

Protocol for evaluation of 'The Curriculum Centre: Word and World Reading Programme'

Introduction

The project to be evaluated is an intervention called Word and World Reading programme. The concept behind this programme is based on research by Professor E.D. Hirsch of the University of Virginia whose work has attracted substantial interest among schools and policy makers. The rationale behind The Curriculum Centre's project is that children need background knowledge and understanding to be able to comprehend what they read, and those with a broad base of factual knowledge find it easier to learn more. The programme being piloted aims to emphasise the teaching of vocabulary to address the vocabulary gap between disadvantaged and affluent children and to enhance literacy and comprehension ability of pupils in early Key Stage 2.

The intervention involves using specially developed knowledge-rich reading material, subject-specific resources and general vocabulary word lists, for literacy lessons as well as pedagogical CPD for teachers in History, Geography, Science and Art. The associated teacher training will emphasise consistent and sequenced use of vocabulary, direct instruction and teacher questioning.

Trials in the US reported promising gains in reading tests (Woodcock-Johnson III) especially in kindergarten, although the differences decreased by the third year. Using the standardised TerraNova test, however, no significant differences were detected for oral reading comprehension and vocabulary. No similar comparisons of gain scores were carried out for other subjects such as social studies and science. There is some evidence of effectiveness but not yet in England with this age group. Therefore further investigation, via a formative evaluation, is appropriate.

Impact evaluation

Design

The proposal is for a standard two group design. One group will receive the intervention over one school year. The other follows standard practice for the year, and then receives the resources for the intervention, and an incentive in the form of £500 per school to put towards teaching cover for training to use those resources. This is to reduce post-allocation demoralisation.

For the pilot, 16 schools will be recruited. Eight will be randomised to receive the intervention in school year 2013/14, and their results will be matched with those of the other eight in the control/wait group. By allocating whole school rather than classes to condition, we minimise contamination, teacher effects and the inconvenience of time-tabling where half the class is taught one method and the other another method. It is important that schools recruited are not already involved in other similar literacy programmes.

Sample

The project outline proposes to offer the programme to pupils in Years 3 and 4 in eight primary schools, some in central London, and some elsewhere (perhaps Kettering and one other site). A further eight schools in the same areas will provide the counterfactual. Assuming 30 pupils per class and an average of 1.5 classes per year, each arm of the evaluation will have around 720 pupils. The total sample will be 1,440, which is sufficient for a formative evaluation leading to an estimated effect size for future definitive testing (if deemed appropriate and feasible). The project outline suggests an effect size (d) of 0.3 for reading comprehension based on the existing evidence. Clearly, eight schools is not intended to provide a definitive test of the intervention.

The evaluation is primarily formative and a test of feasibility. However, it is worth noting that 720 cases per arm, if individually randomised, would be deemed sufficient to detect an effect size as low as 0.15. The study should provide a good estimate of the accuracy of the estimated effect size. This could, in turn, be used to calculate sample size for any subsequent trial.

Tests

The desired outcome is improved reading comprehension. The primary outcome measure will be based on gain scores over one year inclusion on GL Progress in English tests, used as pre- and post-tests. There will also be a post-test only comparison of a brief bespoke test designed by the Curriculum Centre.

The pre-tests will be administered by the 16 schools in conjunction with the project team, in June/July 2013. In addition, students' previous year's results in teacher-assessed KS literacy will be used as a secondary pre-test. Testing will be blind as it precedes knowledge of the randomisation to groups.

Post-tests will be taken in June/July 2014. The post-test will be administered by the 16 schools in conjunction with the project team. Testing in both groups will be observed by the evaluation team. In addition, the project team plan to develop their own bespoke test as an integral part of the evaluation. The development will take place over the year, and the final results can be provided to the evaluation team to add to the analysis.

Other data

Other relevant data on pupils' prior attainment (pre reading grades/APS and pre writing grades/APS), and background characteristics such as age, date of birth, sex, ethnicity, first language, SEN, and FSM will also be collected as a routine part of the pre-testing. These data will be uploaded for all pupils at the outset to the GL test system from each school's SIMS or similar. These will eventually be linked via UPN to the individual post-test scores.

Analysis

The proposed outcome measure to estimate a likely effect size will be the difference in the gain scores between the intervention pupils and their matched equivalents, on the PiE tests. This will be the primary results. It can be expressed as an effect size, where the gain is the average difference between individual scores on pre- and post-tests. Analysis will be conducted for all intervention pupils combined, and for some identifiable sub-sets such as FSM pupils only. As an additional measure, the most up-to-date teacher assessment results in literacy can be used as a secondary post-test score. The results will also be correlated with the findings of the bespoke test developed by the project team. All of these will provide secondary results.

Process evaluation

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

This will all necessitate the generation of some additional data from observation and interviews with staff, focus groups of pupils, plus observation of training, delivery and testing. These will all be as simple and integrated and non-intrusive as possible. The schedule of visits will be agreed

with the intervention team and the schools. Schools will agree to be part of this evaluation when agreeing to be part of the intervention.

These data will address:

- the reaction to training
- the fidelity of training
- whether the teams understand the process and purpose
- the contents and use of any materials
- changes in teacher behaviour
- the reactions of staff and students
- whether there appears to be an impact on how children are learning

Timeline

June 2013-	Observation of school recruitment process Pre-test for current years 2 and 3 pupils in 16 schools Randomised allocation of schools to two groups Observation of training for intervention in eight schools
September 2013-	Collect prior teacher assessed literacy tests results and background data Light touch observation in ongoing process evaluation Interviews with project members, staff and pupils
May 2014-	Observe post-testing in all schools Update background data Analyse outcome data Synthesise with process evaluation data
July 2014-	Complete full EEF report.