Teacher Effectiveness Enhancement Programme

York University
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Evaluation Summery	
Age range	Secondary school aged pupils
Number of pupils	c.20,000
Number of schools	40
Design	Randomised controlled trial, with randomisation at the school level.
Primary Outcome	GCSE

TEEP evaluation Protocol

Background

Significance

Previous qualitative evaluations of TEEP (Ragbir-Day et al, 2008; Gunraj, 2010) suggest that the programme has evidence of effectiveness. This longitudinal randomised control trial and mixed methods approach will provide robust impact and process evaluations. In particular, it is necessary to assess the effectiveness of TEEP, which has undergone recent development and revision, in schools with high numbers of students who attract the pupil premium.

Intervention

The Teacher Effectiveness Enhancement Programme (TEEP) is made up of three components that are connected yet contribute individually to the teaching and learning process: effective teacher behaviours and effective learner behaviours; five underpinning elements, and the TEEP learning cycle.

Effective teacher behaviours that TEEP promotes focus on variety of teaching and learning styles; interactive teaching; classroom management; and classroom climate including high expectations and strong relationships. Effective learner behaviours include makes decisions; seeks assistance; checks personal progress; asks questions; makes links to previous learning; has strategies for learning; and reflects on the work. TEEP's five underpinning elements are assessment for learning; collaborative learning; effective use of ICT, accelerated learning and thinking for learning. The TEEP learning cycle includes prepare for learning, agree learning outcomes, present new information, construct meaning, apply to demonstrate understanding, and review. The cycle can be used to plan a single lesson or a series of lessons and is not rigid; teachers and learners might move back and forth between phases during a cycle.

To support whole school improvement in teaching and learning, three full days of training are led by TEEP trainers for all staff, followed by ~~a~~ two further days on mentoring and coaching for selected teachers who will lead and sustain TEEP development and embed TEEP practices in their school.

TEEP claims to be suitable for any school wanting to improve the quality of teaching and learning, whatever the starting point.

Research plan

Research Questions

Questions the evaluation is designed to answer are:

What is the impact of TEEP on student attainment and achievement?

Are there differences in impact between boys and girls, and between high, average and low achievers?

What are the mechanisms for change in teaching and learning?

Design

The impact evaluation is a randomised control trial (RCT) of 40 secondary schools to assess the effects of TEEP, particularly on raising the attainment of the most disadvantaged pupils. The process evaluation will assess the quality of implementation TEEP as a holistic model and the changes it effects in teaching and learning behaviours

The evaluation design will permit an impact and a process evaluation of whole school implementation of TEEP. The information gathered will inform SSAT about the factors that impact implementation of TEEP and help guide future design in terms of adaptations needed to be context specific for vulnerable students and challenging schools.

Randomisation was at school level, using matched pairs of schools stratified by average percentage GCSE (A*-C) results over three years, percentage of students eligible for free school meals, percentage EAL, number of students registered at the school. In Cohort 2, seven matched pairs and two matched triads were used to equalise numbers in each treatment group overall. Random number generation was used to identify which schools in each pair or triad would be the intervention school and which the control.

Participants

Eligible schools were those under or near the government floor targets. Recruitment by SSAT was through invitation to eligible schools.

Outcome Measures

In order to minimise costs and disruptions of data collection, routinely collected GCSE scores (secondary) will be used as one of the data sets. These standardised measures are high in

contextual validity, as they constitute the main indicators of school and student academic performance. Because virtually all schools in England take these tests, it is certain that control as well as TEEP teachers will be focused on ensuring that students succeed on them. The reliability and validity of the GCSE and KS2 measures have been well established.

In addition to the GCSE scores, electronic assessments (CEM Centre, University of Durham) will be completed by all Cohort students in Year 7 using the MidYIS tests as a pre-test measure before implementation starts, and the INSIGHT assessment as a post-test measure when the students are in Year 9. The use of online assessments removes the need to ensure tests are blinded.

Additionally the qualitative data from conversations with leaders at all levels, classroom teachers and students, observations and feedback from schools will be used in the outcome measures, ensuring the recognition that results data is only part of the story of achievement for many of these young people. Changing a culture of a school takes time and noting significant shifts in teacher and learner behaviours are a key element of the evaluation.

