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Retain: CPD for Early Career Teachers of KS1

Pilot report and executive summary

May 2018

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About the evaluator

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Executive summary

The project

RETAIN is a one-year professional development programme for early career teachers (ECTs) who are teaching key stage 1 (KS1) pupils in schools in disadvantaged areas. The programme has two aims: to enhance ECTs' knowledge and use of evidence-informed practices that have the potential to improve outcomes for disadvantaged pupils and to retain ECTs in the profession. The core components of the programme are: regional workshops at the start and end of the programme; three taught modules; in-school coaching by an external coach; support from a within-school champion, peer collaboration, and supporting resources.

The project was a pilot and focused on evaluating three aspects of RETAIN: the evidence of promise, the feasibility, and the readiness for trial. The main evaluation activities included interviews and surveys of the different stakeholder groups and observations of training. Ten ECTs from nine schools completed the pilot, which happened in Cornwall between March 2016 and March 2017 led by The Cornwall College Group, in partnership with University College London (UCL): Institute of Education and Edge Hill University.

Key conclusions

1. There were increases in ECTs' knowledge and understanding of approaches to teaching disadvantaged students and changes in their classroom practice. Their self-efficacy, confidence and research-use also increased. The absence of a comparison group means that it is not possible to estimate the level of improvement that may have occurred without the programme, due to maturation and school support.
2. The pilot was not intended to assess the longer-term impact of RETAIN on the retention of ECTs in the profession. However, most ECTs perceived that RETAIN was beneficial to their professional and career development and supported them in teaching disadvantaged pupils, and none left the profession during the pilot.
3. Overall, RETAIN was positively received, but some school staff felt that communication from the delivery team could be improved, and would have welcomed closer working with their school.
4. ECTs found it easier to apply the learning from RETAIN in schools which were open to changing existing school practices and willing to support ECTs in implementing new approaches.
5. The RETAIN programme and its components are clearly defined and supporting resources have been produced, so that the programme is ready for an impact evaluation. However, the pilot indicates that recruitment at scale may be challenging.

What are the findings?

RETAIN aims to improve pupil outcomes by increasing teachers' knowledge and understanding of disadvantage and engaging and teaching disadvantaged KS1 pupils, confidence, sense of self-efficacy, and research-use and by developing the practices of early career teachers. Surveys before and after the intervention found that the teachers that took part in the pilot reported increases in knowledge, understanding, research use and confidence and changes in practice. This was a pilot with no comparison group, so all results are indicative and aim to look for evidence of promise rather than measuring the impact of the programme.

ECTs reported changes in their general classroom practices, and highlighted changes to literacy practices. Survey and interview data also indicates that there have been improvements in ECTs' classroom management, engagement with professional learning and career development. Many of the ECTs attributed changes to their classroom practice and confidence to RETAIN. However, some school champions and headteachers were less convinced, pointing to the effects of maturation and in-school

support as alternative explanations. There was some qualitative evidence that RETAIN had improved intermediate pupil outcomes, such as engagement, motivation and literacy skills.

The qualitative findings indicate that the most important components of RETAIN were the taught sessions underpinned by research evidence, coaching by an external coach and peer collaboration. The findings also suggest that these components combined to achieve positive outcomes.

The pilot was not intended to assess the longer-term impact of RETAIN on the retention of ECTs in the profession. However, most ECTs perceived that RETAIN was beneficial to their professional and career development and supported them in teaching disadvantaged pupils, and none left the profession during the pilot.

The evaluation found that it is feasible to deliver RETAIN and as intended, to engage schools with a high proportion of disadvantaged pupils in the programme. Most of the ECTs who participated in the programme were positive about their experiences and valued the outcomes they achieved. There were more mixed views amongst headteachers and school champions, some of whom felt that there was insufficient communication from the RETAIN team. Some school champions made a link between the lack of communication from the team and not being able to support their ECT effectively.

In schools that were not open to change or were very prescriptive about teaching and learning approaches and resources, ECTs found it difficult to apply their learning from RETAIN to their own teaching. Further development of the role of the external coach may have the potential to support ECTs to challenge and change existing practices to align them more closely with research evidence.

The RETAIN programme is in a form ready for an impact evaluation. The programme and its components are clearly defined. Only minor refinements to the programme structure and associated documentation are considered necessary. Challenges to a future trial of RETAIN include the initial high cost of the programme per ECT, but economies of scale may be achieved through expansion. In addition, recruiting enough schools to accurately measure the programme's impact is likely to be challenging, so market research would be beneficial prior to a trial.

