



Education
Endowment
Foundation

Teacher Effectiveness Enhancement Programme

Evaluation report and executive summary

November 2016

Independent evaluators:
Institute for Effective Education

Institute for
Effective Education



The Education Endowment Foundation (EEF) is an independent grant-making charity dedicated to breaking the link between family income and educational achievement, ensuring that children from all backgrounds can fulfil their potential and make the most of their talents.

The EEF aims to raise the attainment of children facing disadvantage by:

- identifying promising educational innovations that address the needs of disadvantaged children in primary and secondary schools in England;
- evaluating these innovations to extend and secure the evidence on what works and can be made to work at scale; and
- encouraging schools, government, charities, and others to apply evidence and adopt innovations found to be effective.

The EEF was established in 2011 by the Sutton Trust as lead charity in partnership with Impetus Trust (now part of Impetus - Private Equity Foundation) and received a founding £125m grant from the Department for Education.

Together, the EEF and Sutton Trust are the government-designated What Works Centre for improving education outcomes for school-aged children.



For more information about the EEF or this report please contact:

Danielle Mason

Head of Research and Publications

p: 020 7802 1679

e: danielle.mason@eefoundation.org.uk

w: www.educationendowmentfoundation.org.uk

About the evaluator

The project was independently evaluated by a team from the Institute for Effective Education.

Contact details:

Address: Institute for Effective Education, Berrick Saul Building, University of York, Heslington, York, YO10 5DD

Tel: 01904 328166

Email: iee@york.ac.uk

Contents

About the evaluator	2
Contents	3
Executive summary	4
Introduction.....	6
Methods.....	12
Impact evaluation	20
Process evaluation	27
Conclusion	32
References	34
Appendix A: EEF cost rating	35
Appendix B: Security classification of trial findings.....	36
Appendix C. Head Teacher Agreement.....	37
Appendix D. Parent Information Sheet and Opt-out Form	40
Appendix E. TEEP Lesson Observation Schedule	43
Appendix F. Head Teacher Baseline Interview Questions	48
Appendix G. Baseline Focus Group Questions	49
Appendix H. TEEP Teacher Survey Questions	50
Appendix I. TEEP Student Survey Questions	53
Appendix J. Comparison of the Cohorts 1 and 2.....	55
Appendix K. Analysis of missing data.....	56

Executive summary

The project

The Teacher Effectiveness Enhancement Programme (TEEP) is a CPD programme that aims to improve teachers' classroom practice. TEEP training is offered as a whole-school approach by the Schools, Students and Teachers Network (SSAT). All staff in a school received three days of training over a period of two terms. A smaller cohort of teachers, chosen by the school leadership team, receive two further days of training the following term to help embed and develop the TEEP strategies across the school. The training focuses on developing pedagogical knowledge (for example, assessment for learning or collaborative learning), understanding different phases of learning (such as preparing for learning and demonstrating understanding), and effective teacher behaviours (including classroom management and interactive teaching). The programme provides a comprehensive language and framework for understanding how to improve the effectiveness of both teachers and learners in secondary schools.

TEEP was evaluated using a randomised controlled trial with over 10,000 students in 45 low-performing secondary schools across England. Schools were eligible for inclusion in the project if their performance was below government floor standards at the point of recruitment. Schools were randomly allocated to receive either the TEEP training or continue with 'business as usual'. The primary outcome measures were grades in GCSE English and mathematics sat by pupils in either 2014 or 2015, at least 18 months after the year-long TEEP programme began. The secondary outcome measures were scores on the CEM INSIGHT tests—which measure science, maths and reading attainment—and attitudes to school at Year 9, but this data was not collected as intended. The evaluators also attended the TEEP training, interviews with senior staff and teachers, and focus groups and surveys as part of the process evaluation. They also conducted lesson observations.

Key conclusions

1. In the low-performing schools selected for this trial, there was no evidence of an impact on pupils' GCSE English and maths attainment in schools selected to receive TEEP training compared to other schools.
2. Both teachers and students were enthusiastic about the programme and believed that it improved students' learning.
3. The evaluation was initially designed to also assess implementation quality and the impact on Year 9 attainment and attitudes. However, the relevant measures for these key evaluation elements were not collected due to circumstances beyond the control of the project teams. This means the evaluation cannot assess whether TEEP made a difference to Year 9 pupils, as originally intended.
4. Any future studies could systematically investigate the implementation of TEEP using implementation measures that relate to specific components of the programme, as well as investigating changes in school culture and teacher behaviour.

How secure are the findings?

Security rating awarded as part of the EEF peer review

The findings from this evaluation for the primary outcomes are judged to be of moderate security. It should be considered an effectiveness trial as it aimed to test a scalable intervention under realistic conditions in a large number of schools. The trial used a well-conducted experimental design and appropriate analysis. At the beginning of the trial the schools and pupils who received the intervention were similar to the schools and pupils in the comparison group. Two padlocks are removed from the rating because over 20% of pupils' GCSE results were not included because their initial attainment data at age 11, which is needed for the analysis, was not available.

What are the findings?

The evaluation of the TEEP programme showed no effect on GCSE English or maths scores in the low-performing schools that participated in the trial, nor did it have an impact for students eligible for free school meals, for either gender, or for students of different ability levels.

Due to circumstances beyond the control of the evaluator and developer, Year 9 attainment and attitudes data, and data on the quality of implementation, were not collected as planned. For these reasons it is impossible to determine the impact of the intervention on Year 9 attainment or attitudes compared with the control group, or to assess whether problems with implementation contributed to the lack of positive impact.



Interviews and focus groups indicated that most of the teachers in the TEEP schools found the training useful and were keen to implement TEEP methods and principles in their lessons. Survey data indicated that teachers and students believed that TEEP had made them more effective teachers and learners overall. Survey responses suggested that teachers and pupils felt TEEP had less of an impact on effective use of ICT than on other elements of teaching, learning and classroom activity.

Previous evaluations of TEEP suggested that the programme had an impact on the behaviour and perceptions of pupils and teachers, but this is the first randomised controlled trial examining the impact on attainment. Future studies could systematically investigate the implementation of TEEP using implementation measures that relate to specific components of the programme, as well as investigating changes in school culture and teacher behaviour.

How much does it cost?

The cost of TEEP training is based on the number of teachers and students in the school. For a school with up to 50 staff members and 1,000 students SSAT would charge approximately £13,000. The cost, therefore, spread over three years is approximately £4,333.00 per school per year and the cost per student per year is £4.33.

Table 1: Summary of impact on primary outcomes

Group & Outcome	Number of schools	Effect size (95% confidence interval)	Estimated months' progress	EEF security rating	EEF cost rating
Treatment vs. control on English	45	-0.04 (-0.17; 0.10)	-1 ¹		£ £ £ £ £
Treatment vs. control on Maths	45	-0.02 (-0.13; 0.10)	-1		£ £ £ £ £
Treatment FSM vs. control FSM on English	45	-0.03 (-0.16; 0.09)	-1	n/a	n/a
Treatment FSM vs. control FSM on Maths	45	-0.01 (-0.14; 0.12)	0	n/a	n/a

¹ Since this report was published, the conversion from effect size into months of additional progress has been slightly revised. If these results were reported using the new conversion, all measures would be reported as 0 months of additional progress rather than -1. See [here](#) for more details.

Introduction

Intervention

The Teacher Effectiveness Enhancement Programme (TEEP) is a continuing professional development (CPD) programme for teachers initially developed in 2002 through funding from the Gatsby Charitable Foundation. TEEP aims to improve teachers' classroom practice by enabling them to reflect on their current practice, align this to a pedagogical framework, and to implement teaching strategies that nurture and develop the characteristics of effective learning in their students. The TEEP programme is neither subject- nor age-specific and consists of a framework model and training that are designed to enable teachers to become more effective and thereby improve learners' effectiveness.

TEEP translates both classroom practice and educational research into a teaching and learning framework and training programme designed to impact long term pupil achievement through a positive shift in culture for both teachers and learners. TEEP was designed to influence teacher behaviours, both professional characteristics and patterns of behaviour, which in turn should improve the overall standards of teaching and learning, develop a culture of learning in teachers and learners, and provide a consistent approach of high expectations, appropriate challenge, and formative assessment that creates an ethos of high expectation and high achievement.

The TEEP model

Represented as a graphic (see Figure 1 below), the TEEP model or pedagogical framework is broken down into three tiers;

- a six-phase learning cycle (preparing for learning, agreeing learning outcomes, presenting new information, constructing meaning, demonstrating understanding, and reviewing);
- five underpinning elements (assessment for learning, thinking for learning, accelerated learning, collaborative learning, and effective use of ICT); and
- effective teacher and learner behaviours (interactive teaching, classroom management, variety of teaching approaches, and classroom climate).

Aspects of these three tiers are considered in more detail below.

Figure 1: The TEEP model describes a taxonomy of thinking for teachers.



Effective teacher behaviours that TEEP promotes focus on using a variety of teaching and learning approaches: interactive teaching, classroom management, and classroom climate—including high expectations and strong relationships. Effective learner behaviours include making decisions, seeking assistance, checking personal progress, asking questions, making links to previous learning, developing strategies for learning, and reflecting on learning.

TEEP delivery model

TEEP training is offered as a whole-school approach with a five day training programme. The training is delivered by SSAT trainers who have classroom experience and who have been rigorously trained in TEEP. From 2012, following the previous evaluations, SSAT developed the whole-school TEEP training to make it more suitable for EEF target schools, and more focused on raising the attainment of the most disadvantaged pupils.

Whole-school training involves all teachers, leadership, and high level teaching assistants who are involved in the planning, delivery and assessment of learning. This is a key aspect of SSAT TEEP: schools about to embark on their TEEP journey will commit to ensuring all members of staff are included in level 1 training without exception. The developers have found that schools where senior leaders do not engage fully with TEEP level 1 will struggle to maintain the enthusiasm following training. They believe that successful schools have the clear identification of the headteacher as lead pedagogue.

The five days of training are broken down as follows:

- Level 1: all teachers including leadership and support staff—three days of training (two consecutive days with a gap of approximately six to eight weeks before day three); then
- Level 2: smaller cohort of teachers, from those who participated in Level 1, chosen by the school's senior leadership team to participate in an additional two days of training (approximately 8–12 weeks after day three).

All days involve six hours of face-to-face training which is participatory, active, and aligned to school context. The delivery of TEEP varied from school to school depending on the existing practices and experience of the teachers and the composition of the student body.

Level 1 (taken from the TEEP manual)

Day 1: Building the classroom climate, the culture of learning and **the five underpinning elements** (see Figure 1 above):

- assessment for learning;
- thinking for learning;
- accelerated learning;
- collaborative learning; and
- effective use of ICT.

