

THE UNIVERSITY *of York*

**Impact of the Teacher Effectiveness
Enhancement Programme:
Phase 2 Evaluation**

**Final Report
December 2008**

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Impact of Teacher Effectiveness Enhancement Programme: Phase 2 evaluation

EXECUTIVE SUMMARY

Background

- 1 The report documents the Phase 2 evaluation of the Teacher Effectiveness Enhancement Programme (TEEP), undertaken from October 2005-December 2008. Phase 2 of the TEEP programme extended its areas of operation from secondary schools into primary schools and FE colleges.
- 2 TEEP aims to improve teacher and student performance through three levels of training associated with five underpinning TEEP elements (accelerated learning, thinking for learning, assessment for learning, collaborative problem-solving, and effective use of Information and Communications Technologies (ICTs)), effective teacher behaviours, and a six-part learning cycle.
- 3 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.

Methodology

- 4 Data were gathered from two primary schools (Birmingham and York), 11 secondary schools (Birmingham, Hull, North Suffolk) and two FE colleges (Manchester and York).
- 5 Data were gathered via (a) teacher observations, (b) pupil questionnaires, (c) teacher interviews, and (d) interviews with key informants (TEEP co-ordinators, head teachers and those with a major implementation role in their institution).
- 6 Data were gathered from 50 teachers in total, and comprised 72 pre-observations, 68 post-observations and 64 interviews. Pupil data comprised 582 pre-training questionnaires and 520 post-training questionnaires. 24 interviews were undertaken with key informants.

Key findings

- 7 The most notable changes in teacher behaviour following TEEP training were seen in:
- less time spent controlling behaviour (all institutions)
 - less whole-class teaching (secondary, FE)
 - increased use of group work (secondary, and in one primary and one FE institution)
 - getting pupils to participate in their own learning (secondary)
 - assessment of prior knowledge (secondary)
 - more inclusive questioning (secondary, FE)
 - questioning that involved higher a higher level of thinking by pupils/students (FE)
 - increased use of ICT (secondary, FE)
 - increased application of all five underpinning elements of TEEP (one primary, institution, secondary, one FE institution)

Within these overall patterns there were considerable variations between institutions.

- 8 Teachers' views showed that:
- networking with other TEEP teachers is valued (primary, secondary)
 - a critical mass of TEEP trained teachers is need for consistent application of TEEP approaches (all institutions)
 - the TEEP framework helps teachers place theory and practice gained from other training into a coherent whole, allowing them to appreciate better how their teaching is translated into the learning experienced by pupils (secondary)
 - thinking for learning remains problematic (secondary)
 - use of collaborative group work is challenging where pupils have poor social skills (secondary)
 - the 'apply' and 'review' strategies are more problematic to use, due to lack of time at the end of lessons (secondary)

- 9 Other features reported by pupils and teachers:
- some pupils reporting they had clearer perceptions of learning outcomes (FE)
 - some pupils reporting they were encouraged to ask more questions (secondary)

- 10 Key features contributing to successful implementation of TEEP include:
- introduction as a whole-school initiative (all institutions)
 - a critical mass of teachers being trained (all institutions)
 - time for practice to become embedded, with noticeable benefits being apparent after two years (all institutions)

- 11 Factors hindering successful implementation of TEEP:
- implementation in schools facing particularly challenging circumstances (secondary, one FE institution)
 - unwillingness of teachers to relinquish control of learning process (all institutions)
 - lack of support at senior managerial level in institution (all institutions)
 - poor physical learning environment (one FE institution)
 - use with very young pupils (primary)
- 12 Additional findings from interviews with key informants:
- TEEP is implemented most successfully where there is congruence with existing aims of institutions, support is provided with costs, where it has support at senior managerial level, and where teachers volunteer for the TEEP training.

Key implications

- 13 The Phase 2 evaluation of TEEP point to the following implications:
- Leaders in education nationally, regionally and locally should be made aware of the successes of the TEEP model of CPD. Funding to support training should be given national and regional priority.
 - Where institutions are thinking of taking up TEEP and the training associated with it, they should first consider what structures will be put in place to ensure that changes are embedded at institutional level.
 - Schemes to support and embed TEEP approaches should include an element of peer-coaching and review. Resources should be allocated to help this process.
 - Senior management support for TEEP implementation is crucial. Senior managers in institutions that take up TEEP should be trained so that their staff feel they are sympathetic to what they are trying to do.
 - Local authorities and other regional bodies should ensure that institutions taking up TEEP are part of a local networks focussed on improving teaching and learning
 - Some preliminary experience or knowledge of the TEEP framework should be given to teachers before they embark on Level 1 training.
 - Teachers should be encouraged to go for immediate implementation of at least some of the ideas gained from TEEP training. This could be backed by in-school peer support such as coaching and review.
 - Consideration should be given to how the TEEP framework and training might be adapted to help improve the quality of teaching for young people in work-related and skills training environments in 14-19 (upper secondary and FE) institutions.
 - Training requires modification for teachers in foundation and early years' settings.

This should be backed with specific examples that have been successfully used in these settings.

- Training in all phases of education should consider how teachers can be encouraged to develop and use better questioning that encourages pupils' higher order thinking.
- Teachers in all phases might appreciate more guidance on the construction and management of classrooms to help them use collaborative group work and to ensure it is effective.
- Training should ensure that teachers do not ignore later parts of the TEEP learning cycle in their planning and that the cycle does not have to be completed in one lesson.

1 BACKGROUND AND DESCRIPTION OF TEEP

1.1. Background

The Teacher Effectiveness Enhancement Programme (TEEP) is an initiative in Continued Professional Development (CPD) based on a programme of training intended to fundamentally change teachers' behaviours and the classroom climates for learners. The TEEP 'approach' has theoretical and research underpinnings congruent with aspirations for high quality CPD (Hay McBer, 2000). The programme was developed following evaluation of a project, in the North East of England, to improve teaching in Mathematics, the Mathematics Enhancement Programme (Muijs and Reynolds, 2000). Muijs and Reynolds found that positive gains made by pupils were correlated closely with specific teacher behaviours: *classroom management, behaviour management, direct instruction, review and practice, interactive teaching* and a *varied teaching and classroom climate*. They concluded that the most effective teachers were effective in most of these areas rather than in just one.

Currently in the UK and other countries there has been a move towards evidence-based or evidence-informed practice with the intention that content of teaching and aims of CPD schemes are informed and influenced by substantial evidence of what works (Oakley, 2002). Although a link to research is not necessarily made explicit in the TEEP programme, it is certainly reflected in what are called the five 'underpinning elements' of TEEP. Each of these is seen as fundamental in shaping classrooms as productive learning environments and the substantial bodies of research and/or established theoretical constructs on which they are based are obvious. These underpinning elements are:

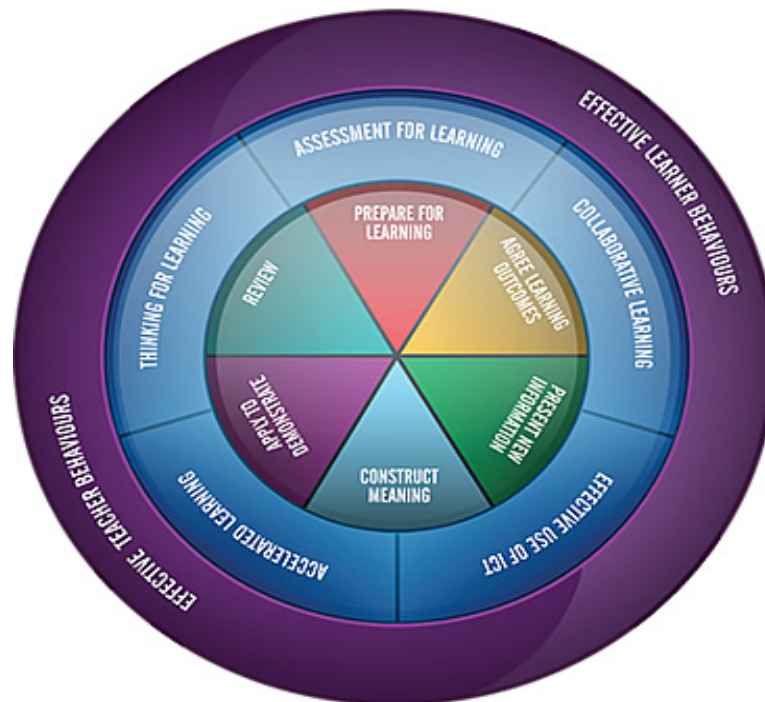
1. **Accelerated learning** which is concerned with providing multisensory learning environments stimulating higher brain functioning (e.g. Gardner, 2006; Claxton, 2002). Several learning strategies emerged from cognitive psychology, including the central issue of limited attention span and its increase when several senses are used for learning experiences. Equally research shows the importance of a variety of learning activities to accommodate different learning styles (Head, 1996), and of the benefit of returning to previous learning.
2. **Thinking for learning** which is mainly concerned with metacognition (Flavell, 1979) and recognition and use by learners of frames of thinking (de Bono, 1999). The strategy here emphasises thinking and reasoning as an explicit learning outcome (for science learning see Adey and Shayer, 1994), relating learning experiences preferably to the higher order thinking skills as identified by Bloom. Again, the KS3 strategy draws heavily on thinking for learning strategies and extensive resources in this area have been.

3. **Assessment for learning** which uses formative and diagnostic assessment along the lines suggested by Black *et al.* (2002). Research by Black and William (1998) has shown that assessment can change learning through asking questions from the whole class and allowing answering time; qualitative marking of homework rather than grading the work; using pupil peer assessment and; involving pupils in setting test items and mark schemes. The *assessment for learning* strategies have also been adopted as a major component of the Government's KS3 strategy.
4. **Collaborative problem solving** where there is a high degree of pupil-pupil interaction in groups to tackle problems that require cooperative actions (see for example Slavin, 1996). Extensive empirical work by Slavin (1990) has shown that when learners construct meaning in small teams, especially when solving problems or taking up challenges, they construct a deeper understanding and remember this much longer than when information is presented through teacher-centred strategies.
5. **Effective uses of Information and Communications Technologies** (ICTs). A large scale study by the British Educational Communications and Technology Agency (BECTa 2001) has demonstrated that achievement across several school subjects improves when ICT is being used as a learning tool across the whole school, regardless of socio-economic background of the pupils. Studies in specific subjects like Mathematics, English and Science confirm these findings. Where ICTs (interactive whiteboards, digital cameras, laptops and so on) are used, 'only to enhance the experience', rather than just for the sake of using ICT. 'If it can be done as well with paper and pen then don't use ICT' (www.teep.info 2006).

At the centre of the TEEP model is the six part learning cycle which are embedded in the five underpinning elements to enable effective teacher behaviours and effective learner behaviours in classroom teaching.

In the TEEP, key teacher behaviours and underpinning elements are incorporated into a six-part learning cycle (after, Smith, 1996). The cycle is similar to one developed for constructivist teaching (Scott, 1987). The first element, *preparation for learning*, describes the physical environment and preparations made by the teacher to ensure that conditions for learning are as effective as possible. The second element, *agreeing learning outcomes*, accounts for ways in which the teacher helps pupils to appreciate the intentions of the lesson in terms of skills, content and concepts and what pupils must do to demonstrate their achievement against the learning goals set for the lesson.

Figure 1: TEEP Model



A third element, *presentation of new information*, provides the visual, kinaesthetic or auditory 'hooks' through which new knowledge and understanding may be incorporated into pupils' schemas whilst a fourth element, *construction of meaning*, describes the main activities through which pupils co-construct this new knowledge or understanding. A fifth element, *application or demonstration of new understanding*, is about ways in which learners declare their new learning, e.g. through group or individual presentations to the rest of the class. The final element of the framework, *reviewing new learning*, deals with meta-cognition, ways in which pupils reflect on their new learning and whether or not they attained the outcomes set for the lesson and their views on reasons for this. This final part feeds back to the first and second stages of the framework thereby making it cyclic.

The first phase of TEEP (2002-2005) developed organically, making use of opportunities or from existing collaborations for training (for example in Birmingham LA) as they arose. In some cases TEEP was focussed at specific groups of schools or teachers or for the development of teaching in a specified area of the curriculum such as science (for example in Tower Hamlets LA). In the second phase of TEEP (2005-current) development and implementation have been focussed by different ownerships (LA or institutional) or through a perceived need to address a particular issue, such as poor teaching in a particular subject or transition from one phase of schooling to another (as was the original intention in North Suffolk). At the same time TEEP provision has been widened from its Phase 1 base in

secondary schools to primary schools, Further Education (FE) colleges and Initial Teacher Training in Higher Education (HE) institutions.

1.2. The TEEP training programme

According to Joyce and Showers (1995), programmes to bring about change in classroom teaching through the professional development of teachers, of which the TEEP is an example, are most effective when they are planned around a sequence that has the following four elements as outcomes for participants:

- *awareness and knowledge of theories, practice and curricula;*
- *change in attitudes to self or pupils or academic content of instruction;*
- *development and practice of newly learned skills, discrete behaviours and strategies, initially through more supportive means such as peer teaching before graduating to full classrooms;*
- *transfer of training through a community of practitioners (through peer coaching and collaborative designing of schemes of classroom work).*

(Joyce & Showers 1995, pp. 108-125)

The TEEP training programme is carried out very much according to these criteria by teams of accredited professionals, each assessed as being conversant and fluent in TEEP training methodologies and the underpinning theory. TEEP training takes place at three levels:

Level 1: Typically two blocks each of two or three days duration separated by a period of in-school implementation of teaching strategies and use of the lesson framework and reflection which may, in some cases, be supported by a programme of peer-coaching or mentoring. At the second block of training teachers are encouraged to share and reflect on their experiences of new methods of teaching and their use of the six-part learning cycle and experience additional strategies in relation to the underpinning elements described above.

Level 2: Additional training for those who have completed Level 1 and have a coordinating or training role within a school or college, so that they can train others in TEEP approaches and methods. Training includes the key skills required for successful peer coaching.

Level 3: Additional training for those who have completed Levels 1 and 2 and will have a cross-institutional, LA based or national remit for TEEP. Training is at the invitation of the national TEEP team.

Initially (and in most of Phase 1) TEEP training took place mainly at Cramlington Community College in Northumberland as that was where significant members of the training team were

based. In the cases evaluated here, however, most of the training was carried out by members of the central TEEP team or by Level 3 trained coordinators and other personnel at local schools or training centres.

In some cases, such as for Colleges of Further Education, a collapsed version of Level 1 training was provided combining some elements into a single day or two day's training.

1.3. Structure of the report

Following this introduction section, the report is structured into seven main sections. Section 2 provides an overview of the evaluation process, describing its aims and the questions to be addressed. Section 3 describes the evaluation methodology in details. Sections 4, 5 and 6 present and analyse the data from secondary schools, Further Education (FE) colleges and primary school respectively. Of these sections the secondary data comprises the largest data set. Section 7 presents the conclusions of the evaluation, together with the implications for the TEEP programme.

1.4. A note on anonymity

The evaluation data were collected in four areas, Birmingham, Hull, Manchester, Suffolk, and York. Data from primary schools were collected in Birmingham and York, data from secondary schools were collected from fifteen secondary schools in Birmingham, Hull and Suffolk., and data from FE colleges were collected in Manchester and York. No individual school is named in the report.

2 OVERVIEW OF THE EVALUATION PROCESS

2.1. Previous evaluations

Phase 1 implementation of the TEEP programme was evaluated in 2005 by the University of Warwick, concentrating mainly on the impact of Level 2 training in seven case study schools in Local Authorities (LAs) from the North East and the Midlands (Gunraj, 2005). A separate three-year evaluation was commissioned by Tower Hamlets LA and carried out by the Institute of Education. This study considered the impact of the TEEP and additional funding from Gatsby's Science Enhancement Programme on science teaching, in particular on the use of practical investigations (Serret and Reiss, 2006).

2.2. Contexts of the Phase 2 evaluation of TEEP

The rapid expansion of TEEP since Phase 1 of the project has meant that training is now provided for educational establishments across the UK at all phases of education from pre-school and primary to Further Education (FE). At the same time the ownership and drivers of TEEP implementation, the sources of its trainers and its geographical locations have expanded from its original base at Cramlington College in the North East of England. Thus evaluation of Phase 2 sought to explore how TEEP operates in some of these new contexts.

Three **study areas** were chosen to represent the three phases of education, primary, secondary and FE. In each study institutions or groups of institutions were chosen as **case studies** to reflect differences in the ways in which TEEP was operated and/or driven and the original intended 'target audience' for improvement and change. For example in the evaluation of TEEP Phase 2, in secondary schools, the three different three case studies were chosen to reflect the key drivers for implementing TEEP. The relationship between case studies and TEEP aspects is summarised in Table 2.2.

Table 2.2. Case studies in the Phase 2 evaluation of TEEP

Case study	Study area	Driver	Trainers	Target level for improvement
Birmingham I	KS1/2	Individual	Internal	Whole school
York I	KS2	School/LA	Consultant	Whole school
Suffolk	KS2/3	Cluster	Internal	Many schools
Birmingham II	KS3/4	Collegiate	Internal	Individual teachers + whole school
York II	KS5	FE	Consultant + internal	Individual teachers
Manchester	KS5	FE	Consultant + internal	Individual teachers

The secondary school context

In **Hull** the key driver for implementing TEEP was the LA. Poor performance of pupils in Hull schools, particularly in science, lay behind an approach by the LA to the central TEEP team and was the reason why science departments in school were chosen as the initial locus of change. Central Gatsby/TEEP resources were used to appoint a coordinator who was paid to spend two thirds of his time supporting local schools and organising and implementing training. He was assisted by an advisory teacher for science and, as TEEP progressed, some of the teachers from schools where TEEP had first been implemented assisted with training on an in-school basis. Three schools were initially chosen for this case study and all three were known to have had specific problems with underachievement and disaffection/lack of engagement of pupils particularly in science. In the first year of evaluation (2005-6) one of these three schools failed its OfSTED inspection and was under special scrutiny from HMI and local inspectors. In the final year of the evaluation (2007-8) an additional school was added to the study in Hull – one that traditionally had been a higher performing school than the initial three and that had a recently appointed and TEEP-trained Head of Science and second in science both keen to introduce TEEP approaches in their department.

In **Birmingham** the key driver for TEEP was the Birmingham Catholic Partnership, which was seeking to improve teaching and learning within the classroom and use TEEP as a vehicle to make teachers reflect on their practise. The Catholic Partnership is made up of nine Catholic secondary schools in Birmingham, of which three were included in the phase two evaluation. These schools work together to ensure that the education received in a Catholic school is of the highest quality, not only academically, but also spiritually. The Partnership is governed by the Partnership Board which comprised the nine Head teachers of the member institutions. Since 1988 staff in the Partnership's schools have been working together on curriculum and professional development to enhance the education of students.

There is a TEEP Network in Birmingham for all teachers who have undergone TEEP training. The idea of the network is for teachers to meet once a term and share practice. A website for the Birmingham Teacher Effectiveness Enhancement Programme was also developed to support the Birmingham TEEP programme which is being implemented in secondary schools throughout the region (<http://www.bhamteep.info/index.asp>). A training centre has been set up in one of the schools in the evaluation where in-house training for teachers and local training with the Catholic Partnership are done together with whole school training in one school. The training is done by two teachers of one of the three secondary in the evaluation who are trained to TEEP Level 3.

In **North Suffolk** the key driver for TEEP implementation was one 14-19 high school in Beccles (in North Suffolk) that wanted to improve effectiveness of teaching and learning as a

whole school but that also sought to do this by including its feeder middle schools in training. Thus there was a transition rationale for the introduction of TEEP. In effect, only one of the three main feeder middle schools was involved and so training was expanded geographically to include a large high school in a coastal town in North Suffolk and a high school in a neighbouring, smaller town. None of the schools was previously rated as being either low or high performing or as having severe problems with pupil behaviour or engagement.

The FE context

The TEEP driver came from the TEEP national office where an FE college in Manchester was asked to participate in the training and was then approached by the evaluation team to participate in the evaluation exercise. A shortened version of Level 1 training was carried out over two days for fifteen tutors in the construction skills department. The main reason for introducing the TEEP framework at the Manchester FE college was in filling the gap between theory lessons and practical skills workshops in the area of construction.

At the York FE college, the TEEP driver came from the City of York LA's role in promoting active teaching and learning in the area, especially at 16-19. The aim was for staff from a number of different providers to undertake training so as to develop and instigate more active teaching and learning. From the outset, the college had a high level of contact with the TEEP national team, and a dedicated strategy linked to their internal policies for training and learning development. The early focus was to get some tutors to attend the TEEP training and then to develop and use TEEP training in-house. Nine teachers from York College took part in the Level 1 TEEP training. Over the period of the evaluation two tutors have completed Level 3 training and have been key leaders for the development of TEEP ideas in the college since completing their Level 1 training. These two tutors were responsible for developing a version of the TEEP Level 1 training course called 'Toolkit', which is an adaptation of the TEEP framework to cover a two days of training with a third day for feedback two months later.

The primary school context

Two schools were included at the primary level as part of a pilot to evaluate the TEEP framework at foundation year and KS1 and KS2 classes. In the Birmingham school, TEEP was introduced by the previous head teacher. Two members of staff in nursery and Year 1 did the level 1 training and were evaluated as part of the primary school pilot. The TEEP model is being considered by the current head teacher who is keen to have more teachers trained at Level 1 with the aim of improving teaching and learning in the school.

At the York primary school, the driver for TEEP was the head teacher who had knowledge about the Accelerated Learning Project (ALPs) and information about the Teaching and

Learning Enhancement Project in the City of York. The head teacher's view was that the TEEP model was applicable at KS2 and as such the school adopted a whole-school approach, with all teachers at KS2 being trained at Level 1. Two KS2 teachers participated in the evaluation. The school's view is that, although the TEEP model works well at KS2, more work at the Foundation stage and KS1 is needed.

2.3. Rationale and aims of the evaluation process

A multi-method approach to evaluation was devised to explore the effects of TEEP as educational innovation according to six dimensions identified by Van den Akker (1998). Specifically the research gathers data according the last three of Van den Akker's dimensions: the *operational curriculum* (instructional processes and teacher behaviours as observed in classrooms), the *experiential curriculum* (the learning experiences of students) and the *attained curriculum* (students' learned outcomes).

The following key research questions guided evaluation:

1. Who is involved in the implementation of TEEP, and in what way?
2. What is the impact of TEEP on changes in observable classroom activities and why have these changes been adopted and not others? (the *operational curriculum*)
3. What is the impact of TEEP on changes in pupils' learning experiences, and how do pupils view these changes? (the *experiential curriculum*)
4. How does the impact of TEEP relate to:
 - the ownership of the TEEP intervention
 - the age of the learners targeted by the TEEP intervention
 - the nature of the target group for TEEP implementation.

Supplementary to research question 2 it was possible, for secondary schools, to explore from examination and test results what effect TEEP training might have had on pupil's performances (the *attained curriculum*).

Of the 62 teachers included from the start of the Phase 2 evaluation, 50 were included in the analysis. This followed a similar rule described above where only those teachers' who were both pre- and post-observed had their lessons evaluated. Again the aim was to pre- and post observed teachers delivering the same lesson but this was not achieved in the primary and secondary schools but was the case for some classes in the FE colleges.

3 THE EVALUATION METHODOLOGY

3.1. Evidence for research question 1: Who is involved in the implementation of TEEP, and in what way?

An overview of the schools and teachers involved in the implementation of TEEP was gained through the extraction of data from the database held by the central team. The reporting period was the second year of Phase 2 of the TEEP Project (2006-7). During this period teachers in the study areas and case studies had been involved in TEEP Level 1, 2 and 3 training. Table 3.1.1 gives a breakdown of the number of schools and teachers included in Phase 2 of the TEEP evaluation process.

Table 3.1.1: TEEP training provision by evaluation sites

Evaluation sites	Number of schools	Level 1 training	Level 2 training	Level 3 training	Number of teachers in evaluation	% Level 1 teachers in evaluation
TOTAL Primary	2	7	1	1	4	57%
Beccles	4	27	7	0	14	52%
Hull	4	28	4	1	15	54%
Birmingham 2	3	83	20	6	8	10%
TOTAL Secondary	11	138	31	7	37	27%
TOTAL FE	2	32	2	2	9	28%
OVERALL TOTAL	15	177	34	10	50	28%

In total, 177 teachers have been trained in Level 1, 34 in Level 2 and 10 in Level 3 training in the schools involved in the Phase 2 evaluation. Of the 177 teachers trained at Level 1, 31% (54) are included in the evaluation.

Table 3.1.2: Percentage of TEEP training provision for different school levels

Site	% of schools	% Level 1 training	% Teachers in evaluation
TOTAL Primary	13%	4%	7%
Beccles	27%	15%	28%
Hull	27%	16%	33%
Birmingham 2	20%	47%	15%
TOTAL Secondary	73%	78%	76%
TOTAL FE	13%	18%	17%
OVERALL TOTAL	100%	100%	100%

During the reporting period, 78% of TEEP Level 1 training in the evaluation sites was provided in the secondary sector (see Table 3.1.2), compared to 4% in primary schools and 18% in FE colleges. 76% of the teachers in the evaluation exercise were from secondary schools, 17 % from FE colleges and 7% from primary schools (see Table 3.1.2).

3.2. Evidence for research question 2: Impact of TEEP on changes in observable classroom activities

3.2.1 Teacher behaviour

Data to inform research question 2 were gathered through classroom observations of teachers before and after TEEP training using an observation framework (see Annex 1) developed by the team following extensive piloting in two contrasting case study areas. Teachers were observed using a structured observation schedule incorporating categories that recorded event events related to effective teacher and pupil behaviours and underpinning elements framework at five minute intervals. The schedule was divided into four sections:

- Mode of organisation – the emphasis here was on whether teachers' lessons included whole class, small groups or individual learning, and the percentage of the class engaged at 5-minutes point of observation.
- Teacher behaviour – this section included statements of effective teacher behaviours and TEEP underpinning elements and comprised the bulk of the observation exercise.
- Pupil behaviour – this section focused on pupils listening to their teacher and other pupils, answering and asking questions.
- TEEP underlying elements – each of the five underlying elements were noted when included in a lesson during the pre- and post-observations.

Observations were carried out by researchers and, in two of the case studies, by coordinators who had been trained in using the schedule. Observations (numerical data) were accompanied by extensive field notes recording the contexts of learning and details of learner activity and engagement. Numerical data from the teacher observations schedules were entered into an Excel database for analysis.

Teachers were each observed on two occasions, at least once before they took part in TEEP training and again (three months) after. In some instances two pre- and two post-observations were done. Behaviours and actions for each category of the observation schedule were calculated as a percentage of the total occasions recorded in each whole lesson. In cases where there was more than one pre- or post-observation, an average score was used. Table 3.2 gives a breakdown of the number of schools and teachers included in

Phase 2 of the TEEP evaluation process, the total number of pre- and post- observations and post- interviews with teachers:

Table 3.2: Summary of teacher observation

Sites	Number of schools	Number of teachers	Pre Observations	Post Observations	Post Interviews
TOTAL PRIMARY	2	4	6	8	6
Hull	4	15	20	18	17
North Suffolk	4	14	25	15	14
Birmingham	3	8	11	14	14
TOTAL SECONDARY	11	37	56	47	45
TOTAL FE	2	9	10	13	13
GRAND TOTAL	15	50	72	68	64

In the two primary schools, a total of six pre-observations, eight post-observations and six post interviews were carried out on four teachers. In the eleven secondary schools, a total of 37 teachers were evaluated, with 56 pre-observations, 47 post-observations and 45 post interviews undertaken. In the two FE colleges, a total of nine teachers participated in the evaluation with ten pre-observations, 13 post-observations and post interviews undertaken.