Table 1: Summary of pilot findings

Question	Finding	Comment
<i>Is there evidence to support the theory of change?</i>	Yes	Positive intermediate ECT outcomes were reported and evidence supports the programme theory of change. There is no comparison group, so change cannot definitively be attributed to RETAIN.
<i>Was the approach feasible?</i>	Yes	Overall RETAIN was positively received, but it could be made more attractive to schools by building stronger relationships with schools to facilitate a better fit with existing practices and priorities.
<i>Is the approach ready to be evaluated in a trial?</i>	Yes	The programme could be evaluated in a trial with minor amendments. Recruiting sufficient schools was challenging in the pilot so it may remain the main issue to overcome. It would be beneficial to conduct market research prior to a trial to assess this.

Introduction

Intervention

RETAIN is a continuing professional development programme (CPD) for early career teachers (ECTs). The target participants are Key Stage (KS) 1 teachers in their first three years of teaching who work in schools in socio-economically disadvantaged areas. RETAIN aims to support ECTs' professional learning and development, with a particular focus on enhancing their knowledge and use of evidence-informed practices that can improve outcomes for disadvantaged KS1 learners. A further intended outcome is to enhance their professional satisfaction and retain them in the profession.

The pilot, which was delivered in Cornwall and completed by one group of ten ECTs, comprised a development phase (September–March 2016) followed by the implementation of a one-year programme (March 2016–March 2017). The pilot was developed and delivered by a partnership of The Cornwall College Group, University College London Institute of Education (UCL IoE), and Edge Hill University. The RETAIN delivery team comprised the Programme Director (The Cornwall College Group), two professors (UCL IoE and Edge Hill University) and the coach appointed to the programme. Details of these roles are set out in the Project Team section.

The programme was evidence-based in terms of its content, supporting resources, and design. The content and resources drew on research in relation to understanding disadvantage and pedagogies to support disadvantaged learners particularly, but not exclusively, related to literacy development. The programme design drew on research evidence on effective teacher professional development and comprises six interrelated elements:

1. **Two one-day regional workshops**—one at the start of the programme, for the participating ECTs, their headteacher, and school champion designated by their school to support them in implementing their learning from RETAIN; and one at the end of the programme for the ECTs and their school champion or headteacher. The first workshop comprised introductory inputs from the delivery team for all participants in the morning, followed in the afternoon by an externally facilitated team building activity for the ECTs and a workshop on mentoring for school champions and headteachers. The final workshop comprised presentations by the ECTs on their development and activity over the programme, and inputs and activities led by the delivery team and external presenters.
2. **Three taught modules:**
 - RETAIN 1—Understanding and mitigating against the impact of socio-economic disadvantage;
 - RETAIN 2—Skills and practice: pedagogy (following agreement with the EEF this was developed to focus on literacy: and
 - RETAIN 3—Professional teaching: processes, structures, and career pathways.

Each module spanned one school term and was delivered at Cornwall College's St Austell Campus. The first module was delivered through five twilight sessions of two hours duration. In response to RETAIN team observations and ECT feedback, the delivery of RETAIN 2 and RETAIN 3 was changed to two, six-hour daytime sessions per module to enable deeper engagement with the sessions. Each module was led by one member of the delivery team and included inputs and activities led by other team members. The third module, 'Professional teaching: processes, structures and career pathways', included a half day of team building activities at an outdoor activity centre. Activities were designed to support the ECTs' to sustain the professional learning community (PLC) they had built with each other after the end of the programme. Participants were encouraged to engage with research evidence and undertake short tasks in their school related to the module content between taught sessions in all modules.