Teachers will apply the principles of the underpinning elements when planning learning activity such that learners are exposed to higher-order thinking skills, formative assessment techniques, collaboration, co-construction and so on.

Day 2: The TEEP learning cycle (see Figure 1 above).

This concerns the phases of learning a pupil experiences in a lesson or a series of lessons. Teachers will understand the six phases of learning and how this informs effective planning and intervention in the classroom:

- preparing for learning;
- agreeing learning outcomes;

- presenting new information;
- constructing meaning;
- demonstrating understanding; and
- reviewing.

Teachers are able to move back and forth throughout the cycle depending on learner need.

Day 3: Effective teacher behaviours and effective learner behaviours.

Effective teacher behaviours are the very foundations of the TEEP framework and focus on:

- interactive teaching;
- classroom management;
- variety of teaching approaches; and
- classroom climate.

Level 2

Days 4 and 5: coaching and mentoring.

The members of staff who have been chosen by their school's senior leadership team to lead the implementation of TEEP in their school receive two additional consecutive days' training in coaching, co-coaching, and mentoring aligned specifically to the TEEP model.

During training, teachers will experience:

- mentoring and coaching skills (such as demonstrating the skills of active listening and paraphrasing and collaborating with colleagues to complete the creation of a 'TEEP teachers' toolkit');
- participating in lesson observations (by, for example, observing a TEEP lesson and discussing how to give feedback in a non-judgmental way, understanding the TEEP coaching framework); and
- conducting classroom observations (by understanding and applying the three purposes of classroom observation and observing effective and appropriate questions in the classroom).

TEEP leadership training

The project also involved further support through additional leadership training for all schools, including a headteachers' briefing before, and senior leadership training after, the core training, as well as ongoing support.

This stage of the programme was implemented as it is key that school leadership teams need to (a) lead by example, (b) understand the need for a coherent vision, and (c) fully support staff delivering the programme if it is going to be successfully embedded in a school. Issues such as changes in leadership, both of the school and/or the Academy Trust, plus high turnover of staff would lessen the ability of TEEP to be consistently applied across school and therefore limit the impact.

The headteachers' briefing prior to Level 1 training brings together the headteachers of that year's schools and provides the opportunity to:

- understand the history of TEEP and the research evidence behind it;
- define the importance of a clear vision for teaching and learning in school before TEEP starts;
- support the planning for the embedding and sustaining of TEEP across the school/academy;
- provide clear tools and information to introduce TEEP to the school community (staff, parents, governors, and students); and

- understand how, through TEEP, staff can be supported to improve teaching and learning.

The senior leadership training day—after the Level 2 training for most schools—provides the opportunity for the key staff of each school to come together to:

- identify the success criteria for embedding the TEEP model in classroom, subject disciplines, departments, and school;
- compare and contrast CPD strategies for embedding TEEP, exemplified in TEEP-trained schools, and evaluate these to ensure the impact of the programme is sustained;
- evaluate and develop their school teaching and learning strategy to support effective teaching and learning through application of the TEEP model; and
- to support the schools involved in the EEF project to ensure that TEEP will be as effective as possible for the young people within school.

Other support for schools or TEEP individuals

Resources to support TEEP are provided as part of the training and include TEEP booklet sets, A3 summary mats, thinking posters, and so on. There is a website offering many resources such as activities, PowerPoint presentations, and the opportunity to share resources with colleagues. There is also a newsletter with articles based on TEEP in practice from practitioners across the UK.

Background evidence

TEEP has been evaluated previously, though not in the form evaluated in this project and not through the use of an RCT. The four previous qualitative evaluations were commissioned by the Gatsby Charitable Foundation. These evaluations collected data on teacher behaviours and perceptions but did not collect student achievement data. They aimed to provide independent recommendations to guide further development of the intervention. Two pilot evaluations involving seven and then five schools were conducted by Gunraj (2005, 2010). Serret and Reiss (2006) conducted a three-year evaluation of four schools which used TEEP to support their science teaching.

A comprehensive qualitative evaluation was carried out of TEEP Phase 2, which was the second version of the programme. The evaluation was conducted between 2001 and 2008 by a team from the Department of Educational Studies at the University of York (Ragbir-Day, Braund, Bennett, and Campbell, 2008). The aims of the evaluation were to identify (a) the factors that resulted in schools and teachers becoming involved in TEEP, (b) impact on classroom practice, (c) impact on pupils' learning experiences, and (d) factors impacting on 'ownership of TEEP and the ways in which teachers chose to use TEEP'.

Data was gathered from two primary schools, 11 secondary schools, and two further education (FE) colleges. The data was gathered via (a) teacher observations, (b) pupil questionnaires, (c) teacher interviews, and (d) interviews with key informants. Rather than use examination or test results, the pupil data was drawn from 582 pre-training questionnaires and 520 post-training questionnaires. The findings of the evaluation were mixed, though there were more positive behaviours of teachers than negative ones. In keeping with the TEEP approach, positive impacts included the following changes in teacher behaviour:

- less time spent controlling pupil behaviour (all institutions);
- less whole-class teaching (secondary, FE);
- increased use of group work (secondary, and in one primary and one FE institution);
- more inclusive questioning (secondary, FE); and
- increased use of ICT (secondary, FE).

The research team reported that they found increased application of all five of the underpinning elements of TEEP, but also stressed that within these overall patterns there were considerable variations among institutions, as outlined above.

Two of the most important recommendations from this study were, first, that ‘a critical mass of TEEP-trained teachers is needed for consistent application of TEEP approaches (all institutions)’, and second, that there was a need for ‘time for practice to become embedded, with noticeable benefits being apparent after two years (all institutions)’ (Ragbir-Day *et al.*, 2008).

All of the studies above provided recommendations for further development and implementation. They suggested that there was sufficient positive feedback about the TEEP approach to warrant a large-scale evaluation. They concluded that, as TEEP has been scaled up and was being implemented in schools around the country, an effectiveness trial was needed.

Evaluation objectives

The impact evaluation for this project was intended to be an RCT involving 40 secondary schools to assess the effects of TEEP, particularly on raising the attainment of the most disadvantaged secondary school students. (To view the evaluation protocol click here: https://educationendowmentfoundation.org.uk/public/files/Projects/EEF_Project_Protocol_TeacherEffectivenessEnhancementProgramme.pdf).

The process evaluation aimed to assess the quality of implementation of TEEP in a small number of schools. The goal of the information gathered was to inform SSAT about the factors that impact implementation and help guide the programme’s future design. Neither the evaluation team nor SSAT had any structured monitoring of implementation fidelity which would have enabled relating it to student attainment.

Ethical review

The evaluation proposal was submitted to the Department of Education (University of York) Ethics Committee. Ethical approval was granted in July 2012. Information and consent forms were issued to headteachers and letters of assent to parents.

Project team

Anne-Marie Duguid, Director of Education, SSAT.

Andy Williams, Senior Educational Lead, Teaching and Learning, SSAT.

Corinne Settle, Educational Leads, Teaching and Learning, SSAT.

Sharon Simpson, Educational Leads, Teaching and Learning, SSAT.

Fie Rason, Senior Project Manager, SSAT.

This list does not include the qualified TEEP trainers who delivered the school courses.

Evaluation team members

Mary Sheard, Principal Investigator (deceased).

Peter Rudd, Principal Investigator.

Alaide Berenice Villanueva Aguilera, Research Associate.

Louise Elliott, Data Manager.

Bette Chambers, Co-Investigator.

Robert Slavin, Co-Investigator.

Chris Whitaker, Statistical Consultant.

Trial registration

As one of the first EEF trials—and prior to the registration of the EEF—this trial was not registered.

Methods

Trial design

This study of TEEP builds on previous evaluations by employing an effectiveness evaluation using a two-armed clustered randomised controlled trial. Randomisation was at the school level and carried out over two separate cohorts. School-level randomisation was chosen because the intervention is a whole-school intervention.

To achieve sufficient power, TEEP was implemented in a large number of secondary schools and no primary schools. There was a waitlist control group, an ideal counterfactual for the TEEP group. The control schools volunteered to continue with business as usual and implement the programme (at no cost to the school) after the evaluation was finished. Matched schools randomisation was used to ensure that TEEP and control schools would be very similar across all relevant factors, such as prior achievement and the percentage of students on free school meals ('FSM students').

Although TEEP is a whole-school model, the evaluation focused on the attainment of the students in one year level—those who would take their GCSEs in June 2014 or June 2015—compared to an equivalent control sample. Each cohort of students was exposed to TEEP for one and a half to two years prior to taking those GCSEs.

The schools that participated in the evaluation were located all around England. The length of implementation varied depending on when the schools were trained and began implementation. Teachers from the first schools were not trained until late autumn 2012 and then the students took their GCSEs in June of the following school year (after approximately 18 months' exposure to TEEP). Schools in the second cohort started training earlier in the school year of 2013 and took their GCSEs in June of the following school year (after about two years of implementation).

The impact evaluation included analyses of GCSE results, using KS2 scores as a covariate, to investigate whether implementing the TEEP programme in secondary schools led to improvement in students' test scores. Researchers also conducted a process evaluation, attended TEEP training, and visited a number of schools during the implementation period.

Participant selection

Eligibility was decided first by the EEF and focused on secondary schools performing around or below the government floor targets at the time for GCSE performance. In other words, struggling schools were targeted—those with a lower percentage of pupils achieving five A*–C GCSEs—rather than well-performing schools. Recruitment was conducted by SSAT through invitation to approximately 1,000 such schools.

Recruitment followed these steps:

1. Recruitment information was sent to schools and publicised widely through SSAT networks.
2. Expressions of Interest were received from schools by completing a form online by a specific deadline.
3. Applications were longlisted using the criteria above, based on the information provided in the application.
4. All schools were offered a telephone interview with a member of the educational team to discuss the programme, the school's suitability, and the commitment (some schools never returned the phone call so excluded themselves at this stage).
5. All schools who had been involved in the telephone interviews were reviewed again and a shortlist was created based on the information provided by each school regarding its current position, its teaching and learning, and the ability and willingness of the senior leadership

team to commit to the requirements of the project, including partially funding the training (around £3,000–£5,000 per school).

6. The shortlist was shared with the EEF to check it was satisfied with the selected schools.
7. The shortlisted schools were sent a copy of the 'prerequisites' to sign, confirming acceptance of the conditions of programme. This included that it could be allocated to either treatment or control year group. Any schools that did not return a signed form were removed and replaced.
8. A final list of schools was approved and given to the IEE to randomise.
9. The Unique Pupil Numbers (UPNs) were collected from the schools by the IEE researchers after schools were selected.