3.3. Evidence for research question 3: Impact of TEEP on changes in pupils' learning experiences

Data were collected using a questionnaire given to pupils (see annexe 2) containing items matched to four TEEP areas, classroom climate, classroom management, interactive teaching; and the range of teaching and learning. Questions were drawn, wherever possible, from established research on classroom environments for learning (e.g. Fraser, 1998) and that mapped well against the theoretical underpinnings of TEEP and intentions of training. On the left hand side of each text item were three options against which pupils were asked to rate the frequency with which an event or action took place. On the right hand side of each item pupils were asked to choose an option that reflected to what extent they thought an action might help them to learn. Data from the questionnaire were intended to provide some degree of triangulation with findings from classroom observations.

Teacher guidelines (with an overhead transparency slide) were produced to help teachers administer the questionnaire. In the pilot phase, no teachers commented on the use of the questionnaire, suggested that its administration was seen as relatively unproblematic. However, a problem was encountered in the main phase of the evaluation as teachers often did not collect pre- and post-data from the same class. As this posed a threat to the validity of the analysis, rather less use of the pupil questionnaires was made than had originally been planned.

Those teachers who did not return both pre- and post- student questionnaire responses were excluded from the student responses evaluation, leaving 29 teachers' classes included in the student questionnaires analysis. Table 3.3 indicates the responses of students from the pre- and post- questionnaires to date (see Annex 2 for a copy of the student questionnaire). A total of 582 pre-questionnaires from 29 classes and 520 post- questionnaire responses were returned by students.

Table 3.3: Student pre and Post responses

Sites	Number of schools	Number of teachers	Year group	Pre student responses	Post student responses
TOTAL PRIMARY	1	1	Y 1 (KS1)	29	27
Hull	4	8	Y 7, 8, 10 & 11 (KS 3 & 4)	151	173
North Suffolk	4	10	Y 6, 7, 8, 9 & 10 (KS 2, 3 & 4)	268	204
Birmingham	1	2	Y 7 (KS 3)	38	27
TOTAL SECONDARY	9	20		457	404
TOTAL FE	2	8	(AS/A2)	96	89
GRAND TOTAL	12	29		582	520

3.4. Evidence for research question 4: How does the impact of TEEP relate to the ownership of TEEP intervention and the nature of the target group for TEEP implementation?

3.4.1. Interviews with teachers

All teachers who were observed following their TEEP training were interviewed at the end of their lessons. Interviews were carried out by two members of the York evaluation team and a semi-structured interview schedule was used (see annexe 3). The focus of the interviews was to obtain teachers' views on how they expected TEEP training to have affected their classroom teaching, whether they were using the TEEP learning cycle and which aspect of the

learning cycle, effective teacher behaviours and underpinning of the TEEP framework they found most difficult to integrate and use in their lessons. Additionally teachers were asked to comment on how TEEP might be better facilitated at their school or college. The times for interviews averaged twenty minutes per teacher and the style and content of questions and prompts was consistent across interviewees. Interviews were recorded, transcribed and analysed to identify emerging trends.

3.4.2. Interviews with co-ordinators and other key personnel

A total of 24 interviews were carried out across the 15 schools and colleges included in the evaluation. A semi-structured interview schedule was used (see annexe 4), and interviews were carried out by two members of the York evaluation team. The focus of these interviews was to get feedback from key personnel about the reasons their school or college got involved with TEEP, aspects of the TEEP framework being adopted into their school's policy and approach to teaching, and learning and issues that might have helped or hindered the implementation of TEEP. Those interviewed included the TEEP co-ordinators in Birmingham and Hull, key personnel in schools whose aim is to promote and take TEEP forward in their school and, when possible, the head teachers of schools involved. The length of the interviews varied and on average lasted for about fifty minutes. All interviews were recorded, transcribed and analysed.

4 SECONDARY SCHOOLS

4.1. Observations of lessons

The findings are shown and discussed in order of the three areas observed; modes of classroom organisation, teacher behaviours and pupil behaviours. In each of these sections patterns for data combined for all three case studies in Hull, Birmingham and North Suffolk are discussed first before considering any differences between them. The graphs in the body of the text show the differences in activity or behaviours (as a mean percentage of the total lesson time observed) following TEEP training for the sample as a whole. Annex 6 contains tables and graphs showing results for each of the case studies in turn and a table of data analysed for the sample as a whole (Annex 7).

4.1.1. Classroom organisation

Overall

The commonest mode of classroom organisation before training was for pupils to follow whole class activities (57% of lesson time). (See Figure 4.1.1.) Although the mean percentage of time spent on whole class teaching appeared to increase by 2% following training, this figure disguises a wide variation in practice, mostly dependent on the teacher and the nature of the lesson being observed. However, for seventeen of the thirty seven teachers observed, the amount of whole class teaching actually fell after TEEP training. The largest rise in organisational mode was seen for small group work (an 11% rise) and, although there were variations in practice between teachers, there was consistency in this finding as increases occurred in twenty five of the post-TEEP lessons observed and the difference was found to be statistically significant ($p = 0.030$).

The amount of time teachers spent controlling behaviour fell after training by 6% and although this is a modest change it should be noted that a fall occurred in twenty-five of the post –TEEP lessons observed. Coupled with a 7% increase in the number of pupils engaged in lessons this shows a positive change towards an improved and more purposeful climate for learning.

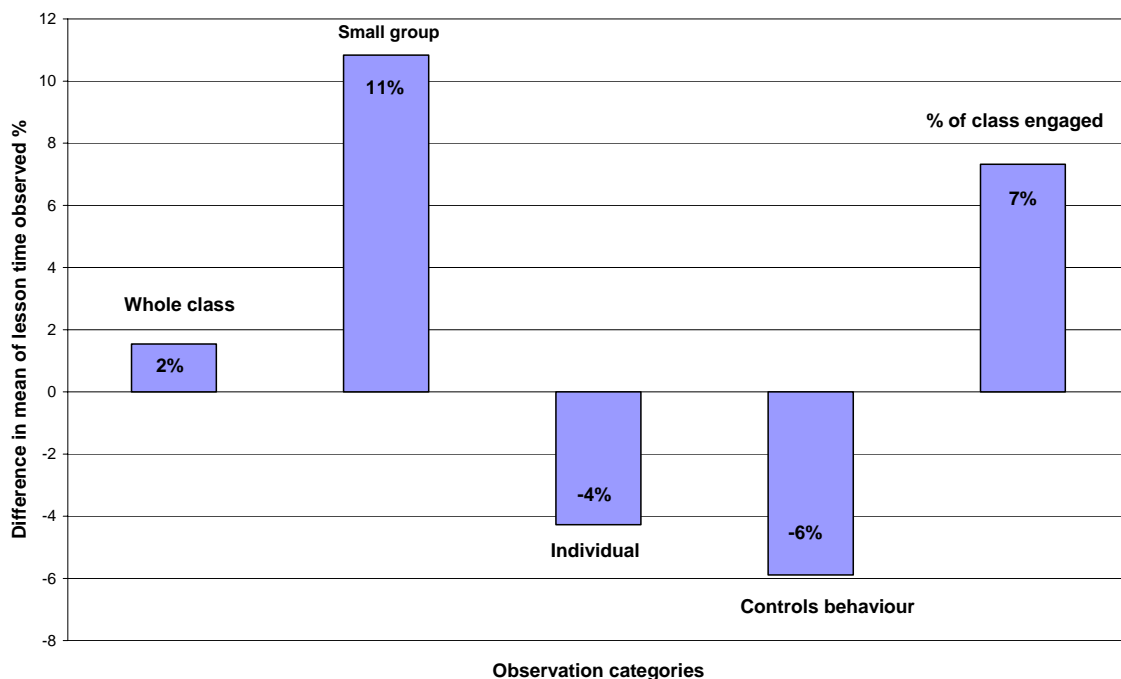
Variations in the different case studies

Annex 8 contains bar graphs comparing the observations of classroom organisation in the three different case studies. There were noticeable differences between observations in the Birmingham schools and those in Hull and North Suffolk. In Birmingham all five aspects of lesson organisation increased after training by a much larger amount than in either of the other two cases (except for group work in Hull). The amount of time teachers spent controlling behaviour actually rose in Birmingham schools but, since the percentage of the class engaged

also rose, this might just mean that teachers were now less tolerant of interruptions and low level nuisance that could disrupt learning and pupils' concentration. One example was in a French lesson where the teacher had to control behaviour for six of the 5-minute intervals recorded. The teacher raised her voice to get students' attention and used 'hush' sounds to quieten her students. The teacher told the class that she was disappointed on how they entered, their lateness and, later on their lack of concentration on set tasks.

The most consistent fall in time spent controlling the class occurred in North Suffolk schools where this was observed for ten of the fourteen teachers. Whether this shows the relative greater difficulties of introducing and sustaining TEEP-style teaching in Birmingham and Hull when compared with schools in North Suffolk is impossible to tell from these figures but we do know that all the schools in the Hull case contained a significant number of pupils with challenging behaviour.

Figure 4.1.1 Classroom organisation: post-TEEP differences for all observations in secondary schools



4.1.2. Teacher behaviours

Overall

There were notable rises (above a 5% difference between pre- and post -training means) in eight of the thirteen categories observed (see figure 4.1.2.). The largest rises were seen for teachers 'encouraging their students to participate in their own learning' and in 'taking account of their previous knowledge' (both at +31%). These rises were consistent (more than twice as many teachers displayed increases than did not) and statistically significant ($p < 0.001$). TEEP training places great emphasis on behaviours that result in better overall pupil engagement in

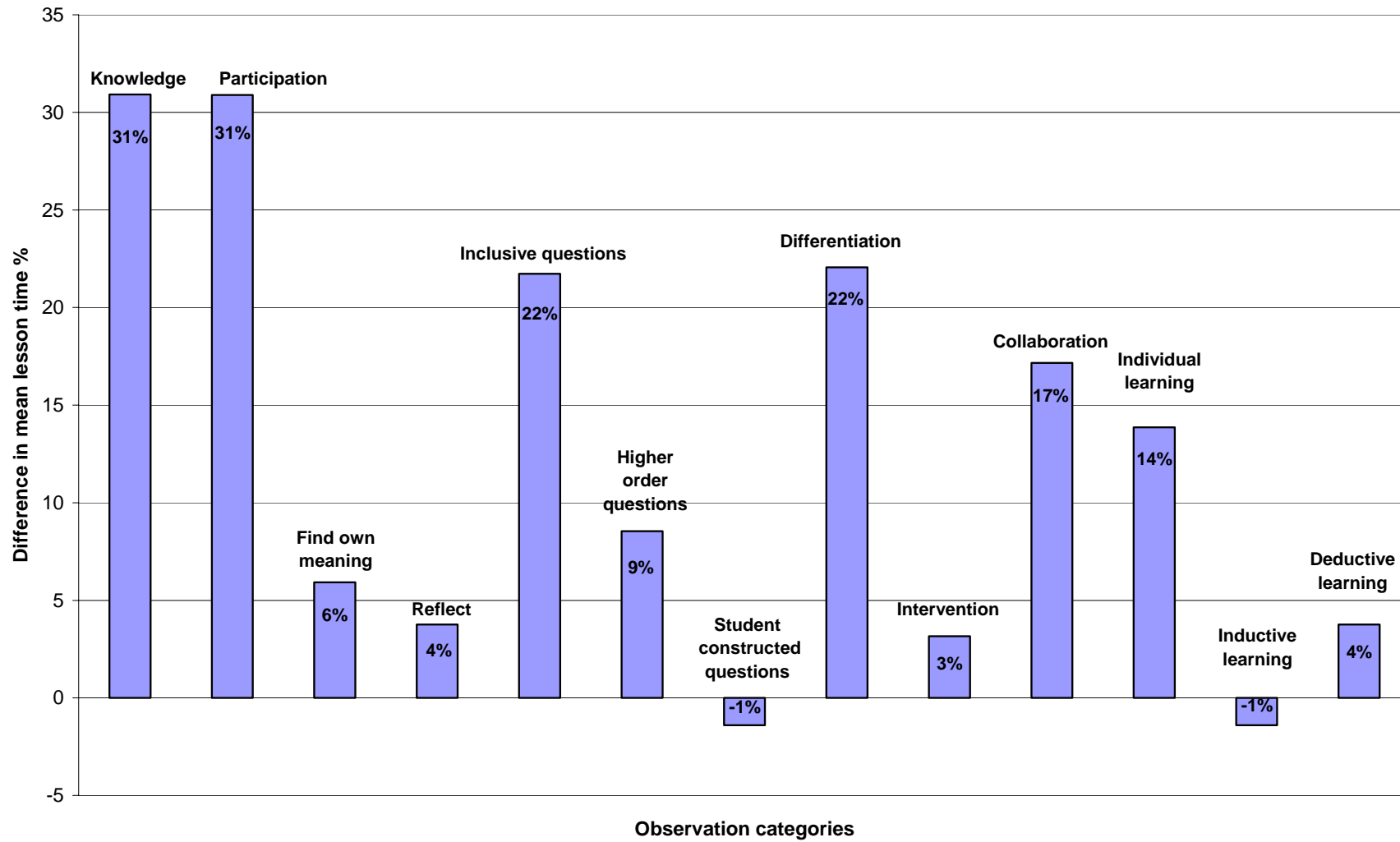
learning tasks mainly by improving the quality and quantity of teacher-pupil interaction and the variety of learning on offer and so observing such a large increase in strategies that improved pupil's general participation in their learning was very encouraging.

One example in Hull was in a fast-paced science lesson on the properties of materials where the teacher included a variety of teaching and learning activities including whole class, group work and individual learning. The students were kept engaged throughout the fifty minute lesson and there was a high level high turnover of tasks that resulted in almost 100% of the class being engaged throughout the lesson.

'Taking account of pupils' previous knowledge' is associated with the TEEP underpinning element 'assessment for learning' and reflects a distinct intentional increase in activity in this area. However, since almost half of post-training observations (15 out of 37) took place early in the school year, when teachers were new to their classes, this may have been a natural consequence of teachers getting to know pupils' cognitive levels so as to adjust and plan their teaching.

There were substantial and statistically significant rises in the use of 'differentiation' and 'inclusive questioning' (both at +22%; $p < 0.01$) which were both substantive aspects in Level 1 training. In the case of inclusive questioning, every case of increase was associated with a similar or greater rise in the amount of pupil participation in the post-training lessons observed and so the two seem to be linked. Although at a smaller level of increase (+9%), 'questioning aimed at promoting higher order thinking', seemed to feature more often following training and was evident for twenty three teachers where they had hardly used it at all before training. It seems that teachers were made more aware by TEEP that providing the same diet for all learners does little to promote quality learning. Better differentiation has been a familiar mantra in education but reports of classroom practice e.g. by OfSTED and others have shown that, in reality, it is rare or ineffective. Better differentiation relies partly on framing questions that challenge pupils by promoting levels of cognition at the higher levels of Bloom's taxonomy (requiring analysis and synthesis rather than pure recall of knowledge) and so the greater use of higher order questions was encouraging. For example in an English lesson on the use of metaphor in literature, pupils were invited to analyse sections of text in the book 'The curious incident of the death of the dog in the night', to identify cases where colours (such as yellow) were used to identify specific moods of the central character Christopher. Following this, pupil activities required an application and synthesis in which they wrote their own pieces describing their moods and feelings as colours and swapped their work as part of a peer review process.

Figure 4.1.2. Teacher behaviours: post-TEEP differences for all observations in secondary schools



The frequency with which teachers encouraged pupils' inductive or deductive learning hardly changed after training, remaining absent in most of the lessons observed, with some notable exceptions. It also remained a rare event for teachers to encourage their pupils to frame their own questions and taken together these findings mean there is still some work to do in encouraging pupils to engage more critically with information or data so as to arrive at deeper understanding.

Teachers' support for collaborative learning increased by 17% corroborating findings discussed earlier for the rise in the amount of group work compared with individual and whole class learning. For example, in a Year 8 Religious Studies lesson on the perspectives taken by different religions (Islam, Taoism, Judaism, Christianity and Hinduism) on the origins of life, collaboration involved groups of four or five pupils producing a storyboard to explain the position taken by one of the religions. The task was made easier for pupils by having a set of success criteria for the collaboration that was agreed by the class before embarking on the task and used to evaluate their efforts on completing it.

1. To work in a group to read, discuss and understand a religious story on the creation of life.
2. To make decisions and judgements about the key elements, parts and beliefs of that story that you will tell.
3. To make a storyboard as a group that allows each person in your groups to tell that story
4. To practice using the storyboard so that you can become an expert for other people in the class.

Variations in the different case studies (Annex 9)

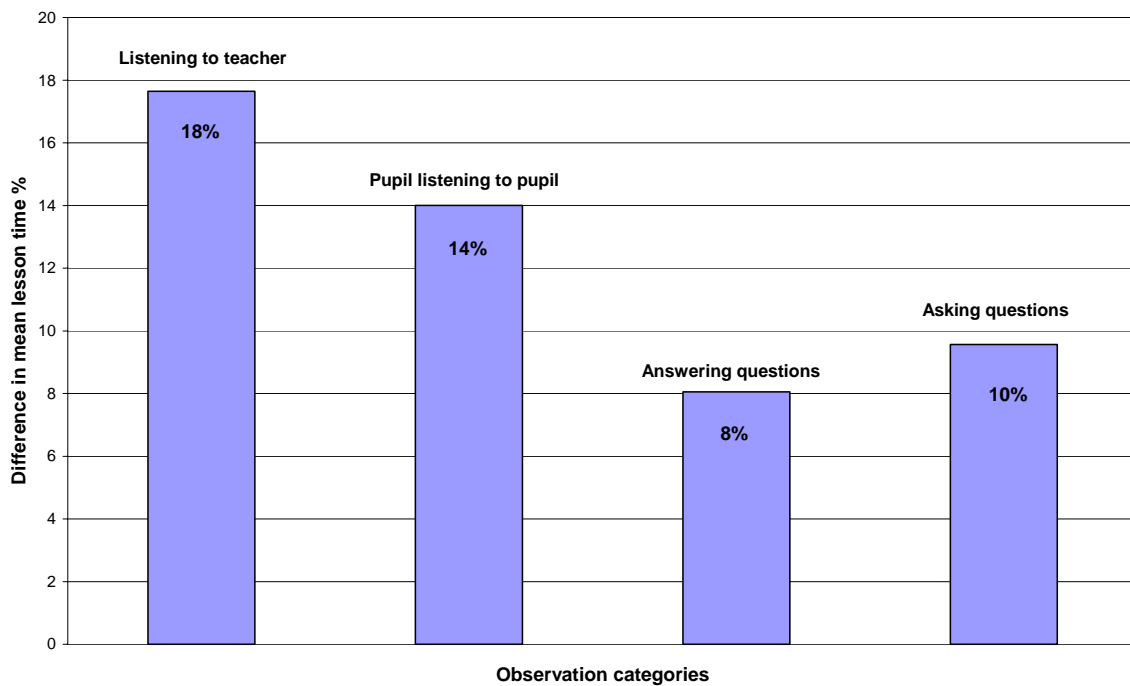
The overall pattern in post-TEEP differences in teaching behaviours described above was evident in all three case studies. In Birmingham, however, increases in time spent on uncovering pupils' knowledge, encouraging participation and use of inclusive questioning were all substantially higher than in the other two cases. This could be a product of the additional time that schools in Birmingham have been involved with TEEP and/or associated with whole school approaches to training here that included support by school-based TEEP coordinators who use a high level of coaching (refer to coordinators interviews). In North Suffolk post-TEEP differences in teacher behaviours were more modest except for the amount of differentiation and collaborative learning on offer. The amount of time spent by teachers encouraging individual learning increased in North Suffolk by 20% whereas changes in Hull and Birmingham were hardly noticeable (below 5%).

4.1.3. Pupil behaviours

Overall

All aspects of pupils' behaviour observed increased as a proportion of lesson time observed following training. The largest increases were seen in listening to the teacher (+18%) and in pupils listening to other pupils (+14%). The latter finding confirms our earlier observations of increased activity in collaborative group work (see figure 4.1.1). There was of course variation between teachers, largely due to the nature of the lesson being observed, but both increases were statistically significant ($p < 0.02$) and twice as many examples of increases in this behaviour were seen compared with decreases. Although there appeared to be an overall mean increase in the amount of time that pupils spent answering questions (+8%), practice was again variable. The amount of time spent by pupils asking their own questions increased by 10% but in most cases these questions tended to be ones that sought clarification of information or instructions rather than to challenge ideas or pose new ones. There were however some notable exceptions to this. For example in the Religious Studies lesson described in the last section, after storyboards illustrating religious positions on the origins of life had been viewed, pupils were asked to produce a question about a story which was then put to each expert group in turn as they explained each 'story'. These strategies to help pupils raise their own questions were rare and indicate a need for more work in this area.

Figure 4.1.3. Pupil behaviours: post-TEEP differences for all observations in secondary schools



Variations in the different case studies (Annex 10)

Increases in pupil behaviours for all four categories observed were seen in all three case studies but to quite different extents. Again, the amount of change in North Suffolk was less than that seen in either Hull or Birmingham. The time spent by pupils raising questions was higher in North Suffolk than in the other cases which might be a result of pupils being less sure about some of the demands on them as a result of shifts to TEEP style teaching.

Summary

Teachers spent less time overall controlling pupil behaviour following TEEP training and a greater percentage of pupils were engaged in their lessons, though there was wide variation in teachers' practice and between the three case studies.

The largest rise in mode of classroom organisation was seen for group work which rose by 11% of lesson time overall.

More than two thirds of teachers made improved efforts to get pupils to participate in their own learning.

There was a significant rise in the amount of time spent on assessing pupils' existing knowledge which in some cases might have been attributable to the time of the school year at which classes were observed.

There were substantial rises in the amount of differentiation used in lessons after training. Teachers' questions were more inclusive and included more examples that encouraged higher order thinking.

Increases in the amount of inclusive questioning were linked with improvements in pupils' participation in lessons.

The promotion of inductive or deductive reasoning and student constructed questions remained at low levels following training and may require more work.

Following training pupils spent much more lesson time listening to each other and to their teachers.

The amount of time spent by pupils raising their own questions increased following TEEP training, most notably in Suffolk schools.

4.2. Findings from pupils' questionnaires (their self reports of pre- and post-TEEP classroom actions and learning)

Examination of data from pupils' self reports of their experiences of classrooms and teachers' and their own actions were possible for Hull and North Suffolk cases where questionnaires were returned from each of the schools studied. In Birmingham returned questionnaires were only available from one of the three schools studied and so detailed analysis here or comparison with the other two case studies was not possible. In both Hull and North Suffolk there was a clear overall pattern in pupils' responses of regression from pre- to post-training towards the mid position, 'this happens sometimes' for most of the questions. So, from the pupils' perspective, it appears that many of the aspects of teaching and learning related to TEEP, that were asked about on the questionnaire, actually **decreased** following training. However, we are cautious about laying too much emphasis on these findings as this overall change in pupils' perspectives might just be a feature of many of the pupils not having been in a new class, with a new teacher, for long enough to have established a realistic view at the time they completed the questionnaires. The fact that, in most cases, the two groups of pupils sampled pre- and post-training were comprised of different individuals and, in most cases, were from different year groups studying different topics adds to the cautions with which these data should be read.

However, there were some cases where shifts in pupils' self reported experiences are worth looking at more deeply. For the purposes of this report, it was decided to include data where the reported change in experience is above the 10% level, and where the numbers of pupils sampled pre- and post-training are similar and large (above 50) so changes do not just represent a few pupils reporting different opinions. For example, in Hull there was a 16.6% increase in the numbers of pupils reporting after training that they never experienced using ICT in lessons for their own research, in quizzes or through simulations. This is interesting but may show, from the pupils' point of view, that ICT is not being used less, but in different ways.

One other shift worth reporting is the occasions that pupils reported that their teacher helped them to decide what activities were best for them to carry out. In both Hull and North Suffolk there was a shift to the 'never happens' category of 10%. Since the question item is connected with pupils' experiences of differentiation and how they take part in this, it seems at odds with findings for the increased amount of occasions that teachers were observed to have used differentiation in their lessons.

In North Suffolk pupils perceived that they were encouraged to answer questions more (a 13% increase in the 'a lot' category) and that teachers gave them more time (wait time) to answer questions (a 9% increase in the 'a lot category'). Both aspects are emphasised in TEEP training

and the findings here confirm observations of pupil behaviours in North Suffolk where there was a greater increase in the incidences of pupils answering questions.

Summary

Pupils' perceptions of their ICT experience and what this means to them in terms of their learning might have changed as a result of TEEP training.

According to pupils in Hull and North Suffolk teachers spend less time after training helping them decide which activities might be best for them to carry out.

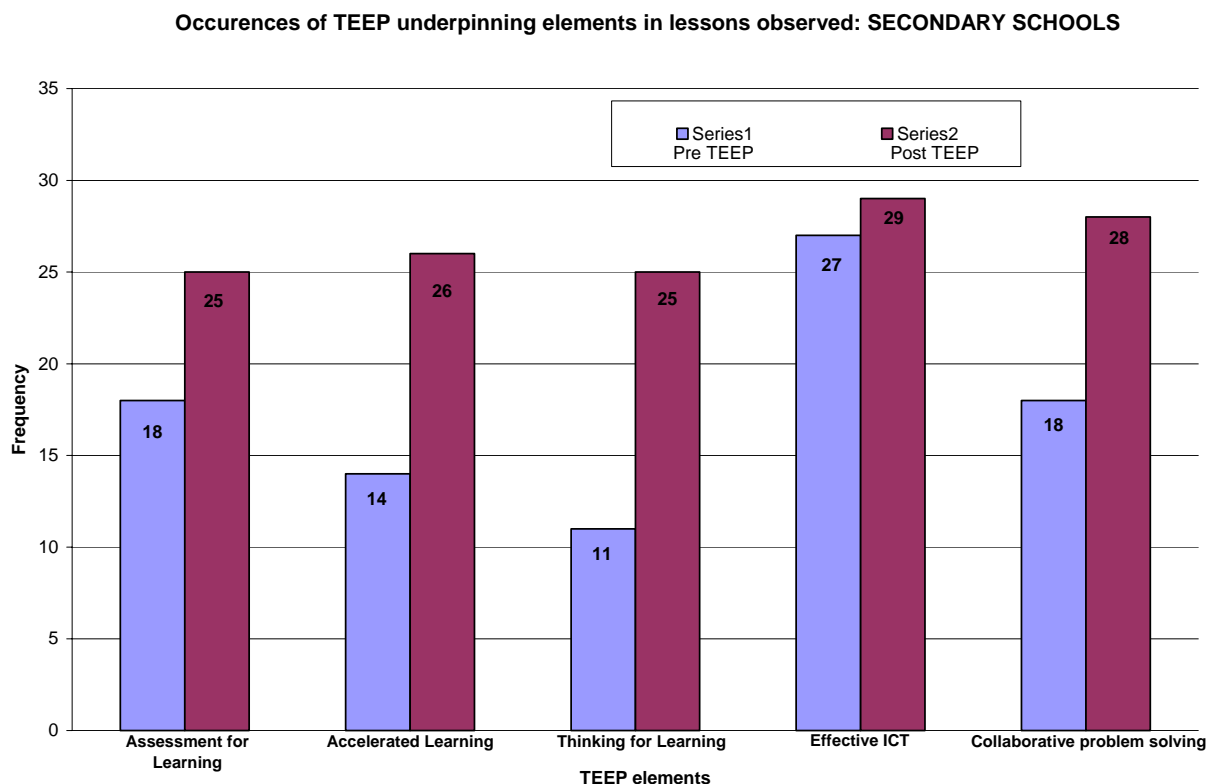
In North Suffolk pupils reported that they were encouraged to ask more questions and that the teacher allowed more time for answers to questions.