3. **Peer collaboration** was an integral part of the programme design. Formal peer collaboration between participants took place through action learning sets held during modules 1 and 3. ECTs undertook visits to each other's schools as a module task during RETAIN 1. This was also encouraged in RETAIN 2 and 3. In addition, more informal collaboration and sharing of practices took place within all sessions and via social media.
4. **Coaching**—a lead coach, highly experienced in KS1 pedagogy, supporting disadvantaged pupils, and coaching, was appointed to the RETAIN delivery team to provide in-school coaching for all the ECTs. ECTs received between six and eight in-school coaching visits spaced over the duration of the programme. The approach to coaching was based on the GROW ('Goal-reality-options-will' model; Whitmore, 2010), with the focus agreed between the ECT and the coach. Coaching visits typically included discussions about practice issues and changes the ECT wanted to make, and observations of the classroom environment, pupils, and teaching. The coach provided suggestions for effective strategies, and made links to research evidence and the content of taught sessions. Changes to be made before the next coaching visit were usually agreed.
5. **In-school champion support**—each headteacher was asked to allocate a teacher or leader in their school to take on the role of an in-school champion; in some schools, the headteacher took on the role. In others, the role was undertaken by classroom teachers of varying levels of teaching experience. The memorandum of understanding signed by schools specifies that the school champion should provide two hours per week of formal mentoring support, support the ECT to relate the module content to their classroom practice, promote programme engagement within the school, and report on ECT progress. As reported in the Findings section, the level of school champion support received by ECTs in the pilot varied.
6. **Supporting resources and communication channels**—resources were hosted electronically on the **Achievement for All** Virtual Learning Environment (VLE), 'The Bubble'. Printed copies of materials were also provided in taught sessions. Participants were provided with a handbook for each module that set out the aims and intended impacts of the module as a whole and for each session. They also received a module research handbook that provided summaries of eight key research texts and signposted further evidence sources. PowerPoint slides were produced to support each session. A range of other supporting materials, including other electronic resources from the Achievement for All VLE and hard copy materials relevant to taught sessions, were also made available. Each participant was provided with an impact log pro-forma to plan, record, and reflect on their learning and changes to their practices.

A separate Yammer account, that is, a private microblogging and collaboration platform for networking, was set up to support communication between the delivery team and participants and peer collaboration.

Background evidence

RETAIN was a new programme at the start of the pilot. The design of the programme was based on research evidence on effective strategies for engaging teachers in new thinking about teaching for improved learning and increased pupil attainment. The programme is distinctive from most other CPD opportunities for early career teachers in its sustained focus on disadvantaged learners in KS1, the combination of taught sessions that engage ECTs with research evidence, coaching by an external coach, support from a more experienced colleague (school champion), and the opportunity to develop a sustained relationship with ECTs from other schools.

It was envisaged by the programme team that engagement in RETAIN would support ECTs to become confident and effective teachers who participated in professional learning communities and understood

how they could progress within their teaching career. This, in turn, was expected to lead to an improvement in the retention of ECTs in the profession. Teacher retention is a policy priority in England (DfE, 2016a). The proportion of working age teachers leaving the profession has increased every year since 2010 in primary schools (Worth, DeLazzari and Hillary, 2017), and in 2015/2016 (the most recently reported data) was 10.2% (DfE, 2016). ECT retention is a particular issue: 13% of teachers leave teaching within one year of qualifying and 30% leave within five years (House of Commons Education Committee, 2017). Addressing the retention of ECTs is made even more pressing as the number of teachers entering the profession has been increasing consistently over the last five years to support the growing pupil population (DfE, 2016b).

There is a strengthening body of studies that demonstrates that teacher CPD can impact on pupil outcomes (for a very recent example see Desimone and Hill, 2017). Hattie's (2009) synthesis of 800 meta-analyses found a medium effect size of 0.62 for the impact of CPD on pupil achievement. In high performing school systems, teachers receive more CPD than teachers in English schools. For example, in Singapore—which out-performed all participating countries in the most recent Programme for International Student Assessment (PISA) tests for 15-year-olds in science, reading, and mathematics (OECD, 2016)—teachers have an annual entitlement to 100 hours of CPD (Schleicher, 2012). CPD in successful systems often includes expert coaches in schools and teachers learning from each other (Barber and Mourshed, 2007), which are core components of the RETAIN programme.

Furthermore, there is evidence that a focus on CPD and support, especially in the early teaching career phase, is associated with positive career experiences and retention (for example, Ashby *et al.*, 2008; Day and Gu, 2010; Ingersoll, 2001; Coldwell, 2017), although the evidence base lacks robust impact studies and needs to be strengthened. Coldwell (2017, p. 190) notes:

There is a body of international research that links teacher [CPD] with higher teacher efficacy (Ross & Bruce, 2007 in relation to mathematics; Lakshmanan, Heath, Perlmutter & Elder, 2011 in relation to science teaching), and a further set of studies that provide limited or weak evidence of a relationship between efficacy and intention to stay in the profession such as Brouwers and Tomic (2000) that showed that higher self-efficacy was related to lower levels of teacher 'burn out' on a range of measures, and other reviews link efficacy to teacher retention, again with generally weak relationships found (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998; Klassen, Tze, Betts & Gordon, 2011).