Due to the project being a whole-school intervention and with the increase in the number of schools requested by both the EEF and the evaluation team to ensure a large enough sample for sufficient power, the decision was made to run the project over a four-year period in two cohorts. All four years of schools (intervention and control) were offered the treatment by the end of the project.

Headteachers signed a memorandum of understanding before participating in the study (see Appendix C). All of the teachers in the schools were expected to participate in the training and implementation of TEEP. Parents or carers of children in the classes that were to participate in the study received information sheets and opt-out forms (see Appendix D).

Outcome measures

The primary post-test measures were routinely collected GCSE scores for both cohorts. These measures are high in contextual validity as they constitute the main indicators of school and student academic performance. Because virtually all schools in England use these tests, it was assumed that control group teachers, as well as TEEP teachers, would be focused on ensuring that students succeeded on them.

Analyses focused on GCSE performance in English and maths (key indicators of academic success and therefore the focus of EEF evaluations), controlling for the individual students' KS2 scores as provided by the NPD. Students' UPNs were provided by the secondary schools.

The protocol states that in the analyses of the post-test GCSE scores, schools' previous GCSE scores (those sat in 2012) would be used as covariates. However, at a meeting at the EEF on 21 July 2015, it was decided to use individual students' KS2 scores as covariates instead. This was necessary as, owing to the length of the two-cohort trial, there were marked changes in some schools—such as some becoming academies. In these circumstances, it was felt that individual students' KS2 scores would constitute a stronger design than school-level GCSEs. Using individual-level KS2 scores allows for a more precise estimate and increases the power of the analysis because it relates directly to each individual student's prior attainment, rather than a previous population of the school.

Subgroup analyses were conducted to assess the impact of TEEP on GCSE scores for students eligible for FSM, boys and girls, and for high, average, and low achievers.

It was planned to have students complete the CEM INSIGHT tests as secondary post-test measures to capture the effect of TEEP on students in the year levels before GCSEs are taken, however there were unavoidable problems with the external testing and communications around these. Testing was carried out with the two cohorts of schools. In June 2014 only five schools from a possible 18 completed tests, and in June 2015 only 14 schools out of a possible 27 completed some parts of the tests. This represents considerable missing data.

There are a number of factors behind these difficulties, including the death of the PI in July 2014. A change in the testing plans from a 50-minute MidYIS test to three 45-minute INSIGHT tests (one for each of reading, maths, and science) proved to be too onerous for schools. Also, communication difficulties between IEE and the testing organisation (CEM) hindered administration of the tests. At the

July 2015 meeting it was agreed that, as was originally planned, the analysis would be of GCSE data as the main outcome measure and to not analyse the post-test INSIGHT data. While it is unfortunate that the CEM tests were not administered, the GCSE tests were always intended to be the primary outcome measure.

Sample size

A collaborative decision was taken early on to recruit 52 secondary schools (26 experimental, 26 control) to participate in the study to provide more statistical power.

The statistical power of the planned analyses for the secondary schools was estimated using Optimal Design software. With 100 students per school and 52 schools, power of +0.80, intraclass correlation of 0.15, and $p < 0.05$, the minimum detectable effect size was +0.20 for the analysis of the outcome data with a 95% confidence interval. We estimated the pre-post correlations to be +0.60.

There were 45 schools in the final ITT analysis (see Figure 2: participant flow diagram). After randomisation and implementation began, another school was closed and a further two schools dropped out leaving 42 schools for the on-treatment analyses.

Randomisation

Randomisation was conducted by the IEE data manager. Schools were matched in pairs using the following criteria: average percentage GCSE (A*–C) results over three years, percentage of FSM students, percentage of EAL (English as an additional language) students, and the number of students registered at the school. Then, using a random number generator, matched schools were assigned to be a treatment or a control school.

Analysis

Primary and subgroup analyses were conducted with SPSS on an 'intention-to-treat' basis. We also conducted an on-treatment analysis on the 42 schools that remained in the study to determine if the three schools that dropped out of the study made a difference to the results.

The assessment data for Cohort 1 and Cohort 2 were compared to each other to determine if there were differences and to test for equivalence (see Appendix J). No significant differences were found so the data from the cohorts was combined and analysed together, providing a more statistically robust analysis.

To account for the clustering and matching in the design a multilevel model was used. The random effects were Pair and School nested within Pair. The Basic model used only included Treatment as a fixed factor. The covariate model extended the Basic model by including covariates. The covariates for the GCSE English and Maths scores were the corresponding baseline scores from KS2.

We analysed the data for the following subgroups: Gender, Cohort, 'Ever received Free School Meals', and three ability groups. The model only included random effects described above together with Treatment. The 'high', 'low' and 'average' achievers were defined as follows. High performers were in the upper quartile of English or maths and, if not in the upper quartile for both, were in the upper for one and the middle quartile of the other subject. Low performers were in the lower quartile of English or maths and, if not in the lower quartile for both, were in the lower quartile for one and the middle quartile of the other subject. The remaining 'average' pupils, who mainly scored between the upper and lower quartiles for both English and Maths, were assigned to the middle quartiles attainment group. This resulted in similar numbers in each of the three groups (see Table 2 below). These groups were used for all the outcome analyses.

Table 2: Assignment to attainment groups

		Maths			
English		Lower quartile	Middle quartiles	Upper quartile	Total
	Lower quartile	1,773	969	70	2,812
	Middle quartiles	883	3,430	1,119	5,432
	Upper quartile	51	1,080	1,518	2,649
	Total	2,707	5,479	2,707	10,893

This produced:

Low attainers having 'neither maths nor English in top 25%': $1,773 + 969 + 883 = 3,625$ pupils;
 High attainers having 'neither maths or English in bottom 25%': $1,080 + 1,119 + 1,518 = 3,717$ pupils;
 and
 Middle attainers being the remainder: $51 + 3,430 + 70 = 3,551$ pupils.

We had planned to calculate the correlation between level of implementation fidelity in a school and the student GCSE attainment, however this was not possible as there were no consistent objective assessments of implementation fidelity conducted.

All 45 schools were included in the ITT analyses. On-treatment analyses were also performed on the three GCSE scores with the KS2 scores as the covariate of 42 schools. One intervention and one control school withdrew from the study and one school closed so these three schools were excluded, leaving 42 schools for the on-treatment analyses.

Implementation and process evaluation

Since the Teacher Effectiveness Enhancement Programme is a whole-school intervention, the evaluation team devised a process evaluation methodology that would examine the perceived impact of TEEP from a number of different angles, including trainer, school leader, teacher, and pupil perspectives. This also allowed us to look at some of the more subjective aspects of TEEP and not just at GCSE examination results as the outcome.

Building on previous evaluations of TEEP, the process evaluation examined how the project was implemented on the ground, and a central question was 'what are the mechanisms for change?'. This aspect of the evaluation included assessment of the quality of implementation of TEEP elements in a small number of schools. The process evaluation provided further information about the factors that have been perceived to influence the implementation of TEEP (for example, the lack of implementation of the ICT component), and this should assist with refining the design of the programme for future implementations. A rigorous implementation fidelity measure was intended to capture implementation across all the schools, but unfortunately this was not conducted.

Specific questions used in the observations, focus groups, interviews, and surveys were as follows:

- How, if at all, has TEEP improved teachers' classroom practice?
- How, if at all, has TEEP improved learners' effectiveness?
- What have been the challenges in implementing the different elements of TEEP?
- How consistently have the five TEEP strands been implemented?
- What additional support might be needed to make TEEP work well?
- How can the long-term impact of TEEP be sustained?

In the original proposal we planned to visit 12 randomly chosen intervention schools for the process evaluation. Since fewer than expected schools were recruited in the early stages of the project, and the timeline for implementation was changed, we revised this so that we visited fewer schools in total, but

more frequently and in more depth. There was also more of emphasis on finding out what was happening longitudinally in intervention schools. The numbers of visits, interviews, and focus groups carried out are summarised in Table 3 below.

Table 3: Overview of the process evaluation

Overview of process evaluation: numbers and details of school visits and interviews		
Numbers and types of school visits		
Pre-training school visits	14 intervention schools	Two researchers visited or conducted telephone interviews with 14 intervention schools before training. They conducted interviews and obtained information about the school pre-TEEP, and asked what the school hoped to gain from TEEP.
Training observations	2 training sessions	Two researchers visited one school each. Each researcher took part in the full TEEP introductory training course.
Discussions with teachers during training	12 teachers	During two three-day training sessions informal discussions were held with teachers to obtain their views on the training (a total of 12 teachers in two schools).
Control school visits (for comparisons)	2 school visits: +7 telephone interviews	Four comparison schools were featured. Two of these were visited by researchers (interviews with heads / principals, heads of department, teachers) and where possible, lesson observations. Seven further contacts were by telephone (head teachers, deputy heads or department heads interviewed).
Post-training school visits	10 school visits	Three researchers visited 10 schools in total: interviews with heads / principals, TEEP leads, heads of department, teachers, and where possible, lesson observations.
NUMBERS AND TYPES OF INTERVIEWS WITH SCHOOLS		
Headteachers/ Assistant Heads	Individual, face-to-face	20 interviews, 10 schools
TEEP Leads	Individual, face-to-face	24 interviews, 10 schools
Heads of Department	Focus groups	35 HoDs in 10 schools
Teachers	Interviews and focus groups	19 teachers in 10 schools (usually with HoDs)
Lesson Observations	1–3 observations for each school visit	16 observations in 8 implementation school visits
Control teachers/ headteachers	Individual, or telephone interviews	2 face-to-face interviews with headteachers and 10 telephone interviews with heads of departments in a total of 12 control schools.

Lesson observations

Lesson observations were structured around the key TEEP components. Researchers conducted 16 observations, mostly in English, mathematics and science lessons in a random sample of eight of the implementation schools randomly chosen for the process evaluation.

A lesson observation schedule was devised that enabled the researcher to assess the strength and depth of the use of the planning cycle, the five strands, and the teaching and learning behaviours that teachers and students engaged in within a lesson (see Appendix E for the TEEP Lesson Observation Schedule).

Interviews

Semi-structured interviews were conducted with the TEEP headteachers or lead teachers in each of the eight schools visited during the school visits (see Appendix F for the interview questions). These interviews were to elicit the school's priorities and its perception of the impact of TEEP on teaching and learning.

The two visits and two telephone interviews with the control schools were conducted to see if the control schools were focusing on improving teaching and learning in their schools in the same way that the TEEP programme was aiming to bring about improvements.

Focus groups

Focus group meetings were held with teachers of various subjects, trained in TEEP, from a random sample of ten of the implementation schools to assess school priorities and predictions of how TEEP would impact teaching and learning (see Appendix G for the focus group protocol). These focus groups were conducted alongside the lesson observations.

