It may also include items to test teachers' knowledge and understanding of research evidence (e.g. based on the EEF Toolkit).

In order to reduce burden on schools, and the number of instruments schools are asked to complete, the outcomes survey will also contain questions relating to process. Questions will explore fidelity and resources required to undertake the interventions (including staff time, and supply cover costs<sup>5</sup>).

### **3.6 Process evaluation**

The process evaluation will involve six main strands:

1. Developing a Theory of Change/Logic Model to underpin the trial and each arm
2. Carrying out a review of monitoring and cost data of intervention usage and resources
3. Observing events and carrying out a review of materials
4. Telephone interviews with schools to understand implementation, fidelity, and resources required
5. Interviewing providers to understand implementation, fidelity, perceived outcomes, sustainability and scalability
6. Case study visits to a sub-sample of schools to understand in more detail implementation, barriers, conditions for success, perceived outcomes, and the mechanisms for change
7. Light touch case studies (by telephone) with a sub-sample of schools to explore similar themes
8. A small round of interviews with control group schools.

This combination of methods will give us a full understanding of how and why the interventions have/have not worked including implementation challenges and adaptations, any unexpected outcomes and perceived impacts, views on sustainability and scalability. Further detail on each strand is provided below.

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<sup>5</sup> This will be a filtered question for headteachers and Key Stage 2 literacy coordinators only. Schools will receive advanced notice of this request for cost and resource information, prior to completing the questionnaire.

### **3.6.1 Developing a Theory of Change or Logic Model (summer term 2014)**

The trial will be underpinned by an overall Theory of Change (ToC) or Logic Model setting out foci and aims, inputs and resources, outputs in terms of activities and participation, and desired outcomes (short, medium and longer-term). We will agree this overall ToC/Logic Model with EEF and the providers. We will support each provider to develop a ToC/Logic Model for each arm, based on the overall ToC/Logic Model. This will ensure a common framework for all the arms, identify common desired outcomes, and highlight any differences in approaches and desired outcomes. The ToCs will be important for understanding the mechanisms leading to change. The Models will also support the costs analyses.

### **3.6.2 Monitoring and cost data (develop autumn term 2014, supply summer 2015 and spring 2016)**

We will carry out a review of monitoring data of intervention usage to support the process evaluation and on-treatment analysis. This will take place in summer 2015 (once the first round of interventions have taken place) and again in summer 2016 (to understand any further resultant activity between schools and providers). We will work with each of the providers in the autumn term of 2014 to devise a monitoring data specification for each arm. The types of data that providers will collate will include: initiations and initial contacts (numbers, and who), materials and booklets sent out (numbers, and to whom), events/seminars/conferences (attendee numbers and who), website usage (hits, navigation, who), other communication by providers (phone calls, letters), other support requested by schools, other support provided.

We will also review the costs of delivery of the interventions. We will develop a cost information specification. Each provider will be required to supply NFER with information on the costs of delivery in summer 2015, and updated in spring 2016. Schools will also provide costs information (e.g. staff time, supply cover costs) through the outcomes survey.

### **3.6.3 Observing events and reviewing materials (spring term 2015)**

We will attend a sample of up to four of the events taking place, including an evidence fair (IEE active arm), a twilight CPD session (CEM active arm), a conference (Research Ed and NatGen). We will also carry out a review of materials, including web-based materials.

### **3.6.4 Initial telephone interviews with schools to understand process (late spring term 2015)**

In order to supply some process findings to EEF ahead of the 2015 election (a requirement of the multi-armed trial), we will conduct a brief round of telephone interviews with each of the providers and up to four schools per arm (but not the

control arm) towards the end of the spring term 2015. In the schools, we will speak with the headteacher or their representative such as the Key Stage 2 literacy coordinator. In order to minimise any interaction effect (i.e. influence inclination towards research use), the interviews will focus on understanding implementation and fidelity (i.e. the focus for effectiveness evaluations, see EEF Process Evaluation Guidance). The telephone interviews with schools will be short (max 10 mins), and will be to understand: what participants engaged with and how (i.e. the mechanisms of research communication), resources required from schools' perspective, and 'fidelity' – have the interventions been delivered as they expected? The telephone interviews with providers will explore 'fidelity' – i.e. have the interventions been delivered as intended, reasons for deviations?

### **3.6.5 Provider interviews (spring 2016)**

We will interview the providers to explore fidelity, outcomes and scalability. These follow up interviews will be conducted by telephone/virtual meeting facility.

### **3.6.6 School visits (summer 2016)**

In order to understand the mechanisms by which awareness, understanding and action are impacted, we will conduct case studies in schools involved in each of the active arms. It is important that these process interviews take place after the interventions have been delivered, and after the outcomes survey, so as not to create any interaction effect.