Buchanan *et al.*'s (2013) analysis of the views of ECTs indicates that CPD programmes that support ECTs to improve pupil engagement, experience professional challenges, and gain collegial support are likely to enhance retention.

There is a growing body of studies that synthesise evidence on the characteristics of effective CPD (see Cordingley *et al.*, 2015; Timperley *et al.*, 2007; Yoon *et al.*, 2007). These provide supporting evidence for the effectiveness of some of the key principles of RETAIN including being a sustained programme shaped by the context in which participants teach, involving peer collaboration, teacher ownership of their learning, and engaging teachers in experimenting with their practices.

There is also evidence to support the impact of coaching, a core component of RETAIN. A recent meta-analysis of 44 causal studies of the impact of coaching on instruction and academic achievement (Kraft *et al.*, 2016) found a large positive effect on quality of instruction and a smaller positive effect on pupils' achievement (effect sizes 0.58 and 0.15 respectively). The meta-analysis drew heavily on studies of coaching to improve the teaching of literacy in nursery and primary schools. Drawing from the related field of mentoring, there is some evidence to support the importance of external support (Cameron and Grant, 2017; Daly and Milton, 2017; Hobson and McIntyre, 2013; McIntyre and Hobson, 2016) as provided by the lead coach in RETAIN. In the current climate of performativity, external mentors are better positioned to establish trusting relationships that enable teachers to openly share their learning

needs and receive professional development support (Hobson, 2016). This evidence has not yet been tested through a trial.

The intention of RETAIN to engage ECTs with research evidence and support them to use this evidence in their practices aligns with both the Department for Education's and the EEF's mission to embed research-informed teaching in schools. There are, however, very few studies that provide evidence of the impact of research use on pupil outcomes (Coldwell *et al.*, 2017; Nelson and O'Beirne, 2014). The evidence base on the effective use of evidence in schools is particularly limited (Brown and Greany, 2017). Some EEF evaluations (for example Gorard *et al.*, 2014) and other studies (for example Coldwell *et al.*, 2017) indicate that a significant proportion of teachers struggle to access, understand, and apply research evidence.

The rationale for undertaking this pilot evaluation was (1) to examine the evidence of promise of the programme theory of change that underpins the RETAIN programme (summarised in Figure 2), (2) how feasible it is to deliver, and (3) whether it is ready to be scaled-up and evaluated in a trial. A key aim of the evaluation was also to provide formative findings at the end of the development phase—and at the end of each module—to support the delivery team in further development of the programme.

Research questions

The evaluation addresses the following research questions:

Evidence to support the theory of change

1. Is the programme likely to impact on teacher knowledge, understanding, attitudes, and practice outcomes and ultimately pupil attainment?
2. Through what processes do the components of the intervention, and the intervention as a whole, lead to outcomes that could be expected, over time, to improve pupil attainment?
3. What enables and what impedes the desired effects of the programme?

Feasibility

4. Can the programme be implemented effectively in schools?

Readiness for trial

5. Is the programme ready to be scaled up for a trial?

Programme development

6. How can the programme be improved to address any limitations in terms of feasibility, potential impact on teachers and pupils, and readiness for trial?

Ethical review

The research was approved by the Faculty of Development and Society's ethics review panel on behalf of Sheffield Hallam University and conducted in line with the ethical guidelines of the British Educational Research Association (BERA, 2011). The delivery partners were responsible for ensuring that all participating schools signed a Memorandum of Agreement setting out the roles of the school, the RETAIN team, and the evaluators (Appendix 1). In addition, opt-in consent was gained directly from all interviewees by the evaluators. Due to the nature of the project, it is possible that research participants may be identifiable to those familiar with the project even though all data has been anonymised. All participants were alerted to this possibility and provided consent on this basis. In addition, the evaluation team have made some minor alterations to reported quotations to protect the anonymity of participants, such as removing gender identifiers and omitting individual and school identifiers for ECTs, school champions, and headteachers in the report.

See Appendix 2 for the project information sheet and consent form.

Project team

Project delivery team

The RETAIN project was led by Dr Tanya Ovenden-Hope (The Cornwall College Group) who took overall responsibility for project development, delivery, and quality assurance. Dr Tanya Ovenden-Hope, together with Professor Sonia Blandford (Institute of Education, University College London, UCL) and Professor Tim Cain (Edge Hill University), designed the programme and resources; each led one module and contributed to the delivery of all modules. Maureen Hunt was appointed as lead coach and undertook all coaching visits and contributed to programme design and delivery. Project administrative support was provided by Tony Harris (The Cornwall College Group).