Surveys

Online surveys were sent to participating teachers in the implementation schools to obtain their perceptions about whether and how TEEP had influenced their teaching (see Appendix H for the teacher survey).

Student surveys were made available online to the treatment schools to administer to the students to assess how their learning had changed and whether they had noticed difference in respect to the five components of the TEEP programme (see Appendix I for the student survey).

Analysis

Descriptive statistics were computed for the teacher and student surveys from the intervention schools to assess their perceptions of the TEEP programme and how it affected their teaching and learning, particularly the five TEEP components.

Content analyses were conducted on the lesson observation, interview, and focus group data collected from the headteachers, TEEP schools leads, teachers, and students in the intervention schools. Again, the interviews and focus groups concentrated on the participants' perceptions of the influence of the TEEP programme. Triangulating among the various measures, we looked for patterns of change in attitudes, priorities, and behaviours.

Unfortunately, Mary Sheard, the principal investigator of the evaluation, died suddenly in July 2014. This loss of the PI made analysing the process evaluation data very challenging. Mary had established good relationships with the participating schools and it was difficult to replicate her efforts in the time remaining

for the project. Her hand-written notes on the interviews and lesson observations were very difficult to read.

Costs



Because TEEP is currently being implemented across the country, we calculated the costs of TEEP by asking SSAT how much they charge an average school to implement the programme. As these are upfront costs, we then divided those costs by three to get a cost per year (on the assumption that a trained school would continue with the approach for three years) and then by the average number of students in an average school.

All of the teachers in each intervention school spent three days attending training. The TEEP mentors in each school also participated in two days of additional training. Because TEEP is a whole-school model and is not an additional intervention but replaces normal in-class teaching, we did not include staff time in our cost calculations. It did take teachers additional time to prepare lessons according to TEEP while they were mastering the approach, but we have no idea how much additional time that took.

Timeline

The timeline for completion of the final report was extended for a number of reasons including the necessity of having two cohorts and the loss of staff from the evaluation team. See Table 4 below for a detailed timeline.

Table 4: Timeline of work performed

	2012		School Year 2012/2013			School Year 2013/2014			School Year 2014/2015			School Year 2015/2016
	Summer	Autumn Term	Spring Term	Summer Term	Autumn Term	Spring Term	Summer Term	Autumn Term	Spring Term	Summer Term		
Randomisation by IEE												
Implementation Cohort 1		Experimental Cohort 1						Control Cohort 1				
Implementation Cohort 2				Experimental Cohort 2							Control Cohort 2	
Lesson observations				Experimental Cohort 1	Experimental Cohort 1	Control Cohort 1	Experimental Cohort 1 Experimental Cohort 2	Experimental Cohort 2	Control Cohort 2	Experimental Cohort 2		
Focus groups				Experimental Cohort 1	Experimental Cohort 1	Control Cohort 1	Experimental Cohort 1 Experimental Cohort 2	Experimental Cohort 2	Control Cohort 2	Experimental Cohort 2		
Electronic surveys				Experimental Cohort 1		Experimental Cohort 1	Experimental Cohort 1 Experimental Cohort 2		Experimental Cohort 2	Experimental Cohort 2		
Conduct Analyses							Experimental & Control Cohort 1 Experimental & Control Cohort 2				Cohorts 1 and 2	
Submit final report											May 2016	

Impact evaluation

Participants

The evaluation was planned to be conducted over two cohorts, Cohort 1 beginning in 2012/2013 and Cohort 2 in 2013/2014. Cohort 1 consisted of 18 schools. For Cohort 2, 29 schools were recruited but two dropped out leaving 27, making a total of 45 schools for the intention-to-treat analyses (see Figure 2 for a Participant Flow Chart for the Combined Cohorts).

Table 5 below shows the calculations of the minimum detectable effect size at different points in the evaluation (as specified in the protocol): after randomisation, and with the final number of schools that were included in the ITT analyses. The large number of students enabled detection of a lower effect size.

Figure 2: Participant flow diagram for intention-to-treat analysis

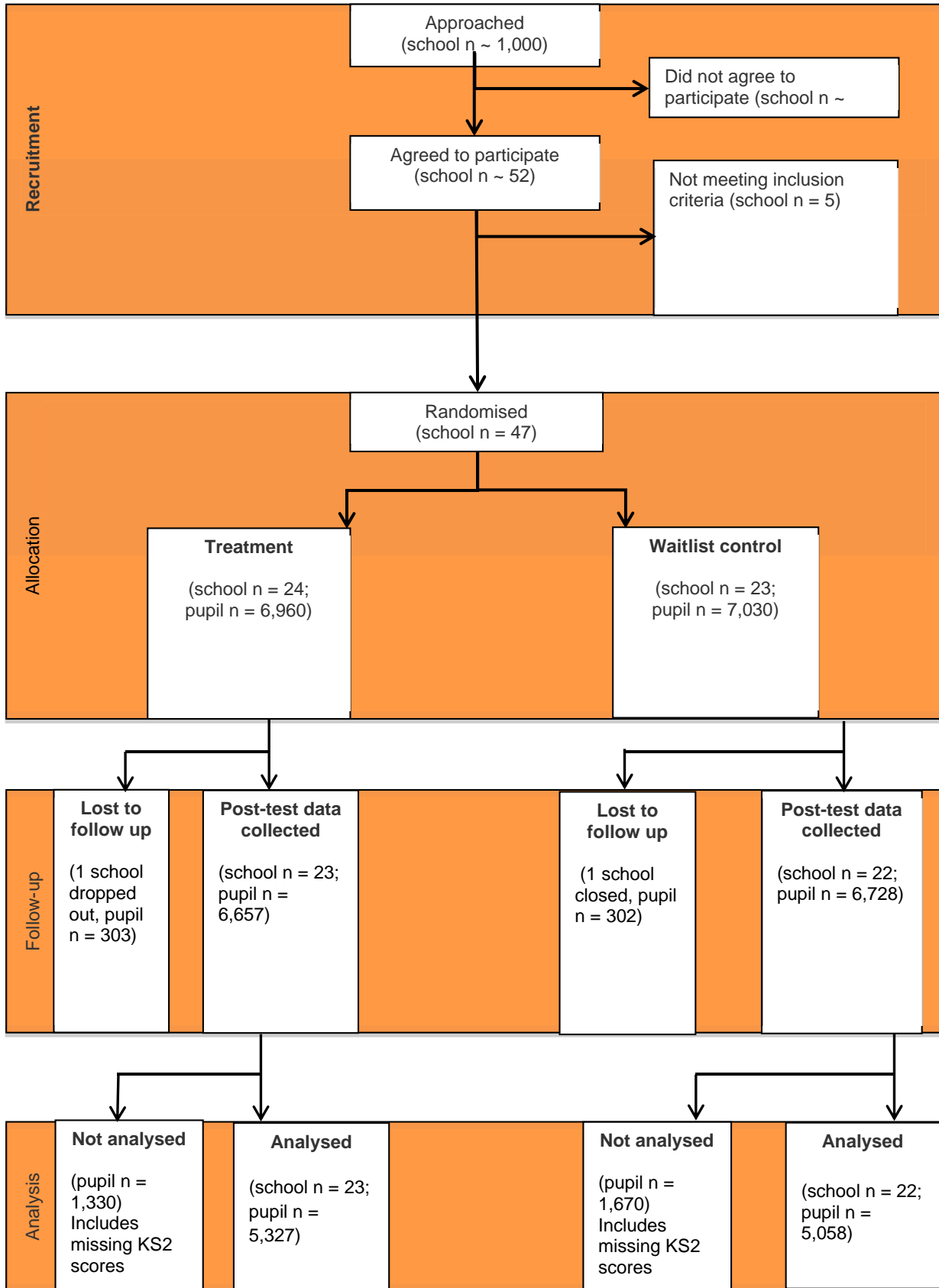


Table 5: Minimum detectable effect size at different stages

Stage	N [schools/pupils] (n = intervention; n = control)	Correlation between pre-test & post-test	ICC	Power	Alpha	Minimum detectable effect size (MDES)
Protocol	40 schools (20; 20)	0.60	0.15	80%	0.05	0.25
Randomisation	47 schools (23; 24)	0.75	0.15	80%	0.05	0.20
Analysis (KS2 and GCSE English scores)	45 schools/ 9910pupils (23/5, 327; 22/5, 058)	0.71	0.05	80%	0.05	0.14

Pupil characteristics

TEEP was implemented in a wide variety of secondary schools across England. The intervention and control schools were closely matched in these key characteristics.

While most of the schools had a moderate number of FSM-eligible children, it ranged from 13.6% to 60.3%. There was an even wider range of EAL pupils—from 0.09% to 83.6% (see Table 6 below). We conducted a comparison of schools at baseline to see if there were significant differences between them on these characteristics. None of the differences between control and treatment schools at baseline were significant. We note that 32 of the 45 schools at post-test were academies. Some of them (four or five) became academies during the evaluation. We did not analyse the differences between academies and local authority controlled or religious schools.

We were unable to collect Ofsted ratings for the schools as a number of schools changed status during the trial.

Table 6: Baseline comparison

Variable	Intervention group		Control group		
	School-level	n/N (missing)	Percentage	n/N (missing)	Percentage
School average % of 5 GCSE (A*–C) scores over three years		19/45 (3)	39.7%	20/45 (3)	38.3%
School-level (continuous)		n (missing)	Mean	n (missing)	Mean
Number of Y11 pupils		6,824 (1,497)	325	6,031 (973)	274
School-level (categorical)		n/N (missing)	Percentage	n/N (missing)	Percentage
Eligible for FSM		19/45 (3)	28.75%	20/45 (3)	30.8%
School-level (continuous)		n/N (missing)	Percentage	n/N (missing)	Percentage
Percentage of EAL students		19/45 (3)	15.75	20/45 (3)	16.10

Outcomes and analysis

The analyses of the GCSE scores in English and maths (as described in Analysis section above), controlling for individual students' KS2 attainment, found no positive impact for the TEEP programme (see Table 7 below). As the following tables show, neither did it have an impact for students eligible for free school meals, for either gender, or for students of different ability levels (see table 8 to 11 below). In some analyses the effect sizes show a small negative effect in favour of the control group, but these differences were not statistically significant.

There was a high level of missing data from the analyses relating to, for example, students who dropped out of school or did not take the GCSE examinations. However, there was also a high number of missing KS2 scores in the sample, meaning that their data could not be included in the primary analysis. One possible explanation for the high level of missing KS2 data is that in 2010 approximately 60,000 children in England did not take the KS2 tests because schools did not administer them in protest to over-testing of children and the use of the KS2 scores to evaluate schools.