Sample Size Calculations

The statistical power of the planned analyses for the secondary schools, based on combining the cohort data, was estimated using Optimal Design software. Assumptions were as follows (based on extensive experience with similar analyses).

Number of schools: 40 (secondary)

Students per school per year group: 100

Pre-post correlation (squared): +0.60

Intraclass correlation: 0.15

Criterion for statistical significance: $p < .05$

Based on these assumptions a minimum detectable effect size (MDES) of 0.25 could be detected with a probability of .80.

Impact Analysis plan

The following analysis plan outlines the statistical methods to be used to compare the groups on the primary and secondary outcome measures, and details subgroup analyses.

The assessment data for Cohort 1 and Cohort 2 will be analysed separately and compared to each other. If no differences are found between them, the data from the cohorts will be combined and analysed together, providing for a more statistically robust analysis. In this case, where possible, the evaluation of TEEP will use Hierarchical Linear Analysis (HLM), a multilevel analysis in which students are nested within schools. The HLM analysis uses degrees of freedom associated with the number of schools, not the number of students. We propose to analyse GCSE scores in two successive years, 2014 and 2015, comparing schools randomly assigned to TEEP to those in a randomly assigned control group, controlling for

2012 scores. Separate analyses will focus on GCSE performance in each major subject, controlling for the school's prior GCSE scores (in 2012). After the main analyses including all students, subgroup analyses will be carried out where possible for boys and girls, and for high, average and low achievers. Exploratory analyses will investigate the correlation between the rated quality of implementation of TEEP, as rated in the process evaluation, using partial correlations, controlling for 2012 GCSEs. As the study extends over 3 or 4 academic years, analyses will account for attrition from the beginning to end of the project.

Process Evaluation

A summary of methods used in the process evaluation and to assess programme fidelity is presented below.

Building on the previous evaluations of TEEP, the process evaluation will determine how the project has been implemented on the ground, that is, what are the mechanisms for change. The quality of implementation of each of the following TEEP elements will be evaluated: assessment for learning; thinking for learning; accelerated learning; collaborative learning; and effective use of ICT, holistically through looking at effective teacher and learner behaviours. Some may choose to work on only one underpinning element within the first year for example. The process evaluation will provide information to SSAT about factors that influence the implementation of TEEP, which will help them refine the design of future implementations.

Specific questions for the observations, focus groups, interviews and surveys are:

How, if at all, does TEEP improve teachers' classroom practice?

How, if at all, does TEEP improve learners' effectiveness?

How, if at all, is TEEP suitable for raising the attainment of the most disadvantaged pupils as well as all pupils?

What are the challenges, if any, in implementing the different elements of TEEP?

How consistently is TEEP being implemented?

What additional support, if any, is needed to make TEEP work well?

How can the long-term impact of TEEP be sustained?

The Process Evaluation methodology includes the following:

Observations

Researchers will observe in English, maths and science lessons in a random sample of 12 implementation schools conducted over the evaluation period. Where possible, lesson observations will be conducted for the same cohorts and classes of students to track their learning experience over the evaluation period.

Observations in English, maths and science lessons in a random sample of 12 control schools will also be conducted.

Focus Groups

Three focus group meetings with a random selection of teachers (core and non-core subjects) trained in TEEP in the random sample of 12 of the 20 implementation schools, will be conducted during the school observation visits.

One focus group meeting with teachers (core and non-core subjects) in a random sample of 12 of the 20 control schools will take place at the same time as the observation visit in spring term of the school year starting September 2013.

Interviews

Interviews will be conducted with the TEEP lead teachers/trainers in each implementation school during the school visits in summer 2013, autumn 2013 and summer 2014.

Surveys

Online surveys will be completed by head teachers, lead teachers (in-school TEEP mentors), and participating teachers and pupils in the 20 implementation schools three times over the project.

One ***electronic survey will be completed by head teachers, teachers and pupils in the 20 control schools in spring term of the school year starting September 2013.***

Personnel

Bette Chambers, PhD. Professor Chambers is Director of the Institute for Effective Education at the University of York and part-time professor at the Center for Research and Reform in Education at Johns Hopkins University in Baltimore. Professor Chambers is a Co-Principal Investigator on the evaluation, with responsibility for overall quality control of the evaluation process and reporting.