Project evaluation team

The evaluation conducted by the Sheffield Institute of Education at Sheffield Hallam University was led by Dr Bronwen Maxwell and project managed by Lucy Clague (from October 2015 to March 2017) and Eleanor Byrne (from April to October 2017). The professional review conducted in the project development phase was undertaken by Bronwen Maxwell and Alison Glentworth. All qualitative fieldwork and analysis was conducted by Bronwen Maxwell, Lucy Clague, and Eleanor Byrne. Survey analysis was undertaken by Dr Martin Culliney. Expert advice and evaluation quality assurance was provided by Mike Coldwell (Sheffield Institute of Education) and Professor Andrew Hobson (University of Brighton).

Methods

Recruitment

The recruitment target set out in the pilot protocol was 12 ECTs from 12 different schools. The eligibility criteria for schools participating in the RETAIN programme were:

1. having a level of socio-economic disadvantage equal to, or above, the average for Cornwall as a whole, using 'Ever 6 FSM' as a proxy measure for disadvantage;¹ the threshold for eligibility was initially set at 30% or more Ever 6 FSM pupils and subsequently lowered to 20% or more due to difficulties in recruiting sufficient schools;
2. employing at least one ECT delivering Key Stage 1 (an ECT was defined as a teacher in their first three years of teaching post-qualification); and
3. willingness of the school to provide a school champion to support the ECT.

Recruitment was undertaken by the RETAIN team in two phases. In the first phase, all schools in Cornwall with 30% or more Ever 6 FSM pupils were targeted (37 of 235 schools). Selected schools were initially contacted by email. Interested schools received follow-up telephone calls and were engaged in further face to face or telephone conversations with the Programme Director. The Programme Director also promoted RETAIN to headteachers at a Cornwall Raising Aspiration and Achievement Board meeting. In the second recruitment phase, applying the revised eligibility (Ever 6 FSM of 20%+) because too few schools had been recruited in phase one meant that 87 schools were within scope (37 identified within the first phase plus an additional 50 identified within the second phase). Mirroring phase 1, the recruitment strategy in phase 2 involved emails, follow-up telephone calls, and conversations with the Programme Director.

Twelve schools and 13 ECTs (two ECTs were recruited from one school) were signed up at the time of the RETAIN programme launch event. By the start of RETAIN 1, there were ten participating schools and 11 ECTs. Two schools dropped out after the launch having decided the programme was not appropriate for their school. They were replaced by another two schools that were eligible and agreed to take part after the launch, but these also dropped out before the start of RETAIN 1, again deciding the programme was not appropriate for their school. Figure 1 provides a detailed recruitment flowchart. One school ceased to participate in RETAIN 1 as its ECT was withdrawn from the programme by agreement between the RETAIN team and the ECT's headteacher due to limited engagement with the programme, so a total of nine schools and ten ECTs were engaged from RETAIN 2 onwards. One ECT moved school during the programme, so their original school ceased to participate but their new school joined the programme, assigning a new school champion to the ECT, so there remained nine participating schools and ten ECTs. Further details on school characteristics, ECT retention, and issues relating to recruitment are presented in the Findings sections.

¹ 'Ever 6 FSM' means those pupils recorded on the School Census who were recorded as known to be eligible for Free School Meals (FSM) in any of the termly censuses in the previous six years.

Figure 1: School recruitment flowchart (n = no. of schools, N = no. of ECTs)

