

Evaluation Summary	
Age range	Secondary (Year 7)
Number of pupils	c. 5,700
Number of schools	30
Design	Randomised controlled trial with randomisation at the school level
Primary Outcome	Reading

BACKGROUND

Significance

The project aims to test the effectiveness of the Developing Healthy Minds in Teenagers programme. This programme aims to boost pupils' academic achievement through improving their non-cognitive skills, which include motivation, resilience and self-regulation. How to Thrive, a unit of Hertfordshire County Council, is working with academics at the LSE, led by Lord Richard Layard, who have identified 14 evidence-based programmes for trial in secondary schools. The programme uses the principles of cognitive behavioural therapy to help students focus on and apply themselves to their learning.

The approach is based on the findings of Heckman and other economists that non-cognitive skills are as important as cognitive skills in determining a range of outcomes in life, including academic results. The main evidence for the programme's effectiveness is from a 2011 meta-analysis conducted by Durlak and colleagues¹. This review found that across 35 controlled studies of whole-class social and emotional learning programmes there was an average effect on attainment of 0.27 standard deviations. Children from poorer backgrounds tend to have weaker non-cognitive skills than their better-off peers and the programme is therefore believed to have the potential to improve the performance of pupils in EEF target schools.

Intervention

The trial is initially funded by the EEF for two years, when it will be reviewed and funded for a further two years, subject to evidence of its effectiveness.

The intervention is a new Personal, Social, and Health Education (PSHE) curriculum for Year 7 to Year 10 pupils based on the programmes identified above. PSHE lessons take roughly one hour per week, and the intervention would replace schools' current PSHE lessons.

The programme is aiming to develop pupils' non-cognitive skills and improve their resilience. It is also aiming to show pupils how to apply the principles and techniques of social and emotional learning to their academic study.

¹ Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432.

RESEARCH PLAN

Research questions

The main research questions concern whether improving pupils' non-cognitive skills (motivation, resilience, self-regulation, etc) boosts their academic achievement.