When we conducted an analysis to determine whether there were significant differences between students in the treatment and control conditions for whom there were KS2 scores, there were differences on the English GCSE scores but not on the maths scores (see Appendix K). Students in control schools with KS2 scores had higher GCSE scores in English than those with missing KS2 scores, while in treatment schools there was no correlation between the presence (or otherwise) of KS2 scores and GCSE attainment.

Table 7: Primary analysis

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p- value
n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)				
GCSE English	6,657 (1,330)	35.95 (35.61, 36.28)	6,728 (1,670)	37.20 (36.88, 37.53)	10,385 (5,327; 5,058)	-0.04 (-0.17, 0.10)	0.61
GCSE Maths	6,657 (1,262)	33.43 (33.06, 33.79)	6,728 (1,674)	34.37 (33.98, 34.76)	10,449 (5,395; 5,054)	-0.02 (-0.13, 0.10)	0.78

Table 6 above states the percentage of FSM students in the secondary schools at the beginning of the study. Table 8 below refers to the individual students ever being on FSM in their school life. Tables 8–10 below show the results for FSM children and for males and females, indicating small negative effects for those subgroups.

Table 8: Free School Meal analyses

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p- value
	n	Mean (95% CI)	n	Mean (95% CI)			
GCSE English	3,306 (602)	33.50 (33.04, 33.96)	3,272 (803)	34.00 (33.55, 34.45)	5,173 (2,704; 2,469)	-0.03 (-0.16, 0.09)	0.60
GCSE Maths	3,306 (555)	30.64 (30.14, 31.13)	3,272 (811)	30.95 (30.43, 31.48)	5,212 (2,751; 2,461)	-0.01 (-0.14, 0.12)	0.91

Table 9: Analyses for males

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p- value
	n	Mean (95% CI)	n	Mean (95% CI)			
GCSE English	3,407 (704)	33.74 (33.28, 34.20)	3,425 (814)	35.36 (34.95, 35.78)	5,314 (2,703; 2,611)	-0.07 (-0.19, 0.06)	0.30
GCSE Maths	3,407 (663)	33.43 (32.95, 33.92)	3,425 (815)	34.41 (33.94, 34.89)	5354 (2,744; 2,610)	-0.04 (-0.17, 0.09)	0.51

Table 10: Analyses for females

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p- value
	n	Mean (95% CI)	n	Mean (95% CI)			
GCSE English	3,250 (626)	36.92 (36.49, 37.35)	3,303 (856)	37.77 (37.35, 38.18)	5,071 (2,624; 2,447)	-0.02 (-0.19, 0.15)	0.81
GCSE Maths	3,250 (599)	33.38 (32.92, 33.85)	3,303 (859)	34.25 (33.76, 34.74)	5,095 (2,651; 2,444)	-0.00 (-0.13, 0.12)	0.98

Table 11 below includes only students with KS2 scores because it used those scores to calculate the ability groups, so there are no missing values. It shows small negative effects for all but the medium-ability students on GCSE English tests.

Table 11: Ability level analysis

Ability Level	Outcome	Raw means				Effect size		
		Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p-value
		n	Mean (95% CI)	n	Mean (95% CI)			
Low	GCSE English	1,826	28.84 (28.24, 29.44)	1,618	29.81 (29.21, 30.42)	3,444 (1,826; 1,618)	-0.07 (-0.20, 0.07)	0.34
	GCSE Maths	1,826	23.08 (22.43, 23.74)	1,618	23.09 (22.37, 23.82)	3,444 (1,826; 1,618)	-0.01 (-0.12, 0.10)	0.88
Medium	GCSE English	1,757	37.74 (37.32, 38.16)	1,587	37.20 (36.88, 37.53)	3,344 (1,757; 1,587)	0.04 (-0.11, 0.19)	0.63
	GCSE Maths	1,757	35.45 (35.01, 35.88)	1,587	34.37 (33.98, 34.76)	3,344 (1,757; 1,587)	-0.00 (-0.12, 0.12)	0.96
High	GCSE English	1,716	41.81 (41.30, 42.32)	1,817	43.56 (43.21, 43.92)	3,533 (1,716; 1,817)	-0.08 (-0.28, 0.11)	0.38
	GCSE Maths	1,716	42.55 (42.16, 42.93)	1,817	43.37 (43.01, 43.74)	3,533 (1,716; 1,817)	-0.04 (-0.18, 0.10)	0.54

On-treatment analyses indicated essentially no difference between the 42 treatment and control schools that SSAT finally trained and that implemented the programme (see Table 12 below).

Table 12: On-treatment results

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges g (95% CI)	p-value
n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)				
GCSE English	6,466 (1,750)	35.47 (35.31, 35.63)	6,256 (1,107)	36.52 (36.36, 36.67)	9,865 (4,716; 5,149)	-0.03 (-0.16, 0.11)	0.70
GCSE Maths	6,466 (1,707)	33.54 (33.37, 33.71)	6,256 (1,039)	34.16 (33.98, 34.34)	9,976 (4,759; 5,217)	0.00 (-0.11, 0.12)	0.94

Cost

Staff teaching time is not included in the cost calculation because the intervention replaces regular classroom teaching. Teachers in each intervention school spent three days attending training and the TEEP mentors in each school also participated in two days of additional training. Staff coverage is not calculated because the whole school staff is trained for two days during days set aside for CPD, when the school would be closed. A TEEP lead is required in each school. The cost of covering this person's time would vary from school to school and would also depend on the professional standing of the person—whether subject lead, department head, or senior manager. It likely took extra time to prepare TEEP lessons but as we do not have this information it is not included in the costs.

Schools need computer access for students, but we assumed that most schools had such access, so considered this a prerequisite cost.

SSAT charges are based on the number of teachers and students in a school. For a school with up to 50 staff members and 1,000 students, SSAT would charge about £13,000. In subsequent years SSAT provide ongoing support at no additional charge and provide online support. They have an established TEEP ambassador network, offer training, and champion schools that further support TEEP schools. We estimate the cost per school to be £13,000 which, if spread over three years, amounts to £4,333.00 per year and equates to a very low cost of £4.33 per student (see Table 13 below). These are approximate figures as they depend on a number of variables, mostly the number of attendees at the training sessions.

Table 13: Cumulative and average per-school and per-pupil costs for TEEP over three years

	Year 1	Year 2	Year 3	Cumulative	Average over 3 years
Per school	£13,000	0	0	£13,000	£4,333
Per pupil	£13.00	0	0	£13.00	£4.33

Process evaluation

Members of the research team were able to examine the implementation of the TEEP programme through the scrutiny of an extensive amount of documentation provided by SSAT (such as handouts from training sessions) and the schools (such as handouts used in class lessons that were observed). This documentation included notes from participation in TEEP training by two research team members; interviews with TEEP trainers, TEEP school leads, school senior managers and teachers; detailed lesson observations; and online surveys with teachers and students, all described above.

The process evaluation was conducted in randomly selected intervention schools so as to be able to study TEEP in some depth and over a reasonable period of time. Researchers visited these schools before they commenced involvement in TEEP (pre-training visits) and attended two training sessions. They then returned during implementation of TEEP to be able to follow progress over time.

Online teacher surveys were completed by 422 teachers from 15 intervention schools. Online student surveys were completed by 2,440 students from 13 intervention schools. The ratings by teachers and students cannot be related directly to the attainment outcomes because in some schools the surveys were completed across all year levels (Years 7 to 11) whereas in others only by students in the year level (Year 11) being assessed.

As detailed below, the process evaluation does not shed too much light on why the impact results were not more positive. The buy-in from senior leadership and teachers was good—headteachers and department heads were enthusiastic and thought that TEEP would directly impact on teaching and improve practice. The training was also well-received by the teachers and of a high quality as evaluated by the researchers in the randomly assigned schools that were observed. The implementation was rated as relatively high in the limited amount of data that was collected from the lesson observations of this small number of schools.

Pre-training school visits

During the pre-training visits to the TEEP schools (at the stage when schools had signed up for TEEP but had not yet started their involvement) the researchers sought to find out about the school's priorities, its current and recent improvement initiatives or programmes, and its reasons for electing to take part in the TEEP programme.

All of the headteachers interviewed commented along the lines that their reasons for joining TEEP were that it had 'a focus on teaching and learning' and/or that there was a need to improve teaching in their school (in other words, to increase the number of teachers rated 'good' or 'outstanding'). Some others added more practical reasons, such as 'we were below the floor targets for proportion achieving five good GCSE grades'.

Another common finding at the pre-training stage was that the school managers felt that the time was right for TEEP, or that it fit well with what the school was planning to do. A typical comment was, 'TEEP is the next stage, it will take us to the next level'.

TEEP training

Observations of training sessions

The training sessions observed were delivered skilfully. Where staff raised concerns during the training sessions—such as 'Can TEEP be applied to all subjects?', 'Why do TAs need to be involved?', 'Is TEEP lesson preparation more time-consuming?'—the issues were addressed effectively. The trainers were complementary about the schools' commitment and the teachers' enthusiasm for TEEP.

All schools and teacher participants were provided with common documentation by SSAT emphasising the fundamental teacher and learner behaviours which form the base of the model, the cultural changes, the core elements, and the TEEP Cycle (see description of intervention above). The training sessions attended by the researchers were very similar and both assessed to be of very good quality. There was consistency in the delivery of the training even though different trainers were observed. The quality of the training observed suggested that the training had been carefully devised and quality assured in order to ensure consistency across trainers.

TEEP was frequently described by the trainers and participants as 'a journey', which was reflected in the SSAT documentation. So, unlike some CPD interventions, this was not a one-off; rather, the programme had long-term goals and was seen as part of a process of continuous improvement. This means that although implementation had a clear starting activity, once the programme was underway it was expected to spread across the whole school and to have an increasing impact over time. Through ongoing CPD, mostly conducted by the TEEP lead in each school, teachers would become more proficient in integrating TEEP elements into their teaching.

Teachers' perceptions of training

The teacher surveys indicated that 79% of the respondents perceived the training as useful. The training sessions were well received by staff in both schools where training was observed. The staff could see the benefits of having a common language to address teaching and learning needs, and enjoyed discussing the TEEP core elements and the stages of the TEEP cycle. While there was much information to take in over the training, a large majority of staff indicated that they would be seeking to implement at least some of the principles of TEEP in forthcoming lessons. IEE researchers also attended the third day of the training for the TEEP leads in the two schools to see how the two schools had begun to take TEEP forward and whether or not there were early signs that TEEP was becoming embedded in the schools. The TEEP leads were very enthusiastic and positive about the training. They appreciated that teachers were not expected to immediately change all of their teaching to follow the TEEP model but that it was intended to be gradual process, integrating elements of TEEP into their lessons over time.