4.3. Findings related to the underpinning elements of TEEP

4.3.1. Post-training changes

The observed occurrences of all five underpinning elements of TEEP increased in lessons observed after training. The most dramatic increases were seen for accelerated learning five and thinking for learning, where incidences more than doubled following training. Large increases were also seen for assessment for learning and collaborative problem solving.

Figure 3.3.1. Occurrence of TEEP underpinning elements in secondary schools



4.3.3. Thinking for learning

Of the five underpinning elements, thinking for learning (TfL), was mentioned quite often (7 of 27) as a difficult area to incorporate in teaching. In one interesting case this appeared to be because of the teacher's views about learning on the basis of a previous study of Piaget's epistemology as part of an MSc course. This teacher assumed that 'higher order thinking' would not be appropriate until all pupils are ready to be challenged by activities requiring this:

Because I don't think the pupils are used to it (TfL) ... and you are talking about higher order thinking skills and they are not all at that level. In the Piaget definitions they are not all at the stage of putting the ideas together to make up those higher level frameworks.

In a different case a teacher was resistant to TfL on the basis that it was time consuming and inconsistent with teaching a content driven curriculum:

Partly, I think, because of the time it (TfL) takes up because we have got a content driven curriculum and a lot of the time we try to make sure that the kids have the knowledge in their heads and the understanding in their heads rather than thinking about how they got to that.

In other cases there was a feeling that closing the lesson with tasks requiring pupils to engage in thinking might be tiring or stressful both for the teacher and the pupils.

i. Assessment for learning (AfL)

This element of TEEP was unique in that no teachers referred to difficulties in adopting or integrating AfL approaches in their teaching. In fact one teacher actually volunteered this:

I think, it would be easier to say which ones (TEEP elements) are the easiest ... because 'Assessment for Learning', I had already started quite a lot of and that one I find it easier because of so much practice with it...

This confirms the earlier findings from post-TEEP observations of lessons where we observed significantly more effort being made by teachers on uncovering pupils' knowledge and on interventions to help students' new learning.

4.3.5. Collaborative problem solving

Although teacher observation data revealed an increased use of collaborative group work and pupil-pupil talk, several teachers (7/27) admitted to having some problems in using group work:

The collaborative work is quite difficult ... because ... trying to include that (group work) with the social skills that they have got, is quite difficult and I tend to, when I have got my bottom set, shy away (from using group work). They prefer to work individually.

I guess I am still working on ... Collaborative Problem Solving that doesn't involve three lesson long, all singing all dancing... trying to get smaller situations when they(students) have to work together ... I find that quite difficult still.

In some cases it seemed as if teachers were reticent to release their control and to give pupils the necessary autonomy to collaborate and solve problems for themselves. So maintaining a 'hands-off' approach was a challenge:

Sometimes I'm scared of letting them just go for it, particularly my GCSE groups because you just like literally, not spoon feeding them, but you want them to get the right answer and because you've got so much time constraints you do the problem solving activity with them or you know, you let them go at it and then you're like... oh it's not going right ... I'd better jump in now and save them. So I think I need to be a little bit open to them developing themselves ... because it is about them not about me.

In one interesting case of a teacher, who was observed to have hardly changed his practice as a result of TEEP training and indeed was reticent about the whole TEEP approach, it seemed as if using collaborative group work was a question of pupils' maturity and age. Thus, in his view, it might be suitable for sixth form groups but not for younger pupils:

I've no problem doing that (problem solving group work) again with year 12 and year 13 in fact ...I'll do that quite a lot and they'll ... look at problems and come up with solutions. For example again in government and politics, we looked at the reforms in the House of Lords and how would you reform the House of Lords ... I find that more difficult to do lower down the school. (In this lesson on Nazi Germany) I could have done ... how did Hitler make the Germans support him. But I would have found that at this level that the students would have needed an ... so much stimulus, that I would have found it a little bit self-defeating 'cos in the end I would have told them what I wanted them to find out, personally.

On the other hand, these comments reveal a typical frustration that many traditionalist teachers have with holding back on the need to inform pupils in rather factual ways or to communicate their views that they believe might be a more efficient use of their teaching time.

4.3.6. Effective uses of Information and Communications Technologies (ICTs)

In most of the five examples recorded teachers referred to their frustrations related to such matters as; internet access speed, the reliability of IWB technology, inequity of levels of equipment in different rooms or the problems of using ICT in a subject such as PE. In North Suffolk, however, a more sophisticated example was recorded of reflection on the effectiveness of teaching and pupils learning using ICT. One teacher in a middle school said that:

Although I used ICT very effectively, the challenges are whether ICT should be used by the teacher or by the pupils and whether it supports learning ... and I find that quite an interesting dilemma. Is using ICT supposed to be part of setting the learning environment and the learning objects and supporting that or is it supposed to be something the children are actively using?

Summary

According to teachers, 'thinking for learning' remains an area of TEEP that is problematic to implement, often because of its position towards the end of a lesson.

Where teachers have problems in developing and using more collaborative group work this is likely to be because of their perceptions of pupils' poor social skills, their reticence to give control of learning to pupils or their worries about the time needed to gain knowledge.

Few teachers were able to reflect on ICT and its effectiveness in pupils' learning; rather their concerns were internally focussed on their own frustrations at not having ICT resources to hand.

4.4. Other findings from teacher interviews

4.4.1. The TEEP learning cycle

Most aspects of the learning cycle (except 'presenting new information') were mentioned by at least one teacher as being problematic to implement. There was an overall impression that if the six part cycle was to be implemented in each lesson (usually of one hour) then this might be more difficult than if it was to be applied to two or more lessons in a sequence of learning. In one case a teacher was aware that, for the TEEP cycle to be effective, students would require some previous experience of, or contact with, TEEP-style teaching.

So at the moment because it is such a vast range ... of different students in there, just to get into the cycle itself (is difficult), because some of pupils are from a group that I had before who were more trained into other routines

The comment below was made by a teacher from a school in Birmingham where TEEP approaches have been adopted over a five year programme of training and development. The relative sophistication in understanding how the TEEP cycle can be perceived is obvious here:

Well, I did not aim to complete the six-stage TEEP cycle in the lesson, I never do. I have a constant discussion with people in school. I actually think it's very often inappropriate to try and complete all six stages in one lesson. People who try to force it into one lesson ... sometimes do not give the children sufficient time to demonstrate their understanding. They don't give sufficient time to produce the work. This lesson was focussed particularly on review...they came back and they are making their work better. But that's based on peer assessment and a review of other people's work... based on agreeing last week what the assessment criteria were going to be. The whole process of producing a newspaper has followed the TEEP cycle in that we have looked at newspapers, researched newspapers, found out how newspapers were written, looked at the codes and conventions of newspapers, then they have produced their own. So instead of being the TEEP cycle in one lesson it's been a TEEP cycle over a couple of months.

Interestingly, more comments (7/27) were made about the 'apply' phase of the TEEP cycle than for any other. In one case a teacher admitted that she ran out of energy and ideas when

planning highly interactive TEEP-style lessons meaning that the later stages of a TEEP lesson might not be as engaging for pupils.

I think starter activities are easy, so by definition, if I think one thing is easier, something else must be harder mustn't it? For me ...I think review and apply. I don't know if it is because by the time I get right round to writing the stuff I am a bit bored ... sort of my concentration span has gone a little bit and I am not as excited as when I start writing my starters.

Time constraints were mentioned most often as a reason for not spending sufficient time in developing well-embedded approaches that allow pupils to review their learning.

4.4.2. Teacher behaviours

Teachers referred to a number of aspects of teacher behaviours prominent in TEEP (see table in Annex 7). Perhaps, rather oddly, it was teachers in Birmingham who mentioned managing pupils' behaviour most often even though schools in both Hull and North Suffolk were known to have far more acute behavioural problems. In all of their interview responses teachers in Birmingham were more voluble and perceptive, perhaps a product of their schools' longer term involvement with TEEP and the relative degree of embeddedness of TEEP as whole school action. Often behaviour was seen as a problem when trying to use TEEP approaches with classes that comprised lower ability pupils or for whom a more academic curriculum has been deemed less appropriate. For example, on pupils' behaviour, a teacher in Birmingham said this:

I think I sometimes find the classroom management difficult simply because of that class, not that it's their fault but there are so many, they are an alternative curriculum group. I've only got one teaching assistant and they are quite needy – Miss I need this and I need that. So it's quite hard to leave one group and then find yourself talking to another group ... that can be quite hard actually ... they are trying to get attention because I sometimes feel they don't get enough of me in the classroom.

Three teachers commented on classroom interactions with pupils. In the example below there seemed to have been a clear link between an improved interaction with pupils and the overall management of the class.

I mean my teaching ... is much more interactive and my expectations have always been high but which one of these I would actually find difficult to do? Well my classroom management is better but that's ...to do with the interactive teaching as well. I think my relationship with them is really good and there are some interesting characters in there but we get on ... really well.

In Birmingham one of the teachers interviewed commented on interactions in terms of her attempts to raise the level of demand on pupils in the questions she used:

It's also I think on the questioning skills, trying to make sure that we're using the higher order questioning skills and thinking skills ... I'm still trying to get my head around that one. It's very easy to get the recall and the evaluate questions OK ... but trying to move them on to the analysis ... trying to get that, that's one area that I need to work on.

As before there were one or two comments that reinforced the idea that there is still, in teachers' minds, some work to do in getting pupils to converse with each other productively as part of collaborative group work:

There are still some students who find it difficult to work with people that they are not used to working with and ...they are sometimes very shy with someone they are not used to talking to in lessons or at break-time. It is most ...with the speaking tasks and they don't normally talk to each other and it is quite difficult but in a way it is good for them to be able to do things they don't normally do ... but it is challenging and difficult.

4.4.3. Additional support for TEEP

Towards the end of our interviews with teachers we asked for feedback on what might help TEEP implementation (Annex 3, question 5). The main categories of responses that emerged are shown in the table in Annex 7.

Two of the more frequently suggested actions (in 5/27 responses) were about opportunities to observe other teachers using TEEP approaches or to share practice through formal or informal meetings at which collaborative planning or discussion of teaching might focus.

Yes I think one of the things which is very useful to do is to go and see a subject which you don't normally teach, but being able to identify TEEP type behaviours, like collaborative learning, like peer assessment, like self-assessment. That is very useful because you can actually see the sort-of strategies in place but in a different setting.

I think as a department we could maybe get together on a more regular basis and share what we have got. I mean obviously we try and do that as much as possible. But with obviously the time that that takes to get together as a group it would be better... you know with a specific focus ... say on thinking for learning or some other bit of TEEP.

In Birmingham schools, we recorded comments showing that these sorts of strategies are already in place and are endorsed and facilitated by senior management. It was interesting to note that teachers' keenness to continue and even to increase that collaborative whole school approach was at the forefront of their thinking, showing that TEEP is still very much alive and ongoing even after five years of development.

Continued collaborative work within my department ...is very good. We are very supportive and quite often you will find us after school, you know, just trying things out and just saying, oh that's good, or mm! ... don't think that will work very well ... or try that one out ... you know ... continued work like that really ... we are never tired of it.

The same teacher was also aware of the importance of a critical mass of teachers in a school or department who are *au fait* with TEEP approaches so that the work individual teachers try out with their pupils is seen as being consistent and so a team of teachers are working to common goals. The advantage of having fellow, TEEP-trained teachers is that, if problems occur, they can be ironed out through immediate professional dialogue:

I think if everyone else is on-board in your department... then you feel confident in what you're doing and are able to share your ideas ... as well as sharing your ideas with other colleagues who have been on TEEP. We are quite lucky that we speak to each other and we have meetings all the time and that we share these ideas with

everyone. So if that continues that's great because then you get that support in the classroom .. you can go back to someone and say, that didn't actually work, so how did you do that.

4.4.4. Teachers' additional comments about the impact of TEEP

To close the interviews we provided an opportunity for teachers to tell us about any other examples of impact that TEEP might have had on their teaching (Annex 3, question 6). Mostly, comments reiterated or expanded on the issues and themes discussed in the sections above but, in one or two cases, some new insights emerged. In some cases comments suggested that TEEP increases the likelihood that the teacher will be more adventurous – more likely to take risks in the design and implementation of their teaching:

I think if anything it has made me more adventurous in the things I am willing to try out and I don't worry too much if it doesn't work, whereas before there was a reluctance to try some of the techniques because you think 'well if it all goes wrong, how do I get this class back on track?' I think getting the kids out to talk about what they have done and they get used to it and enjoy it, so yes it does improve your lessons and you do enjoy it.

I think it's (TEEP) kind of made me more adventurous in some ways and to actually think about how they (Pupils) perceive their own learning, as children because you are always taught how you should teach and what you should and shouldn't be doing but you're never really taught how they are learning themselves, if you know what I mean? So, it kind of opens your eyes, makes you think about different techniques that you can use for the students and it does make a big difference.

In this second comment and in several others there was the feeling that TEEP provides an opportunity for deeper reflection on how teaching is experienced through their pupils' learning – 'seeing it through their eyes'. Another comment that was quite common was that TEEP training provides a way of linking previously encountered but seemingly disparate theoretical perspectives and practical suggestions into a more coherent whole:

...and so that was the good thing about the TEEP training ... it's given us lots and lots of new ideas and ways of doing things but also when you look at the big picture, it's not asking us to reinvent the wheel. We're not going out there and having to do anything too drastically different, it's just trying to make sure we are all doing things in a structured and better way ... it's like reinforcing some of the good practices we're doing but also giving us even more (good practices) to put into our lessons.

We listened to anecdotal, informal comments made by teachers during our own experiences of TEEP training that suggested some were worried that teaching in a 'TEEP way' might be highly demanding and tiring and so difficult to sustain. From the comment below, it seems that for some, higher levels of pupil engagement following TEEP training can actually result in less tired and hence reinvigorated teachers:

I would say that I feel that I've got more time to do things in the way that I feel more confident about it, in tasks which the students are actively involved and that I can work there guiding them more than the students giving a lot of input from me and I think because of that I feel less tired [laughs] so that's quite good yes.

Summary

Perceptions of the implementation of the TEEP learning cycle are often a product of the amount of time the school has been involved with TEEP approaches.

Teachers report more problems in developing the 'apply' and 'review' phases of the TEEP learning cycle often because of lack of time or because more of their energies have been devoted to establishing dynamic beginnings to lessons.

TEEP trained teachers appreciate continuing opportunities to network ideas through collaborative discussions of teaching and learning. These desires do not diminish after a school's long-term involvement with TEEP.

Having a 'critical mass' of TEEP trained teachers in a department or school helps development as approaches are consistently applied rather than being seen as the responsibility of just one or two teachers.

In some cases TEEP training results in more adventurous teaching and risk taking.

The TEEP framework helps teachers place theory and practice gained from other training into a coherent whole allowing them to better appreciate how their teaching and is translated into the learning experienced by pupils.

4.5. The coordination and management of TEEP in secondary schools

Discussion in this section draws on the findings from interviews with key personnel in schools responsible for the coordination of TEEP training and the subsequent development of policy and programmes that attempted to embed TEEP at departmental or at wider school, school cluster or LA level. In all cases these were people who had a deep understanding of TEEP and its underpinning pedagogies either through additional training (at least to Level 2 and in most cases to Level 3) and/or through previous personal involvement with the Cramlington team.

Annex 4 provides details of the questions asked at these semi-structured interviews. The interviews probed the overall impact of TEEP; reasons for the adoption of TEEP; the extent to which TEEP was being implemented across the school; the aspects that were being successfully embedded into practice and the factors facilitating and hindering the adoption of TEEP. Transcripts were selected to represent the twelve most important personnel involved with TEEP in the three secondary school case studies in Hull, North Suffolk and Birmingham.

Content analysis was used to group similar emerging themes and identify patterns. Care was taken to check emerging conclusions by seeking contradictory evidence in the transcripts. What follows are the key points from this analysis. These are presented under a series of headings. Each heading represents an aspect of TEEP explored in the interviews and/or emerging from the analysis of the interview transcripts.

4.5.1. The overall impact of TEEP

The overwhelming view of interviewees was that TEEP has had a positive impact on their school, its teachers and its pupils. Of course, many schools are involved in several change initiatives simultaneously and thus it may not be so easy to attribute particular changes to particular actions as voiced by one coordinator thus:

.. as far as the school is concerned it is difficult to measure the impact of TEEP but if you look at all the indicators, this school has moved on considerably since we started to do TEEP.

(Coordinator – North Suffolk)

Although of course subjective, other interviewees were much bolder in their assertions on the impact of TEEP. Viewpoints related to the culture of teaching and learning within the school, to teachers and to pupils:

I think it's definitely made children far more enquiring, I think children are far less passive, particularly with the teachers who are very experienced in using the programme. The teachers are far more comfortable with allowing the children to discover and I think that is a really big issue in the classroom. Children are very often spoon fed information, they are very passive learners and the whole responsibility attitude of needing to take responsibility for them learning something...some teachers struggle with quite a bit with that.

In terms of influences on the whole school the following quotation illustrates how TEEP impact grows as more pupils are taught using the approaches for which teachers are trained:

More children are engaged in the learning, more kids are buying into it and therefore the overall feel of the school is that more children are engaged in what is going on. Well we got involved originally because I knew it was high quality. The reasons we have continued to be involved is because it has an impact. If you observe teaching and learning across the school you can feel the TEEP. The approach is coming through.

(Head teacher - Suffolk)

Interviewees also reported on practices in which pupils have had to change the way they work in lessons and how they have been able to do so and to profit from these changes to their learning behaviour. The following quotation supports of this view.

We have students who come through the middle-school system who are very much used to the teacher giving them the information and then they reproducing it and that being the way learning works, so we are almost having to re-educate them about their role as a learner as much as we are educating the teachers about their role as facilitating that learning and that has been a troubled thing to start off with. They soon cotton on, they soon switch onto it and get a lot out of it but mainly because they are

amazed at what they have managed to accomplish over the course of an hour or 2 hours what they can actually come up with, they think 'wow, look at what I have just done' and they get a little bit more confidence and that has been a big feature to get them on board.

(School – North Suffolk)

Another interviewee spoke of the positive feedback from an OfSTED inspection stating:

we have just had an OfSTED inspection he said was that it is a truly inclusive curriculum and he said about the lessons there was a definite improvement in the number of good and outstanding lessons from the previous OFSTED. That is measurable. Since our last OFSTED we have had 3 years of developing through the TEEP

(Head teacher – North Suffolk)

Finally, in dealing with impact, it is important to note that TEEP has had a beneficial impact on teachers. The professional development opportunities and training offered by TEEP have helped to harness their talents and direct their energies to more effective classroom practices, for example:

Yes, I would say that we are actually really starting to see things change now, where we are getting reports back from head teachers, senior leaders within schools, talking about the teachers who have been enthused and their teaching has actually improved as a result of TEEP, so what they are actually saying is, as part of their regular regime of observing lessons, they are starting to see those improvements with other teachers. They are getting feedback from the children as well that there is great improvement with the teachers who pick up the programme best.

(Coordinator - Hull)

4.5.2. Making a start with TEEP

A number of factors have influenced schools to become involved in TEEP. Significant among these is the importance of personal networking of staff who have been in schools where the TEEP ideas have been developed and/or used. The flow of members of staff from one school to another, and from one area to another, as they climb the promotion ladder and gain increasing levels of responsibility and influence has been quite instrumental to schools' participation in TEEP. The personal endorsement of TEEP by senior practitioners is highly significant. Further to this, some local authorities seeking ways to support schools to improve the levels of pupil achievement have brought TEEP to the attention of schools and encouraged application for TEEP training. In other cases (a minority of the situations investigated) participation has been a personal initiative by a teacher. Regardless of these factors, which may be seen more as ways in which TEEP was brought to the attention of schools, two important factors have influenced participation. One is financial. Interviewees spoke of the importance of receiving training without the need to pay fees.

We were looking at developing aspects of teaching and learning and it fitted in with that and initially the courses were funded so we didn't have to fund them personally. We had to release people from teaching and cover but the actual cost of the course was originally covered for us. So apart from anything else it was cost-effective!! So that is the honest answer, but it did fit in very well in with what we were trying to do in terms of developing certain aspects of teaching and learning

(North Suffolk – school)

However, there is no question that the main reason for schools to fully engage with TEEP is that the approach held the promise of outcomes that the schools were seeking to achieve *i.e.* there was congruence between the development priorities of the school and the approach, aims and objectives of TEEP. This is evidenced in the quote above and also from the example as follows.

So the main thing we were looking for was to develop a consistency across the school and that was a model we thought we could see how that worked with our staff
(North Suffolk – school)

While the quote above is from a teacher coordinator in a school that took the initiative on themselves, even when the Local Authority was involved, it was the realisation that TEEP offered something that the school was already seeking that triggered involvement, as indicated below.

.. because the LEA (in Hull) had been in and we had been seen as a Department who wasn't doing as well in terms of results and everything and teaching levels weren't quite as good as we would have liked them, satisfactory or below so we thought TEEP would be a good way of getting the teacher behaviours right to help the classroom climate
(Hull – school)

In Hull there were whole LA issues of poor pupil performances, particularly in science, that were key drivers for adopting TEEP:

The main reason was the low attainment with secondary schools in Hull. Hull has traditionally done very badly in terms of pupil achievement, always within the bottom 1% or 2% nationally, so along with trying to do lots of other things to improve things in Hull, TEEP was suggested as a project that the LA might pick up on. They initially tried to implement TEEP in a large way right across all of the secondary schools, English, Maths and Science ... that was turned down but they were given the Science project ... Science was doing particularly badly, still is doing badly, but I think we are improving and that is why Science was picked.

(LA coordinator in Hull)

For some schools it was important not just that TEEP offered the promise of outcomes that the school had already declared it was seeking, but that the basis of the approach being advocated was well grounded in theory and that TEEP offered the added value of linking staff into a national network. This is illustrated in the following quotation.

We got involved with TEEP as a way of showing keen staff that actually the in-house training was based on sound theory and national ideas and also to enable staff to meet like-minded staff from other schools and begin networking.

(school – North Suffolk)

This is consistent with the views expressed by some teachers interviewed that TEEP provides a coherent framework through which a plethora of seemingly disparate and sometimes confusing other initiatives now make more sense.

4.5.3. Networking

TEEP is a national project and one of the points that emerged from the analysis of the interview data was the extent to which schools saw themselves as part of a local or national network and that making use of these networks and opportunities to work together either locally or nationally or both is important.

It seems clear that, although there are clusters of TEEP schools, there is variation on how they see their relationship one to another and to the national project. Much here seems to depend on the role perception and actions of any local coordinator and the longevity of such an appointment. In North Suffolk there was an original thrust concerned with transition and hence the coherence, continuity and progression in curricula and pedagogy but as TEEP grew it seemed that word of mouth and the good reputation of TEEP took over as key factors in the further development of the network:

... with our second cohort tried to open it up a little bit more (from just our local and feeder middle schools), which wasn't that difficult because with word of mouth people were phoning up and saying we would like to get involved as well.

(Coordinator – North Suffolk)

Another interviewee in North Suffolk reported that:

Our continuing involvement also has been facilitated by the proximity of the training at the school only 15 minutes down the road,

(School – North Suffolk)

Local networking with other schools was seen as important as illustrated as follows.

I think that has been the best thing, we have had TEEP Network Meetings (in the LA) so they have helped me personally develop with my TEEP lesson and then we share resources so that has helped other people too I hope. We had XXXXX (the LA coordinator) come in a few times and I think it really good that help that is outside school and having resources from other schools because then you get new ideas and then you get your own ideas from that and things like that I think has really helped.

(school - Hull)

Some schools also valued being part of a larger national network and the professional benefits that this can bring

TEEP is a really good way of allowing staff to network and allowing staff to see that what we are doing is part of a national programme and its not just an isolated case and is actually good practise.

(school - North Suffolk)

For one interviewee, it was the external support of the network, more than the in-school support that led to the development of TEEP. The school was more a facilitator of training rather than a driver for change.

so the things that has helped us most has been getting together and external things like meeting with other TEEP trained teachers and that has really what has pushed it forward but not directly from the school apart from to allow us to get the training.

(Interviewee 6)

In Birmingham schools TEEP has been a feature for over five years and here highly developed in-school structures, as well as cluster wide networking, are important

... from the beginning (five years ago) we was set up a teaching and learning group ...that was very open and anybody to come and share good practise and that worked really well, people liked that. We realisedthis is going back more than five years ... that classroom teachers very rarely get the opportunity to talk about the good things that they are doing, they very rarely get the chance to talk to each other 'oh I did this today and it went really well and the kids did this and I am really pleased with it' those kind of conversations are snatched people mention it 'oh I had a really good lesson' and then they are off to the next one, and the other member of staff wont get the opportunity to say 'what did you do and how did you do it and show me it'. So that then developed into the Teaching and Learning Committee and we have one business meeting at the beginning of September of every year where we set the agenda and we have about 6 meetings across the course of the term ...

(School coordinator and cluster/national TEEP trainer)

4.5.4. Factors facilitating development of TEEP

In looking at the adoption and impact of an educational innovation it is important to try to identify those factors that are perceived to have been facilitators. Thus, the interviews with staff responsible for leading and co-ordinating TEEP in schools explored such factors. Most respondents cited more than one factor. Leaving aside the excellence of the training provided by TEEP, which was recognised universally as of crucial importance, a range of other factors was identified by interviewees. These were reported as follows and can be recognised as not uncommon in the success of other educational innovation.

Collaboration

Recognised by many interviewees as an important facilitator of TEEP, was the extent to which teachers worked together in collaborative endeavours either in school or across schools. In referring to inter-school collaboration as a facilitator for the adoption of TEEP one interviewee stated:

I think that has been the best thing, we have had is TEEP Network Meetings so they have helped me personally develop with my TEEP lesson and then we share resources so that has helped other people too I hope.

(school - Hull)

The following quote illustrates how one interviewee saw the importance of external collaboration in relation to the school commitment to encourage exchange of practice and dissemination of ideas.

... external things like meeting with other TEEP trained teachers and that has really what has pushed it forward but not directly from the school apart from to allow us to get the training.

(School - Hull)

Structures

A number of interviewees mentioned the importance of having structures in place to facilitate TEEP. Comments focused on creating time and opportunities for dialogue and training. The following provide examples of such structures that were reported.

The structural things, like the use of the training time and the PD days and we have desegregated a couple of PD days this year, which has given us time to do evening sessions, so these can be focussed much more on specifics around teaching and learning, so that has been very useful. We obviously had a meeting time for the TEEP group to work

(School – North Suffolk)

We have organised our time so we can have 1 hours planning time every week which is focussed on helping teachers to improve the way they help children to learn.

(School – North Suffolk)

Leadership and management support

While no interviewee spoke of their being a TEEP ‘champion’, several recognised that strong leadership and senior management team encouragement and support were important facilitators to their successful implementation of TEEP. To illustrate this, one interviewee enumerated the different levels at which management facilitators worked:

... most important ... is have you got the head teacher behind you when you are working with it (TEEP). If you haven't got the head teacher pushing it right from the very top it tends to be less successful, so where you have got the head teacher in the senior leadership team engaged, involved, is where we have the greatest success (in Hull schools), which you might expect.