We have costed for two case studies per active arm (i.e. ten case studies in total). Case studies will explore the changes schools have made in relation to the specific literacy intervention they received through questions such as What did you do/change? How? Why? What else did you consider? We will explore the decision mechanisms and impact trails in schools, as well as extent of immersion regarding schools' changes in practice (i.e. by interviewing the headteacher and senior leaders, the Key Stage 2 literacy coordinator, and classroom teachers). Case study visits will include exploration of artefacts, documents and evidence. We will explore:

- If and how teachers engage with the research evidence provided to them
- What are the conditions for success of the intervention arms?
- Are there any barriers to delivery being experienced?
- Perceived outcomes in terms of awareness and understanding
- Evidence of changes in action
- Extent of immersion in the school
- Other perceived outcomes
- Unintended consequences, positive or negative

Case study visits will focus on high-engaged schools from the active arms (according to MI data and where possible survey and telephone interview data).

### **3.6.7 Light touch case studies (by telephone) (summer 2016)**

We will also conduct four light touch case studies (by telephone only) with schools in the passive arms (one school per passive arm). These will provide a picture of the mechanisms for change, including any pre-conditions for research engagement, in schools that have been sent materials/invitations without additional 'active' support.

A light touch case study will involve: telephone interviews with the Key Stage 2 literacy coordinator, a school senior leader, and a classroom teacher. It will not involve documentary or observational evidence.

Light touch case studies will focus on high-engaged schools from the passive arms (according to MI data and where possible survey and telephone interview data).

### **3.6.8 Interviews with control schools**

We will conduct interviews with the key contact (e.g. literacy coordinator or headteacher) in five schools from the control group. These interviews will help to explore the ways in which schools are engaged with evidence more widely, and if and how they feel the evidence landscape has changed during the course of the trial. We note that perspectives gathered in this way will be partial, rather than generalisable, but will offer some useful detail alongside control group survey responses.

Control group interviewees will be identified through survey responses, in order to cover a range of different kinds of evidence-engagement for key stage 2 literacy.

## **3.7 Reporting**

NFER will provide bi-annual reports to EEF. We will provide an interim briefing paper outlining the findings of the first phase of the process evaluation in advance of the 2015 election. We will prepare a report of the evaluation findings to CONSORT standards in February 2017 (with finalising in June 2017). This will include findings of the impact evaluation (interim and primary pupil outcome measures) together with the findings from the process evaluation. We will provide a further updated evaluation report to CONSORT standards in early February 2018 (with finalising in May 2018) incorporating pupil attainment outcomes analyses using NPD.

We will be pleased to discuss dissemination options, such as an article in refereed or practitioner journal.



## 4 Overall timeline

This is a detailed timetable for the evaluation. It is constructed on the basis that 'interventions' start taking place in the spring term 2015, and that schools make plans for their following academic year during the summer term. The primary attainment outcomes will therefore be measured associated with summer 2016 (using amended NPD results available in December 2016). In addition, interim outcomes will be explored using data from summer 2015 (available through NPD in December 2015), and follow-up outcomes will be measured using data from summer 2017 (through amended NPD results available in December 2017). EEF requirements state that some results are available in time for the election in May 2015 hence the need for some early process evaluation in late spring 2015.

<b>May 2014</b>	Define arms, population, location(s), theme(s), outcome(s) Write, agree and register protocol
<b>June 2014</b>	Devise sampling frames and recruitment strategy Develop ToC(s)/Logic Model(s) with providers Start-up meeting with providers
<b>July 2014</b>	Design webpages for the project
<b>August 2014</b>	Devise additional bespoke baseline questions
<b>Sept 2014</b>	Recruitment strategy starts Develop monitoring data specification and instruments
<b>Oct 2014</b>	Recruit schools with baseline survey Devise process framework
<b>Nov 2014</b>	Recruit schools with baseline survey
<b>Dec 2014</b>	Randomise
<b>Jan 2015</b>	Providers start interventions
<b>Feb 2015</b>	Observe events
<b>March 2015</b>	Interview providers, telephone interviews with sub-sample of participants/schools, review intervention materials, request to access NPD
<b>April 2015</b>	<b>Interim briefing paper</b>
<b>May 2015</b>	
<b>June 2015</b>	
<b>July 2015</b>	Providers supply monitoring and costs data
<b>August 2015</b>	
<b>Sept 2015</b>	
<b>Oct 2015</b>	Analysis
<b>Nov 2015</b>	Devise additional bespoke questions for the outcomes survey
<b>Jan 2016</b>	Outcomes survey of schools/teachers
<b>Feb 2016</b>	
<b>Mar 2016</b>	
<b>April 2016</b>	Follow-up interviews with providers Providers supply further monitoring and costs data
<b>May 2016</b>	MI Analysis
<b>June 2016</b>	School visits and interviews
<b>July 2016</b>	School visits and interviews
<b>August 2016</b>	Start survey analysis; start process analysis