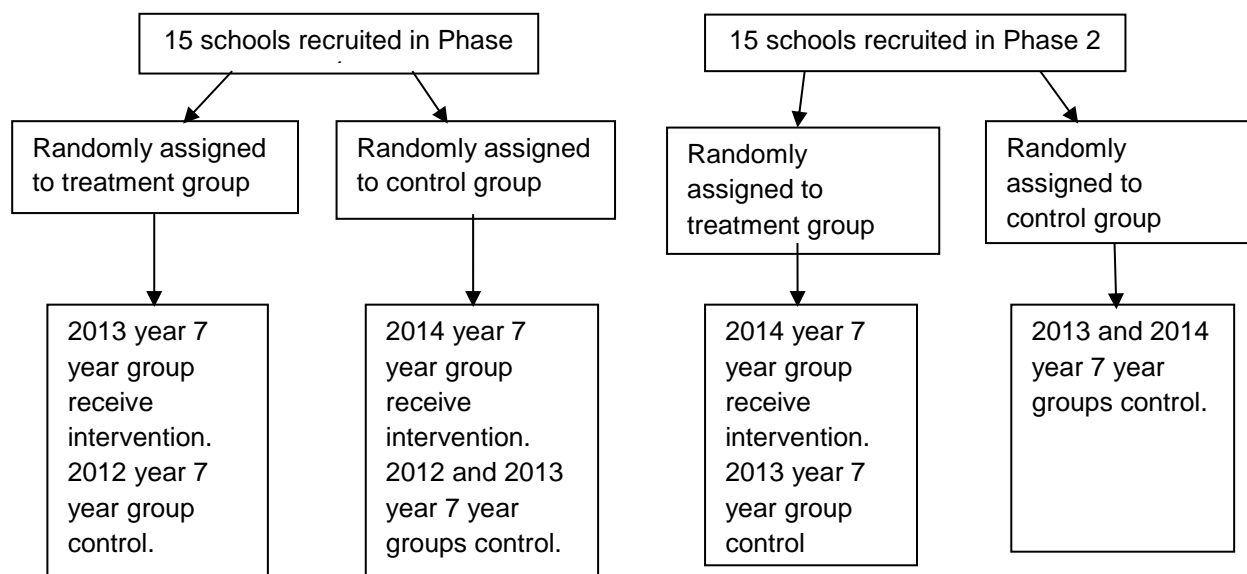
Design

The trial is a cluster randomised trial, with school level randomisation. Randomisation is conducted using minimisation and schools are stratified according to whether the percentage of pupils eligible for Free School Meals (FSM) is less than 13 per cent, between 13 and 25 per cent or greater than 25%; whether the percentage of pupils with 5 GCSEs with grades A*-C is below 59 per cent or not; and whether the school is single sex or mixed.

School recruitment takes place in two phases. Phase 1 schools enter the project in academic year 2012/13. Schools assigned to the treatment group implement the intervention with the Year 7 year group in academic year 2013/14, whilst schools assigned to the control group implement the intervention with the Year 7 year group in academic year 2014/15.

Phase 2 schools enter the project in academic year 2013/14. Schools assigned to the treatment group implement the intervention with the Year 7 year group in academic year 2014/15, whilst schools assigned to the control group do not implement the intervention with their 2014/15 Year 7 year group.

Figure 1 The Intervention



Participants

All pupils in selected Phase 1 schools in year 7 in 2013/14 are eligible along with all pupils in selected Phase 2 schools in year 7 in 2014/15. Additional control groups are taken from 2012/13 year 7 year group in Phase 1 schools and 2013/14 year 7 year group in Phase 2 schools.

Outcome Measures

The primary outcome will be the Hodder Education Access Reading Test and the secondary outcome will be the Hodder Education Access Maths Test.

Pupils are randomly assigned to take either the Reading or Maths Test, so half of each year group in each school will take each of the tests.

The analysis will not be blinded. Assessors and data analysts will know the intervention status of each school.

Sample size calculations

Our power calculations assume 160 pupils per year group per school (based on analysis of year group size in preceding year in selected schools). This means that 80 pupils per school will take the Reading test and 80 pupils will take the Maths test. We also assume an intra-class correlation of 0.13, significance level of 0.05 and power of 0.8. Based on these figures, the required number of schools to detect an effect size of 0.3 standard deviations is 23, whilst to detect an effect size of 0.25 standard deviations requires 32 schools. Meta analysis of similar programmes (Durlak et al. op. cit.) indicates an average effect size of 0.27 standard deviations.

Analysis plan

The analysis will be carried out using multilevel regression models to reflect the clustered nature of randomisation. The model will be specified in order to allow comparison of pupil outcomes for those attending intervention or treatment group schools.

We will consider a number of subgroups defined by pupil characteristics. These include:

- children receiving free school meals (FSM) compared to non-FSM children;
- ethnic minority children compared to white children
- children with low attainment scores on the pre-test compared with children with higher attainment scores on the pre-test

Process evaluation methods

NIESR is carrying out an independent process evaluation of the intervention to identify the factors which affect impact and which may explain the findings of the quantitative evaluation. The evaluation will therefore use a range of qualitative approaches to assess evidence in relation to:

- the introduction of the programme in participating schools, including commitment of senior leadership
- contextual factors, including other activities and initiatives with a resilience component and resource issues of relevance to the programme
- training of teachers in the programme, their understanding of the approach and commitment, their preparation for the emotional impact on pupils
- the application of the programme within the PSHE slot, size of groups and who it is delivered by
- views on the curriculum materials
- collaborative partnerships relevant to the operation and implementation of the programme

Interviews are being conducted with project managers, senior staff and teachers in schools. The evaluation will also include observations of the delivery of the programme and focus groups with pupils.