The next level down then would be the strategy (National Strategy) manager within the school. The strategy manager would be the senior leader who would engage with the consultants within the LA ... and would have a big influence on teaching and learning, so if they are involved as well, again you have more chance of success.

Moving down..., it's at the departmental level. If the whole department is convinced about what is actually happening and looking to move things along, again more chance of success

Also prominent in interview responses was the recognition of the crucial importance of a senior figure with a ‘hands on’ role in TEEP. This is well illustrated thus:

In effect he (the school's coordinator for TEEP) looks after the whole teaching & learning agenda. He is a member of the leadership team, (Assistant Head Teacher) and he drives forward the whole agenda in effect. So he is also responsible for organising the CPD training. He ensures that the whole TEEP programme is at the heart of our CPD

(Head teacher – North Suffolk)

4.5.5. Factors hindering development of TEEP

Just as it is important to try to identify those factors that are perceived to have been facilitators, so it is equally important to try to identify factors that are perceived to hinder an innovation so

that these may be overcome. Thus, the interviews with staff responsible for leading and coordinating TEEP in schools also explored such factors.

Staff related factors

Two issues merged from analysis of responses, one concerned with teachers' attitudes to training and the extent to which they might accept innovation and the other with staff turnover. On teachers' attitudes one school based coordinator who is also part of the national training team for TEEP commented:

I don't think there is a school in the country where you don't have people who are 'well I have been doing this for 20 years why should I change now?' You always have a few of those, your 'radiators' and your 'drainers' as they call it!! And everybody has got drainers.

I think in retrospect if we were doing this again, what happens when you bring something new into a school is you have lots of what you call 'Bright Sparks' – not necessarily young people, but people who are willing to have a go at anything and that is nice but they tend to have a go at anything anyway ... then you get those people that wait for a little bit and see whether it is worth them having a go because if they are going to do it, they don't mind doing it but they are not going to do all that work if its not going to get embedded and then you get the 'arms folded you are having a laugh I am not doing that' brigade and I think its nice when your bright sparks run with something but I think sometimes that can put off people who would step forward and have a go and I think if it was to do it again I would probably, some of the people in the middle, I would probably approach those quicker than I did originally.

Resources

The most common remarks connected with resource allocation in schools to enable development of TEEP were about time. On the one hand some managers commented on lack of time for sufficient planning and on the other a shortage of time to meet together to collaborate and debrief learning approaches:

I think planning time is essential for TEEP type lessons, and there is never-enough planning time is there?

(School – North Suffolk)

So hindering is time to plan to incorporate in lesson plans, having said that at least half of every PD day that we have had since (2)

(Coordinator – North Suffolk)

We have been given one evening after-school session but it was on at the same time with lots of other sessions so we would have needed more time than that to speak to other staff because we only impacted on a very small number because it was up against things that people have been told you must attend this you must attend that and there were many other people left who could opt for our session. So I think it's the forum to share it with other staff and the time to work together on it.

(School – North Suffolk)

School structures

Two interviewees indicated that the length of teaching periods had proved a barrier to TEEP but, more positively, one also reported that this would be overcome with a change in the school day.

The other thing that I think may have limited it but wont in the future is length of our periods which is 50 minutes

(School – North Suffolk)

The other interviewee was more specific in identifying the nature of the problem.

Collaborative Problem Solving is very difficult to do in-house, so maybe the timetable constraints that we have at the moment make it difficult for people to have a go at that sort of approach. Also lessons that get one lesson a week, it is very difficult to do a Collaborative Problem Solving approach in 1 hour and then to spread it over 3 weeks when you only have 1 hour a week becomes difficult. I think people are very interested in that approach but timetable constraints at the moment make it difficult

(Middle school – North Suffolk)

School structures

Uniquely in Hull the poor behaviour of pupils in some of the schools (particularly in three of the four schools in the case study) was of concern in the effective advancement of TEEP to make overall improvements in schools' standards:

I would say the biggest problem (for implementation of TEEP) is behaviour ... where we have schools that are struggling to maintain effective learning behaviours ... that makes it most difficult and that tends to be our schools which have got the greatest literacy problems because they are schools in areas which have a low social and economic intake in terms of the students, so those are the ones who struggle most and of course that is what ... is at the root of all our problems.

(Coordinator – Hull)

Summary

Whilst it is not always possible to separate the effect of TEEP training from other parallel initiatives in schools, those responsible for leading change describe definite positive impacts on pupils' attitudes to learning and their ability to become independent learners.

Senior managers in schools are beginning to link high quality learning and the most improved pupil engagement with lessons delivered by TEEP trained teachers.

Factors affecting involvement with TEEP include its congruence with existing aims for development; assisted costs of training; approval and endorsement of senior managers and the chance to join an initiative supported by a national network.

The organic growth of TEEP in local clusters of schools and LA networks depends as much as anything on word of mouth communication on the positive advantages of its approaches and methods. LA wide meetings that share TEEP approaches have helped drive development forward.

In Birmingham schools the longevity of involvement with TEEP has allowed development of in-school structures that support further development through regularly held and very focussed training sessions.

Strong involvement with TEEP and support for it at senior and middle management level is one of the most crucial aspects of successful implementation of TEEP.

Targeting teachers with the right mindset likely to help them accept highly innovative teaching strategies is important in the early stages of implementing TEEP.

Sufficient resources should be allocated to help teachers increase time they spend planning and lessons and meeting to discuss outcomes.

The short length of lessons may hinder use of some TEEP approaches including collaborative work and training might need to reflect on how this can be overcome.

4.6. Analysis of attainment data

Data presented here were extracted from the database providing attainment statistics for national tests and examinations for all schools and LAs in England (DCSF, 2008). KS3 SAT results (percentages of pupils achieving the target level 5 or above) and percentages of A* - C GCSE grades for each school in each case study are compared with average results for the same years for the whole LA. At KS3, results are provided separately for the three core subjects English, mathematics and science. Data are reported for two years: 2005, before the start of TEEP Phase 2 and 2007, by which time TEEP might be considered to have had an impact on results. Data for 2008 are not provided as the marking problems for KS3 SATs meant that levels are at best unreliable and also because a full analysis of GCSE grades was not available at the time this report was written.

One school from the Hull case is excluded from this analysis as TEEP was only introduced from 2006. One school from the North Suffolk case is excluded as it is a middle school with national testing only as Key Stage 2.

Table 4.6. KS3 and GCSE attainment data for 2005 and 2007 compared

Percentages of pupils attaining level 5 or above in Key Stage 3 National Tests and percentages of pupils attaining 5 or more GCSE grades A*-C.

(Figures in parenthesis show changes in percentages from 2005 to 2007)

Case	School	2005				2007			
		KS3 (% level 5+)		GCSE		KS3 (%level 5+)			GCSE
		En	Ma	Sc	A*-C	En	Ma	Sc	A*-C
Hull	A	59	68	56	49	70 (+11)	75 (+7)	62 (+6)	53 (+4)
	B	46	43	41	45	45 (-1)	50 (+7)	43 (+2)	46 (+1)
	C	56	49	47	31	46 (-10)	51 (+2)	4 (-3)	48 (+17)
	All LA	56	59	54	44	59 (+3)	65 (+6)	57 (+3)	52 (+8)
North Suffolk	A	64	67	65	54	73 (+9)	75 (+8)	78 (+13)	66 (+8)
	B	69	68	70	60	72 (+3)	72 (+4)	71 (+1)	62 (+2)
	C	78	81	87	55	79 (+1)	85 (+4)	86 (-1)	60 (+5)
	All LA	77	75	75	58	76 (-1)	77 (+2)	77 (+2)	62 (+4)
Birmingham	A	83	69	57	58	83 (0)	79 (+10)	77 (+20)	68 (+10)
	B	54	60	52	55	76 (+22)	75 (+15)	75 (+23)	46 (-9)
	C	97	93	81	78	92 (-5)	89 (-4)	83 (+2)	81 (0)
	All LA	74	74	70	57	74 (0)	76 (+2)	73 (+3)	62 (+5)

In seven of the nine schools where data were analysed, TEEP schools showed improved performances between 2005 and 2007 when compared with overall improvements in LA averages for the same period. Of course it is impossible to say that these changes are associated only with TEEP training or the specific changes in teaching behaviours and learning activities that TEEP promoted. As in many other studies in educational settings, simple causal relationships are unlikely. At the same time as TEEP training and its outcomes were implemented there were other efforts to raise standards, particularly in the core subjects, promoted by LAs and through the National Strategy. It is, however, quite possible that TEEP acted as a catalyst resulting in a 'Hawthorne effect', where specific training of a few teachers had a knock on effect within the school as a whole ultimately driving change, whether it be from TEEP or from local or national initiatives, in more coherent and successful directions.

Changes were most noticeable at KS3 reflecting the level of focussed TEEP training effort in many of these schools at this Key Stage. The most spectacular gains in KS3 attainment were made in two schools in Birmingham (schools A and B in Table 8.4.), in one school in North Suffolk (school A) and in another in Hull (school A). In all four of these schools we know that TEEP was implemented as a whole school approach with high levels of support from senior managers and other teachers in the school. In these four schools gains were much larger than gains for the whole LA but not necessarily in all subjects. For example, in school A in Hull, improvement in performance in English was almost three times that for all LA schools whereas in maths it was in line with the LA trend and in science it was twice that of the LA. In North Suffolk, in school A, there was improved performance in all three core subjects but particularly so in science (+13%). This probably reflects the larger proportion of teachers in the science department that received TEEP training when compared with the situation in maths and English departments.

In one school in Hull (school C) the changes in KS3 attainment were much worse over the two year period than in the LA as a whole. Interestingly this was not the case at KS4 where, over the same period, the level of A*-C GCSE grades increased by almost three times the LA average. These changes may reflect the priorities of the LA and the school for raising performance from a very low level (31%) in 2005. It was also the case that this school was in very challenging circumstances over this period, including poor OfSTED inspection reports and a high turnover of senior and middle managers.

Summary

Gains in attainment were most noticeable where TEEP was introduced as a whole school initiative supported by senior managers or has been embedded over a long period of time (as in Birmingham).

Where a critical mass of teachers has been trained in a department (at least half or more), implementation of TEEP over a two year period has a noticeable affect on pupils' performances, particularly at KS3.

In schools that face challenging circumstances, introducing TEEP might not be a way of transcending the difficulties that the school faces and so any changes are less likely to be reflected in the performances of pupils in the short term.

5 FURTHER EDUCATION (FE) COLLEGES

5.1 Background

One target group of expansion of TEEP training was in Further Education (FE). Here the evaluation was to explore differences in training needed to teach older students that involve learning and work-related training in settings that are often very different to those found in schools. Thus this second phase of evaluation of the TEEP programme presented an opportunity to observe the TEEP framework applied in various settings and classes at two FE colleges in England. The evaluation involved both pre- and post-TEEP training observation of tutors to assess whether there had been any impact on the learning environments for students. Pre-training observations took place up to one week before training and the post-training observations up to 3 months after. The two FE colleges included in the evaluation were Manchester and York. The evaluation helps to draw lessons from diverse TEEP experiences where features of training included; the use of Advanced Skills Teachers (ASTs), the development of specific TEEP frameworks for teaching vocational subjects and the production of subject specific resources to enhance effective learning in the classroom.

The TEEP training carried out at the Manchester FE college was a shortened and adapted version of the level 1 training operated over two days instead of the normal five. This shorter version was agreed by the college's management board partly to add value to its existing in-house training programme and to help tutors enhance their delivery of theory lessons related to learning of construction skills (bricklaying, carpentry, joinery and plastering). At the end of the two-day TEEP level 1 training the aim was that tutors should be familiar with the TEEP learning cycle, its underlying elements and effective teacher behaviours.

In contrast to the Manchester FE college model, tutors at the York FE college who participated in the evaluation exercise underwent the full 5-days of level 1 TEEP training. However, the College has since designed their own version of a TEEP course called 'Toolkit' which is operated in-house over three days. The 'Toolkit' course includes elements of TEEP and focuses on subject learning using peer-coaching and is part of a wider development in further education. The 'Toolkit' course is structured in two parts, the first consisting of two days of training on the TEEP frameworks and the second where participants are engaged in coaching and action 'learning sets' involving pairs of trainers and trainees over a two month period. There is third day of training following this second part that involves feedback and sharing of practice.

Although tutors from MANCAT and the York FE college underwent different versions of TEEP training, common aspects of the TEEP framework were incorporated in both. However,

lessons and the teaching styles of tutors at the two colleges varied substantially, partly as a result of the very different subjects taught. At the Manchester FE college, tutors' subject areas included brickwork, plastering, carpentry and joinery while at the York FE college, tutors' subject areas were in health and social care, the entry award and in child studies.

5.2. Observation of lessons

A total of 10 pre-training observations and 13 post-training observations were carried out in the two FE colleges. The patterns arising from analysis of the data from both colleges are discussed individually first before considering any differences between them. As for the chapter on secondary schools, the graphs included here show differences in activity or behaviours as a mean percentage of the total lesson time observed, following TEEP training for the sample as a whole. Annex 11 summarises the observation data for the FE colleges.

5.2.1. Classroom Organisation

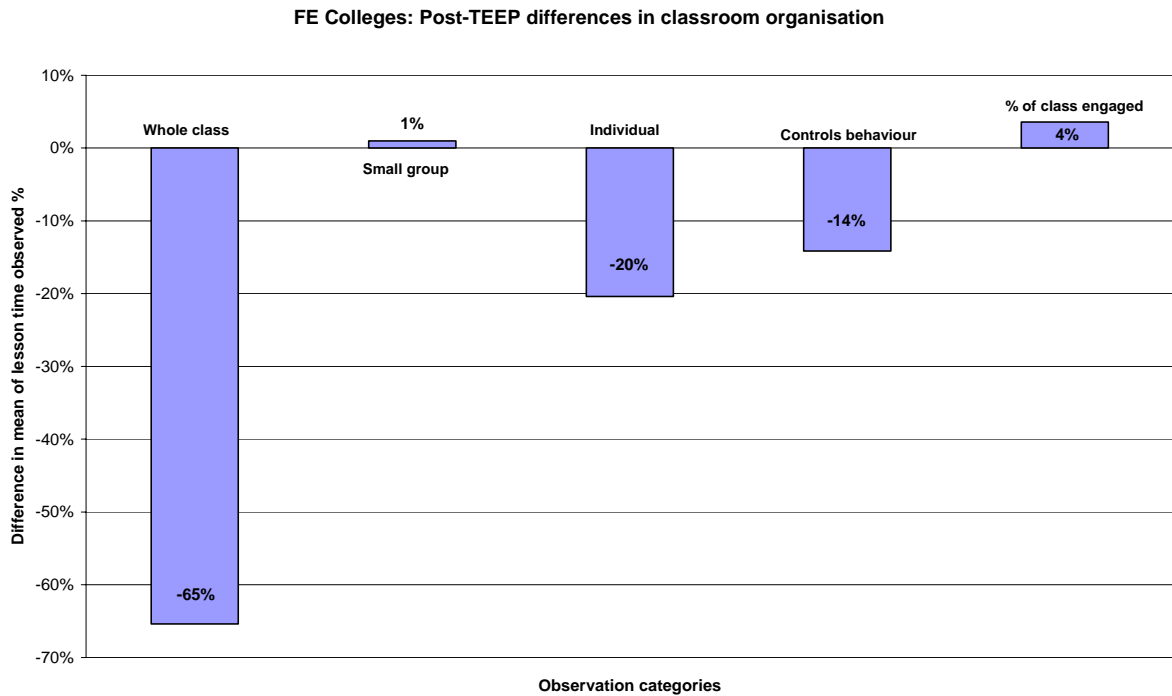
At both colleges, the most common mode of classroom organisation before TEEP training was for tutors to adopt a whole class approach that involved students following common activities set by tutors. After TEEP training, there seemed to have been a very marked fall in this approach shown by all tutors. One explanation is that this was the result of tutors using more small group work, though close inspection of the post-observation data showed that for the lessons observed this was only true for three of the four tutors at The York FE college. At the Manchester FE college group work was not common practice for theory lessons before or after TEEP training two.

Students from the Manchester FE college were described by the Head of the Construction and Skills department as 'students of all abilities ...mostly at the lower end of the (ability) range' (see section 5.4). At the York FE college, tutors recognised that many of their students have problems with basic literacy and behaviour. As a result tutors at both colleges admitted that many of their students tend to have limited attention spans, difficulty in communication and low self esteem. At there was a noticeable fall in the amount of time that tutors spent controlling behaviour. A similar fall was not seen at the Manchester FE college indicating that TEEP training may have and very different impacts at the two colleges.

Following training there were wide variations in the amount of time tutors spent adopting more individual forms of teaching and in controlling students' behaviour. Tutors at the York FE college seemed to have increased their behaviours in these two areas to a greater extent than their colleagues at the Manchester FE college did. Compared with the secondary data discussed in the last chapter there was a very small rise in the percentage of the class

engaged in post-TEEP sessions observed but this was not surprising since pre-training levels for tutors at both colleges were around the 90% mark.

Figure 5.1: Classroom organisation: Post-TEEP differences for all observations in FE Colleges



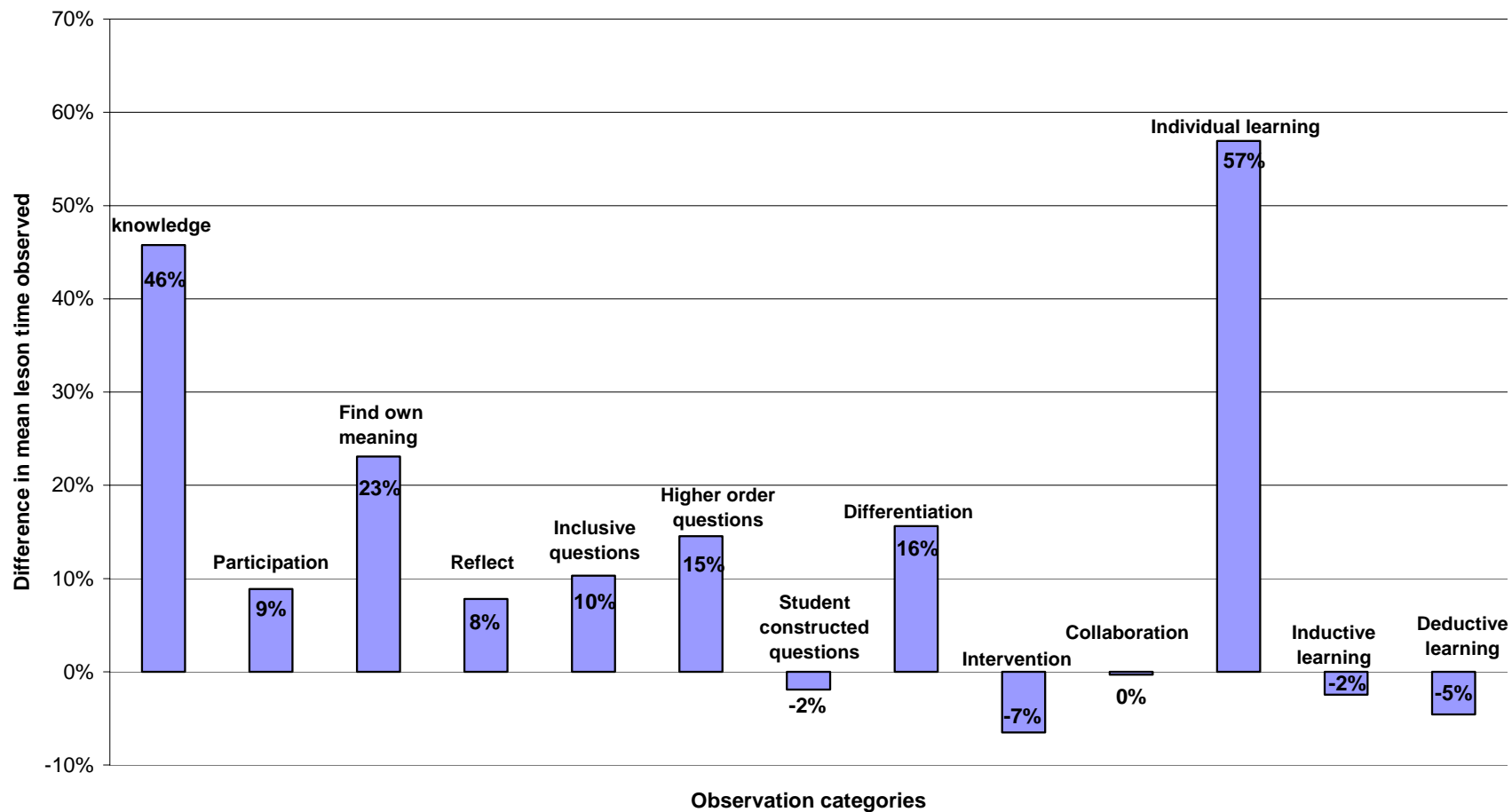
5.2.2. Teacher Behaviours

In eight of the thirteen categories of teacher behaviours observed there were notable rises, above a 5% difference, between pre- and post- training means. The largest rises were seen for tutors ‘encouraging individual learning’ (+57%) and ‘taking into account previous knowledge’ (+46%) in their lessons (see Figure 5.2). These rises were seen for most tutors. At both colleges tutors used more inclusive questioning and in some cases there was a move towards questioning that required higher order thinking.

Another area of notable improvement between pre- and post- training indicated was that students were more likely to be encouraged to ‘find their own meaning’ (+23%). This increased activity, which is associated with the TEEP element ‘thinking for learning’, could be a result of tutors working with more mature students at FE level.

Figure 5.2: Teachers Behaviours: Post-TEEP differences for all observations in FE Colleges (n=9)

FE Colleges: Post-TEEP differences in teacher behaviours

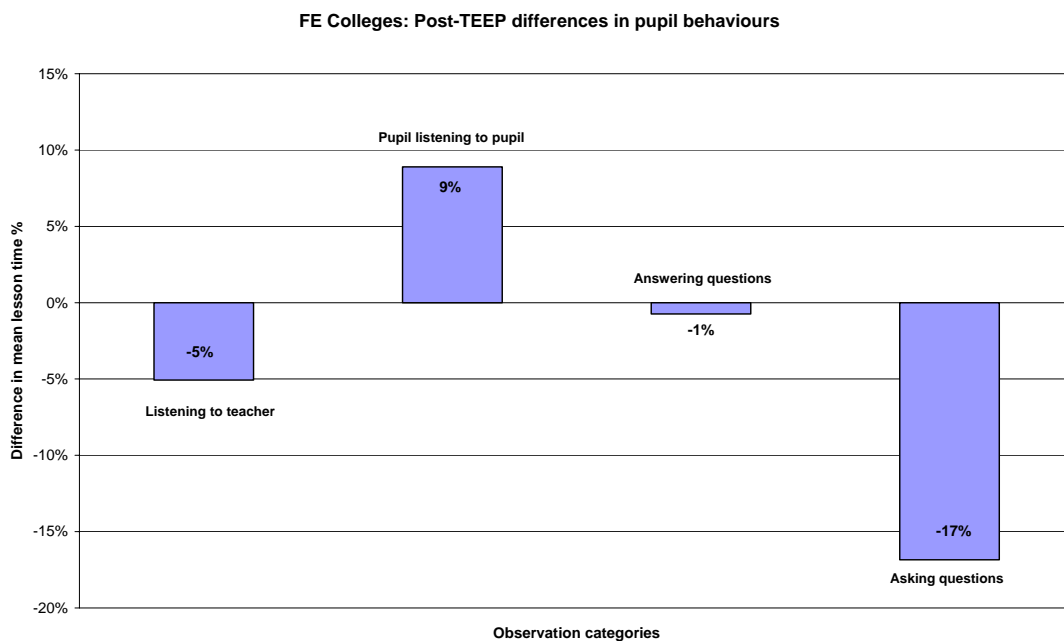


Although Figure 5.2 shows no rise in tutors' support for 'collaborative learning' such practice was evident among three of the five tutors at the York FE college but only one of the four observed at the Manchester FE college. From these data it seems that collaborative learning was not common practice in these FE colleges neither was encouraging pupils' inductive or deductive learning.

5.2.3. Pupil Behaviours

There was very little consistency in the post-TEEP changes for the nine tutors observed. The only notable increase was for more pupil-pupil talk at The York FE college, a result that fits with the greater use of collaborative group work noted earlier.

Figure 5.3: Pupils Behaviours: Post-TEEP differences for all observations in FE Colleges



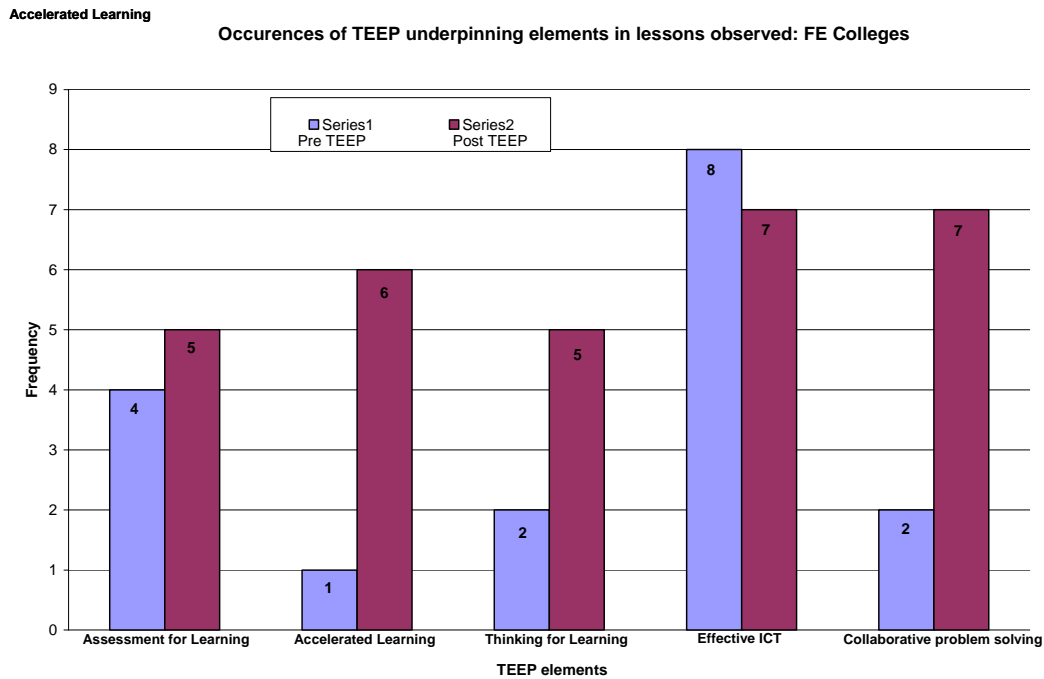
5.2.4. Findings related to the underpinning elements of TEEP

Tutors at both the Manchester FE college and the York FE college were already applying some of the TEEP elements in their lessons, but to a limited extent. Pre- and post-TEEP training comparisons showed a rise in all five underlying underpinning elements (Figure 5.4). The greatest increases were in tutors applying 'accelerated learning' and 'collaborative problem solving'. Two of the nine tutors observed were already applying 'thinking of learning' in their lessons and following training this increased to five.