Implementation fidelity

Because TEEP is a whole-school model it was generally implemented across the year levels. There was anecdotal evidence from the school visits and interviews that a good level of implementation was maintained, however, there were no objective implementation fidelity assessments conducted by the TEEP leaders or trainers or the evaluation team. After the whole school training was completed, which included all the teachers in the school, the teachers were encouraged to build the five core elements into their lesson plans. The lack of implementation fidelity rating makes it very difficult to establish whether the programme itself or poor implementation is responsible for the results. It was assumed that TEEP would be adopted gradually. Teachers were also encouraged to share ideas with each other about how they had incorporated TEEP into their lessons. Of course, how teachers did this was subject to a good deal of variation and this was expected by the TEEP trainers. There was variation among different subjects, different year levels, and different levels of enthusiasm for some aspects of TEEP over others. Because observations were conducted across all these variables it is impossible to determine any correlation between the variables and implementation fidelity or students' attainment. Trainers stated, for example, that it was not possible build all of the five TEEP elements into one lesson plan.

Outcomes

Lesson observations

Over time, 16 lessons were observed in eight visits to randomly-selected implementation schools. Some schools were observed more than once but different teachers were observed in each visit. Because teachers varied in which subjects they taught, which year levels, and which ability groups, it was impossible to perceive trends in the level of TEEP implementation fidelity over time. In all of the classes observed elements of TEEP were evident, though to varying degrees. Due to the range of subjects, year groups, and abilities observed, it is difficult to draw out how effectively TEEP was implemented across this range. Also, the scope of TEEP meant that a lot of different lessons were observed. For example, one teacher was seen to be employing co-operative learning in an observed lesson and embedding elements of assessment for learning. In another observed lesson, the teacher was using ICT throughout the lesson.

Classroom climate and classroom management were rated very highly in most of the observations. The level of interactivity varied considerably. In some classes students were actively engaged in discussion and in others they were doing mostly individual seatwork. From our lesson observations, researchers had the impression that there were variations by subject and teacher experience.

Students appeared to be very engaged in the lessons, making decisions and asking questions. Students checking their progress and displaying strategies for learning were less apparent but it may be that those behaviours are just more difficult to observe.

These observations must be interpreted with caution. The researchers only observed 16 lessons in 8 different schools and in a number of different year levels and subjects. They may or may not have been representative of typical lessons in the TEEP schools. There is no evidence for this, but one might expect teachers to put extra planning and care into lessons that they knew were going to be observed.

Teacher surveys, interviews, and focus groups.

Overall, teacher perceptions of the TEEP programme were very positive from the surveys, the interviews, and the focus groups. They reported that TEEP improved their confidence (58% either agreeing or strongly agreeing). Between 55% and 71% of teachers either agreed or strongly agreed that four of the five components (Assessment for Learning, Collaborative Learning, Accelerated Learning, and Thinking for Learning) were enhanced by implementing TEEP. The only component that the teachers reported as not being as effective was the experience of TEEP in ensuring that they made more effective use of ICT in their teaching. Only 37% agreed or strongly agreed.

The majority of teachers reported being on board with TEEP and found it reinvigorating. It helped with lesson planning and the TEEP resources were welcome. They felt it engaged the students, made them more active learners, and gave them increased responsibility for their learning. Teachers reported that fewer students were being referred for misbehaviour.

The different elements were not that new; it was putting them all together that was novel. They started out gradually introducing the elements until they became confident and then added more into their lessons. Teachers reported that it helped that they talked less and were more effective in questioning. They reported that it helped having everyone in the school using the same language. It gave the teachers more confidence.

A few teachers reported finding TEEP a bit overwhelming at the beginning, though the evaluation did not follow these teachers to see if they found implementation easier over time. They reported that it was hard to find time to fit in all the interactive aspects of TEEP approaches (such as feedback to students

or collaborative learning) into one lesson period, which is not the intention of the TEEP approach anyway. A few said it was hard to not to fall back into their old ways. Some schools did not have the equipment to do all the ICT teaching that TEEP called for. Some teachers did not have the expertise, nor the confidence, to engage with the ICT component. A few teachers were rather cynical and suffered from 'strategy overload'.

Headteacher/Deputy Headteacher and Head of Department interviews

The interviews with the school leaders showed that the TEEP elements aligned closely with the schools' priorities. The school leadership teams reported wanting improve their students' attainment and their Ofsted ratings. Some reported already using coaching to improve teaching. They believed that TEEP would help them have a stronger focus on assessment for learning and to have a more systematic model of lesson planning to create more interactive lessons. It was reported that this happened more in English and in maths, though somewhat less in science. However, there was no comparison made between subjects as the numbers were too low to be meaningful.

The interviewees said that TEEP had enhanced the co-operative learning that was taking place, which improved the students' engagement. The only area where a few school leaders reported that they weren't making as much progress embedding TEEP was in ICT.

Student perceptions

Student surveys

In the student surveys, the students were asked to reflect on how TEEP had impacted on their effectiveness as learners. Thirteen out of 22 TEEP schools had their students complete the surveys. Schools varied in year levels that they included in the evaluation—from including all year levels to only including students in one. This makes a comparison among the schools impossible.

By and large, students believed that participation in TEEP improved their effectiveness as learners, with 58% 'strongly agreeing' or 'agreeing' with the statement 'All round, I am a more effective learner than before', compared with 12% who 'disagreed' or 'strongly disagreed'.

On other ratings related to the impact of TEEP on confidence, co-operation, working things out, whether lessons were 'interesting', and so on, many more students expressed positive opinions (approximately 44%) compared to negative opinions (approximately 15%).

Control group activity

Two schools visits and seven telephone interviews with control school headteachers, deputy heads, and department heads revealed that while control schools were implementing various strategies to improve their attainment, their interventions did not resemble TEEP in terms of its whole-school, comprehensive approach. They often reported that increasing feedback to students (for example, using assessment for learning) or improving interaction in the classroom (for example, by using collaborative learning) were teaching and learning goals for the school. Because ICT is increasingly being used in schools, and meta-cognition and assessment for learning are currently popular strategies, some of the schools reported implementing them in some of their classes; however, none of the schools reported using TEEP. In the few control-school lessons that were observed, a couple of the strategies were implemented but there was no consistent use of the combination of strategies that are representative of the TEEP approach.

The lessons observed in the intervention schools, therefore, appeared to contain more of the elements of TEEP than those in the control schools. However, the limited number of observations in both

intervention and control schools means that it is impossible to conclude without doubt that intervention schools were definitively more 'TEEP-like' than the control schools.

Conclusion

Key conclusions

1. In the low-performing schools selected for this trial, there was no evidence of an impact on pupils' GCSE English and maths attainment in schools selected to receive TEEP training compared to other schools.
2. Both teachers and students were enthusiastic about the programme and believed that it improved students' learning.
3. The evaluation was initially designed to also assess implementation quality and the impact on Year 9 attainment and attitudes. However, the relevant measures for these key evaluation elements were not collected due to circumstances beyond the control of the project teams. This means the evaluation cannot assess whether TEEP made a difference to Year 9 pupils, as originally intended.
4. Any future studies could systematically investigate the implementation of TEEP using implementation measures that relate to specific components of the programme, as well as investigating changes in school culture and teacher behaviour.

Interpretation

Given the strength of evidence on the Teaching and Learning Toolkit behind the components of TEEP, such as collaborative learning and assessment for learning, it is surprising not to find a positive impact on the GCSE scores of students in the TEEP schools. Also, based on the findings of previous studies of TEEP that showed mixed but mostly positive qualitative findings, one would expect there to have been a positive impact on achievement.

TEEP is a complex intervention with a lot of moving parts. Because it involves changing so many elements of teaching (for example, assessment for learning, co-operative learning, and ICT) it may be that it takes a longer time to have an impact on GCSE scores. The TEEP model calls for a gradual inclusion of elements into teachers' lessons: it might be too much to expect to be able to assess impact after only one and a half or two years' implementation. The implications for development might be to introduce TEEP gradually over a longer time. However, one previous evaluation found noticeable changes in teaching behaviour, aligned with the TEEP approach.

Because this was a well powered trial, but with considerable attrition, the findings for the primary outcomes are of moderate security. The trial involved schools in many regions of England, with varying demographics, so findings are likely quite generalizable to low performing schools in England.

Limitations

The initial plan had been to assess the impact of TEEP on the CEM INSIGHT achievement test as secondary outcome measures in addition to analysing the GCSE English and maths scores. However, there were unavoidable problems with the external testing and communications around these. In June 2014 only five schools from a possible 18 completed tests, and in June 2015 only 14 schools out of a possible 27 completed some parts of the tests. This represented considerable missing data. At the July 2015 meeting with EEF it was agreed that, as was originally planned, the analysis would be of GCSE data as the main outcome measure and to not analyse the post-test INSIGHT data.

It may be that the CEM tests might have been more sensitive to the whole-school impact of the TEEP programme, particularly in the early year levels, however TEEP is a whole-school intervention and was

being implemented at all year levels in most of the treatment schools. Having outcome measures that assess the impact of TEEP on specific outcomes that TEEP targets might be a good next step.

The process evaluation indicated that the ICT take-up was not as thoroughly embedded as some of the other elements. However, we do not have clear indication how well the elements were implemented across all of the schools as only eight schools were visited and SSAT says that not all elements would be implemented in each lesson. We had planned to calculate the correlation between level of implementation fidelity in a school and the student GCSE attainment, however there were no consistent objective assessments of implementation fidelity so it was not possible to conduct that analysis. The interaction effect on the GCSE English scores for students with missing and available KS2 data and being in treatment and control schools makes interpreting the results more tentative. Students in control schools had higher GCSE scores in English, but not maths, if their KS2 scores were available compared to those students whose KS2 scores were missing, while the availability of KS2 scores had no impact on the GCSE scores of students in treatment schools.

Regretfully, the loss of the PI on this project definitely had a negative impact on its conduct, particularly on the process evaluation. She had established good relationships with the participating schools and that was difficult to replicate in the time remaining for the project. Other staff changes at the IEE delayed the submission of the final report.

Future research and publications

Conducting a large randomised controlled trial with a complex programme such as TEEP is a challenge for all of the participants. It is an important step forward, but only focused on one year group. Conducting an evaluation of TEEP on all of the students over a longer period of time might be an appropriate next step. For example, one could compare the GCSE scores of the students who were exposed to four years of TEEP to those who were exposed to only two years to gain some information about the length of time it takes to embed TEEP. However, this would not be a randomised evaluation, without a pure control group.