Robert Slavin, PhD. Professor Robert Slavin is currently Director of the Center for Research and Reform in Education at Johns Hopkins University in Baltimore and professor at the Institute for Effective Education at the University of York. Professor Slavin is Co-Principal Investigator on the evaluation, with particular responsibility for evaluation design and statistical analysis.

Peter Rudd, PhD. Dr Peter Rudd is a Reader at the Institute for Effective Education focusing on the theme of overcoming educational disadvantage. Dr Rudd is Co-investigator with shared responsibility for data collection.

Mary Sheard, PhD. Dr Mary Sheard is a Research Fellow at the Institute for Effective Education with interests in teacher learning and professional development; student learning with technology; and learning with representations. Dr Sheard is Project Manager and Co-

investigator, with responsibility for liaison with the TEEP Team (SSAT), participating schools and the CEM test centre personnel; and data collection for the impact and process evaluations.

Louise Elliott. Louise Elliott is the Data Manager at the Institute for Effective Education. Ms Elliott is responsible for managing all database organisation, data entry, cleaning and descriptive statistical analyses conducted in the evaluation.

Risks

Because the GSCE and KS2 data are readily available, no risks are anticipated in the basic study although it must be recognised that this is only one of many measures of impact and over a period of time.. However, with the proposed sample of secondary schools, it is unlikely that significant effects in the cluster randomised trial will be found, even if the treatment has an effect size in the range of +0.20 to +0.24, which would ordinarily be considered an educationally meaningful difference. This problem should be remedied by expanding the secondary school sample.

Recruitment and attrition risks are expected to be minimal, , however it is recognised that factors outside their control may affect the involvement of schools later in the programme (for example those who have been waiting until 2015 to start).
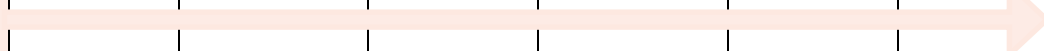
DATA PROTECTION STATEMENT

All outputs will be anonymised so that no schools will be identifiable in the report or dissemination of results.

Data will be handled in accordance with the Data Protection Act (1998). Statistical databases will hold non-identifiable data. Twenty per cent of data will be double entered to assess reliability. Confidentiality will be maintained and no one outside the trial team will have access to the database. The trial database will be securely held and maintained on the University's research data protection server, which is regularly backed up.

Timeline

A timetable including specification of who completes each task is attached.

Timeline for TEEP Evaluation

	June 2012	School Year 2012-2013			School Year 2013-2014			School Year 2014-2015			Autumn Term
		Autumn Term	Spring Term	Summer Term	Autumn Term	Spring Term	Summer Term	Autumn Term	Spring Term	Summer Term	
Randomisation (IEE)											
Implementation Cohort 1		Experimental Cohort 1						Control Cohort 1			
Implementation Cohort 2				Experimental Cohort 2							Control Cohort 2
Pretest Year 7 (Before implementation) (MS in association with CEM)	E & C Cohort 1			Experimental Cohort 2 & Control Cohort 2							
Lesson observations (MS & PR)				Experimental Cohort 1	Experimental Cohort 1	Control Cohort 1	Experimental Cohorts 1 / Experimental Cohort 2	Experimental Cohort 2	Control Cohort 2	Experimental Cohort 2	
Focus groups (Teachers) (MS & PR)				Experimental Cohort 1	Experimental Cohort 1	Control Cohort 1	Experimental Cohorts 1 / Experimental Cohort 2	Experimental Cohort 2	Control Cohort 2	Experimental Cohort 2	
Electronic surveys (MS)				Experimental Cohort 1		Experimental Cohort 1	Experimental Cohorts 1 / Experimental Cohort 2		Experimental Cohort 2	Experimental Cohort 2	
Post-test Year 9 (MS in association with CEM)							Experimental Cohort 1 & Control Cohort 1			Experimental Cohort 2 & Control Cohort 2	
Analyse Year 7 & Year 9 MidYis data; GCSE scores (RS with all team)							Experimental & Control Cohort 1			Experimental Cohort 2 & Control Cohort 2	

Notes: Interviews with a sample of TEEP lead teachers/trainers will be conducted in the Autumn Term 2013 and the Spring Term 2013