Tutors at both colleges already incorporated formative assessment to support pupils' progress and following TEEP training, one additional tutor was seen to have adopted this. Interestingly eight of the nine tutors were already seen to be using effective ICT in their lessons before TEEP training and seven were observed to have used it following training. During the

evaluation the use of ICT in lessons at both colleges was heavily promoted. Classrooms at the Manchester FE college and The York FE college were fitted with interactive whiteboards, laptops and data projectors. However, the major challenges for tutors incorporating effective use of ICT in their lessons is associated with the need for additional training and I time to prepare lessons that include ICT, as responses to interviews shown in section 5.4 show.

Figure 5.4: TEEP Underlying Elements: pre- and post observations in FE Colleges



Summary

Following training tutors spent much less time on whole class teaching and included more tasks that required students to be engaged in individual learning.

At the York FE college there was a noticeable fall in the amount of time tutors spent controlling students' behaviour.

Post-TEEP, there were large increases in the amount of time tutors spent 'encouraging individual learning' and 'taking account of students' previous knowledge'.

After training, questioning became more inclusive and more occasionally now involved questions that required higher order thinking.

After training tutors at both colleges more often encouraged their students to 'find their own meanings'.

Collaborative group and pupil-pupil interactions increased at the York FE college but were not common practice at the Manchester FE college either before or after training.

Rises in the application of all five underpinning elements of TEEP were noticed following changes.

The use of ICT in lessons at both colleges was in use pre-training and is being promoted and used post TEEP training.

5.3. Findings from students' self reported questionnaire responses (pre- and post-TEEP classroom actions and learning)

The general pattern at the Manchester FE college was that students who completed the questionnaire following their tutors having been trained were more likely to pick the 'this happens sometimes' category for most questions. It therefore appeared from the students' perspective that many aspects of teaching and learning related to TEEP actually decreased following training. As with the findings for secondary schools caution must be exercised in reading too much into this as this might just be a feature of different classes being asked the questions. In three of the nine tutors' classes, pupils sampled pre- and post-training were the same in other cases the students were entirely different.

At the York FE college the post-TEEP sample of students had new classrooms and facilities as the college was moved to brand new premise with state-of- the-art classrooms and facilities. At the Manchester FE college, on the other hand, students in the bricklaying course had to contend with make-shift temporary classrooms and had limited access to facilities such as interactive whiteboards. Unsurprisingly therefore, there was a positive change in students' perceptions of the classroom environment at the York FE college (a 21% rise in the 'a lot' category) that was not seen at the Manchester FE college where change was to the 'sometimes' option (30%). Students at the York FE college also reported using more ICT in their lessons and now had higher expectations that this would help them to learn. A similar pattern, but at a more modest level of change (11-14% rise in 'a lot') was seen at York for lessons 'having interesting beginnings' and being 'linked to what I know', two aspects that could not necessarily be linked to the move to new buildings.

There was some evidence, after training at both colleges, that tutors may have involved students more in 'deciding on which class activities are best for them'. There was an overall average 12% difference in students' responses that this happened 'sometimes' and that it helped with students' learning.

Another area promoted in TEEP training is to encourage teachers to include reflection or review in their lessons. Students' responses showed that this happened sometimes in their lessons at both colleges. Tutors at the York FE college adopted a review at the end of their lessons and this seems to have resulted in more students now reporting that this happened 'a lot' or 'sometimes' following training.

Summary

Learning environments at the two colleges varied considerably and as a result the better learning environment at the York FE college had a positive impact on students' perceptions of their ability to learn.

Students at York reported using more ICT in lessons and had a higher appreciation of the positive impact this might have on their learning.

There was some evidence at both colleges that training may have impacted on students' perceptions of clearer objectives being set for their learning.

At the York FE college tutors' efforts to spend more time on the review part of the TEEP learning cycle appeared to have been noticed by their students.

5.4. Findings from teacher interviews

Teachers from the two FE colleges shared varying experiences of adopting the TEEP model and framework in their teaching. Before TEEP training tutors at the Manchester FE college and the York FE college did not know or were not familiar with the TEEP learning cycle or its five underpinning elements. However, two tutors at the York FE college were made aware of TEEP from other level 2 trained tutors in the college. Responses from tutors interviewed are summarised below under categories addressing; the TEEP underpinning elements, the learning cycle and effective teacher behaviours.

5.4.1. The TEEP underpinning elements

The following sub sections discuss findings relating to each of the underpinning elements of TEEP derived from transcribed interviews with nine tutors following post-training observations of their teaching.

Accelerated learning

This element was not mentioned by any tutors as a specific area that was difficult to incorporate in their teaching.

Thinking for learning

Thinking for learning (TfL), was mentioned as a difficult area to incorporate in teaching by two tutors at the Manchester FE college. The main challenge seen by one tutor was in providing realistic contexts for theory lessons that 16-18 year olds could readily link to site-related experiences:

Getting them to think of scenarios and situations which will affect them on site, without them working is hard to do. It's just an element of the course that I find doesn't work... but there is very little you can do to get them the site experience. The 16 to 18 year olds who come here who haven't got a permanent job I think will struggle with that line of thinking for learning.

Assessment for learning (AfL)

Three tutors at the York FE college admitted that they had difficulty including assessment for learning in their teaching. Tutors commented on the different levels of learning and abilities within their classes in reading, spelling and in writing eligibly. As a result this made assessment work in lessons time consuming and challenging particularly where students were engaged in peer review of each others' work:

...because of the reading age and writing ability and spelling ... as you've seen ... it (assessment for learning) is often more time consuming ... so you have to think quite carefully about what you're doing. So asking them to mark each others' work is often hard particularly if they are written answers.

One reason given for finding difficulty in incorporating AfL was the notion of tutors having to let go control of the learning process.

I don't really let them assess each others' work and maybe again it's sort of (me as a teacher) letting go and try it.

These views were echoed by tutors at the Manchester FE college and probably accounted for tutors there not providing many opportunities for students to review their lessons or for including much self- and peer- assessment of students' work. Tutors at the Manchester FE college felt that sharing lessons ideas with the rest of the tutor team could make this area easier to integrate in teaching, (see Section 5.5 below).

Collaborative problem solving

Only one tutor admitted to having some problems in using group work, perhaps a feature of its low occurrence. As was the case for some secondary teachers it seemed as if this tutor was afraid to release control and to give pupils the necessary autonomy to collaborate and solve problems for themselves.

I think it's sort of letting go and allowing them to try it out for themselves and I feel unless I haven't told them perhaps they are not learning.

One tutor suggested that this area could be made easier to integrate into tutors' teaching by setting up activities that would allow students to participate in group activities.

Effective uses of Information and Communications Technologies (ICTs)

Tutors at both colleges saw the main difficulties in integrating effective use of ICT in classroom teaching as lack of time and training in its use. For example, when asked which of the TEEP underpinning elements tutors found most difficult to include in their teaching, one tutor at the Manchester FE college commented:

The IT generally, because I'm quite limited (in the skills I have to make use of it). I've not been on any training for IT and I've just had to pick it up as I've gone along. It's very time consuming.

According to another tutor at the Manchester FE college, integrating ICT could be made easier if ICT training were in place and equipment made more readily available.

Firstly to be trained up on it and with facilities to be made available, basically. It took nine months for them (the college) to get me a computer just to use at my desk never mind anything else.

5.4.2. The TEEP learning cycle

Three aspects of the learning cycle were mentioned by tutors as being more problematic to implement. Four tutors stated that they found the 'review' stage difficult to incorporate in their lessons. As in some interviews with secondary teachers, there was an overall impression (from seven of the nine teachers interviewed) that if the six part cycle was to be implemented in each lesson (usually of 50 minutes) then this might be more difficult than if it was to be applied to two or more lessons in a sequence of learning.

I mean we were time bound a little bit so the review side of things might have been a little bit better but again we are going to pick the back end of that up in the next session.

So I think overall if you looked at that and took it over the whole of the three lessons then you would find them all because we will certainly be doing a lot of that next week, the reviewing

Another tutor stated that the 'present new information' stage of the learning cycle proved difficult to integrate within the lesson observed.

I had them thinking more laterally about how they were going to do it.

However, the tutor was able to share an example of a lesson where this aspect of the cycle was integrated.

I did a lesson focusing on food a while ago ... on food groups. I gave them the new information and then we had a paper, food group pyramid so they had to then draw their own different foods on that and then we had some games that would be useful for children ... but it was suitable for that activity.

The 'construct' stage was also experienced by as being difficult to integrate within lessons. One tutor at the York FE college identified factors such as the group dynamics and a time element as being problematic.

...because the group dynamics, there's lots of things going on within the group and again I think it all links to the time element. I feel I've got to race through it to meet the requirements of the unit and if I've mentioned it we've covered it... So I think ... the 45 minutes just isn't enough.

Overall, at both colleges, tutors were using the TEEP learning cycle when planning and delivering their lessons to introduce a variety of activities and choice into their lessons.

Thinking about the hook and how they could interpret what they were doing a little bit more. I didn't give them a choice of activities but they had a choice of how to interpret the activities so they were 'constructing' and 'applying'.

5.4.3. Teacher behaviours

Three of the four aspects of teacher behaviours were reported as difficult to include in the lessons observed: classroom climate, classroom management, and a variety of teaching and learning styles. Regarding classroom climate, one tutor's difficulty seemed to be with the classroom environment whereas other aspects such as pupil interaction, pupils' expectations and enthusiasm seem to be less problematic.

*I would say the cheerful classroom environment (is easy to provide). I'd like there to be more colour and things in here (the lecture room). I mean if you look at the classroom yourself you know it's a bit run down ...
.... the other stuff ... the pupil interaction is alright, expectations, relations ... enthusiasm.*

More resources to develop the classroom and make it more inviting was given as the means for overcoming this difficulty by a tutor from the Manchester FE college.

The main challenges with classroom management at the Manchester FE college were controlling pupils' behaviour in the classroom, timelines for lessons and keeping the attention of students with various previous learning experiences.

I suppose just the classroom management bit at the beginning when they were late in and we were chasing them up...

So it's very hard to keep them both occupied at the same time without someone causing trouble and you've also got the lads that are on site and some lads aren't so they know the answers first. There are other times they are just ignoring it because they know it already so you don't actually know whether they know it or they don't.

One tutor from the Manchester FE college stated that classroom management could be made easier to integrate in their teaching if classes were allocated by band according to students' ability.

...it would make it a lot easier if the classes were banded ability wise. Just for the planning stage because actually planning the lesson takes a lot longer when you've got to account for that spectrum (of ability).

....there's plenty of scope for putting similar abilities together because they all do an initial assessment before they start and stuff like that.

Another challenging area was seen as incorporating a variety of teaching and learning styles into lessons. The main difficulties in this area were seen as time, using new technology and trying to accomplish a variety of learning activities within one lesson.

... this year we've had to hook up to the electronic age ... and you can't do everything all at once to the standard that you want for all of your lessons, there just isn't the time.

Unless I try something different each week and just experiment and see how it goes each week, perhaps not try to put too much in as well. Because I want them to be engaged at all times. So I think I give them this activity and then that and then

hopefully they are learning as well. So perhaps if I concentrate on one each week rather than fit all of them in.

5.4.4. Additional support for TEEP

When asked what additional support teachers require in strengthening the implementation of TEEP in their classroom teaching, responses from tutors at the York FE college were categorised by three areas; resources, time, and continuous reviewing of the programme. These responses are illustrative of these areas:

I think since we've come to the new building we're using a lot more resources. I mean ... I'm using the laptop now. I hardly ever used it before I came into the new building. PowerPoint I just didn't do ... But now I do. Well I try not to use them too much, it's getting a balance of sort of different things you can use. So I think in terms of the resources, the laptops are great and we share a lot of ideas in the staff room, especially for those who have done the TEEP.

It's just time. It's the time needed to do it.

We share resources. We've got quite a big ... budget for DVDs and things.

Just keep chatting about this. Just keep regularly reviewing what we're doing. Keep it on the boiler.

Tutors at the Manchester FE college were more likely to state wishes that reinforced their unmet needs. These included the need for additional learning support to help tutors in assisting students with learning difficulties such as dyslexia and redeveloping resources to meet the thinking and doing required of lessons associated with specific trades such as carpentry.

...regular ALS (additional learning support) would help, you know with lads with dyslexia ... Having a helper basically... The idea was to send a couple of lads to the office for one to one tuition but it didn't quite work out as planned.

We might not document it like we should but we do a lot of those things. Prior learning experiences and observations, all those things you could put into there we're already doing so - I developed that resource thinking along the lines of the tower (of power) project.

One tutor had developed a resource called a 'mono-scaffold kit' following from the 'tower of power' activity used in TEEP training to make his carpentry and joinery lessons more exiting and to assist his students in their learning of the discipline.

5.4.5. Teachers' additional comments about the impact of TEEP

Tutors were asked about any other examples of impact that TEEP might have had on their teaching. Tutors at both colleges said they enjoyed the training and found it useful, motivating and positive. A major perceived constraint, however, was time. Tutors were content with using a combination of TEEP and their existing training methods in lessons. Some comments from the York FE college tutors are:

I just really enjoyed it and found it really useful and was quite sort of motivated and enthused to try them out. But I think it's being allowed to use them and the time to use them as well which can be an issue. In an ideal world we could use it all the time but I think it's just using a combination of methods at the moment.

I think it was useful in that it gave me more ideas and access to more resources to go away and work on.

...it's been good. It's been positive.

One tutor at the Manchester FE college said he was using TEEP-like activities prior to his training but that the training had helped him in planning and delivering his theory lessons. There was also the notion that tutors can help or 'pass on' ideas to new tutors.

It (the training) was prior to me going on these courses so it gave me an insight into what was expected. But like I say ... we use a lot of the things that you (TEEP) is teaching us already. You know in the role of a tutor doing a practical course, we do a lot of those things. But a lot of the tutors I know do a lot of the things who wasn't on that (training), you know the new guys. So we pass that onto (them).

Another the Manchester FE college tutor was keen to embrace the notion of outlining the aims of the lessons early on in order that students are clear on the topic, for example, in the practical aspects of bricklaying.

I think it's more practical based and if you kind of guide them to do something, if they can see they've got a goal they'll do something but if they can't see why they've got to do something then they don't want to do it. So if you tell them in basic terms what you want them to do ... they like that because they can see this is what they are going to do... and away they go.

Summary

Models of training at the two colleges were very different. At The York FE college, tutors familiar with TEEP and trained to levels 2 and 3 led an in-house version of TEEP supported by focussed peer coaching and follow-up. At the Manchester FE college, a shortened and adapted version of training was provided by the central TEEP 'team' with limited internal follow-up but plans for further training and development of peer-coaching did not materialise.

Tutors at both colleges found TEEP related training a positive experience and felt it had helped motivate them. More time to incorporate approaches in planning and to reflect on the impact of TEEP was mentioned as being desirable.

The nature of the skills-based learning at the Manchester FE college might have limited opportunities to develop the thinking for learning strand of TEEP.

The low literacy level of students was perceived as a problem when students are required to peer-assess each others' written work.

At the Manchester FE college tutors reluctance to relinquish control of the learning process may have limited the use of group work and peer assessment there.

At both colleges, tutors wanted more time and training to be able to make the best use of the ICT facilities made available to them.

There was evidence, at both colleges, that tutors found the TEEP learning cycle useful in helping them to plan lessons and improve the variety of learning tasks offered to students. Confidence in using the learning cycle seemed to have been higher at The York FE college. The review part of the cycle was felt to be the most difficult to incorporate in teaching.

At the Manchester FE college, the poor physical learning environment, the range of students' abilities, lack of learning support for students with learning difficulties and time to learn to use new technologies were seen as challenges to using and developing TEEP approaches.

5.5 Coordination and management of TEEP in further education colleges

Interviews with key personnel at the York FE college and the Manchester FE college who were responsible for the coordination of TEEP training were carried out. The extent of understanding of TEEP and its underpinning pedagogies varied widely according to the different personnel interviewed at both colleges. The reporting of their feedback is given separately below for each college because of the marked differences in the contexts of the two colleges.

5.5.1. The Manchester FE college

TEEP training took place at the Manchester FE college as a result of a direct request from the College to the TEEP office. A shortened version of level 1 training was carried out over two days for fifteen tutors in the construction skills department. The main reason for introducing the TEEP framework at the Manchester FE college was given as filling the gap between theory lessons and practical skills workshops in the area of construction. The Head of the Construction Skills department commented:

... (We had) a lot of new staff coming in who have come off the tools (building sites and workshops) and have never done training or education before themselves. They are very good in the workshop but when it gets down to classroom theory lessons, key skills that sort of thing, they are floundering a little bit.

Thus the reason for the Manchester FE college's interest in incorporating the TEEP approach was seen as:

... to give existing staff who are fairly new apart from brand new staff, ... an insight into it ... (to show them) it's not just about standing up in front of the students and writing on a chalk-board, there are other ways of doing things and the college has always been amenable to that sort of approach. Make it fun, it actually sticks, that's the sort of thing.

Commenting on the changes that the TEEP approach had brought about with one tutor, the Head of Construction Skills stated:

I've seen and heard massive improvements in (TUTOR X) – everybody has high praise for him ... the way he is going about things now. He doesn't have any discipline problems in classes and that sort of thing now. It just gives them (the other tutors) food for thought.

There was no indication in interviews that there was a direction towards a whole-college approach to TEEP at the Manchester FE college. However, there was some indication that the tutors in the evaluation were implementing aspects of the TEEP framework in their teaching.

The main measure at the Manchester FE college which may have facilitated the impact of TEEP on classroom teaching was seen as the development of resources including ICT.

Measures that we've taken are mostly on resources. We're trying to build up the resource within the department to the extent that we have at the moment 'Promethean' interactive whiteboards in all of our classrooms and that is a first for construction. We also have laptops and data projectors and we have about 15 ... in the department at the moment but ... with 123 staff ... that's not a lot. There are another 5 on order which are coming through. But that's the way we're sort of moving. We have e-beams as well - it's very much like an interactive whiteboard but you just connect it to a laptop and whatever and this beam sits on the corner of a whiteboard so that you can use a special pen.

No reasons were provided as to what circumstances within the College might have hindered the impact of TEEP at departmental level.

One aspect of TEEP training that is a strong element for FE colleges is coaching. After the 2-day training at the Manchester FE college, the Head of the Construction Skills Department suggested that four tutors be trained in coaching skills to further improve their and other tutors' teaching skills. The coaching skills training was intended to be carried out by trainers from the TEEP central team but this did not happen. This training on coaching was not taken up due to time constraints and factors that were not made known to the evaluation team. There may have been associated management factors which prevented coaching being developed at MNACAT but an exploration of this was outside of the remit of the evaluation.

Another question was asked of the Head of the Construction Department to probe whether or not the college would want to continue with the TEEP framework for the further development of teaching. The issue of further cost to the college was mentioned because any further TEEP training would have to be paid for.

Yes I think I would like to continue with it but we also have this (internal training) within the college ... so we're already doing that, why do we need to pay for something elsewhere which is very, very similar?

A follow-up question was asked as to whether or not the College would consider developing a tailor-made course incorporating TEEP elements such as the learning cycle and underpinning elements. The response indicated that to do this there may be some internal management differences to be faced.

I think one of the things that needs to be addressed is a clash with management ... and especially for new staff.

5.5.2. The York FE college

TEEP was promoted at the York FE college in 2006 as part of the City of York LA's promotion of more active teaching and learning, especially at 16-19. The City of York LA set up a 16-19 strategy involving a partnership of eight institutions in the City. The idea was for staff from a number of different providers to undertake training (not necessarily only from TEEP) so as to develop and instigate more active teaching and learning.

Making a start with TEEP

The policy at the York FE college was to introduce more active teaching and learning using TEEP and so the Director of Teaching and Learning was keen for most staff to adopt the TEEP framework. Thus, from the outset, the college had a high level of contact with the TEEP team and a dedicated strategy linked to their internal policies for training and learning development. An early focus was to get some tutors to attend the TEEP training and then to develop and use in-house TEEP training. Over the period of the evaluation, two tutors completed Level 1, Level 2 and Level 3 TEEP training and have been key leaders for the development of TEEP ideas in the college since they completed their level 1 training. These two tutors were interviewed and some of their comments were:

We saw that there was some good results coming from Cramlington School and on investigation we found out that (they had)... a very good focus on educational values ... so we thought it would have been a good vehicle for a College of this size to get involved

... the original idea was that we would train up to be TEEP trainers and get TEEP in to do their thing with us alongside this. But ... what we've done is we've taken TEEP strategy/TEEP philosophy and we've made our own course here which we've called 'Toolkit'.... We've been funded now, we've had one year, we've got two more years of funding to actually run our own internal 'Toolkit' course. As it's turned out we've both done the level 3 so we're qualified.

It should be noted that College funds have been internally redirected as part of the teaching and learning strategy to promote the TEEP model into College.

These two tutors were responsible for developing the version of the TEEP level 1 training course which they called 'Toolkit'. The toolkit is their adaptation of the TEEP framework tweaked to cover a two days of training with a third day for feedback two months later. The 'Toolkit' incorporates an element of coaching.

So we've got a coaching element (and) we've got the TEEP element and we've made our own course (the 'TOOLKIT'). But what we have got is a three day course, so we do two days then coaching and action learning sets for about 2 months or so and then we have a day three to finish. So rather than three and two (as in standard Level 1 TEEP training) we have a two and one.

There's sixteen tutors in college who work with us ... who have now all done TEEP 2 and are acting with the groups. We're in a TEEP type situation, in Toolkit you've got the four training groups, myself and (XX) are at the front (as leaders of TEEP

training) and then we've got four senior tutors. So we've actually got a big staff ratio (Of trainers to staff) going. We've got six tutors on a course which is great.

Tutors are given the option as part of their continuous (in College) training programme to attend the 'Toolkit' course or it may be suggested by their curriculum manager that it could be useful to them to attend it.

Curriculum Managers are very positive and supportive of the 'Toolkit' programme and they will allocate members of staff from the teams to come on it, so we always have a full cohort. Curriculum Managers will ask who would wish to be going on the programme. So they (tutors) are given the option and sometimes the Curriculum Manger will suggest that it would be useful for certain people, but it is very supported.

The overall impact of TEEP

A whole-college approach to implementing the TEEP framework into teaching and learning developed from an early stage and seems to have had rapid take up and impact on staff and in classrooms, partly through the immediacy with which teaching actions were implemented following training:

TEEP is a college wide strategy... we are still in the infancy of the 'Toolkit' within the College but the more people that are doing it the more it is becoming known..

... if you walk through the college you can actually see elements of TEEP in just about every classroom. One of the big things that we felt was very good about the whole programme was people actually left on Day 2 (of the training) with a lesson plan that was actioned for their next lesson, or the next month's lesson, or one of the lessons they were going to be teaching and that has proved very popular and they were actually able to take that template and apply it to other lessons as well. So all the way around the college you hear people talking about preparing for learning and you hear them talking about learning outcomes ... you never used to hear that...

The TEEP learning cycle has been adopted by most tutors who have attended the training and is used in preparing lesson plans. There are also discussions among staff on its uses and on sharing resources adapted to the TEEP learning cycle.

Well everybody that has been on it (the 'Toolkit' course) does use the 'Toolkit'- type lesson plan. They do have the 6 stages of the cycle so we do see this predominately around the College with members who have been on the course. One of my colleagues in the staffroom has actually developed a little (ICT) application to create lessons plans and schemes of work and they have used the TEEP stages to create that and that works out very nicely.

Effective teacher behaviours have been emphasised by college-wide staff development and are incorporated into the 'Toolkit' course as part of the college's new position on teaching and learning.

We actually look at the behaviours and things on Classroom Management on Day 3, when we discuss about the Effective Teacher Behaviours its an ongoing process and any of the people that have used 'Toolkit' or TEEP in effect in College would actually start off with Effective Behaviours prior to the learning curve. So they

would discuss Classroom Climate then Management of the students prior to taking the class any further.

The five underpinning elements of TEEP have also been incorporated into the college-wide staff development process and are built into the 'Toolkit' course.

Day one (of the Toolkit course) is about the underpinning elements, day two is the cycle, day three is learning behaviours, teacher behaviours. So day one we do a version of the challenges they do on TEEP and we use that challenge base to introduce the ideas of thinking for learning, assessment for learning...

... this is all part of what the action learning sets are about; these are the underpinning elements. When they (tutors) come back on Day 3 (of the Toolkit course) we actually ask them to underpin which of these areas have been emphasised in the classroom situations by using the Toolkit programme.

Coaching and networking

There is a strong element of coaching at the York FE college where senior tutors are trained at TEEP level 2 with the intention of then becoming a subject learning coach. The college has had one senior tutor from each of its twenty departments trained at TEEP level 2 in order to provide coaching for the 300 tutors that will eventually all have been trained using its 'Toolkit' course.

... TEEP 2 has been used specifically for our senior tutors ... all the guys who have been working on our 'Toolkit' courses and our subject learning coaches. So there's about 20 people there in total. So in every curriculum area there is someone who is now TEEP trained at level 2, to push that out.

These two tutors' comments indicated that they saw the coaching element and immediacy of follow-up action as possible limitations of standard TEEP training which they wished to address in the development of their 'Toolkit' programme.

...a weakness of the TEEP course for us and training courses in general is ... you go off-site for two or three days, you do your thing, great all these ideas, you come back and normal work and then it just never happens ... The idea here is that after your initial 2 days, people then meet every other week or so for a couple of months to get coached and to talk together as a group. It doesn't always work and that is the hardest bit to organise. Because of people's timetables and other commitments it's difficult to get people interested. By definition you'll always get the most active people I suppose interested in doing it initially. And everyone else needs a little bit of a nudge. But people have certainly taken part in the coaching and the actual learning so that's been a very strong part of it.

The college has timetabled a yearly follow-up day where tutors on the 'Toolkit' course can meet to share good practice.

We have a planned a seminar for the end of year in July where we will bring back everyone who has been on the 'Toolkit' ... we have them all back for a 1 day seminar to show good practice.

There is also ICT support for tutors and resources for sharing and accessing information from the TEEP and 'Toolkit' training.

We've got a virtual learning environment, where there is a blackboard course with all the materials from there on the course. They (tutors) are encouraged to retain the action learning sets, because that group of people have then formed a kind of allegiance ...

We have a very effective IT technician team and they are only a phone call away. They (Tutors) have a telephone helpline, an online support team, they have various training days so staff development days like these are geared towards this. We also have an Effective ICT Use within the third day of this programme ... there is a support mechanism behind all the ICT things that we do

Tutors also have the facility of working in teams and meeting in smaller groups in what the college calls 'Action Learning Sets', to share their ideas and get feedback from their colleagues.

People that come onto the 'Toolkit' course, they are allocated a little team of people. It works better when they collaborate in different teams but then they are all together, so these are called the 'Action Learning Sets' and that happens every 2 months, they come to us for 2 days of training, they have action learning set for 2 months, where they discuss what hasn't worked, what problems they have had, what help they need and they help each other in their action learning sets and then they come back for their 3rd day and they disclose exactly how they have got on with things

Factors facilitating development of TEEP

The 'Toolkit' course is seen as the key method within the college to embed the impact of TEEP training on classroom teaching. As such it has coherence and support across the college as these comments suggest. A programme of funding that allows staff to take part is also seen as important:

Well really that's the 'Toolkit' course. I mean there is a lot of money if you think about the amount of cover time that's been made available; the college has said here is a chunk of money to run that course. So the idea is that it is a college wide strategy and it is starting to have an impact.