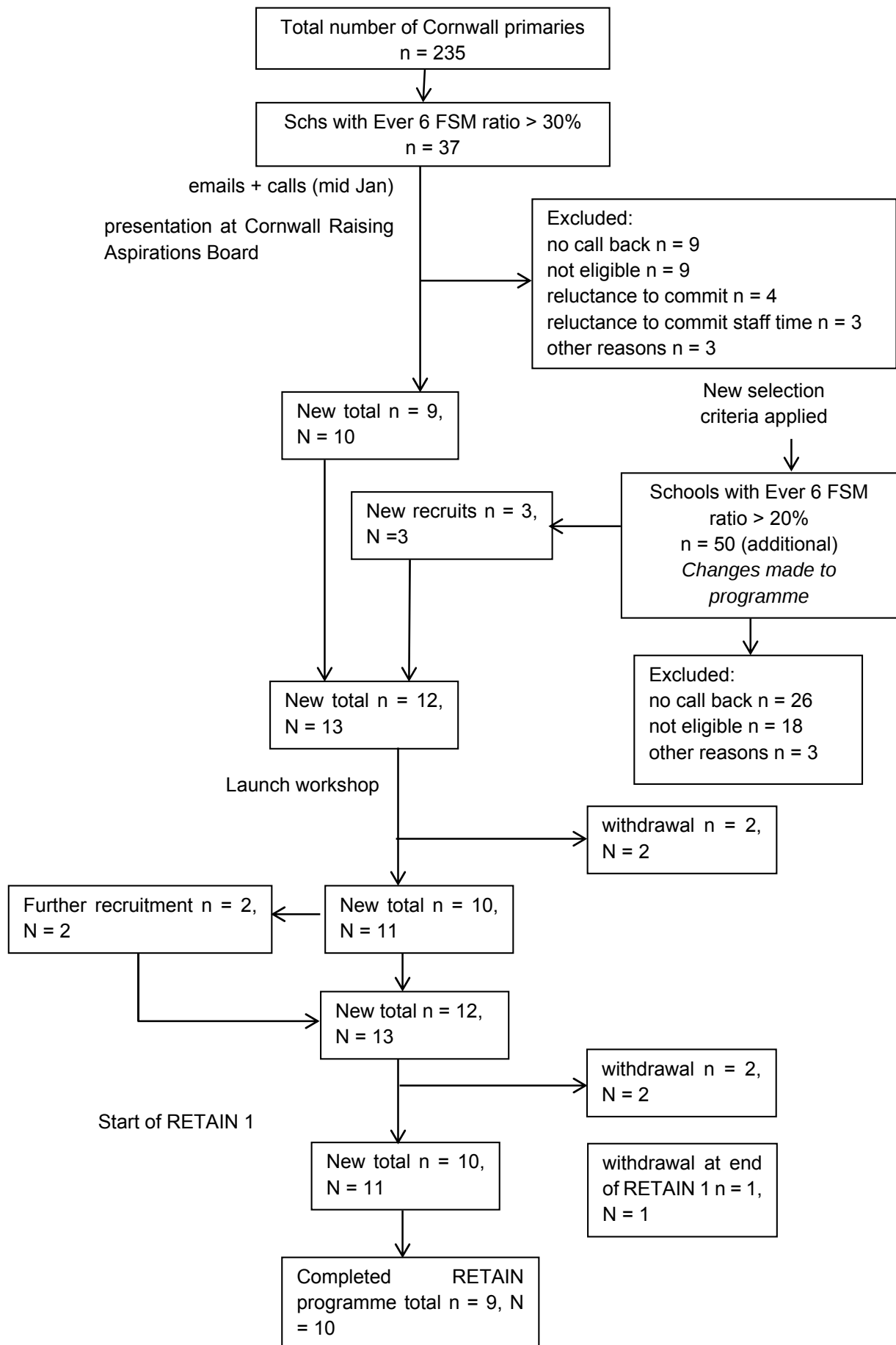


Table 2 summarises schools' reasons for non-participation. Just under half of all schools eligible on the criterion related to Ever 6 FSM did not respond to the contact by the RETAIN team (n = 35) and around a third did not meet the eligibility criterion of having an ECT teaching KS1 or were school that did not teach KS1 (n = 27). Other reasons for non-participation were a reluctance to commit to the programme in general (n = 4), a more specific reluctance to commit staff time (n = 3), deciding after the launch event that the programme was not appropriate (n = 2), and 'other' reasons (n = 6).

Table 2: Reasons for non-participation of schools

	No. of schools
No response from school to recruitment emails and/or telephone calls:	35
Ineligible to participate—either because the school had no ECTs teaching KS1, or was not a school that taught KS1:	27
Reluctance to commit to the project:	4
Reluctance to commit staff time:	3
Considered not appropriate after attending the launch event:	2
Other reasons:	6
Total number of non-participants out 87 eligible schools:	77

The programme team made changes to the programme design during the recruitment process to address concerns raised by headteachers and ECTs, in particular reducing the time for module attendance and increasing in-school coaching.

In total, 11 ECTs were recruited from the ten schools participating at the beginning of RETAIN 1. Where a participating school had more than one ECT, the headteacher selected which ECT would attend the programme. With agreement from the Programme Director, two ECTs from one school attended the programme. As noted above, one ECT withdrew at the end of RETAIN 1 so ten ECTs completed the programme. All ECTs were teaching KS1 at the beginning of the programme, however during the programme two transferred to teaching KS2. Further details of ECTs' characteristics are given in the Findings section. Since headteachers selected ECTs, based on their view of which teacher they thought would gain the most benefit from the programme without any objective criteria, it is possible that there was sample selection bias.