In order to achieve sufficient power for the evaluation, we only evaluated TEEP in secondary schools. It might be that it is more effective in primary schools. An evaluation of TEEP implemented in primary schools might be worth considering.

Finally, future evaluations should seek to unpick the various factors of implementation that might make this intervention successful (or, conversely, unsuccessful). Future evaluations of TEEP should seek to collect both implementation data (relating to the fidelity and quality of the implementation and the dosage) alongside detailed measures of teacher and pupil behaviour.

References

Gunraj, J. (2005) 'An Evaluation of Impact from the Teacher Effectiveness Enhancement Programme (TEEP) End of Phase One Report', London, UK: Gatsby Charitable Trust.

Gunraj, J. (2010) 'An Evaluation of Impact from the Teacher Effectiveness Enhancement Programme (TEEP): Whole School Model – Final Report', London, UK: Gatsby Charitable Trust.

Ragbir-Day, N., Braund, M., Bennett, J. and Campbell, B. (2008) 'Impact of the Teacher Effectiveness Enhancement Programme: Phase 2 Evaluation', Report commissioned by the Gatsby Charitable Foundation, York: University of York, Department of Educational Studies.

Serret, N. and Reiss, M. (2006) 'Evaluation of GTEP Award in Tower Hamlets – Final Report', London, UK: Institute of Education, University of London.

Appendix A: EEF cost rating

Cost ratings are based on the approximate cost per pupil per year of implementing the intervention over three years. More information about the EEF’s approach to cost evaluation can be found [here](#). Cost ratings are awarded as follows:

Cost rating	Description
£ £ £ £ £	<i>Very low:</i> less than £80 per pupil per year.
£ £ £ £ £	<i>Low:</i> up to about £200 per pupil per year.
£ £ £ £ £	<i>Moderate:</i> up to about £700 per pupil per year.
£ £ £ £ £	<i>High:</i> up to £1,200 per pupil per year.
£ £ £ £ £	<i>Very high:</i> over £1,200 per pupil per year.

Appendix B: Security classification of trial findings

Rating	Criteria for rating			Initial score	Adjust	Final score	
	Design	Power	Attrition*				
5	Well conducted experimental design with appropriate analysis	MDES < 0.2	0-10%		Adjustment for Balance []		
4	Fair and clear quasi-experimental design for comparison (e.g. RDD) with appropriate analysis, or experimental design with minor concerns about validity	MDES < 0.3	11-20%				
3	Well-matched comparison (using propensity score matching, or similar) or experimental design with moderate concerns about validity	MDES < 0.4	21-30%	3		Adjustment for threats to internal validity []	3
2	Weakly matched comparison or experimental design with major flaws	MDES < 0.5	31-40%				
1	Comparison group with poor or no matching (E.g. volunteer versus others)	MDES < 0.6	51-50%				
0	No comparator	MDES > 0.6	<50%				

- **Initial padlock score:** lowest of the three ratings for design, power and attrition = 3 padlocks
- **Reason for adjustment for balance** (if made): n/a
- **Reason for adjustment for threats to validity** (if made): n/a
- **Final padlock score:** initial score adjusted for balance and internal validity = 3 padlocks

NOTES

- The trial was a school level randomised effectiveness trial.
- The sample size was able to detect a MDES of less than 0.2 at analysis
- As a result of missing data and attrition there was relatively high data missing between randomisation and analysed - 25.7% at the pupil level (13,990 pupils randomised, 10,385 analysed).
- The samples seemed relatively well balanced at baseline (though they do not present analysis of KS2 results).
- Threats to validity: no clear indication of counterfactual, but TEEP suitably complex enough for us to assume that control schools were not doing TEEP

Appendix C. Head Teacher Agreement

Evaluation of Teacher Effectiveness Enhancement Programme (TEEP), 2012-2015

Dear Head Teacher,

Researchers at the Institute for Effective Education (IEE) will conduct an evaluation on behalf of the Education Endowment Fund and The Schools Network to assess whether TEEP improves children's learning and attainment. The evaluation will start in the Autumn Term in the school year 2012-2013 and will finish at the end of the Summer Term, 2015. Two cohorts of schools will take part. The first cohort will participate in the evaluation from Autumn Term 2012 to Summer Term 2014. The second cohort will participate in the evaluation from Spring Term 2013 to Summer Term 2015.

The researchers at the IEE will randomly assign schools to the experimental group to use the TEEP programme for two years **or** to the control group to continue with their regular teaching and learning programmes and strategies for two years and to implement TEEP thereafter.

Training for the experimental group of schools who will be implementing TEEP will be provided in all five strands of TEEP prior to the implementation of the programme.

For the first cohort, in the Autumn term 2012/2013, prior to implementation, Year 7 pupils in both the experimental and control schools will complete a test to provide a base-line measure. In the Summer term of school year 2013-2014, the Year 9 pupils in both the experimental and control schools in the first cohort will complete a post-test to provide comparison data. The process will be repeated for schools in the second cohort.

During the evaluation, head teachers, teachers and students will be surveyed on-line three times about their perceptions of the efficacy of TEEP. Lesson observations in a random selection of lessons and focus group interviews with samples of teachers will be conducted on three occasions over the implementation period.

The study will provide valuable information about the effectiveness of the programme for improving learning and raising pupil attainment.

If you have any questions or want to discuss the project, you can contact me at mary.sheard@york.ac.uk or call me at 01904 328159. Please complete and return the form below if you agree to take part in the evaluation.

We look forward to hearing from you.

Sincerely,



Mary Sheard

Terms and Conditions of Participation in the Evaluation

Please complete and return the form to the address below if you agree to take part in the evaluation of TEEP and accept terms and conditions of the evaluation.

I agree for my school to take part in the TEEP evaluation and I accept the terms and conditions.

Name of HeadTeacher: _____

Signature of Head Teacher:

School address: _____

School email: _____

School FAX: _____

School telephone
number: _____

Main contact for the
evaluation: _____

Contact details: _____

Number of students on
roll: _____

The Teacher Effectiveness Enhancement Programme

Local Authority: _____

Please return by email to mary.sheard@york.ac.uk or by FAX (01904 328156), or post to Mary Sheard at the address below.

Appendix D. Parent Information Sheet and Opt-out Form

Institute for effective education, the University of York

Teacher Effectiveness Enhancement Programme (TEEP)

Information Sheet for Parents/Guardians

Dear Parent/Guardian,

We would like to request your permission for your child to take part in an educational evaluation study. The following information explains why the research is being done and what it would involve for your child.

What is the Institute for Effective Education?

The Institute for Effective Education (IEE) is part of the University of York. It aims to find out what works in teaching and learning and why, and then use the evidence to improve education.

What is the purpose of this study?

This study is being done to see if using a professional development programme for teachers (TEEP) helps students to achieve better results.

Why is my child's class participating?

We will conduct this study with Year 7 classes in 40 secondary schools in England. The headteacher of your child's school agreed to participate in this study.

Does my child have to take part?

At the beginning and towards the end of the evaluation,

Your child's test scores will be confidential and will not count towards your child's assessment scores or levels in school. You may choose not to permit your child's test scores to be used in the evaluation.

If so, please complete and sign the attached opt-out form by 3:00 pm on Monday **(insert date here)** 2012. A pupil's right to withdraw from the testing will be respected.

What will my child's participation be?

This Summer Term, and again in the Summer Term 2015, the current Year 7 students will do an online test that includes items assessing English, maths and general ability. We will use the test results to see if the teachers' professional development programme has improved student learning.

What should I tell my child about the study?

It would be helpful if you could tell your child that the study is trying to find out whether a particular professional development programme for teachers helps students to learn and achieve better.

What are the disadvantages and risks of taking part?

There are no known disadvantages or risks in participating in this study. The test data will be securely stored and managed, scored electronically at the Centre for Evaluation and Monitoring (CEM), University of Durham, and will not be shared with anyone. Teachers will continue to teach to the usual lesson objectives throughout the evaluation period.

What are the possible benefits of taking part?

By participating in this study, your child will experience an up-to-date online approach to assessment. The information gained from this study may influence how your child and others will be taught more effectively in the future.

What happens when the research stops?

IEE researchers will analyse the test scores to determine the overall effectiveness of the TEEP professional development programme for teachers. Scores for individual pupils and classes will be kept confidential.

When the research is over, the school will receive a report that will show if using TEEP makes a difference to pupils' achievement. The school can then decide whether and how best to use the TEEP programme in the future.

Will my child's information be kept confidential?

Yes. Students' names will be replaced with code numbers. No individual pupil's data will appear in any report. The research team will not have access to pupil or parent names.

What if there is a problem?

If you have a concern or question about your child's participation in this study, please contact Bette Chambers (e-mail: bette.chambers@york.ac.uk) Tel: 01904 328153 or Mary Sheard (e-mail: mary.sheard@york.ac.uk) Tel: 01904 328159.



Institute for Effective Education

Parent/Guardian opt-out form

If you **do not** permit your child's test scores to be used in the study, please complete this form and return it to your child's teacher by 3:00 pm on Monday (**insert date here**), 2012.

I **do not** wish my child's test scores be used in the study.

Pupil's name:

(Please print clearly)

Teacher's Name:

School:.....

Parent's/Guardian's name:

(Please print clearly)

Parent's/Guardian's signature:

Date.....

Appendix E. TEEP Lesson Observation Schedule

Observer		Date	
School		Subject	
Year Group		Teacher	
Pupil Grouping		No. of Students	
Lesson Focus		Lesson Plan	

As of Underpinning Elements	0-5 mins	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60
Assessment for learning												
Collaborative learning												
Accelerated learning												
Thinking for learning												
Effective use of ICT												

As of Planning Cycle	0-5 mins	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60

Prepare for learning												
Agree learning outcomes												
Present new information												
Construct meaning												
Apply and demonstrate understanding												
Review												

Effective teacher behaviours	Observations
<p>Variety of teaching styles</p> <ul style="list-style-type: none"> *Plan lessons that are inclusive *New information presented in a variety of ways *Lesson moves at brisk pace *Students have opportunity to work and learn with each other *Students are given time to explore new concepts before being assessed 	<ul style="list-style-type: none"> * * * * *

<p>Interactive teaching</p> <ul style="list-style-type: none"> *Questions used by teachers and students as tools for learning * 'Wait time' is observed; students given time to formulate their responses *Regular reviews to consolidate what has been learned *Discussion – students share their ideas and have the chance to listen and learn from each other 	*								
<p>Classroom management</p> <ul style="list-style-type: none"> *Clear and consistent behaviour strategies *Effective classroom organisation *Lessons are well planned and structured *Teacher gains and holds students' attention *Routines and structures are establishes to support the learning process 	*								
<p>Classroom climate</p> <ul style="list-style-type: none"> *High expectations *Strong relationships *Enthusiasm for teaching and learning *Safe environment, physically and emotionally *Student engagement-students actively participate 	*								
Effective learner behaviours	Saliency				Proportion of students				
Makes decisions	0	1	2	3	0	¼	½	¾	All

Seeks assistance	0	1	2	3	0	¼	½	¾	All
Checks personal progress	0	1	2	3	0	¼	½	¾	All
Asks questions	0	1	2	3	0	¼	½	¾	All
Makes links to previous learning	0	1	2	3	0	¼	½	¾	All
Has strategies for learning	0	1	2	3	0	¼	½	¾	All
Reflects on the work	0	1	2	3	0	¼	½	¾	All
Considers how they have learned	0	1	2	3	0	¼	½	¾	All
Additional Observer Comments	Teacher Quotes								

	Student Quotes
1. Deployment of Teaching Assistant 2. 3. 4.	