The fact that we have this staff development programme running makes a big impact. It is emphasised through the Learning and Development Unit, the training and development areas, curriculum managers, the senior management meetings all observe that this is something that has to be transferred through the whole college, so the college is focusing on that it wants all the staff to have commitment to this programme.... this is a whole bag of techniques and an over-arching strategy that is used

We've trained about 60 people in Toolkit and we've got funding for three years and the idea originally is that we put every single tutor in the college through that. It's about 300.

Factors hindering development of TEEP

The main factors that could hinder the impact of TEEP on classroom teaching in the College can be summarised as time to incorporate the TEEP framework into their lessons, no more

funding for TEEP training, tutors being forced to do the 'Toolkit' course, and poor lines of communication within a college of more than 300 tutors who all aim to undertake 'Toolkit' training.

From our point of view it's time initially to get people onto the courses.

I am not seeing any enormous amount of hindrance within the College currently and its probably just the fact that we are only at the beginning of the journey. I presume that once maybe staff and curriculum areas are not asked to come onto the Toolkit and they are told to come on it that may cause a bit of a (negative) impact.

Funding for TEEP training has now ceased and this was one of the main reasons for the College investing in developing the 'Toolkit' course as tailor-made TEEP influenced training. The course is seen to be cost-effective where the maximum number of tutors can be trained compared with the costs of sending just one tutor on TEEP level one training.

There used to be funding to send people onto TEEP training courses and that has stopped, so that is why there is a lot of people who probably won't utilise that. They can't do TEEP because there is no funding.

If people come to us now and say I would like to do TEEP 1, it's like sorry its £400, £500 it's not going to happen. But we're running our own internal version of that. Simply that we can train 10 times more people than we could doing it through (the official) TEEP alone.

Keeping tutors informed in a large College can be challenging. The College has in place a regular newsletter to keep staff informed of teaching and learning news.

Communicating the idea in a college of this size can be difficult. Trying to get to people they physically don't hear the things that are going on.

We have a Newsletter that goes out from our Learning & Development Unit and that focuses on teaching and learning

Summary

At the Manchester FE college, investment in ICT resources seemed to have helped promote the use and development of TEEP but lack of finance for further training and internal management issues have restricted an extension of it.

At York FE college, staff implementing TEEP had a high level of contact with the TEEP team and worked with a dedicated strategy linked to the College's internal policies and the LA 16-19 strategy for training and learning development.

At the York FE college, TEEP has been adapted to provide a rapidly expanding internally driven programme of training aimed at all 300 staff. Immediate classroom implementation of TEEP approaches met in training, peer coaching by level 2 trained senior managers and yearly timetabled follow-up training are seen as important successful elements of the 'York model'.

Factors constraining further development of TEEP at the York FE college include a lack of funding for training and tutors being coerced into training rather than as more willing volunteers.

Leaders of TEEP at the York FE college view their model of training as being more cost effective than sending tutors away from the college to be trained.

Strong involvement with TEEP and support for it at senior and middle management level is one of the most crucial aspects of successful implementation of TEEP at FE level.

6 PRIMARY SCHOOLS

6.1 Background

Two schools having very different previous knowledge of TEEP and who received training in rather different ways were included in the evaluation. Taken together, they form one case study for the implementation of TEEP in primary schools. The original intention of phase 2 evaluation was to research the use of TEEP in upper primary classes (KS2). At the York primary school, two teachers participated in the evaluation process and taught KS2 classes. At the Birmingham primary school primary, the other school to participate in the case study, the two teachers who participated taught Foundation Year and Year 1 (KS1) classes respectively. Thus the case study changed to encompass a wider age range for teaching actions though in two different settings.

The York primary school followed a whole-school approach to implementing TEEP and had two teachers trained at Level 3 who were responsible for taking TEEP forward in the school. As Level 3 trainers, these teachers also assisted with national TEEP training for primary school teachers and prepared videos of their TEEP lessons as additional resources used in national training. The Birmingham primary school is part of the Birmingham Catholic Partnership that comprised three other secondary schools one of which was included in the secondary school case study evaluation. However, this school had not previously benefitted from the partnership in terms of support for TEEP, coaching or follow-up that the secondary schools in this partnership had received. This school had recently had a change of head teacher and, even though the current head teacher was keen for the TEEP approach to be used to develop teaching and learning in the school, the main challenge remained to get more teachers trained at Level 1. Only two teachers in the school are currently trained at TEEP Level 1.

The data sets for observations of post-TEEP teaching and collection of pupils' questionnaires for these primary schools comprise Foundation Year (nursery) and Year 1 (KS1) classes in the Birmingham school and classes from Years 4 and 5 (KS2) in the York school. All four teachers are included in the observation data discussed below but only data from one set of pupils at the York primary school was included in the section analysing pupils' questionnaire responses. Pupils at the Birmingham primary school found it difficult to understand and fill in the student questionnaire used at secondary schools and FE colleges mainly due to their age (3-5 years). A shortened version of the student questionnaire (14 compared to 23 statements) was designed and A4 laminated cards displaying the responses 'a lot', 'sometimes' and 'never' were used to make it easier for pupils to respond to how often they perceived events might happen. Although responses from pre- and post- applications of the student questionnaire were received from Foundation and Year 1 pupils, these were not included in the analysis

because of the questionable reliability. Responses from KS2 pupils at the York primary school primary school have been included principally to aid comparisons with secondary schools and FE data.

6.2. Observation of lessons

A total of four teachers were observed pre- and post-training at the two primary schools. It was possible to visit each teacher's class twice to make post-training observations. The findings for modes of classroom organisation, teacher behaviours and pupil behaviours are discussed separately for each of the two primary schools. Since only two teachers at each school were involved graphs of numerical data have not been provided but a summary of the findings is shown as annexe 12.

6.2.1. Classroom organisation

In Foundation and Year 1 classes at the Birmingham primary school, after TEEP training, a whole class approach and individual learning were still widely used even though pupils appeared to be organised to work in small groups (in the case of Year 1 pupils). Also, teachers were still controlling pupils' behaviours but this could be due to the nature of small children's relatively shorter attention spans. Both teachers at the Birmingham primary school continued to engage their classes in their lessons and there was an overall increase of a 6% difference between pre- and post -training means compared to an increase of 12% for individual learning. The physical environment of the classroom displayed learners' work and colourful teaching materials in both classrooms but this had not changed very much as a result of TEEP and is the way classrooms are designed to help students' learning at most primary schools.

At the York primary school, after training, there was an overall reduction in whole class teaching and a greater shift to learning in small groups (a 30% increase) and a smaller change in individual learning (7% increase). Both teachers managed to integrate successfully whole class and individual learning together with small group work activities and one teacher did so within just one lesson. There was an improvement in pupil behaviour in classes overall (an increase of 10% for one of the two teachers observed). Before training both teachers were able to engage their pupils in their lessons (94% and 97% of class engaged) and achieved 100% pupils' engagement after training (an overall +5% difference between pre- and post -training means).

6.2.2. Teacher behaviours

At the Birmingham primary school, in all but two of the thirteen categories for teacher behaviours observed, there were notable rises above a 7% difference between pre- and post-training means for both teachers. There were very large rises, above a 29% difference between pre- and post-training means, in five categories. As one might expect encouragement for 'inductive' and 'deductive learning' was not observed in these Foundation and Year 1 lessons. The largest rises were seen for encouraging 'individual learning' (+57%), 'encouraging pupils to participate' (+53%), 'encouraging pupils to find their own meaning' (+46%), and 'taking into account pupils' previous knowledge' (+30%). There were declines in 'encouraging collaborative learning' and in teachers 'using differentiation' in their classes.

The two teachers at the York primary school showed notable rises above a 6% difference between pre- and post-training means in all categories of teacher behaviour after TEEP training. There were high rises, above a 32% difference, between pre- and post-training means in six categories. The highest positive rises were in 'teachers encouraging individual learning' (+80%), 'including inclusive questioning' (+68%), 'encouraging pupils to participate' (+67%), 'encouraging collaborative learning' (+61%), 'using questioning aimed at higher order thinking' (+48%), and 'taking into account previous knowledge in their lessons' (+47%).

It was encouraging to see, in both schools, that elements of the TEEP framework such as 'thinking for learning', 'effective use of ICT', 'group work' and elements of the learning cycle all being used in the preparation and teaching of lessons by all four teachers. However, it should be noted that teachers at both schools were already using many aspects of the TEEP approach when the pre- training observations were carried out but, perhaps, not in such a structured way. This was particularly so in Foundation and Year 1 classes at the Birmingham primary school and it could be that, compared with secondary schools and FE colleges such classes are already set out and in the sorts of environments encouraged in the TEEP approach for example so that classrooms displayed learners work and colourful teaching materials and are structured to accommodate group work. One observation that can clearly be made from these data is that the teachers in the York primary school were more advanced in incorporating the TEEP framework into their lessons than teachers at the Birmingham primary school were, probably because of longer and hence deeper involvement with TEEP.

6.2.3. Pupil behaviours

In both schools, pupil behaviour showed positive shifts in all categories after TEEP training. Mean percentage differences were over 50% for 'pupils listening to their teachers' and 'pupils listening to pupils', the latter signifying the increased use of group work activities during lessons. Pupils were also 'asking' and 'answering questions' more

which links with observations that their teachers spent more time engaging pupils in the lessons, encouraging questioning and higher order thinking. Again, all these were noticed in the pre- training observations and could be part of primary teachers' practice anyway - not solely attributed to TEEP.

6.2.4. Findings related to the underpinning elements of TEEP

After TEEP training, the two teachers at the York primary school were incorporating all five TEEP underpinning elements into their teaching. However, at the Birmingham primary school, only effective use of ICT and collaborative group work were in evidence post-TEEP. One reason for not seeing the other elements, of 'accelerated learning', 'assessment and thinking for learning' in the Birmingham primary school teachers' post-TEEP lessons could be that the teachers did not feel it was appropriate to include such elements in their lessons that were observed or that they found it difficult to include these areas more generally when teaching children at Foundation and Year 1 level.

Summary

In Foundation and Year 1 classes at the Birmingham primary school individual learning was widely used before and after training. Collaborative group work was used less after training in these classes than in the York primary school.

At the York primary school, both teachers adopted more small group work activities in their lesson.

The physical environment of the classroom, displaying learners' work and colourful teaching material is common in primary schools and in sympathy with the aims of TEEP.

There were notable rises in all but two or the thirteen categories of teacher behaviours in the Birmingham primary school and in all categories for teachers at the York primary school.

In both schools there were improvements in time teachers spent controlling pupil behaviour and in pupils listening to the teacher and to each other.

The two teachers at the York primary school incorporated all five TEEP underpinning elements into their teaching however, at the Birmingham primary school, only effective use of ICT and collaborative group work were seen to have increased post-TEEP indicating a much higher engagement with and impact of TEEP.

6.3. Findings from pupils' self reports questionnaires (pre- and post-TEEP classroom actions and learning)

One complete set of KS2 pupils' self reported questionnaires were received from a teacher in the York primary school primary school before and after TEEP training. Twenty-nine pupils filled in the questionnaire when the teacher was pre-observed and 27, in the post-observation. The two groups of pupils sampled comprised of different individuals and were from different year groups studying different topics. The small sample of student responses does not reflect the true nature of the impact of TEEP and the different student groups adds to the cautions with which these data should be read.

The same rule as in the secondary schools and the FE colleges was applied when analysing student responses. It should be noted that the teacher had prior knowledge of TEEP and its learning cycle and had been incorporating parts of the framework into his lessons prior to TEEP training. As a result, the pre-observation of a lesson on English Literature was very much taught as a structured TEEP-type lesson. The post- observation was done for a Maths lesson and again it was a highly structured TEEP-style lesson (see section 6.4 on the teacher interview).

An examination of student responses showed that in 18 of the 23 statements asked of pupils' experiences of classrooms, their teacher's and their own actions, the pupils indicated the higher response in the 'a lot' category for both the frequency of classroom actions and their efficacy for learning.

Summary

Pupils' perceptions of their classroom experiences, their teacher's and their own actions, were positive and for most examples pupils reported higher frequencies and efficacies following TEEP.

6.4. Findings from teacher interviews – the Birmingham primary school

Teachers from primary schools had different levels of knowledge and experiences of adopting the TEEP model and framework in their teaching. The two teachers interviewed did not have any knowledge or information of TEEP and its learning cycle. The following sub sections discuss findings relating to each of the underpinning elements of TEEP derived from transcribed interviews with the two teachers following post-training observations of their teaching.

6.4.1 Underpinning elements

As in the other interviews described, teachers were asked if they were aware of the five underpinning elements of TEEP and to what extent they applied them in their lessons before TEEP training. The previous Head of the Birmingham primary school was keen to put forward elements of the TEEP framework but it seems that this had not been done in a structured way under the TEEP banner.

I mean our previous Head did an awful lot on all of it (TEEP approaches)....It was never called TEEP, it was all done individually. We've had training days on different elements of it

... because of the different training that we've had previously, we picked up bits from it, which again had sort of filtered in through our training anyway. It had never been under one umbrella. I think that was the difference with TEEP, it was all under one umbrella ...

When asked which of the five underpinning elements they found difficult to include in their teaching 'thinking for learning' (for Foundation Year) and 'collaborative learning' (Year 1) were identified.

Matching learning outcomes to higher order thinking skills. That's sometimes quite hard.

... collaborative problem solving. They are not that good at working together the majority of them. They will work independently ... but if you put them in a group there's too many people fighting for the position of top dog

When asked how collaborative group work could be made easier to integrate into lessons, the Foundation Year teacher said that because of their young age, they needed to learn from play and the Year 1 teacher mentioned stepping back rather than controlling the learning process (a problem that was also identified by teachers in secondary schools and FE colleges).

I mean they just need play and they learn from that ...

Give them more opportunities to do it which we are putting them into situations and probably what I need to do, which I don't do very much, is actually take a step back and see how they sort it out. Because they are always looking to us for the answers and I think sometimes we intervene too much

... if it's something you gave them to do it wouldn't necessarily work. If it's something that's come from them and they are in the right frame of mind, then they would do it very well. Like if they were pretending they were going on the train and going somewhere. I was kind of like watching them this morning and they were collaborating very well and kind of like going on a journey but, you don't get that every day. Most of the time it's the same, they can't share, they are learning to share. They are very 'it's mine, it's mine' stage. Me and mine

In this last comment there is the sense that the context of the group task matters. Ownership of the problem context seems to be an important factor in helping keep pupils focussed.

6.4.2 Learning cycle

One teacher mentioned that the 'apply' stage of the learning cycle, even though it was used in planning lessons, was still difficult to integrate into teaching. The other teacher said her main challenge was in getting the Foundation Year pupils to listen.

... so things like 'apply'... I mean there was 'apply' in it (the lesson) but over the weeks, we'd do a lot more on that.

... on that particular lesson (observed), I don't think I found any of it challenging. Just getting them to listen ... that was the biggest challenge really.

Overall, the teachers felt that they were already using the TEEP learning cycle when planning and delivering their lessons to introduce a variety of activities and choice. Although this was not always done in a structured TEEP way as was the case for teachers in the York primary school (see section 6.5.2).

6.4.3 Teacher behaviours

Classroom climate was reported as difficult to address in the lessons observed. One teacher's difficulty seemed to be with the variability of young children's reactions and the other with lack of space and the size and built characteristics of the classroom.

Classroom climate (is difficult) because there were an awful lot of them that are not well and they are all...coming down with chickenpox. So you're trying to like do things ... to calm them and quieten them. So I think that was hard and they are very young, you know, so what works one day doesn't work another day. You could never plan... you know you can spend an hour planning and none of it might work one day, you just have to abandon it and go with the children.

Lack of space...the problem is over there it's so small, the ceilings are so low the noise just goes up whereas if you can look at one of the classrooms over here, they have so much more space to manoeuvre around.

6.4.4 Additional support for TEEP

When asked what additional support teachers might require in strengthening the implementation of TEEP in their classroom, responses centred around providing additional training with a focus on foundation and early years of primary education. One teacher said that she had left the Level 1 training not having understood it and that having more information on TEEP type techniques used in Australia with Foundation Year groups would have been very useful.

Training for TEEP at foundation stage would have perhaps been much more appropriate.

I still don't really feel that I understand it at all... (at the training they were) explaining that they've got nursery in Australia and they've got a problem solving wall and it was things like that, that we were interested in

It (training) needs to be more primary (focussed) – and the lower end of primary. It needed to be more at our level ... new ideas. If it had been more aimed at primary, I think we'd of got something from it. I think we are doing the majority of this anyway, or trying to ... it was more personal to us and we could actually taken more from it and sort of homed in on our certain areas.

6.4.5 Teachers' additional comments about the impact of TEEP

Teachers were asked about any other examples of impact that TEEP might have had on their teaching. One teacher said that what was useful from the Level 1 training was learning techniques on how to 'hook' learners in the lesson.

The only thing that I really took away from it is the hook bit. Hook them. It doesn't matter what class you've got I think in primary that's always what you're trying to do because if you haven't got their attention and their interest you're just banging your head against a brick wall.

Both teachers repeated they did not find the training useful and relevant to Foundation and Year 1 classes.

It's just little things ... like to make them (the children) more independent learners which is what I wanted to do. But I don't feel that I got enough information that was relevant to us, that we could actually implement. I just think it was a wasted opportunity.

A major constraint in being able to use TEEP approaches for these two teachers was the lack of additional information on how methods might be integrated into their lessons and the rate at which information about changing practices is being encountered from various sources without a clear sense of being part of an overall policy of the school.

I also feel that we're having so much thrown at us all the time, you know, the minute you've got your head round something it's changed and you're having to get your head round something else. So unless it's either a foundation stage, that kind of like change, so your trying to get your head around that and a new head teacher and her ideas and unless it's kind of like a whole school and it's all going in the same direction, it's a waste of time because you're just... my head's on overload and I can't take any more.

One teacher's clear view was that TEEP should be introduced as a whole-school approach for it to work well.

I think if it's primary it should be the whole school or nobody. I think it's good but I think it needs to be whole school. It's not fair on the child otherwise.

6.5. Findings from teacher interviews – the York primary school

Teachers at the York primary school were made aware of the TEEP framework and learning cycle through in-school training prior to going on the Level 1 course. Each teacher was interviewed twice after Level 1 training and both of them taught Key Stage 2 classes. Again the responses from teachers are summarised below under three categories addressing; the TEEP underpinning elements, the learning cycle and effective teacher behaviours.

6.5.1. Underpinning elements

Teachers in York were asked if they were aware of the five underpinning elements of TEEP and to what extent they applied them in their lessons prior to TEEP training. It appeared that three of the five underpinning elements were already used by these teachers.

Yes, we already had looked at accelerated learning so we had already done some of that and assessment for learning as well. And we already used ICT and smart-boards in classes but we hadn't really done any collaborative problem solving, so that was new.

When asked which of the five underpinning elements they found most difficult to incorporate, 'assessment for learning', 'effective use of ICT', and 'collaborative learning' were all mentioned.

Sometimes the 'Assessment for Learning'... I can get the children to talk about things and explain to me and that gives me some kind of assessment, but its putting that down on paper and remembering it for the next time you address that topic so that's a bit really that maybe I find hard because of time constraints. I don't know if I find it difficult but it's an area that I would like to do more ...

Sometimes the use of ICT, generally I use it but sometimes ... maybe just in terms of using the whiteboard to illustrate to the children what I'm expecting in their books or... as a tool rather than getting them to use ICT all the time

I usually find the 'Collaborative Problem Solving' difficult, because actually finding what will fit for their age and what they actually have to do it's finding the opportunities to do that within the curriculum that we are teaching

When asked how it might be made easier to integrate underpinning elements that they found difficult to incorporate, comments included:

Assessment for Learning - I think just more time to be able to do things like this, practical activities like looking at the other person's work – sometimes we do that in literacy, they proof-read each others' work before I do, so they get into the habit and they like doing that.

ICT - think time constraints really and class sizes have a factor on it. In one lesson to do with persuasive writing and newspaper reports I gave them a video camera to use and then they went off into another room and they actually filmed what they recorded, and then we linked it up with a computer and then they presented it to the class. So that was a good way of using ICT, they were getting to deal with the equipment that you've got ... (BUT) time constraints.

Collaborative Learning - I think a set of ideas that we were then able to apply in different areas would help. So you could have a resource book of different challenges that they could solve

6.5.2. Learning cycle

The two teachers also had knowledge and were using the learning cycle prior to their Level 1 training. However, one teacher was more advanced in using it and gave a detailed overview of how he used the learning cycle in a lesson. The other teacher, although familiar with cycle, felt she had gained a better understanding of it after training.

We had already done some training in school. We had already had some inset and two people had already been on the (TEEP) course, so I was familiar with the cycle, although it didn't... I wasn't totally sure I understood it before I went, so after ... it made a lot more sense

... I had a good familiarity with the TEEP cycle because I ...incorporated those things that we were looking at as a school anyway. 'Prepare for learning', I always try and recap on the previous lesson actually. Introduce something new and model it to children, so sort of presenting new information. In terms of constructing their ideas and getting them out, I would always ask them to talk, I think the talking skills is really where we kind of together construct the ideas and thinking of a way forward whatever the task is and apply and demonstrating, you know, differentiating the groups and looking at my class as a group of individuals as well as a group of a whole. I would say, right those individuals need to be doing this, that individual needs to be doing that and to then group them as individuals within their needs and then always to review but also to do sort of mini reviews throughout.

When asked what aspect of the learning cycle they found most difficult to integrate within their lessons, the 'apply and demonstrate new learning' and 'construct' stages were both mentioned.

I find most difficult is... step five (apply and demonstrate new learning) ... getting them to demonstrate their learning and what they understand, I do find that the most difficult thing.

I always think what kind of questions I ask them, shall I recall back on last week. I always go through what we are trying to learn and why and explain and then try different ways of introducing things, look at the pictures, so no I really like this kind of format. I can't say there is anything that I find particularly that difficult. I find it easy to use it. ...'.construct the understanding' - when it came to the main bit which was to look at the text, to read the text, interpret the text and then create an image. For some of those children that was very hard and I had to sort of split it up into three groups and pushed the higher ability ones to get them to really think about the images and the pictures ...

Overall, teachers at this school seemed to be already using the TEEP learning cycle in a very structured way when planning and delivering their lessons and to ensure that a variety of activities and choice was part of their lessons.

6.5.3 Teacher behaviours

One teacher found that 'incorporating higher order thinking' was difficult to use in teaching whereas the other teacher did not admit to having any problems integrating effective teacher behaviours into his lessons.

... I think a lot of the really high order question skills ... getting the children to think, I find posing the right question to the right level quite difficult ... It's very easy to ask very simple one answer questions

6.5.4 Additional support for TEEP

When asked what additional support teachers might require to strengthen implementation of TEEP, teachers mentioned that the school's senior management and the Head teacher should have a clearer understanding of the TEEP framework and how it works, and that all teachers should be TEEP trained so that there can be continuity in teaching styles. It was suggested that some teachers should be encouraged to train at Level 2.

I think that senior management could have a better idea of what it's about ... because I think ... there wouldn't be so many contradictions between saying we want to do TEEP and then asking for evidence for every single lesson and so if they are up a bit on their understanding of what it's about I think it would be easier to apply it.

Everybody going on the training course ... we keep doing it across the school - if one person is incorporating lots of visual aids, lots of discussion, teamwork, activities ... and then they (the pupils) go to another class and it's very much old-style - I talk, you listen – everything that they have gained over that year is washed away ...

I think going onto Level 2 (training) will give me a better understanding.... I mean the first five days were great, we really sort of understood the principles and then we sort of looked at different things that we could try. So I think going onto Level 2 and looking at it again... I think it's just constant thinking about what TEEP was talking about, use in your lessons and then say right, what can I use today?

6.5.5 Teachers' additional comments about the impact of TEEP

At the second post-observation, the two teachers at York primary school were asked how much more confident were now in actually implementing the TEEP approach in their classroom since their lessons were observed on the previous occasion. Both teachers indicated that their level of confidence had improved and, with continuous practice and use, that the TEEP framework gets easier to integrate into lessons.

I think over time it's hitting, it's all getting easier now

I think I have got a much better understanding of it. I don't think it is that hard to implement, I think it makes your life easier and it's just coming up with new ideas all the time but using ideas that are good as well, don't re-invent the wheel but look at what you have got to think ... about the visual aids ... the group discussions and activities and constantly do a mixture. So it has built my confidence, it has made me think more about my lessons and be more creative.

Teachers were asked about any other examples of impact that TEEP might have had on their teaching. Both teachers said they enjoyed the training and that role playing enabled them to understand how it feels to be a child in a lesson.

I just really enjoy it. I found it's really helped get the children into lessons and they are getting more familiar with it and yet I find it very enjoyable.

I thought the course was brilliant in how it was explained to us and how they got us – what we are trying to teach the children – so we were the children we fully understand how they felt. You got involved and you did lots of variety and ...you

went back with loads of ideas in your head and the danger was to do them all at once, and for me it was I did. I did it all at once ... it was terrible so then it was doing it slowly and doing little bits and consistently doing the same thing so the children get into those routines and what you are asking them to do and then when they are at that level ... then think, right I can push them to the next one .. but not too much ...

I think it's really made me understand how it is to be a child. The way it was presented was brilliant and the activities, it took you back to that age and you know you could understand how children lose concentration at the end. They lose concentration and you can understand how they need short quick activities and they need that visual aspect and they need that talking but also you need to vary ... not just sat there talking to the guy ... get up and talk to somebody, get yourself into groups and talk to somebody ..

Summary

Teachers were already using the TEEP learning cycle when planning and delivering their lessons to introduce a variety of activities and choice. In the York primary school this was not done a highly structured TEEP way.

Teachers of Foundation and Year 1 classes found that TEEP training offered them little that they could use and said they had difficulty including thinking for learning, assessment for learning and collaborative group work in their teaching because of the young age of their pupils.

A productive classroom climate was reported as difficult to achieve for foundation and early years classes partly as a result of the unpredictable nature of children at this age.

Additional training with a focus on foundation and early years and information on techniques used in Australia with children of this age were mentioned as being useful by teachers at the Birmingham primary school.

Teachers at both schools said senior managers and the Head teacher should have a clearer understanding of the TEEP framework and how it works and that all teachers should be trained as part of a whole school approach for there to be continuity in teaching styles.

Teachers at the York primary school indicated that their level of confidence had improved with continuous practice and that consequently the TEEP framework gets easier to integrate.

Teachers at the York primary school reported no problems with the training they received and found the course was a good model of learning that helped them appreciate the educative process.

6.6 Coordination and management of TEEP in primary schools

A narrative summary of the interviews with Head teachers at the two schools is summarised separately for each school.

6.6.1 Reason why the school got involved with TEEP

At the Birmingham primary school, the current Head teacher mentioned that the previous incumbent had decided to engage the school in TEEP training and had therefore asked two members of staff in the nursery and Year 1 to complete Level 1 training. The view of the current Head being interviewed was that the TEEP training experienced was initially aimed at Secondary schools. She added that she quite liked the idea of TEEP and what it was trying to achieve and believed the programme was in sympathy with how teaching operates in primary schools.

I do think that there are elements of it that we could work on and adapt and would actually improve our teaching and the way we deliver teaching. So it is something that I have considered since I have been here and considered about investigating more, so I am quite positive and open about doing more with it in the school.

The Head teacher at the York primary school became interested in TEEP through the Accelerated Learning Project (ALPS) and also had been provided with information about TEEP information at a meeting of the Teaching & Learning Enhancement Project provided by the City of York LA. She thought the TEEP model to be a good one for use at Key Stage 2 but that more work would be required to adapt it for use at Foundation level and Key Stage 1. The school believed that TEEP had improved teaching and learning.