<b>Sept 2016</b>	Survey analysis; process analysis; start NPD request
<b>Oct/Nov 2016</b>	Intention-to-treat and on-treatment analysis (secondary outcomes) Feedback to schools
<b>Dec 2016</b>	Receive amended NPD data (attainment measures for Dec 2015 and Dec 2016)
<b>Jan 2017</b>	Primary outcome analysis
<b>Feb 2017</b>	<b>Submit draft Report</b>
<b>June 2017</b>	<b>Finalise Report</b>
<b>Sept 2017</b>	Start NPD request
<b>Dec 2017</b>	Receive amended NPD data (attainment measures)
<b>Jan 2018</b>	Intention-to-treat and on-treatment analysis
<b>Feb 2018</b>	<b>Submit draft addendum report (early Feb)</b>
<b>May 2018</b>	<b>Final addendum report</b>

## 5 Personnel, roles and responsibilities

The project will be directed by Dr. Ben Styles at NFER, and led and managed on a day-to-day basis by Pippa Lord at NFER. Dave Hereward in NFER's Research and Product Operations department will manage the recruitment of schools, administer surveys, and manage the collation of monitoring and cost data from providers. Pippa Lord will oversee the process evaluation, supported by an experienced research manager and researchers. Members of NFER's Impact Team – Ben Durbin and Dr. Julie Nelson – will provide consultancy support to the project.

NFER's data protection policy is available at: <http://www.nfer.ac.uk/nfer/about-nfer/code-of-practice/nfercop.pdf>.

In setting out the roles and responsibilities for this trial, the NFER and EEF will draw up a Memorandum of Understanding (MoU) with each of the providers. This will include a description of the nature of the data being collected by providers and how it will be passed to NFER (as set out in section 3.6.2).

In addition, the NFER, EEF and the providers will need MoUs with schools, explaining the nature of the data being requested of schools (as set out in section 3.6.2), how it will be collected by providers, and how it will be passed to and shared with NFER.

## 6 Risks

Risk	Assessment	Countermeasures and contingencies
Failure in recruiting schools	<b>Likelihood:</b> medium <b>Impact:</b> high	NFER has devised an enhanced recruitment strategy to support this trial.  Timescale could be revised.
School or teacher attrition	<b>Likelihood:</b> moderate <b>Impact:</b> moderate	Clear information for schools, including a dedicated website, explaining the principles of the trial and expectations. Both 'intention to treat' and 'on-treatment' analysis will be used. Providers will also have a role in retaining schools in the intervention and trial, once assigned to their arms. Attrition will be monitored and reported according to CONSORT guidelines. Incentives and school feedback will be offered.
Interventions are not implemented well	<b>Likelihood:</b> low <b>Impact:</b> moderate	Providers are all employing interventions that they have previous experience of delivering. There will be information for schools explaining the principles of the trial and expectations. Both 'intention to treat' and 'on-treatment' analysis will be used. Process evaluation will monitor this.
Control schools increase level of research engagement and use	<b>Likelihood:</b> low <b>Impact:</b> moderate	Clear information for schools explaining the principles of the trial and expectations. Both 'intention to treat' and 'on-treatment' analysis will be used. Process evaluation will monitor this.
Low response rates to surveys	<b>Likelihood:</b> moderate <b>Impact:</b> moderate	Clear information for schools explaining the principles of the trial and expectations. Both 'intention to treat' and 'on-treatment' analysis will be used. NFER reminder strategies to increase response rates. Online and paper versions of surveys. The primary outcome is pupil attainment. Analysis of this is not affected by survey response rates. The trial is not powered to detect impact on teacher outcomes. These secondary outcomes can still be analysed with a lower response rate. Incentives and school feedback will be offered.
Researchers lost to project due to sickness or absence	<b>Likelihood:</b> moderate <b>Impact:</b> low	NFER has a large research department with numerous researchers experienced in evaluation who could be redeployed. Senior staff can stand in if necessary.
Provider teams do not follow correct trial protocols	<b>Likelihood:</b> moderate <b>Impact:</b> high	Meetings with provider teams at start of project.  Provision of clear guidance describing protocols for distribution to providers, and available to schools on the dedicated website.