

Evaluation Summary	
Age range	Year 5 and 6
Number of pupils	c. 7200
Number of schools	c. 80
Design	School level randomised controlled trial
Primary Outcome	Writing

Background and significance

In 2013 approximately 85,000 pupils left primary school without having attained Level 4 or above in writing (Department for Education, 2013a). A substantial minority of pupils who do not reach Level 4 in English at the end of Key Stage 2 (incorporating reading and writing) do not achieve the expected level of progress in secondary school (Department for Education, 2014).

Self-regulated strategy development (SRSD) is a writing process model in which students are encouraged to plan, draft, edit and revise their writing. SRSD is a strategy (originating in the United States in the 1990s), which provides a clear structure to assist writers and can be used for most genres of writing, including narrative writing. There are six basic stages of instruction and four strategies for self-regulation, which include self-monitoring and goal setting, thus providing pupils with ownership for improving their own writing. SRSD uses 'heuristics' which provide scaffolding of structures and devices that aid the composition of argumentative writing – in particular planning – which can include examining a question, brainstorming, organising and sequencing ideas and evaluating. The approach was designed, and is suitable, for children who are aged between 8 and 14 (Andrews et al., 2006). A systematic review by one of the authors (CT) with colleagues (Andrews et al, 2006) found that a combination of contextual factors and specific interventions based on the SRSD programme were necessary for successful practice in teaching and learning writing for 7-14 year olds. The effect sizes of individual studies, largely undertaken in the US, were very large with estimates in some instances exceeding 1 standard deviation between the intervention and control groups. For example, in a study by De La Paz and Graham (2002) of secondary school children of mixed attainment (aged between 12-14) the overall quality of their writing was 1.7 standard deviations better than the quality of writing of children in the control group 6 weeks after the intervention. Nevertheless, despite these promising results in a US context it was important to establish whether or not such an intervention would be effective in a British setting.

In 2013/14 an efficacy trial undertaken by some of the authors (CT, DT, HA, CH and NM) among Year 6/7 pupils (who had not achieved a Level 4 at the beginning of Year 6) in 23 British schools of a SRSD

instruction intervention combined with ‘memorable’ experiences showed a large improvement compared with control children, not exposed to the intervention (effect size 0.75) (Torgerson et al 2014). This large difference was in line with previous, mainly United States’, studies of SRSD alone.

A scaled up effectiveness trial has now been funded by the EEF to evaluate the impact of the intervention in a trial of ‘roll out’ before widespread implementation.

In addition to evaluating the scaled up intervention, using a ‘train the trainers’ approach to delivery (described in more detail below), this trial will also enable a number of other important issues to be addressed.

Firstly, the issue of generalisability is partially addressed. The schools in the pilot trial were from a small area of West Yorkshire and they had worked together for a number of years, it is possible that these results may not fully generalise. This issue is partially addressed in the plan to recruit schools from the Leeds and Lincolnshire areas. However, it should be noted that generalisability may depend on representativeness, which could only be fully achieved through a probability sampling of the targeted school population, which is not possible in this trial. However, characteristics of participating schools will be compared with national norms to check how representative they are of the national picture.

Secondly, in the delivery for the previous efficacy study, the intervention was adapted or ‘anglicised’ and this modified version needs further testing. The modified ‘anglicised’ version will be the version of the intervention that will be used in this trial.

Thirdly, the main outcome measure used in the previous trial, Progress in English 6 (PiE6) is publically available to teachers and therefore, in theory it would be possible for teachers to have sight of the test and be influenced by the test before it is delivered to the pupils as post-test. The test also provides children with scaffolding instructions. In this trial the high stakes KS2 outcomes will be used.

Aim

To estimate the impact of SRSD with memorable experiences on writing outcomes delivered to pupils in Years 5 and 6, when rolled out at scale.

Primary Research Questions

Trial 1: What is the effectiveness of SRSD with memorable experiences when delivered for one year to pupils in Year 6 compared with ‘teaching as usual’ on the writing skills of participating children?

Trial 2: What is the effectiveness of SRSD with memorable experiences when delivered for two years to pupils beginning in Year 5 and moving into Year 6 compared with pupils receiving ‘usual teaching’ on the writing skills of participating children?

Secondary Research Questions

What is the impact of SRSD with memorable experiences on children ever eligible for Free School Meals?