I think the TEEP model is a good model, particularly at Key Stage 2. I think there still needs to be more work done in primary schools with the TEEP Trainers to look at Foundation stage and Key Stage 1 but I think that the school has taken on board TEEP particularly at Key Stage 2 and I think that it has improved teaching and learning.

6.6.2 To what extent has the TEEP approach been adopted by individual teachers or through a whole-school approach?

The Head teacher at the Birmingham primary school expressed the view that the two teachers who have been involved in the training have modelled their teaching around TEEP, have made changes and adjustments to their teaching and have been able to pass on different aspects of TEEP to other teachers. She mentioned that:

There hasn't been any expectation of teachers to take anything on ... so where teachers have taken aspects on ... it has been voluntary because they have liked what they have heard and what they have seen and felt it could improve their practice.

She was of the opinion that the TEEP framework should be looked at as a whole staff approach to teaching and learning and at the school and that there are elements of TEEP that locate well with a whole-school approach to planning and lesson structure.

The TEEP model is being considered next academic year to evaluate the school's teaching and at the moment it has been more of a voluntary exchange between the two teachers trained who are leading the implementation of TEEP ... and sharing it with other teachers who want to know more.

The York primary school has done much to embed TEEP in a whole school approach at Key Stage 2 and most teachers have now completed Level 1 training and one teacher is trained to Level 3. However, the view of the Head teacher was the TEEP approach should have been designed for the primary level and then introduced at the secondary level, following a bottom-up rather than a top-down approach. Teachers at the school found it difficult to translate some of the TEEP ideas that had come from secondary level into their practice. She felt that successful implementation of TEEP depended on teachers' confidence, their creative and imaginative skills and how much risk they are willing to take.

We have definitely embedded a whole school approach at Key Stage 2, there is more work to be done at Key Stage 1 and Foundation stage but staff are now coming round to the model as being quite a sensible one. It's not been helpful that it was evolved in a secondary school because we would like to think it was a bottom-up rather than top-down ... it's been harder for our Key Stage 1 teachers to be able to translate some of the ideas from secondary level ...

It varies depending on how confident and what level of training each individual teacher has been on and how creative, imaginative and how much risk a teacher is prepared to take.

6.6.3 What aspects of TEEP and the learning cycle have been implemented in this school's philosophy of teaching and learning?

At both schools the learning cycle has been embedded into teaching and learning however, at the Birmingham primary school this was not done in the TEEP structured way as it was at the York primary school.

The Learning Cycle is very much part of our practice of Agreed Learning Outcomes. We have taken on-board Assessment for Learning across the school and part of that is specific to the children getting them to understand what they are learning, why they are learning it and what the outcomes of their learning will be. Teachers have used WALTs (What are We learning about Today?) and WILFS (What am I looking For) - what are the teachers looking for, what are the success criteria and they refer back to the WALT and WILF in their lessons

(Head teacher in Birmingham)

Every member of staff has a TEEP learning mat which we have made up from the TEEP Learning Cycle. Every classroom has 'how to be a successful learner' in every lesson. All our lesson plans have been matched to TEEP and Ofsted so we have kind of married the two together and I can now say across our whole school that we all agree learning outcomes

(Head teacher in York)

In terms of preparing for learning, both head teachers shared the view that this is an area that needs development and is more difficult to incorporate at primary level.

In terms of preparing for learning, our physical, emotional environment in the school is very strong and positive and it's a real strength of the school. Teachers are pretty good on linking to previous lessons and units but maybe the pre-thinking about work had to come. So there are a couple of things out of Preparing for Learning that we could work on in the future

(Head teacher in Birmingham)

The Prepare for Learning is harder in a primary school because you don't have any time between lessons. One lesson flows into the next and that is something that needs to be looked at in terms of primary learning. So fantastic philosophy but the set-up in primary schools is slightly different from what I understand secondary schools to be

(Head teacher in York)

Both head teachers commented that kinaesthetic learning and is important at primary level however, at the York primary school this was more apparent and in place than at the Birmingham primary school.

I think we do quite well in terms of presenting and quite well in tapping into children's visual and auditory learning. Using the five senses is something that we could improve on as a school, just opening up more ways for children to learn. I don't think there is enough kinaesthetic teaching going on or I don't think it is given enough weighting and that is something that we can look at

(Head teacher in Birmingham)

We share criteria with the children, we present new information in VAK, Visual Aesthetic or Kinaesthetic ways. We construct the lesson. We look at multiple intelligences.

(Head teacher in York)

As was the case in secondary schools and FE colleges incorporating the learning cycle into one lesson was challenging and so often completed over more than one lesson.

To do all of the TEEP Cycle in one lesson teachers have found quite hard because our lessons in primary are only an hour long ... Perhaps children in secondary schools work at a quicker pace so there are issues of time and how we manage the TEEP Cycle over a number of lessons – it doesn't always have to be in one lesson.

(Head teacher in York)

6.6.4 Effective teacher behaviours

At the Birmingham primary school having a positive classroom climate was seen as being part of the school's Catholic ethos. However, the head teacher felt there were inconsistencies in the variety of teaching and learning styles teachers were using in their lessons. At the York primary school, all aspects of effective teacher behaviours were thought to be in place with the main challenge being in developing questioning skills as part of interactive teaching.

There is an ethos within the school that there are high-expectations of pupils, the relationships between the children themselves and staff and children are very good. The children are enthusiastic learners – there is no doubt about it. Our classroom

and learning environments I think are cheerful. They are safe and there is very much, because we have a Catholic ethos here, we value the children and their work so that is something that is in this school and is tangible and I think it comes from the quality of staff that we have

A variety of teaching and learning styles is something that is inconsistent across the school, There are bits of everything in different classes but not all of everything in every class ... so that is definitely a big focus for next year

(Head teacher in Birmingham)

We have got very good teacher relationships here. Multiple Intelligences – sometimes it's not easy for teachers just to be able to understand quickly how the different intelligences fit with what they are doing – I think that is an area we need to work on. A huge one is probably questioning skills because that has to do with subject knowledge and a teacher's own ability to be curious and interested ...

(Head teacher in York)

6.6.5 What aspects of the underpinning elements have been emphasised by school-wide staff development?

Assessment for learning had been emphasised by school-wide staff development at the Birmingham primary school and an assessment for learning action plan had been produced for all teachers to use. The school has an improvement plan and CPD for ICT is included in it. The challenges were seen to be in the areas of collaborative problem solving, thinking for learning and accelerated learning. At the York primary school, assessment for learning, and thinking for learning were seen as being embedded in the curriculum but that more could be done on accelerated Learning (in the area of different intelligences).

Subject leaders have been on training, and have produced an Assessment for Learning Action Plan, and are doing more on Assessment for Learning. ICT is used effectively but there has not been a lot of CPD for ICT and for that there is a whole-school improvement plan and a lot of CPD for this. In terms of ICT there is a whole section of the school improvement plan in terms of developing ICT. Problem solving is something that we know we are weak with ...again ...part of our school improvement There is not much of 'thinking for learning' 'Accelerated Learning' but this is something that the school have to develop

(Head teacher in Birmingham)

We have particularly in this school looked at Assessment for Learning. We have done some work towards Team Building and Problem Solving we have done some inset work on that. ICT - we now have Smart-Boards in every room and we have invested heavily in packages to support that. Accelerated Learning – the top one there we are doing out best with this but it still needs more work probably from TEEP on these different intelligences. We have a Learn to Learn week at the beginning of the year where we look at the brain and how we learn so we have put in Learn to Learn weeks. Thinking for Learning – we are looking now at re-designing our curriculum to look at more engaging opportunities for children to use key thinking skills as well so we are beginning to use the thinking in much more in terms of curriculum design

(Head teacher in York)

6.6.6 What circumstances do you think within the school have hindered the impact of TEEP on classroom teaching?

In the Birmingham primary school, the main circumstances constraining impact of TEEP were seen as the fact that only two teachers were trained and, although these teachers have shared their experiences, there is much more to be done to roll-out TEEP across the whole school. The Head teacher had stated that the school is definitely considering additional teachers to be trained and intended to seek support from one of the secondary schools that provides TEEP training and support.

At the York primary school the main challenges were that there has not been enough training for Key Stage 1 and Foundation stage teachers and that local; isolation has prevented a communication and networking. The Head teacher was keen to explain how enthusiastic her teachers were about TEEP:

There hasn't been enough training for Key Stage 1 and Foundation stage teachers. The fact that we are the only school in York ... is difficult to network with anybody else. If I have to be honest I think generally the communication between the TEEP hub and the school in driving the project forward is lacking and the school has been left in some ways to just find its own way. Because we are seemingly on our own in York it's been hard to keep the motivation up without outside influences or people to share work with.

The teachers who have been on the training have it wonderful. They come back ... they are enthused ... it's fantastic and I am so positive about that – the fact that it is paid for ... and straightaway they want to do things in their own classroom

(Head teacher in York)

Summary

In the Foundation Year and Year 1 classes at the Birmingham primary school primary school individual learning is widely used.

Teachers were controlling students' behaviours but this could be due to the nature of small children short attention span and lack of ability to sit still.

At the York primary school primary school, both teachers adopted whole class and individual learning together with small group work activities in their lesson.

Teachers continued to engage their classes in their lesson.

The physical environment of the classroom displayed learners work and colourful teaching material in the classes but this is not a new way of helping student learning at that level of teaching.

There were notable rises in two or the thirteen categories of teacher behaviours in the Birmingham primary school primary and in all categories for teachers at the York primary school primary school.

The two teachers at the York primary school primary were more advanced in incorporating the TEEP framework into their lessons than the teachers at the Birmingham primary school because of using it over a longer period of time

Overall in both schools, pupil behaviour showed positive means differences in all categories after TEEP training.

The two teachers at the York primary school primary were incorporating all five TEEP underpinning elements into their teaching however, at the Birmingham primary school, only effective use of ICT and collaborative group work were being done post-TEEP.

TEEP-like methods were noticed at the pre-observations of teachers and could not be solely attributed to TEEP training.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 introductory remarks

TEEP training is highly valued and often recognised by teachers as being as good if not better than most Continued Professional Development (CPD) that has been and, in many cases, still is on offer. For teachers, part of TEEP's success lies in its ability to unite, under one integrated framework, a number of pedagogical issues that might previously have been met in fragmented ways through teachers' other experiences of professional development or their varying perceptions about what teaching quality is and how best to achieve it. In the last few years, teachers in all phases of education have had to deal with an unprecedented rate of change accompanied by initiative after initiative, albeit ostensibly aimed at improving standards of pupils' performance and the quality of teaching. In many ways TEEP provides a welcome respite in this educational climate and a chance for teachers to be more professionally proactive. Training, particularly when backed by peer coaching or follow up discussion, provides a useful professional space for reflection on practice in which dialogue between practitioners about teaching and learning is valued.

In all three case study areas, TEEP training was seen to have a positive affect on teacher behaviours that were promoted in TEEP training. Most importantly, following training, less time was spent in lessons disciplining learners and checking their behaviour as lessons moved to faster paced episodes using a greater variety of learner-centred tasks. As a result of these changes the levels of pupils' participation, in most cases, improved. Importantly, teachers in all three phases of education shifted towards using more collaborative learning and group work though there are still some teachers concerned about the time group work might take up, that it requires a shift in the locus of their control and the social skills required by their pupils to engage in it effectively. Talk between pupils is recognised as having important cognitive as well as social outcomes. The seminal work in the UK of Barnes and Todd (1995), Edwards and Mercer (1987), Des Fountain and Howe (1992) and in the US of Palinscar and Brown (1984) points to the importance of classroom talk in providing, '...worthwhile opportunities [for children] to work together in small groups, making meaning through talk', (Des Fountain and Howe, 1992 p146). Thus collaboration in groups is a crucial element of TEEP and the learning cycle, particularly for the construct and review phases. Taken as a whole, the most fundamental changes seen in teacher behaviours in this evaluation exercise confirms other research (see for example: Hay McBer, 2000; Serret and Reiss, 2006) that improvement in the quality of teaching and, as a result, of pupils' learning is a tripartite interaction of professional characteristics, teaching skills and classroom climate.

Teachers liked the idea of the TEEP learning cycle though some struggled with the (erroneous) notion that all phases of it should be used in each lesson. There was a noticeable

pre-knowledge effect, as those teachers with some previous exposure to TEEP, seemed to be the ones who were most comfortable in applying it. In one of the primary schools where it was possible to observe a teacher on two occasions following training the teacher said, on the second occasion, "it (using the learning cycle) gets easier with time". One danger of the six-part structure is that teachers put most effort into the first parts of lessons and consequently, by the time teachers get to the 'review learning' stage they and their pupils suffer a kind of 'learning fatigue'. Perhaps this is why some teachers in all three phases felt that the review and application phases of the cycle were the most difficult to cope with.

The five underpinning elements of TEEP provide useful foci in training and act as important drivers to improve the classroom climate for learning and the quality of teaching. In this evaluation we saw increased examples for all five elements following training in all three case study areas, though in the FE colleges and primary schools there was greater variation in practice. Particular effort by teachers was noticeable on 'assessment for learning' perhaps because it was congruent with recent efforts and training in this area of teaching. In other words, teachers might have been better disposed to taking actions in areas of TEEP that they already felt most comfortable with. This was supported by some of the comments made during post observation interviews. For example, when asked which of the five underpinning elements of TEEP they found most difficult to implement after training, one teacher said this:

I think it would be easier for me to say which ones (elements of TEEP) are the easiest (to do) really! ... Because assessment for learning ... I had already started quite a lot of that and it is the one I find easier because of so much practice with it. (Teacher D)

(Teacher in a Hull secondary school)

There is an inherent danger that some teachers might 'cherry pick' items from TEEP which seem most familiar and hence are easier to use and implement. Perhaps a whole school approach to the development of TEEP, supported by well defined in-house management and training structures, would help focus some teachers better on which aspects of TEEP are most important for them to concentrate on using at a particular moment in their professional development.

7.2. Factors that resulted in high impact

It was possible to draw, mainly from the interview data, some conclusions about what factors helped TEEP training have most impact.

It seems that in all three case study areas, Secondary schools, FE Colleges and primary schools, real successes deriving from TEEP were in places where training was part of a whole institutional approach to improving teaching and learning. Length of contact with TEEP is an important factor to bear in mind. For example, if we use TEEP as a verb, the

most 'TEEPED' school visited was one in Birmingham that had worked on TEEP for over five years. Here TEEP training had been provided both externally and later internally for most teachers and an ongoing, continually evaluated programme of coaching and review was in place to make sure that embedded changes in teaching were not lost and dissipated with time. It was noticeable that in this school, and one other in North Suffolk where a high proportion of teachers had been trained, pupil performance on tests and examinations showed most improvement. Where structures to help embed TEEP were most successful they were often the result of overt support from the senior management team of the institution. Where management support was weak or absent trained teachers felt isolated, cut off from the chances for professional dialogue, mentioned earlier. In schools where the framework for support was less obvious to teachers there was the feeling that pupils not used to TEEP approaches would flounder when they arrived in classes taught by teachers who were trying to make the best use of their training. A feeling of isolation was not confined within institutions; it operated at local and regional levels as well. Where an institution was the only one in an area to be using TEEP there was a feeling that, even if the institution had done all it could to improve teaching and learning, an internal 'wall' would be met preventing further advancement resulting in possible stagnation in teaching.

7.3. TEEP - Towards world class?

According to a recent study, the world's top performing school systems share three essential features; teachers recruited from the highest qualified graduates, high quality and sustained professional development and ensuring high quality instruction for all learners (Barber and Mourshed, 2007). Thus good CPD has a pay-off in good instruction that is itself a matter of better quality of teaching. Barber and Mourshed suggest three things that are most likely to make this happen:

1. Individual teachers need to become aware of specific weaknesses in their own practice. In most cases, this not only involves building an awareness of what they do but the mindset underlying it.
2. Individual teachers need to gain understanding of specific best practices. In general, this can only be achieved through the demonstration of such practices in an authentic setting.
3. Individual teachers need to be motivated to make the necessary improvements. In general, this requires a deeper change in motivation that cannot be achieved through changing material incentives. Such changes come about

when teachers have high expectations, a shared sense of purpose, and above all, a collective belief in their common ability to make a difference to the education of the children they serve.

Barber and Mourshed, 2007, p. 27.

This evaluation goes some way towards showing how, with the right structures to support and sustain changes, TEEP can help meet these aspirations. The change in teaching seen in this evaluation bodes well for the future of institutions making the most of what TEEP has to offer. What seems clear is that TEEP represents a high quality CPD experience, soundly rooted in research of what is effective. If institutions, and indeed the country as a whole, seek to emulate the world's best, then taking heed of the TEEP approach and further extending and developing it is worth considering.

7.4. Implications for further development of TEEP

1. Leaders in education nationally, regionally and locally should be made aware of the successes of the TEEP model of CPD. Funding to support training should be given national and regional priority.
2. Where institutions are thinking of taking up TEEP and the training associated with it, they should first consider what structures will be put in place to ensure that changes are embedded at institutional level.
3. Schemes to support and embed TEEP approaches should include an element of peer-coaching and review. Resources should be allocated to help this process.
4. Senior management support for TEEP implementation is crucial. Senior managers in institutions that take up TEEP should be trained so that their staff feel they are sympathetic to what they are trying to do.
5. Local authorities and other regional bodies should ensure that institutions taking up TEEP are part of a local networks focussed on improving teaching and learning
6. Some preliminary experience or knowledge of the TEEP framework should be given to teachers before they embark on Level 1 training.
7. Teachers should be encouraged to go for immediate implementation of at least some of the ideas gained from TEEP training. This could be backed by in-school peer support such as coaching and review.
8. Consideration should be given to how the TEEP framework and training might be adapted to help improve the quality of teaching for young people in work-related and skills training environments. This should be given national priority within the government's 14-19 agenda.

9. Training requires modification for teachers in foundation and early years' settings. This should be backed with specific examples that have been successfully used in these settings.
10. Training in all phases of education should consider how teachers can be encouraged to develop and use better questioning that encourages pupils' higher order thinking.
11. Teachers in all phases might appreciate more guidance on the construction and management of classrooms to help them use collaborative group work and to ensure it is effective.
12. Training should ensure that teachers do not ignore later parts of the TEEP learning cycle in their planning and that the cycle does not have to be completed in one lesson.

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Annex 1: Teacher Observation Sheet

School _____
 Teacher _____
 Topic _____

Date _____
 Group _____
 Number in class _____

Time _____

Mode of Organisation	Time Intervals	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	##	Tot	
whole class																							
small group																							
individual																							
Teacher controls behaviour																							
% of class engaged at point of observation																							
Lesson Characteristic	Time Intervals	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	##	Tot	
For the Teacher behaviour																							
Previous knowledge is taken into account																							
Students are encouraged to participate																							
Students are encouraged to find their own meaning																							
Students are encouraged to reflect on what and how they learnt																							
Questioning is inclusive																							
Questioning aims at higher order thinking																							
Encourage student-constructed questions																							
Differentiation is being used																							
Teacher intervention helps new learning																							
Collaborative learning is encouraged																							
Individual learning is encouraged																							
Inductive learning is encouraged																							
Deductive learning is encouraged																							
For the Pupil behaviour																							
Pupils listening to teacher																							
Pupils listening to pupil																							
Pupils answering questions																							
Pupils asking questions																							

Assessment for learning:	Accelerated learning:	Thinking for learning:	Effective ICT:	Collaborative problem solving:

Annex 2: TEEP pre- and post-questionnaire

Gender

This happens...				It helps learning ...		
A lot	Sometimes	never		A lot	A little	Not at all
☺	☺	☹	1. The room is friendly and welcoming.	☺	☺	☹
☺	☺	☹	2. The lessons have interesting beginnings.	☺	☺	☹
☺	☺	☹	3. The lessons are linked to what I already know.	☺	☺	☹
☺	☺	☹	4. The teacher helps me with my work.	☺	☺	☹
☺	☺	☹	5. The teacher corrects bad behaviour in class when necessary.	☺	☺	☹
☺	☺	☹	6. I understand <i>what</i> I am going to learn in the lesson.	☺	☺	☹
☺	☺	☹	7. I understand <i>why</i> I am going to learn something in the lesson	☺	☺	☹
☺	☺	☹	8. I understand what I need to do in order to be successful in class.	☺	☺	☹
☺	☺	☹	9. In lessons we use things like video, film, music.	☺	☺	☹
☺	☺	☹	10. In lessons I use ICT for research, quizzes or simulations.	☺	☺	☹
☺	☺	☹	11. I help the teacher to decide which activities are best for me.	☺	☺	☹
☺	☺	☹	12. In class I can ask if I'm not sure I understand what we are doing.	☺	☺	☹
☺	☺	☹	13. In lessons I work on my own.	☺	☺	☹
☺	☺	☹	14. In lessons I take part in whole class discussions.	☺	☺	☹
☺	☺	☹	15. In lessons the teacher asks me questions that make me think.	☺	☺	☹
☺	☺	☹	16. In lessons the teacher gives me enough time to answer questions.	☺	☺	☹
☺	☺	☹	17. In class I am encouraged to ask questions.	☺	☺	☹
☺	☺	☹	18. In class I show what I have understood by making something (like presentations, posters, films, photographs or audio tape).	☺	☺	☹
☺	☺	☹	19. In class I talk to other people about how to solve problems.	☺	☺	☹
☺	☺	☹	20. In class I explain my ideas to other people.	☺	☺	☹
☺	☺	☹	21. I get a chance to decide how well I have succeeded in a lesson.	☺	☺	☹
☺	☺	☹	22. In class I get a chance to think about how I learn.	☺	☺	☹
☺	☺	☹	23. In class we summarise the main points at the end of the lesson.	☺	☺	☹

Annex 3: Interview schedule with TEEP teachers (post-TEEP lessons)

Thank you very much for inviting me into your class and for the time you've made available for this short interview. I have recognised several features of the TEEP training in the lesson I observed. In this interview I would like to hear your views about the aspects of TEEP you find easy and difficult to apply in your classes, and the reasons for this. This discussion will be confidential and the reporting will be anonymous, so I hope you can be as frank as possible.

1. Before you started on your TEEP training, how did you expect this to affect your classroom teaching?
 - i. To what extent were you already familiar with the TEEP learning cycle?*
 - ii. To what extent did you already apply the five elements underpinning TEEP? (refer to chart with Accelerated learning, Thinking for learning, Assessment for learning, Collaborative problem-solving, Effective use of ICT)*
 - iii. If any of these was already applied in class, could you give some examples?*

2. In the lesson you just taught, which of the 6 stages of the Learning Cycle did you find most difficult to integrate meaningfully within this lesson? Why?
 - i. What alternatives did you consider and why did you reject those?*
 - ii. How could it be made easier for you to integrate this in your teaching?*
 - iii. Could you give me an example of a lesson where you have been quite happy with integrating this aspect?*

3. Could you look at the 'Effective teacher behaviours'. Which of those 4 aspects do you feel was most difficult to include in this lesson? Why?
 - i. How could it be made easier for you to integrate this in your teaching?*

4. There are five underpinning elements for TEEP (refer to chart). In general, which of these do you find difficult to include in your teaching? Why?
 - i. How could it be made easier for you to integrate this in your teaching?*

5. What additional support do you think will strengthen the implementation of the TEEP approach in your classroom teaching?

6. Is there anything else you want to add about the way the TEEP training has impacted on your class teaching?

Annex 4: Interview schedule with TEEP coordinators within each school

Thank you very much for the time you've made available for this short interview. I have seen several very interesting TEEP lessons in the school. In this interview I would like to hear your views about issues which help and hinder the implementation of the TEEP approach in your school. This discussion will be confidential and the reporting will be anonymous, so I hope you can be as frank as possible.

1. What were the reasons for the
 - i. LA to get involved with TEEP?*
 - ii. Schools to get involved with TEEP?*
 - iii. Are these still the same reasons for involvement with TEEP?*

2. To what extent has the TEEP approach been adopted by
 - iv. Individual teachers?*
 - v. Whole-school approach?*

3. What aspects of TEEP have been implemented into the schools' philosophy of teaching and learning?
 - vi. To what extent has the TEEP learning cycle been adopted by staff?*
 - vii. What aspects of 'Effective teacher behaviour' (see chart) have been emphasised by school-wide staff development?*
 - viii. What aspects of the 'Underpinning elements' (see chart) have been emphasised by school-wide staff development?*

4. What measures within the school have facilitated the impact of TEEP on classroom teaching?

5. What circumstances within the school have hindered the impact of TEEP on classroom teaching?

6. Is there anything else you wish to mention about the impact of TEEP on classroom teaching in your school?

Annex 6: Table of data for each secondary school case study, pre- and post TEEP observations of classroom organisation and teacher and pupils' behaviours

	Observations	Hull					Birmingham				North Suffolk				
		Pre	Post	Diff	SD	p	Pre	Post	Diff	SD	Pre	Post	Diff	SD	p
Organisation	Whole class	58	54	-3	23	0.566	54	84	31	27	57	48	-10	30	0.258
	Group	23	40	17	30	0.038	15	38	23	14	33	31	-3	33	0.772
	Individual	42	33	-9	38	0.357	39	57	19	18	39	27	-12	37	0.247
	Control	30	33	3	29	0.720	25	11	-14	16	29	18	-11	27	0.166
	% engaged	86	92	6	16	0.167	87	98	11	11	86	92	7	12	0.054
Teacher behaviours	Knowledge	33	60	27	52	0.059	20	80	61	17	33	51	18	41	0.128
	Participate	34	70	36	36	0.001	44	93	49	27	38	53	15	37	0.156
	Own meaning	9	29	20	26	0.011	18	8	-9	19	32	32	0	38	0.978
	Reflect	4	11	7	14	0.074	7	14	7	7	15	13	-2	21	0.770
	Qu inclusive	18	37	19	39	0.077	17	57	40	24	18	32	14	30	0.101
	Qu high order	5	16	11	212	0.070	18	24	6	15	14	22	8	17	0.115
	Qu construct	1	3	2	7	0.302	8	0	-8	15	3	2	-1	7	0.548
	Differentiation	9	28	19	25	0.010	6	30	24	23	9	32	24	32	0.015
	Intervention	3	19	16	14	0.001	27	15	-11	24	21	19	-2	29	0.789
	Collaborative	18	33	16	25	0.029	11	36	26	16	17	30	14	33	0.151
	Individual	32	53	21	50	0.137	54	74	20	15	26	29	3	44	0.786
	Inductive	3	7	4	10	0.836	2	11	10	16	15	1	-14	24	0.052
Deductive	0	5	5	14	0.165	0	3	3	9	18	20	2	44	0.841	
Pupil behaviours	Listen teacher	57	73	15	32	0.088	41	86	45	22	62	62	0	33	0.962
	Listen pupil	10	31	21	28	0.011	24	4	-20	34	34	36	2	36	0.831
	Answer Qu	40	50	10	30	0.208	24	46	22	32	48	52	5	30	0.549
	Ask Qu	6	12	6	11	0.101	0	0	0	20	18	34	15	32	0.095

Annex 7: Table of combined data for all secondary schools

Pre- and post- TEEP observations of classroom organisation and teachers' and pupils' behaviours (N=37)

	Observations	Mean lesson time observed			Number of teachers who changed		t-test <i>p</i> value		
		Pre	Post	Diff	SD	+		-	
Organisation	Whole class	57	58	2	30	18	17	0.760	
	Group	25	36	11	30	25	10	0.030*	
	Individual	40	36	-4	36	20	15	0.470	
	Control	28	33	-6	26	11	25	0.184	
	% engaged	86	93	7	13	28	6	0.002**	
Teacher behaviours	Knowledge	30	61	31	44	28	9	<0.001**	
	Participate	38	68	31	36	30	7	<0.001**	
	Own meaning	20	26	6	32	21	11	0.265	
	Reflect	9	12	4	16	19	9	0.171	
	Qu inclusive	18	40	22	34	23	10	<0.001**	
	Qu high order	11	20	9	18	23	8	<0.007**	
	Qu construct	3	2	-1	10	5	6	0.399	
	Differentiation	8	30	22	27	27	7	<0.001**	
	Intervention	15	18	3	25	17	13	0.447	
	Collaborative	16	33	17	27	26	9	<0.001**	
	Individual	34	48	14	43	23	14	0.055	
	Inductive	7	6	-1	21	13	9	0.681	
	Deductive	7	10	4	28	10	4	0.425	
	Pupil behaviours	Listen teacher	55	72	18	36	26	10	0.005**
		Listen pupil	19	33	14	33	23	10	0.013*
Answer Qu		45	53	8	29	22	15	0.105	
Ask Qu		11	20	10	23	22	10	0.016*	

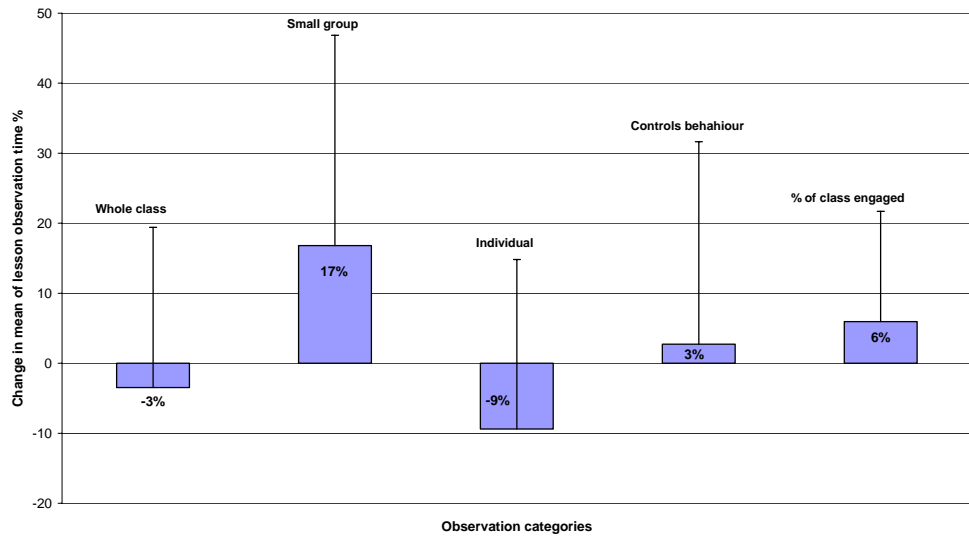
Figures are rounded to the nearest whole number and so differences might not add to original numbers.

