Protocol for Evaluation of Catch Up® Literacy

Note: This protocol excludes aspects of the evaluation that are the sole responsibility of Catch Up who are undertaking the main evaluation in collaboration with Dr Ann Dowker of Oxford University.

Intervention

Catch Up Literacy is a structured one-to-one intervention for learners who find reading difficult. The intervention provides two 15-minute individual sessions to each child per week and adopts a combination of segmenting, blending phonemes and memorising letter names of high frequency sight words. Catch Up Literacy can be delivered by any trained staff including teachers, teaching assistants (TAs) and carers. The project proposed here will see teaching assistants delivering Catch Up to children at the end of Year 6 (in primary school) and to these same children through the first two full terms of Year 7 (in secondary school).

Three studies have shown the positive impact of the intervention on the Reading Age of children who are struggling to learn to read, with gains of up to just over one and a half years. However, none of these studies included a control group. Another study, which did include a control group of children receiving another literacy intervention for the same amount of time, found that those receiving Catch Up increased chronological Reading Age by 13.1 months compared to those who received the matched-time intervention, who demonstrated a mean increase of 5.6 months[1].

Research Plan

Research Questions

The primary research question is: what is the impact of Catch Up Literacy on pupil literacy over the transition period between Year 6 and Year 7?

The secondary research question is: are any improvements in pupil attitudes to education or levels of self-esteem attributable to attendance on the Catch Up Literacy intervention?

Design

The project will be run as a randomised controlled trial (RCT), with a minimum of approximately 816 individual Year 6 pupils coming from the feeder primary schools of 17 secondary schools. Numbers are approximate as it depends on the number of feeder primary schools for each secondary. These pupils will be randomly assigned to three groups; treatment, control and replacement. Each primary school will aim to have at least one replacement pupil. A replacement pupil, who is in addition to the 816 identified above, is included in the design and the randomisation to allow for pupils that do not sit their KS2 assessments, but were expected to sit , to be replaced by someone who did. This allows the project to start with the N described above and is an attempt to control for one area of likely attrition. The project will focus on the weakest readers in Year 6, i.e. those at level 4c and below in reading. Children will be extracted from classes and supported on a one-to-one basis by TAs

---

1 Holmes, W., Reid, D., Dowker, A., (2012). Early intervention to prevent long-term literacy difficulties: the case of Catch Up Literacy. 4th World Conference on Educational Sciences, 2012

who have been specifically trained in the Catch Up Literacy methodology. Children in the treatment group will receive the Catch Up Literacy intervention; children in the control group will experience their usual English teaching. Selected pupils will receive targeted intervention in the second half of the final term of primary school and the first two terms of Year 7.

The trial will be designed, conducted and reported to CONSORT standards (http://www.consort-statement.org/consort-statement/).

Inclusion Criteria

Year 6 pupils that were expected to be below National Curriculum level 4b in Reading will be selected. Selection will occur prior to sitting Key Stage 2 assessments and schools will inform Catch Up of any pupils from the initial list who did not take their assessment. These pupils will be replaced with the randomly-allocated reserve in order to maintain the number of participating pupils in each school, and hence aid TA planning and scheduling of their time between primary schools.

Randomisation methods

Randomisations will be carried out by a statistician at NFER. Randomisation will be conducted in two stages. Each primary school will have at least one of its selected pupils randomly assigned to the reserve list. The remaining pupils will then go into a larger pool where, within each secondary school, they are randomly assigned to the treatment or control group. These two groups will each contain 24 pupils.

Outcome Measures

The paper version of the New Group Reading Test (NGRT; GL Assessment) will be used to measure reading ability. The NGRT has two subscales – ability and comprehension, which can be combined into a composite reading score. The composite score will be used as the primary outcome. The two subscales will be used as secondary outcomes. Pupils in the treatment and control groups will be tested using the NGRT at two time points: at the start of Year 7 following half a term of intervention and at the end of the 30-week intervention period. Pupils will additionally complete a short paper-based questionnaire following the completion of the final NGRT assessment, in order to address the secondary research questions (see page 1).