What is the impact of SRSD with memorable experiences on academically high achievers and academically low achievers?

Design

Study design

Two pragmatic cluster randomised controlled trials will be combined within the same study.

Trial 1 will enable the study to assess, after 12 months, the impact of pupils receiving SRSD with memorable experiences for one year when in Year 6 compared with usual teaching on the high stakes and policy relevant KS2 results. It will also allow long term follow up of these pupils through the National Pupil Database (NPD).

Trial 2 will evaluate the impact of pupils receiving SRSD with memorable experiences for two years when in Year 5 and Year 6 compared with usual teaching on the high stakes and policy relevant KS2 results. It will also allow long term follow up of these pupils through the National Pupil Database (NPD).

Approximately eighty schools, from Lincolnshire and the Leeds areas will be recruited and randomised. All children in Year 5 and Year 6 in the 2015/2016 academic year will be eligible for the study (approximately 7200 children). Schools will be randomised on a 1:1 ratio. Schools in the intervention group will receive training in SRSD from the implementation team during June 2015. Schools will be supported to deliver SRSD with memorable experiences to Year 5 and 6 pupils during the academic year 2015/2016 beginning in September 2015 and to Year 6 pupils in the 2016/2017 academic year. Schools in the control group will be asked to continue with usual teaching with Year 5 and 6 pupils in the 2015/2016 academic year. From June 2016 control schools will receive training in SRSD, and will be supported to deliver SRSD with memorable experiences to pupils in Year 5 (and Year 4 if they wish) in the 2016/2017 academic year. Schools will be explicitly asked not to deliver SRSD to pupils currently in Year 6 in the 2016/2017 academic year.

It must be noted that there is potential for contamination or spill over effects in the Trial 2 comparison, if schools in the control group, whose teaching staff will have received training, do deliver SRSD or elements of SRSD to current Year 6 children in the 2016/2017 academic year. The process evaluation will seek to determine to what extent this may have been the case.

Randomisation

The unit of allocation for randomisation will be at the level of the school. In allocating schools to intervention and control groups we will undertake minimisation (a form of random allocation (Torgerson and Torgerson 2008) to ensure the schools are balanced on size; proportion of children currently eligible for free school meals (FSM); geographical area and mixed year group teaching (of Year 5 and 6 pupils). This will be undertaken by an independent study statistician ensuring that the allocation is concealed after school recruitment and after school baseline data has been collected.

Interventions

SRSD

SRSD intervention is a continuing professional development (CPD) training programme for Year 5 and Year 6 teachers at participating primary schools. In schools allocated to the intervention group children in Years 5 and 6 will be taught by teachers trained in SRSD. Self-regulated strategy development (SRSD) is a writing process model in which students are encouraged to plan, draft, edit and revise their writing. SRSD is a strategy which provides a clear structure to assist writers and can be used for most genres of writing, including narrative writing. There are six basic stages of instruction and four strategies for self-regulation, which include self-monitoring and goal setting, thus providing pupils with ownership for improving their own writing. SRSD uses 'heuristics' which provide scaffolding of structures and devices that aid the composition of argumentative writing – in particular planning – which can include examining a question, brainstorming, organising and sequencing ideas and evaluating.

Memorable experiences

Schools will receive funding and ensure participating pupils engage in 'memorable' experiences; this could include a school trip, or unusual activity in school. The purpose of these 'memorable' experiences is to provide stimulus for children's writing practice during the year.

Delivery Model

Members from the Calderdale Excellence Partnership will train trainers from Leeds Local Authority and Lincolnshire/Centre for British Teachers (CfBT). These trainers will then deliver the SRSD CPD training programme to teachers in their area, with the trainers from Leeds Local Authority taking responsibility for training the teachers from their schools in Leeds and the trainers from CfBT training the teachers from Lincolnshire schools. The implementation team will quality assure the training programme.

Recruitment

Outline ethical approval has been granted by the Durham University School of Education Ethics Committee. This means that schools may be approached and school expression of interest and agreement to participate can go ahead from the date outline ethical approval was granted (16.09.14). School recruitment will aim to be completed by March 2015. CEP and the evaluation team will work collaboratively. The evaluation team will provide information documentation on the trial for the schools and pupils/parents. This will include details of the trial design. We will replicate our successful strategy of recruitment by working with CEP to establish a list of schools expressing an interest in being involved and then set up a series of high profile 'recruitment events' to provide information to the schools and enable them to ask questions before signing up to take part in the trial. We propose to pay all participating schools £750 to compensate them for the extra time needed to provide the data to the evaluators for analysis. This payment should also ensure that the control schools are less likely to drop-out after randomisation.