The + figure shows the numbers of teachers who were observed to have increased their behaviours from pre to post TEEP and the – figure shows the numbers who were observed to show a behaviour less often in the post TEEP lesson.

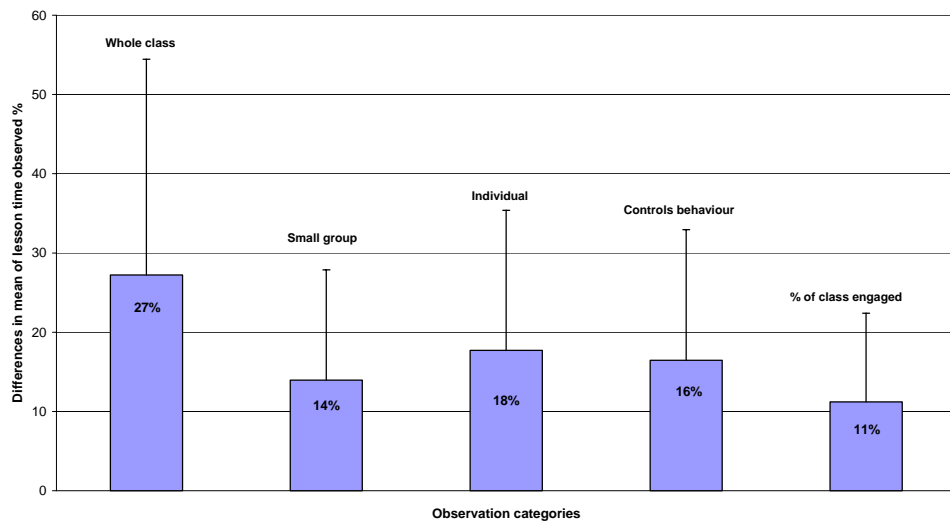
* the difference is statistically significant ** the difference is statistically very significant

Annex 8: . Graphs for pre- and post observations of classroom organisation for Hull, Birmingham and North Suffolk

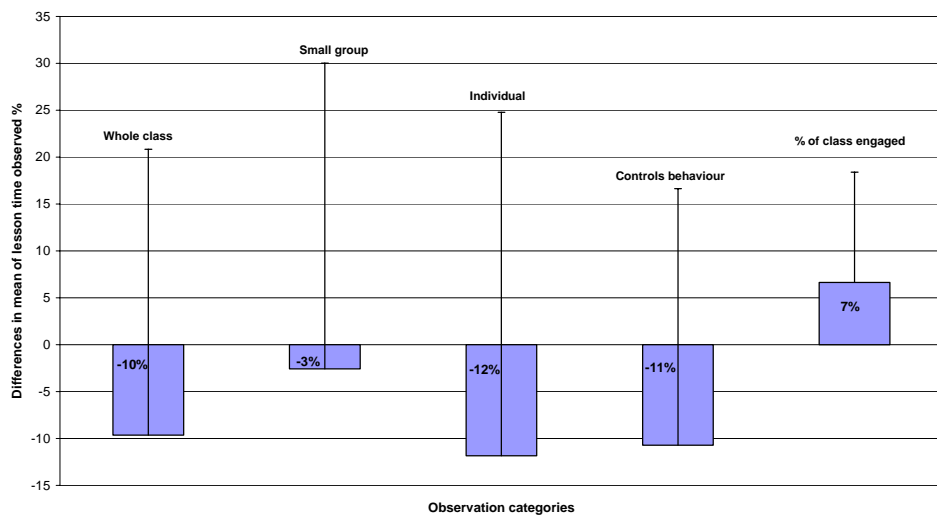
Hull data: Differences in pre- and post- means for classroom organisation



B'ham data: Differences in pre- and post- means for classroom organisation

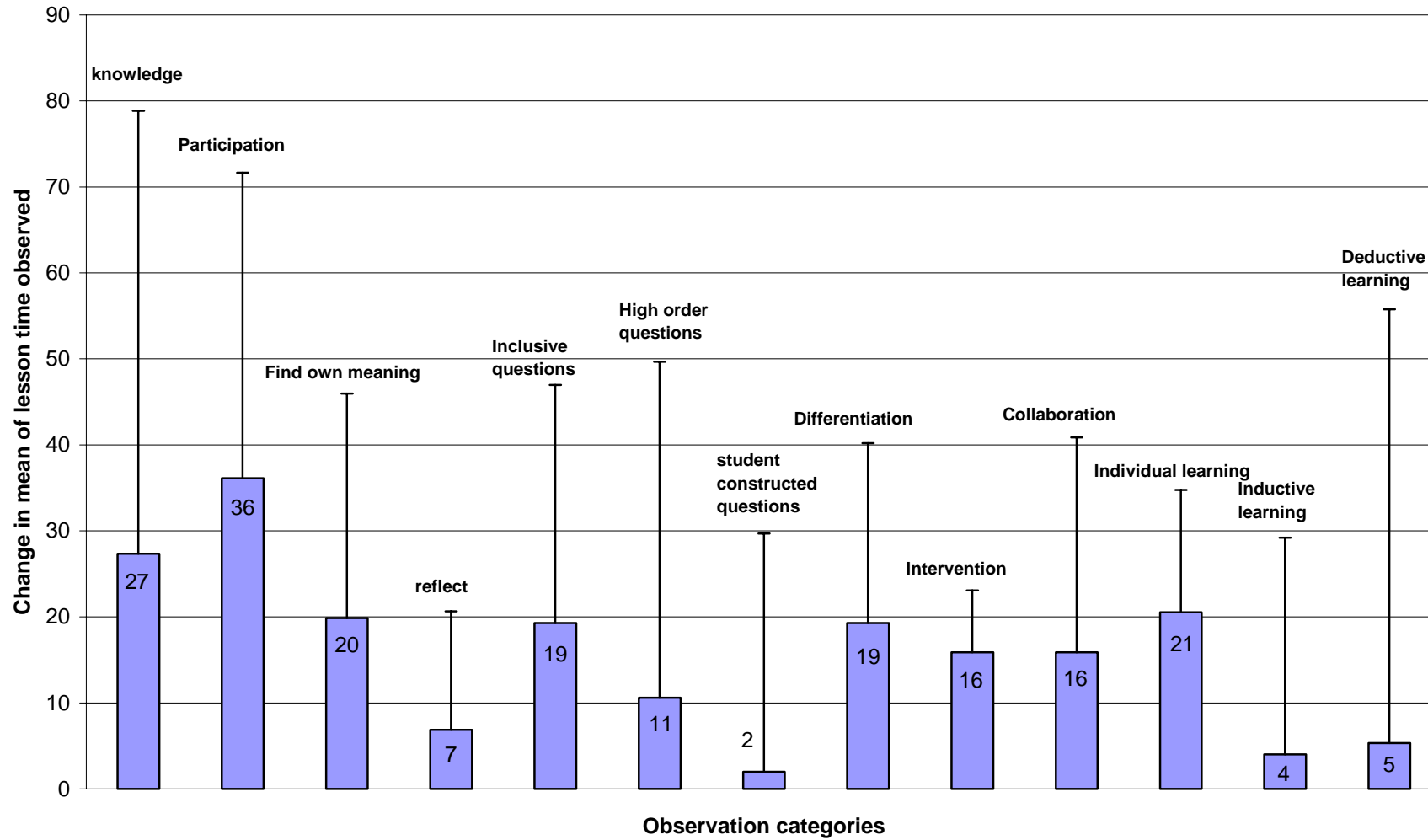


N Suffolk data: Differences in pre- and post- TEEP means for classroom organisation

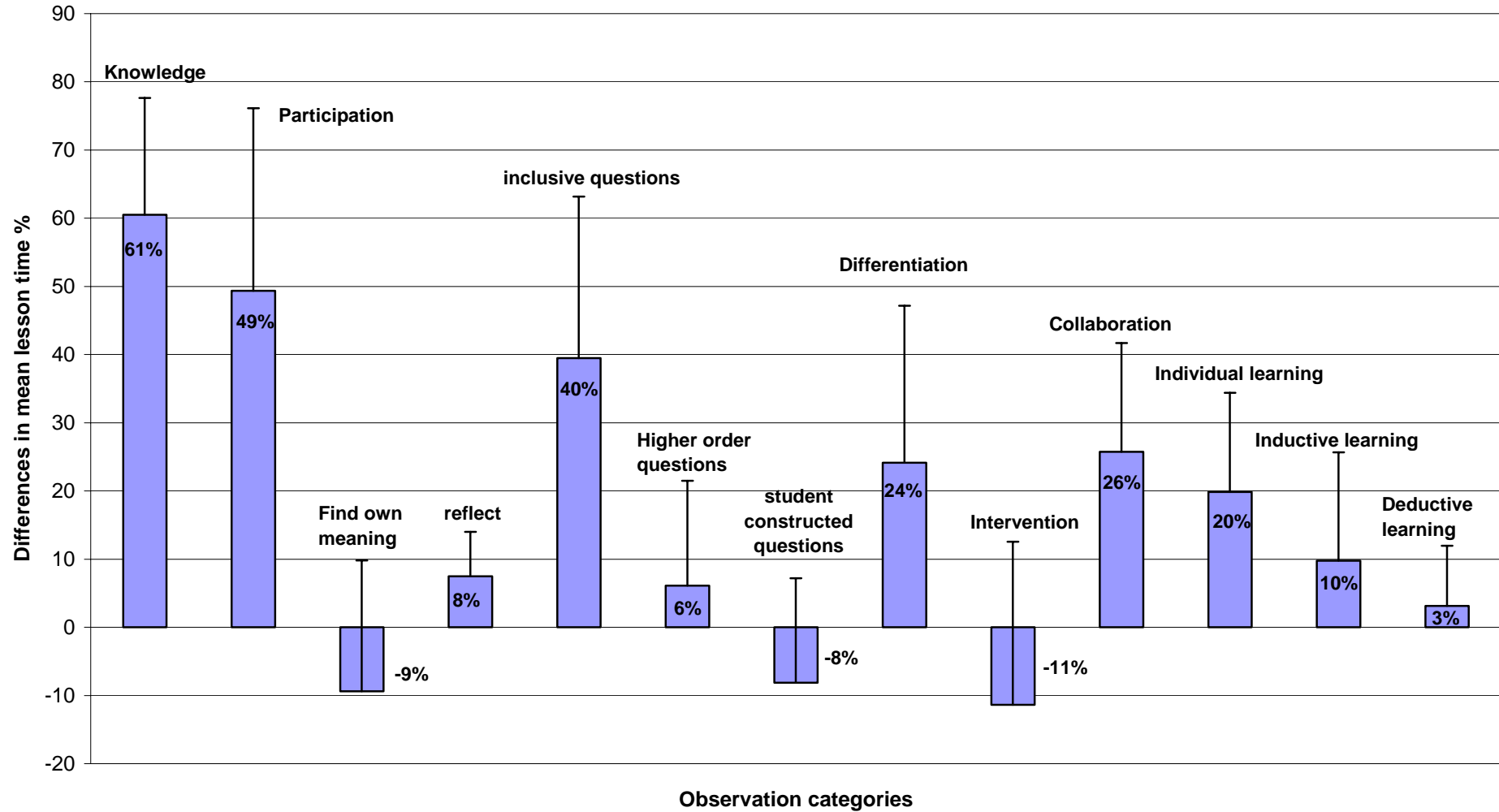


Annex 9: Graphs for pre- and post observations of teacher behaviours for Hull, Birmingham and North Suffolk

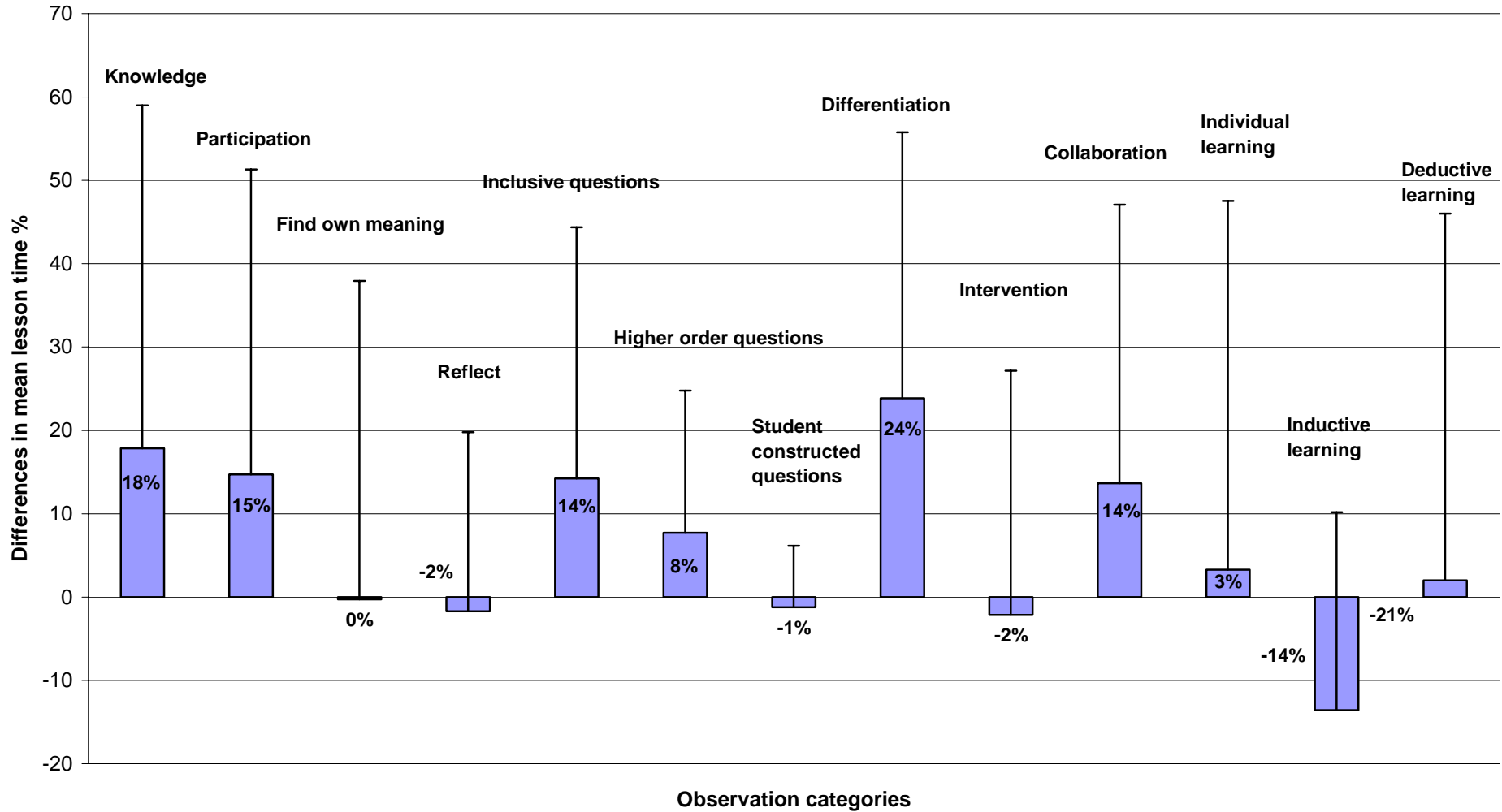
Teacher Behaviours in Hull: Post TEEP changes in mean % of lesson time observed



Birmingham: Post TEEP differences in mean % lesson time for teacher behaviours observed

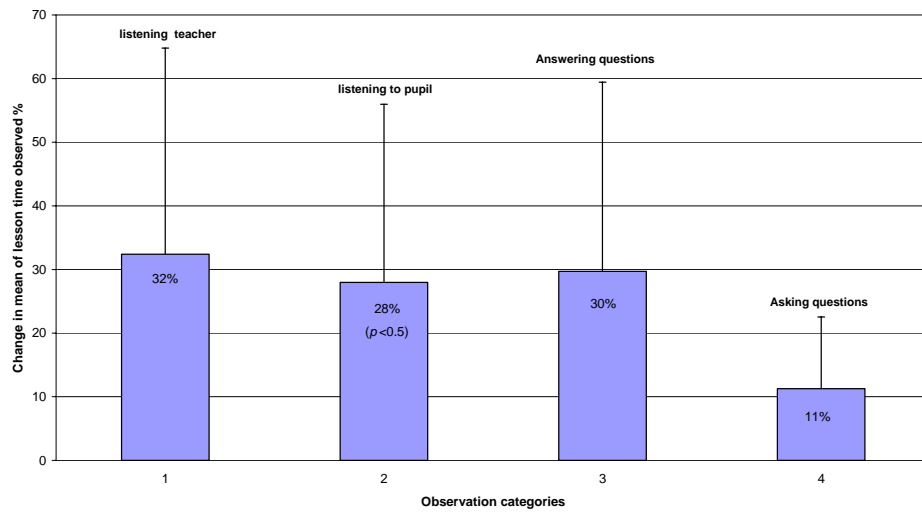


N. Suffolk: Post TEEP differences in mean % of lesson time for teacher behaviours observed

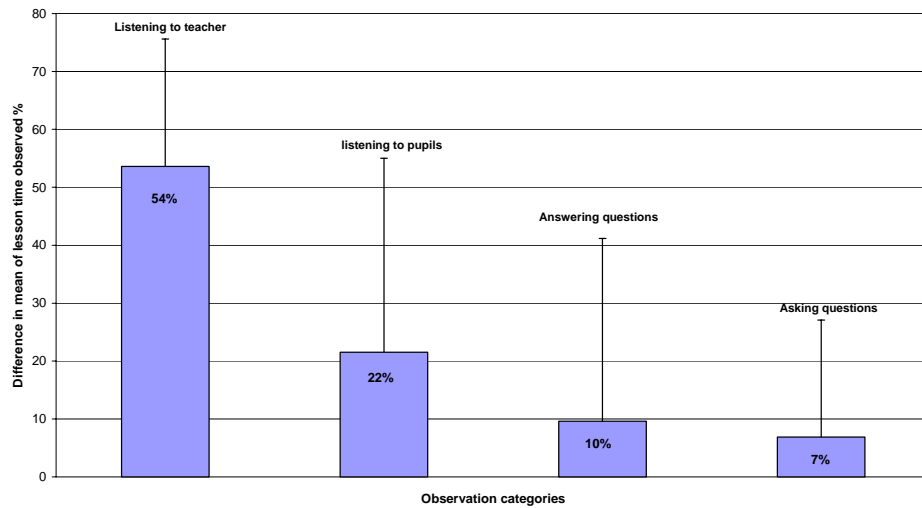


Annex 10.: Graphs for pre- and post observations of pupil behaviours Hull, Birmingham and North Suffolk

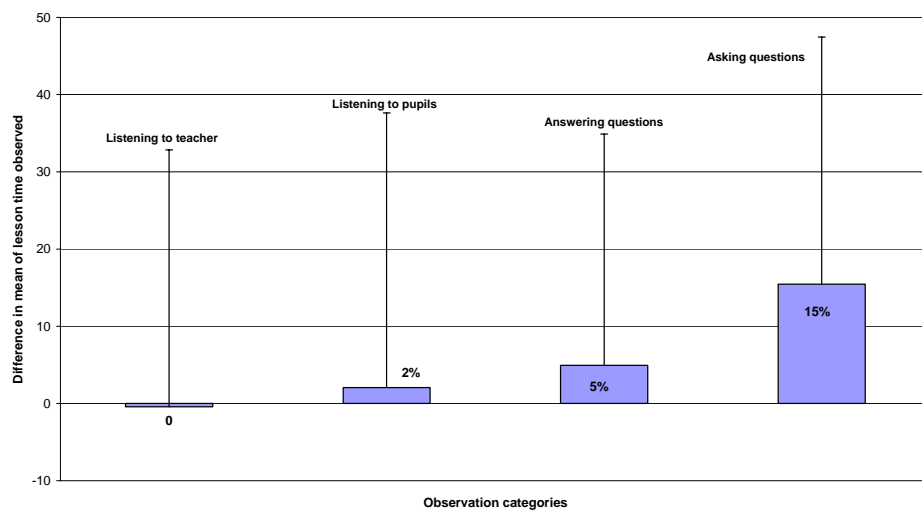
Pupil behaviours in Hull: Post TEEP changes in mean % of lesson time observed



Pupil behaviours, Birmingham: Post TEEP differences in mean % of lesson time



Pupil behaviours, N. Suffolk: Post TEEP differences in mean % of lesson time



Annex 11: Table of data for each FE College case study, pre- and post TEEP observations of classroom organisation and teacher and pupils' behaviours

	Observations	The York FE college			The Manchester FE college			Both		
	Observations	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
Organisation	Whole class	100%	34%	-66%	85%	20%	-65%	93%	27%	-65%
	Group	22%	28%	5%	5%	1%	-4%	14%	15%	1%
	Individual	82%	43%	-39%	74%	72%	-2%	78%	58%	-20%
	Control	26%	0%	-26%	2%	0%	-2%	14%	0%	-14%
	% engaged	98%	98%	0%	90%	97%	7%	94%	97%	4%
Teacher behaviours	Knowledge	55%	88%	33%	31%	90%	59%	43%	89%	46%
	Participate	75%	68%	-6%	34%	58%	24%	54%	63%	9%
	Own meaning	10%	30%	20%	0%	27%	27%	5%	28%	23%
	Reflect	14%	4%	-10%	17%	42%	25%	15%	23%	8%
	Qu inclusive	37%	45%	8%	19%	32%	13%	28%	38%	10%
	Qu high order	6%	13%	7%	4%	26%	22%	5%	20%	15%
	Qu construct	0%	0%	0%	4%	0%	-4%	2%	0%	-2%
	Differentiation	29%	43%	15%	7%	23%	16%	18%	33%	16%
	Intervention	14%	5%	-9%	10%	6%	-4%	12%	6%	-6%
	Collaborative	13%	16%	3%	5%	1%	-3%	9%	9%	0%
	Individual	17%	68%	51%	20%	83%	63%	19%	76%	57%
	Inductive	0%	0%	0%	5%	0%	-5%	2%	0%	-2%
	Deductive	6%	0%	-6%	3%	0%	-3%	5%	0%	-5%
Pupil behaviours	Listen teacher	83%	80%	-3%	62%	55%	-7%	72%	67%	-5%
	Listen pupil	15%	28%	12%	3%	9%	6%	9%	18%	9%
	Answer Qu	47%	59%	11%	45%	33%	-13%	46%	46%	-1%
	Ask Qu	51%	25%	-26%	28%	20%	-8%	39%	23%	-17%

Annex 12: Table of data for each primary school case study, pre- and post TEEP observations of classroom organisation and teacher and pupils' behaviours

	Observations	York primary			Birmingham primary			Both		
	Observations	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
Organisation	Whole class	53%	0%	-53%	30%	11%	-19%	42%	6%	-36%
	Group	42%	72%	30%	43%	5%	-38%	42%	38%	-4%
	Individual	33%	41%	7%	25%	37%	12%	29%	39%	10%
	Control	2%	5%	3%	30%	4%	-26%	16%	4%	-11%
	% engaged	97%	100%	3%	93%	99%	6%	95%	99%	5%
Teacher behaviours	Knowledge	51%	98%	47%	35%	65%	30%	43%	81%	38%
	Participate	31%	98%	67%	48%	100%	53%	39%	99%	60%
	Own meaning	22%	60%	38%	0%	46%	46%	11%	53%	42%
	Reflect	30%	36%	6%	0%	15%	15%	15%	25%	10%
	Qu inclusive	9%	77%	68%	25%	54%	29%	17%	66%	48%
	Qu high order	17%	65%	48%	3%	0%	-3%	10%	33%	23%
	Qu construct	0%	7%	7%	0%	0%	0%	0%	3%	3%
	Differentiation	35%	52%	17%	25%	20%	-5%	30%	36%	6%
	Intervention	19%	55%	36%	5%	12%	7%	12%	33%	21%
	Collaborative	34%	95%	61%	13%	2%	-10%	23%	49%	25%
	Individual	14%	94%	80%	33%	89%	57%	23%	91%	68%
	Inductive	0%	16%	16%	0%	0%	0%	0%	8%	8%
Deductive	0%	8%	8%	0%	0%	0%	0%	4%	4%	
Pupil behaviours	Listen teacher	30%	91%	60%	45%	98%	53%	38%	94%	57%
	Listen pupil	18%	87%	69%	3%	34%	31%	10%	60%	50%
	Answer Qu	79%	77%	-2%	43%	65%	23%	61%	71%	10%
	Ask Qu	3%	14%	5%	0%	27%	27%	2%	20%	18%