



Literacy Octopus

Passive trial protocol further update

07.06.16: Following the publication of the Literacy Octopus Passive Trial protocol and amendment, the following further update is required. This entails:

- p.3 – Section 3.2.1 – the trial will run until May 2018
- p.5 – Section 3.3 – outcome measures to use amended NPD data available in December 2016 and December 2017 (rather than unamended data in September 2016 and September 2017)
- p.6 – Section 3.5 – 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.6 – 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.

24.02.15: Following the publication of both the Literacy Octopus Active Trial and Literacy Octopus Passive Trial protocols, the following clarifications are required for the Passive Trial protocol document, in order to confirm consistency across the two trials. These are:

- p.3 – Section 2d. Replace text with: **ResearchEd** and **NatCen** will send teachers an invitation to view the website of archived webinar and live materials relating to ResearchEd Literacy Octopus activity.
- p.5 Table. Clarification of text in table: ResearchEd Invitation to view website and webinar materials.
- p. 5 – Section 3.3. Confirmation that the primary outcome for this trial is Key Stage 2 attainment in English as obtained from NPD data relating to tests sat in summer 2016 (using unamended Key Stage 2 data available via NPD in September 2016). Tests sat in summer 2017 and associated data available in September 2017 will be used for follow-up analysis. There will be no secondary outcomes. (Note that these confirmed dates for the primary outcome and follow-up analysis are consistent with the dates specified for the Active Trial.)

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

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 trial the passive communication approaches to a large number of schools, to assess impact on pupil attainment. The focus of the passive interventions is on literacy at Key Stage 2. Impact will be assessed using Key Stage 2 data from the National Pupil Database.

2 Passive trial: the interventions

The different communication methods being trialled are:

- a. **The Institute for Effective Education at York University** will look at the impact of 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. **Teaching How2s and Campaign for Learning** will give 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 straightaway. The theory is that knowing the underlying research is much less important than knowing how to implement it. The idea is that visual

guides can accurately communicate how to deliver evidence-based teaching strategies.

- c. **Centre for Evaluation and Monitoring**, part of Durham University, will send out a handy, up-to-date, easy-to-read booklet on research-based strategies for teaching literacy in Key Stage 2.
- d. **ResearchEd** and **NatCen** will send teachers an invitation to view the website of archived webinar and live materials relating to ResearchEd Literacy Octopus activity.

3 Evaluation plan

3.1 Research question

The primary research question is: what are the effects of different ways of communicating research evidence and findings to teachers and schools on pupil attainment?

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/>.

3.2.2 Inclusion criteria and population

A sample of 12500 schools with year 6 pupils in England will be drawn from NFER's register of schools to take part in the externally valid ('passive') trial. The sample of schools for the passive trial will be drawn excluding all of the schools that are required for inclusion in the active trial and also excluding the schools that are in receipt of existing research communications from providers. The sample of schools for the passive trial will, however, include the same types of schools as those in the sample for the active trials, for example maintained schools, academies and independent schools in England that have pupils in year 6.

3.2.3 Randomisation method

Once the sample of 12,500 schools has been drawn, NFER will carry out a randomisation of the sample, splitting it into five equal groups who will be allocated to receive materials as follows:

- CEM booklet
- Invitation to use Teaching How2s
- IEE's Better magazine, Best Evidence in Brief publication and Evidence4Impact website
- Research Ed invitation
- Control group

Once the randomisation of the sample has been carried out, NFER will provide each of the four partner organisations with the relevant list of their 2500 schools. The list of schools will include school name, address, postcode, telephone number, email address and DfE reference number. NFER understands that each of the four partner organisations will then undertake to despatch materials, as described above, to the schools on their listing. Each despatch will include a covering letter or e-mail (depending on the nature of the despatch) notifying recipients that they are being sent the material as part of an evaluation.

3.2.4 Trial arms and sample size

Schools will not be aware they are part of the passive trial so there will be no recruitment phase. For such a cheap intervention that could be administered easily on a large scale, small effects are important. Furthermore, it should be possible within the passive trial not only to test the effectiveness of different evidence provision versus control but also between arms.

How small an effect this trial should be designed to detect can be determined by cost of delivery. The cost of passive communication in the ResearchEd and Teaching How2s arms is negligible. However, the cost of production and delivery of an advice booklet in the CEM arm is approximately £3.10 per booklet with an anticipated delivery of three booklets per school i.e. £9.30 per school. The cost of delivery of IEE materials to each school is between £5 and £10 so we shall assume £7.50 here.

Randomising most English primary schools with a year 6 results in approximately 2500 per arm and an MDES (versus control or between arms) of 0.024. This equates to a maximum of 1 month of extra progress for the average pupil. With an average of 34 pupils per school¹, this comes at a cost of 27p per pupil for the CEM arm and 22p per pupil for IEE. Compared to the cost of intensive interventions this is still negligible; the lowest cost bracket in the [EEF Toolkit](#) is £80 per pupil per year.

Given this, it is important that this trial is maximally powered. If any of these passive methods were to have a significant effect, the cost-benefit analysis would rank them as the very best. Using the same assumptions as for the active trial in terms of attainment outcomes, we will randomise all schools in the sampling frame minus exclusions i.e. approximately 2500 per provider.

¹ Note that in practice the intervention is likely to benefit several cohorts. These calculations are based solely on the primary outcome as measured in 2016.

Provider	Arm	Minimum detectable effect size (versus control or between arms)	Number of schools
CEM	Advice booklet only	0.024	2500
IEE	Evidence material only	0.024	2500
Research Ed	Invitation to view website and webinar material	0.024	2500
Teaching How2s	Login only	0.024	2500
-	Control	-	2500
		Total sample size:	12500 ²

Sample size calculations were based on Key Stage 2 outcomes with Key Stage 1 as a baseline using the following assumptions: average of 34 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%.

3.3 Outcome measures and analysis

The primary outcome for this trial is Key Stage 2 attainment in English as obtained from NPD data relating to tests sat in summer 2016 (using amended Key Stage 2 data available via NPD in December 2016). Tests sat in summer 2017 and associated amended data available in December 2017 will be used for follow-up analysis. There will be no secondary outcomes.

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. 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).

3.4 Cost Effectiveness

In the same way as for a smaller trial, cost per pupil month of progress will be calculated.

² There are 14421 primary schools with year 6 in England according to the NFER's most recent register of schools.

3.5 Reporting

We will provide an evaluation report to CONSORT standards in February 2017 (for finalising in June 2017). In early February 2018, we will provide a final addendum report including 2017 Key Stage 2 results (for finalising in May 2018).

4 Overall timeline

Summer 2014	Devise and register protocol
Autumn 2014	Sampling frame established and randomisation
Spring 2015	'Passive' communication approaches take place
September 2016	Start NPD request
December 2016	Attainment data available (amended NPD data)
January 2017	Primary outcome analysis
February 2017	Submit draft Report
June 2017	Finalise Report
September 2017	Start NPD request
December 2017	Attainment data available (amended NPD data)
January 2018	Further outcome analysis
February 2018	Draft addendum report (early February)
May 2018	Final addendum report

5 Personnel

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 administer the sample.