Inclusion criteria

Schools

Primary schools (excluding those in an Ofsted category) will be recruited from the Leeds and Lincolnshire areas. Schools will be asked to sign an Agreement to Participate Form to demonstrate their commitment to the project and understanding of the evaluation requirements. Any schools who are unable to ensure that, should they be allocated to the control group, pupils in Year 6 in the 2016/2017 academic year would not receive SRSD (for example schools who have mixed year 5 and year 6 classes) will be excluded from the Trial 2 analysis, but will remain in the study so results can be used in Trial 1.

Pupils

All Year 5 and Year 6 pupils in the 2015/2016 academic year at participating primary schools will be eligible for inclusion in the study. Pupils will be identified from the school roll in the 2014/2015 academic year (current Year 4 and 5). Schools will inform parents of all pupils currently in Year 4 and Year 5 about the study (material and help provided by the evaluation team and Calderdale Excellence Partnership). Parents will have the opportunity to withdraw their child's data from being used in the evaluation (opt out). Pupils whose parents request opt-out for the purposes of the research would still receive the intervention as this will be delivered to the whole year.

Primary schools will make details of all eligible pupils (with the exception of any children whose parents have opted out) available to the implementation team who will share the data with the evaluation team and EEF.

Outcome Measures

Baseline data

Schools will be asked to provide the name, unique pupil number, date of birth, gender, FSM current eligibility, pupil premium eligibility (FSM ever 6) and end of KS1 data for all eligible pupils at baseline.

Primary Outcomes

Trial 1: KS2 writing (Teacher assessed) results at one year follow up (collected from schools initially and subsequently from the NPD).

Trial 2: KS2 writing (Teacher assessed) results at two year follow up (collected from schools initially and subsequently from the NPD).

Secondary Outcomes

Secondary Outcomes will include:

Trial 1: KS2 Reading (National Test)

KS 2 [Spelling, Punctuation and Grammar](#) (National Test)

KS2 Maths results at one year follow up (collected from schools initially and subsequently from the NPD).

Long term follow up using data from the NPD.

Trial 2: KS2 Reading (National Test)

KS 2 [Spelling, Punctuation and Grammar](#) (National Test)

KS2 Maths results at two year follow up (collected from schools initially and subsequently from the NPD).

Long term follow up using the NPD.

Implementation Fidelity

A tool to record implementation fidelity will be developed in collaboration with the implementation team. The implementation team will score each intervention school using this measure. A random sample of schools will be scored using this measure by the process evaluator.

Sample size calculation

Trial 1: Assuming 80 schools are recruited and randomised with 3,600 children in total (i.e., 45 per school), and assuming an intra-cluster correlation of 0.08 (taken from a previous evaluation of Year 6 pupils (Torgerson et al 2014)) and a correlation with KS1 scores of 0.7 (Torgerson et al 2014), we estimate that the sample size would detect a minimum difference of 0.14 standard deviations (80% power, $2p = 0.05$ between the intervention and the control groups).

Trial 2: Assuming 70 schools are recruited and randomised (excluding schools who cannot ensure separate Year 6 teaching) with 3,150 children in total (i.e., 45 per school), and assuming an intra-cluster correlation of 0.08 (taken from a previous evaluation of Year 6 pupils (Torgerson et al 2014)) and a correlation with KS1 scores of 0.7 (Torgerson et al 2014) we estimate that the sample size would detect a minimum difference of 0.15 standard deviations (80% power, $2p = 0.05$ between the intervention and the control groups).

The effect of the intervention will also be analysed in the sub-group of pupils who are eligible for FSM. In a previous trial of SRSD (Torgerson et al 2014) approximately 28% of children were eligible for FSM. Estimating there will be approximately 750 FSM ever children in total in Trial 1 would allow us to show a minimum difference of an effect size of around 0.31 in this subgroup.

Analysis

An interim analysis will be conducted using data provided by schools. When final data becomes available from the NPD a final analysis will be conducted.