Evidence of promise—indicators

The intended outcomes of the RETAIN programme are to improve attainment for disadvantaged pupils and increase teacher retention. The pilot evaluation was not designed to assess these outcomes because of the low number of ECTs involved and a time span unlikely to be sufficient for improvements in attainment to be realised. Instead, evidence of promise is assessed by using measures relating to the outputs and intermediate outcomes set out in the programme logic model (Findings Chapter: Figure 2) as summarised in Table 3. The underpinning assumption is that if these outputs and intermediate outcomes are achieved, it is plausible that these will lead, over time, to the intended final outcomes.

Table 3: Indicators for evidence of promise

Outputs, intermediate outcomes, and alignment with characteristics of effective CPD	Indicator
Outputs Recruitment, engagement, and completion.	- Number of schools recruited compared to the number of eligible schools and the RETAIN team's experience of recruiting schools. - Comparison of characteristics of schools eligible on the basis of Ever 6 FSM and recruited schools to provide an indicative assessment of appeal to schools with high proportions of disadvantaged pupils. - Attendance of teachers, school leaders, and school champions at regional workshops, and for teachers at module sessions. - Number of withdrawals from the programme.
Intermediate teacher outcomes: - knowledge and skills - beliefs and attitudes - self-efficacy - confidence - understanding analysis - critical reflection - enhanced practice - enhanced engagement in teaching/ investment in self and schools - sharing practice with other teachers	- ECTs' self-efficacy as measured by the Teachers' Sense of Efficacy Scale (Tschannen-Moran and Woolfolk Hoy, 2001) - ECTs' self-report ratings in relation to knowledge and skills, confidence, research use, and practice. - Headteachers', school champions', ECTs' and RETAIN team's perceptions of impact.
Alignment with characteristics of effective CPD (see Table 4): - content focus - active learning - relevance - duration and rhythm - collaborative participation - shared sense of purpose about professional development	- Headteachers', school champions', ECTs' and RETAIN team's perceptions of alignment with the characteristics of effective CPD. - Evaluators' perceptions of alignment based on analysis of observations at the start and end of programme regional workshops and workshop videos.

To provide an indication of the appeal of RETAIN to schools with a high proportion of disadvantaged pupils, the characteristics of schools eligible on the basis of Ever 6 FSM in Cornwall and in England as a whole were compared to recruited schools. Collecting data in relation to the other eligibility criteria (of having a KS1 ECT and being willing to provide a school champion) was beyond the scope of this evaluation so it is not possible to make a comparison of schools eligible on all criteria to recruited schools. In addition, the RETAIN team's experience of recruiting schools was drawn on to indicate how easy or difficult it was to recruit schools. Other programme outputs were assessed by reviewing ECTs' attendance at module sessions, the attendance of ECTs, school champions, and headteachers at regional workshops, and the number of withdrawals from the programme.

Assessment of intermediate ECT outcomes

The achievement of intermediate ECT outcomes—knowledge and skills; beliefs and attitudes; self-efficacy; confidence; understanding analysis; critical reflection; enhanced practice; enhanced engagement in teaching and investment in self and schools; and sharing practice with other teachers—was assessed in three different and complementary ways.

First, the Teachers' Sense of Efficacy Scale (Tschannen-Moran and Woolfolk Hoy, 2001) was used both to contribute to measuring intermediate teacher outcomes and to inform a potential secondary

measure of teacher outcomes for an efficacy trial for this programme—or other pilots and trials that include a professional development component. Within teaching, ‘self-efficacy’ is conceptualized as ‘teachers’ belief that they can bring about desirable changes in student achievement’ (Guo *et al.*, 2012, p. 5). Drawing on Newman, Rutter and Smith (1989), Guo *et al.* argue that teachers with a strong sense of efficacy believe that they can positively affect student learning and accept responsibility for motivating students and improving their teaching skills and impact on pupil learning. Empirical studies indicate that teacher self-efficacy is likely to correlate positively with other teacher outcomes that are identified in the RETAIN programme theory of change. For example, Caprara *et al.* (2006) cite a range of studies that demonstrate the crucial effect of teachers’ self-efficacy beliefs on performance and motivation. This includes their competence as rated by school leaders, positive orientations to colleagues, leaders, and parents, as well as satisfaction with their choice of profession and sustaining their commitment to their school and the profession. A more limited number of studies support the hypothesis that a teacher’s sense of self-efficacy has a positive impact on a range of positive outcomes for pupils, including cognitive achievements and attainment (for example, Caprara *et al.*, 2006; Guo *et al.* 2012; Muijs and Reynolds, 2001).