Sample size calculations
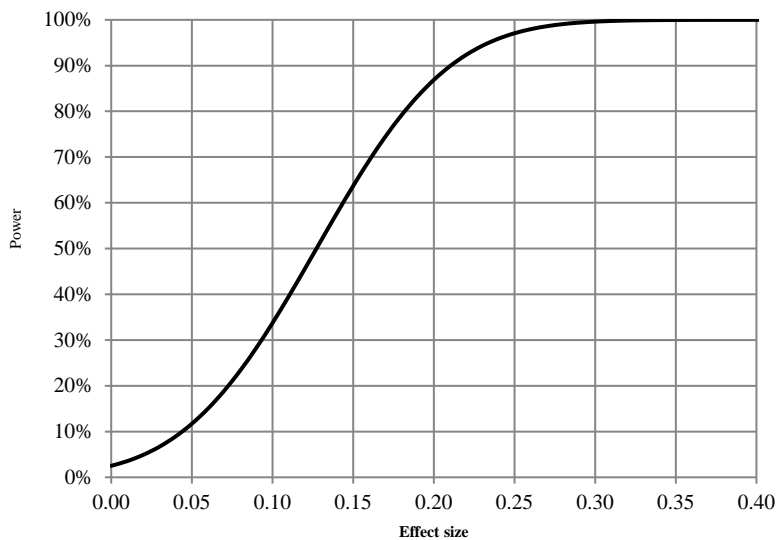
Randomisation will be conducted at a pupil level, and furthermore, we will be controlling for variation in baseline scores in the final analysis. Intra-class correlation (rho) is therefore likely to have a minimal impact on the effective sample size; we have conservatively assumed a value of rho=0.05 for the purposes of our calculations. The chart illustrates that the sample sizes will be sufficient to detect effect sizes at least of the order 0.20.

Analysis

The primary outcome will be reading ability as assessed by the New Group Reading Test. Sub-group analysis on the primary outcome will be carried out on the following group only: National Curriculum level. The secondary outcomes will be the two NGRT subscales: reading ability and comprehension.

We will undertake basic descriptive analysis of baseline test data to provide a check that the randomisation process has been carried out successfully. Whilst we would not expect treatment and control groups to exhibit identical characteristics, we will carry out statistical tests to verify that any small differences that do arise are consistent with what one might expect, assuming an unbiased randomisation.

We will then undertake our main analysis combining baseline and follow-up data. The definitive analysis will be 'intention to treat', reflecting the reality of how interventions are delivered in practice and avoiding attrition bias. We will use multi-level models to enable us to combine results across schools whilst accounting for clustering, and will include baseline data as a covariate in each of our models. Sub-group analysis will test hypotheses relating to the impact of the intervention on pupils of differing abilities through the inclusion of interaction terms in the modelling.

The main analysis is described above, but additional analysis will look to incorporate school-level variables based on the questions addressing the extent to which TAs feel they maintained fidelity to the intervention, and any perceived contamination of the control groups of pupils. This analysis, if data obtained from TAs allows for the creation of reliable measures, would enable us to estimate a 'pure intervention effect' (net of any fidelity issues, contamination, or non-completion). Analysis

would additionally include reliable indicators obtained from the attitudinal questionnaire completed by pupils following the completion of the second NGRT assessment.

Process evaluation

The purpose of the process evaluation is to assess scalability of the Catch Up Literacy intervention. For the NFER research team to fully understand the Catch Up Literacy intervention, we will be attending and observing each of the Catch Up Literacy training events (L1: Introducing Catch Up Literacy; L2: Delivering Catch Up Literacy; L3: Managing Catch Up Literacy and L4: Review and next steps). The following will take place:

1. Observing one region's L1 session; this will provide insights into the questions and issues raised by schools and local authority leaders during these events.

2. Observing two regions' L2 and L3 training; this will enable the research team to observe the delivery of the training across different geographical areas and to a wide range of participating schools. This will help to understand any issues or concerns teachers/teaching assistants have.

3. Observing the L4 sessions in the two regions that were observed for L2. These observations will feed into the development of the interview schedule to be used below.

The team will need access to the training materials and (electronic) PowerPoint presentations *before* the observations commence. These materials remain secure and only one copy of the training materials, learning resources and progress booklet will be required.