Analysis will be conducted using the principles of intention to treat, meaning that all schools and pupils will be analysed in the group they were randomised to irrespective of whether or not they actually attended the intervention.

Statistical significance will be assessed at the 5% level unless otherwise stated. Regression based methods of analysis will be used with appropriate adjustment for clustered data. 95% confidence intervals will be provided as appropriate. Methods for handling missing data and further detail on analyses will be provided within a statistical analysis plan.

Primary Analysis

The primary analysis will be to compare two primary outcomes: KS2 writing scores between the two groups of schools for year 6 pupils in Trial 1 who have received one year of SRSD teaching and for year 6 pupils in Trial 2 who have received two years of SRSD teaching.

Secondary Analyses

Regression models, adjusting for clustering, will also be used to compare differences between the intervention and control groups with respect to the secondary outcomes of KS2 Reading, KS2 Spelling, Punctuation and Grammar and KS2 maths results to assess whether there is any evidence of a 'spill-over' effect of SRSD teaching.

The effect of the intervention will also be analysed in the sub-group of pupils who are ever eligible for FSM.

The effect of the intervention on academically high achievers and academically low achievers will also be investigated. Detail on categories will be provided in the Statistical Analysis Plan.

Our primary fidelity analysis will be to assess the impact of any non-compliance using Complier Average Causal Effect (CACE) analysis to estimate effect of the intervention on writing skills.

Process Evaluation

The process evaluation will be undertaken within the trial. A separate detailed protocol will be developed for the process evaluation and all instruments will be submitted to Durham University School of Education Ethics Committee. In brief we will evaluate the fidelity of implementation of the intervention as described by the developers and also investigate, through a cross-sectional design, issues of implementation and organisation. We will be guided by the EEF's template for process evaluation in developing a detailed protocol for this aspect of the research.

Implementation and organisational issues will be explored through in-depth process work. In this respect perceptions and experiences of key stakeholders will be significant. An observation schedule will be developed for school visits to look at how the programme is being implemented. Each of the site visits will also include interviews with the teaching staff as well as focus groups of up to four pupils.

A semi-structured interview schedule will be developed to address the following:

- Clarification of the aims and learning objectives
- Assessment of the necessary conditions for successful delivery
- Assessment of the actual and potential barriers to successful delivery
- Assessment of fidelity of delivery
- Perceived outcomes of the intervention, including interest and enjoyment by the pupils
- Identification of any potential negative effects on the pupils

A full protocol will be developed for the process evaluation before any process work is initiated.

Data Protection Statement

Durham University's data protection policy is publically available at:
<http://www.dur.ac.uk/resources/data.protection/dataprotectionpolicy.pdf>

"Durham University is committed to protecting the rights and freedoms of individuals in accordance with the provisions of the Data Protection Act 1998. The requirements to which University staff and student who process personal data must adhere are set out in the University's Data Protection Policy"

The University of York's data protection policy is publically available at:

<http://www.york.ac.uk/media/recordsmanagement/documents/dataprotectiondocs/Data%20Protection%20Policy.pdf>

Risks

Low risks associated with this project include operational and project specific risks. For the operational risks such as staffing and IT / assessment system we are confident that we have systems and procedures in place to minimise any risks.

School and pupil recruitment – The main risk is likely to be school recruitment. Whilst this will be the primary responsibility of the implementation team, the evaluation team have a good track of recruiting schools and we will adopt a collaborative approach with the implementation team. We will contact the relevant educational authorities and the local primary schools to encourage them to take part. The initial study showed a positive result which will encourage the schools to take part as the intervention now has good evidence of promise from a UK-based study. Schools will, in addition, be provided with a financial contribution to acknowledge the time and resources required to implement the intervention or control condition and undertake the testing regime and take part in the process evaluation. All schools will eventually have access to the SRSD training which again should encourage participation and retention.

Attrition and loss to follow up – in a study such as this it is essential that this is kept to a minimum. Whilst this will be the primary responsibility of the implementation team, our involvement, as with the recruitment, will help to minimise attrition. Again the financial incentive to schools and wait list design should encourage retention.

Maintaining fidelity (intervention and control) - it is essential that as many as possible schools maintain a high level of implementation fidelity. Again whilst the primary responsibility will lie with the implementation team we will provide some support, for example, by emphasising the importance of contributing to the process of building good evidence. Implementation fidelity will be assessed in the Process evaluation.

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