Appendix F. Head Teacher Baseline Interview Questions

TEEP Evaluation: Summer Term School Visits

Interview with Head teacher/Deputy Head teacher

1. Using the school's recruitment profile information, a short introductory discussion will focus on the reasons why the school elected to take part in the TEEP project. Following this, the interview will address the questions below.
2. What are the school's current priorities for improvement?
3. What are the schools' current policies and practices in the following areas and what changes are intended as a result of TEEP?
 - Assessment for learning;
 - Thinking for learning;
 - Accelerated learning;
 - Collaborative learning;
 - Use of ICT.
4. What will be the mechanisms for change in teaching and learning in the areas identified in Q3?
5. Will change in teaching and learning be evaluated at school and department level? If so, how will change be recorded/documentated?
6. Will you/SMT identify the impact of TEEP on student engagement, progress and attainment? If so, how?
7. What evidence will you/SMT seek to demonstrate the effectiveness of TEEP on teaching and learning?

Appendix G. Baseline Focus Group Questions

Focus group questions with HoDs and/or teachers: e.g. English, maths, science

10. What are your departments' current priorities for improving teaching and learning?
11. What if any are your expectations of the TEEP project for enhancing teaching and learning in your department/subject area?
12. What are your departments' current policies and practices in the following areas, and what if any changes in teaching and learning are you intending as a result of TEEP?
 - Assessment for learning;
 - Thinking for learning;
 - Accelerated learning;
 - Collaborative learning;
 - Use of ICT.
13. What will be the mechanisms for change in teaching and learning at department level? How will change be recorded/documentated?
14. How do you think TEEP will be directly benefit students' learning and attainment in your subject areas?
15. Do you envisage any potential challenges in implementing TEEP in your departments? If so, what might they be and how will you address them?

Appendix H. TEEP Teacher Survey Questions

Your school's name

Your job title

Gender: please tick one; male female

Age group: Under 25 years 25-34 35-44 45-54 Over 54

Main subject taught:

(Any) Other subjects taught:

Month & Year of first TEEP training session: Month Year

1. How, if at all, has your teaching changed from the period before you had any TEEP training to the period after you completed TEEP training? (Please tick one box in each row).

Now...	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
I talk at the class less than I used to					
My lessons include a bigger range of activities than before					
I use ICT/computers more effectively (for teaching and learning) than I used to					
Students now take a more active part in lessons than they did previously					
There is now more working together by students					
My lessons are more interesting than they used to be					
I feel better motivated to teach than I did before					
Students ask more questions than they did previously					
Students do more working out of things for themselves than they did before					
All round, I am a more effective teacher than before					

2. Please indicate the extent to which you agree with each of the following statements (tick one box in each row).

The experience of the TEEP training programme has...	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
... improved my confidence as a teacher					
... brought about more variety in my teaching styles					
... helped me to plan lessons better					
... led to a better 'climate for learning' in my classroom					
... improved my classroom management skills					
... improved my understanding of Assessment for Learning					
... enabled me to facilitate more collaborative learning					
... improved my understanding of 'accelerated learning'					
... has helped me to better deliver 'thinking for learning'					
... has ensured that I make more effective use of ICT					

3. Please tell us about one lesson that you have delivered in the past few weeks that you feel was influenced by TEEP and was also an interesting lesson for the students.

(a) What was the subject (e.g. science)? _____

(b) What was the topic of the lesson? (e.g. learning about the human body)

(c) What activities were used in the lesson? (e.g. teacher talking, discussion, video, worksheet...)

(d) Why do you feel that this lesson was particularly interesting?

(e) What did the students learn from this lesson?

4. On a scale of 1 to 10, where 1 means 'no support at all' and 10 means excellent support, please rate the support you have received from your TEEP mentor. If you are a TEEP mentor please circle A, or if you do not have a TEEP mentor please circle B.

1 2 3 4 5 6 7 8 9 10 A B

To what extent do you feel that your school management are committed to the TEEP Programme? 1 means 'not at all committed' and 10 means 'totally committed'.

1 2 3 4 5 6 7 8 9 10

5. Overall, on a scale of 1 to 10, where 1 means 'not at all useful' and 10 means 'extremely useful', how would you rate the TEEP training programme?

1 2 3 4 5 6 7 8 9 10

6. To what extent do you feel that the TEEP programme has changed the way that you teach? Please rate this on the following scale, where 1 means 'no change at all' and 10 means 'TEEP has completely transformed the way that I teach':

1 2 3 4 5 6 7 8 9 10

Appendix I. TEEP Student Survey Questions

Your school's name

Your year group

Gender: please tick one; male female

1. We would like to know about how you learn in the three core subjects of Maths, English and Science, starting with **Maths** (please tick one box in each row)

In Maths...	Never	Sometimes	Often	Always
I check my work and correct mistakes				
I plan my work carefully before starting				
I can see links between the work and my personal life				
I have opportunities to work with other students				
I tell the teacher if I don't understand something				
I can take risks and suggest answers that might be wrong				
The use of ICT/computers helps my learning				
The teacher makes the lesson interesting and varied				
I have the freedom to make my own decisions				
I can reflect (think about what I have done in the lesson)				

2. Please now answer these questions in relation to your **English** lessons (tick one box in each row)

In English...	Never	Sometimes	Often	Always
I check my work and correct mistakes				
I plan my work carefully before starting				
I can see links between the work and my personal life				
I have opportunities to work with other students				
I tell the teacher if I don't understand something				
I can take risks and suggest answers that might be wrong				
The use of ICT/computers helps my learning				
The teacher makes the lesson interesting and varied				
I have the freedom to make my own decisions				
I can reflect (think about what I have done in the lesson)				

3. Please now answer these questions in relation to your **Science** lessons (tick one box in each row)

In Maths...	Never	Sometimes	Often	Always
I check my work and correct mistakes				
I plan my work carefully before starting				
I can see links between the work and my personal life				
I have opportunities to work with other students				
I tell the teacher if I don't understand something				
I can take risks and suggest answers that might be wrong				
The use of ICT/computers helps my learning				

The Teacher Effectiveness Enhancement Programme

The teacher makes the lesson interesting and varied				
I have the freedom to make my own decisions				
I can reflect (think about what I have done in the lesson)				

4. We'd now like you to think carefully about your learning in general (i.e. across all subjects): think about what your learning is like **now** compared to **one year ago**. (Please look at the following statements and tick one box in each row).

Now...	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Our teachers talk at us less than they used to					
Lessons include a bigger range of activities than before					
We use ICT/computers more effectively than we used to					
I take a more active part in lessons than I did previously					
There is more working together by students					
Lessons are more interesting than they used to be					
I feel better motivated to learn than I did before					
I ask more questions than I did a year ago					
We do more working out of things than we did before					
All round, I am a more effective learner than before					

5. Please tell us about one interesting lesson that you have had in the past few weeks.

(f) What was the subject (e.g. science)? _____

(g) What was the topic of the lesson? (e.g. learning about the human body)

(h) What activities were used in the lesson? (e.g. teacher talking, discussion, video, worksheet...)

(i) Why was this lesson particularly interesting?

Appendix J. Comparison of the Cohorts 1 and 2

Cohort	Out- come	Intervention		Control		n in model		Effect Size		p value		
		n (miss)	mean	n (miss)	mean	I	C	95% CI				
1	GCSE English	3,310	95% CI 36.12		3,317	95% CI 37.05		6,147		-0.03		0.58
		(281)	35.70	36.54	(199)	36.66	37.45	3,029	3,118	-0.15	0.09	
	GCSE Maths	3,310	32.82		3,317	33.74		6,140		-0.04		0.50
		(284)	32.34	33.29	(203)	33.26	34.22	3,026	3,114	-0.16	0.08	
2	GCSE English	3,347	34.47		3,411	36.05		4,238		-0.06		0.55
		(1,049)	34.00	34.94	(1,471)	35.61	36.49	2,298	1,940	-0.26	0.14	
	GCSE Maths	3,347	34.00		3,411	34.92		4,309		-0.01		0.92
		(978)	33.52	34.48	(1,471)	34.43	35.40	2,369	1,940	-0.13	0.15	

Appendix K. Analysis of missing data

The tables below show the mean and SE for the Intervention and Control treatments for those students where KS2 English is missing and where KS2 Maths is missing. The tables give similar results because a pupil who is missing one score is usually missing the other score (Both KS2 score available, N=10893; neither available, N=2985; English only available, N=71; Maths only available, N=133).

	KS2 English missing			KS2 English available			Interaction
	Intervention	Control	C-I	Intervention	Control	C - I	p value
	mean SE	mean SE	mean SE	mean SE	mean SE	mean SE	
GCSE English	32.14 0.76	34.55 0.73	2.41 1.06	35.91 0.69	36.86 0.69	0.95 0.98	.007
GCSE Maths	32.95 0.72	34.43 0.69	1.48 1.00	33.38 0.63	34.21 0.62	0.84 0.88	.290

	KS2 Maths missing			KS2 Maths available			Interaction
	Intervention	Control	C-I	Intervention	Control	C - I	p value
	mean SE	mean SE	mean SE	mean SE	mean SE	mean SE	
GCSE English	32.00 0.77	34.56 0.73	2.55 1.06	35.90 0.69	36.87 0.68	0.96 0.97	.004
GCSE Maths	33.01 0.73	34.43 0.69	1.42 1.00	33.36 0.63	34.21 0.62	0.85 0.88	.254

You may re-use this document/publication (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence v2.0.

To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/2 or email: psi@nationalarchives.gsi.gov.uk

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned. The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.

This document is available for download at www.educationendowmentfoundation.org.uk



The Education Endowment Foundation
9th Floor, Millbank Tower
21–24 Millbank
London
SW1P 4QP
www.educationendowmentfoundation.org.uk