PERSONNEL

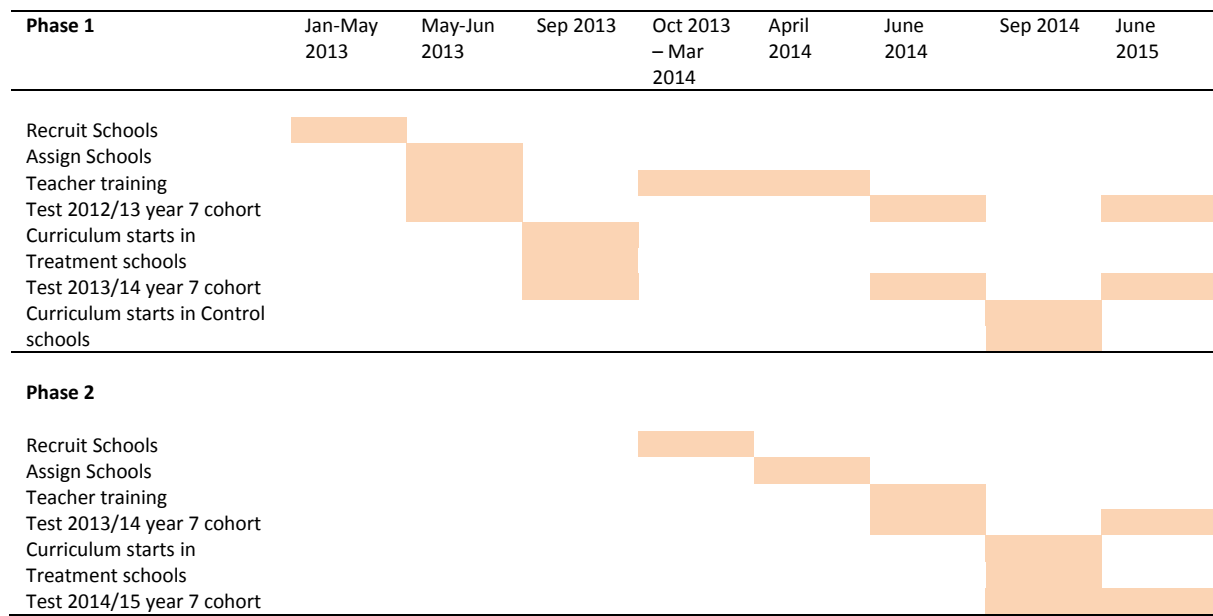
Lord Richard Layard, of the LSE Centre for Economic Performance and his LSE colleagues will oversee the project through a steering group that will be chaired by former No. 10 education advisor James O'Shaughnessy.

'How to Thrive' will be responsible for delivering training and ongoing support to participating schools. How to Thrive is a unit housed in Hertfordshire County Council Children's Services Team.

Lucy Bailey, Head of How to Thrive will be leading the implementation of the project in schools. Emma Judge in the How to Thrive team, will also play a leading role.

NIESR is conducting an external evaluation of the project. The project leader is David Wilkinson who will oversee the delivery of academic pupil assessments; Heather Rolfe will lead a qualitative process evaluation of the programme. Other key members of the NIESR team are Anitha George and Cinzia Rienzo. Richard Dorsett will provide additional expert advice on aspects of the quantitative evaluation.

TIMELINE



RISKS

The following table summarises the main risks to the evaluation and how they might be addressed

Issue/risk	How risk might be addressed
Contamination of the random assignment design	Complications arise when the real-life behaviour of subjects in randomised control trials is at odds with the conceptual design of the experiment. Pupils may not receive all of the treatment. To achieve anything other than the effect of intention to treat will be difficult. However, to help understand the nature of the estimated impact better, monitoring information should be collected on programme attendance.
Confusion in evaluation tasks undertaken by LSE, How to Thrive and NIESR	Tasks and roles for each organisation have been agreed at the outset of the project.
Unexpected absence of team members	The team will substitute for each other during any short-term absence. In the event of longer periods of unplanned absence, NIESR will involve other NIESR experts in evaluation and education if necessary.
Low impact report	Our reporting will be aimed at ensuring maximum impact of findings through summaries and guidance for EEF schools. Reporting will focus on best practice and implications for policy and practice.

NIESR has established systems which comply with the stringent requirements of data protection legislation and best practice in data security and research ethics. This compliance includes the use of encryption, secure passwords, lockable paper files and secure entry to the office building (which does not have any public access). Computing facilities include secure data transfer through a VPN system and the use of stand-alone computers for data use. Through training, staff are made aware of the importance of ensuring that data security is not compromised.