In addition to the observations, the research team will carry out a set of qualitative telephone interviews:

- **Following** the L4 session; the research team will carry out telephone interviews, between March and May 2014, with participants managing Catch Up and the TAs delivering the intervention across the 17 schools. We will select a sample of 17 teaching assistants and ten Catch Up coordinators from across the 17 areas (N=27). Telephone interviews will last for between 30 and 45 minutes each and will explore the process in relation to training and support; delivery in the classroom; managing and supporting transition; incorporating the intervention into existing timetabling; managing the intervention within both settings; and any evidence of the achievement of softer outcomes in relation to pupils' learning; confidence and in their transition between schools. These interviews will feed into the process and impact evaluations.

A report will be produced in line with the EEF specification and will report on both the observation and telephone interview data. The process evaluation will be submitted as part of the main report.

Personnel

The project will be led by Dr Graham Sigley from Catch Up and Dr Ann Dowker from Oxford University. The impact evaluation will be led by Simon Rutt at NFER. The process evaluation will be led by Claire Easton at NFER. Camilla Neville will have overview of the evaluation at EEF and Emily Yeomans will oversee the grant.

Roles and responsibilities

Each person will carry out their duties with the assistance of teams at their respective institutions:

Dr Graham Sigley – Recruitment and retention of schools, delivery of intervention, supply of list of eligible pupils for randomisation, administration of tests (tests will be administered under examinations conditions with Catch Up providing observers)

Simon Rutt – trial design, randomisation and analysis.

Claire Easton – process evaluation, telephone interviews and visits to training and review sessions.

Data protection statement

NFER's data protection policy is available at:

http://www.nfer.ac.uk/nfer/about-nfer/code-of-practice/nfercop.pdf

Timeline

Month	Activity
➢ **December 2012**	• Review research design and agree data collection arrangements with Catch Up (IE)
➢ **April/May 2013**	• Undertake pupil randomisation (IE) • Attend training sessions and analyse evaluation forms (IE & PE)
➢ **June/July 2013**	• First manipulation check questionnaire sent to TAs (IE)
➢ **September 2013**	• Pupils sit NGRT test in secondary schools (Non NFER)
➢ **March/April 2014**	• Pupils sit NGRT tests for post-treatment results (Non NFER) • Pupils sit short attitudinal questionnaire • Attend end-of-year meetings (IE & PE) • Phase three telephone interviews (PE) • Second manipulation check of teaching assistants (IE)
➢ **May 2014**	• Complete phase 3 telephone interviews (PE)
➢ **April – June 2014**	• Undertake impact analysis on pre- and post-test scores (IE)
➢ **July 2014**	• Draft report to EEF on impact analysis and process evaluation (IE & PE)
➢ **September 2014**	• Final report to EEF (IE & PE)

Risks

Risk	Assessment	Countermeasures and contingencies
Delay in recruiting schools/teaching assistants and gap between first and last is large	**Likelihood:** possible **Impact:** moderate	• Revise timetable for pre- and post-testing periods • Discussions on analysis would need to occur to discuss potential impact of different testing periods
Failure in recruiting schools	**Likelihood:** possible **Impact:** High	• Catch Up could make use of NFER's Research Operations Dept to provide a list of schools to contact • Timescale can be revised
Time between school recruitment and training sessions is too short for staff availability	**Likelihood:** possible **Impact:** moderate/high	• Catch Up informed of researcher availability. • PL will keep in regular communication with Catch Up to ensure there is adequate notice of events
Poor response to teaching assistant survey	**Likelihood:** possible **Impact:** moderate	• Teaching assistants informed of surveys when recruited by Catch Up • NFER will write to schools to establish good channels of communication and continuity.
Refused access to NPD data (if required)	**Likelihood:** possible **Impact:** moderate	• Some data will be collected directly from schools when identifying eligible pupils • NFER will liaise closely with NPD data team
Researchers lost to project due to sickness or absence	**Likelihood:** possible **Impact:** minor	• NFER has a large research department with numerous researchers experienced in evaluation who could be redeployed. • Senior staff can stand in if necessary.