The 12-item scale comprises three sub-scales: efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. The scale has good construct validity and good internal consistency (Cronbach Alpha, whole scale, of 0.9; efficacy for instructional strategies, 0.86; efficacy for classroom management, 0.86; efficacy for student engagement, 0.81; Tschannen-Moran and Woolfolk Hoy, 2001) and there is substantive evidence of reliability and measurement invariance across countries (Klasen *et al.*, 2012).

Second, the intermediate outcomes relating to ECTs’ knowledge and skills, confidence, and practice were assessed through Likert-scale self-report ratings developed for this evaluation. Since the use of research evidence on disadvantage and how to teach disadvantaged learners was an integral part of the RETAIN programme content and resources, Likert scales were also used to measure ECTs’ awareness of, and use of, research evidence.

Third, headteachers’, school champions’, ECTs’ and the RETAIN team’s perceptions of impact were collected through semi-structured interviews.

To further support the assessment of evidence of promise, a framework of indicators of effective CPD, programme design, and delivery was constructed from research evidence (Table 4). The framework adapts and extends Desimone’s (2009) framework of critical features of effective CPD to include content, active learning, relevance, collaborative learning, duration and rhythm, and sense of shared purpose about professional development. Drawing particularly on Cordingley *et al.*’s (2015) review of international reviews of effective professional development, we have populated the framework with indicative criteria for each characteristic. The framework and indicative criteria were shared with ECTs, school champions, and the RETAIN team; their perceptions of the extent to which the criteria were met was collected through semi-structured interviews. Headteachers’ perceptions of the extent to which the RETAIN programme had met the criteria related to a shared sense of purpose for professional development were also collected through semi-structured interview. The framework was then populated with key findings from a thematic analysis of the interview data and analysis of the evaluators’ observation field notes.

Table 4: Indicative characteristics of effective CPD

Critical features	Indicative characteristics of effective CPD
Content focus	Curriculum content that helps teachers understand how pupils learn, both generally and in specific subject areas; includes subject-specific pedagogy and enables participants to access the theory and evidence underlying the relevant pedagogy, subject knowledge, and strategies. A logical thread between the various components of the programme. A focus on learner progression, starting points, and next steps, including formative assessment, to enable teachers to see the impact of their learning and work on their pupils. Content includes alternative pedagogies for pupils with different needs. Content takes account of different teachers' starting points.
Active learning	Opportunities are provided for teachers to reveal and discuss their beliefs and values, and test ideas from different perspectives. This includes helping participants believe that better outcomes are possible, particularly in schools where achievement has been depressed over time. Teachers are engaged in analysis of, and reflection around, the underpinning rationale for changes in practice and the supporting evidence. Activities include explicit discussions, following the initial input, about how to translate CPD content to the classroom. This includes teachers making links between professional learning and pupil learning explicit through discussion of pupil progression and analysis of assessment data. Teachers implement what they have learned by experimenting in the classroom. Specialists support teachers through modelling, providing observation and feedback, and coaching.
Relevance	The content and activities have overt relevance to participants' day-to-day experiences with, and aspirations for, their pupils.
Duration and rhythm	The duration (total time and the spread over time) is sufficient to lead to, and the 'rhythm' of follow-up, support, and consolidation, enables changes in teachers' practices.
Collaborative participation	Teachers engage in peer learning with colleagues attending the programme. Teachers share and discuss learning with colleagues in their own school. The design of collaboration leads to positive outcomes for teachers and minimises the negative outcomes that can be associated with collaborative activity.
Shared sense of purpose about professional development	There is a shared sense of purpose about professional development between teachers and their schools. Senior leaders in schools ensure that enabling mechanisms are in place to support teachers in implementing what they have learned from the programme and share that learning with school colleagues.

Key sources: Cordingley *et al.*, 2015; Desimone, 2009.

Data collection

RETAIN inception and development phase

Three evaluation activities were undertaken during the RETAIN inception and development phase from the November 2015 to April 2016:

1. exploration of the RETAIN theory of change with the delivery team and creation of an agreed programme logic model;
2. a literature review to identify quantitative and qualitative measures of teachers' professional learning and development; and
3. a professional review of RETAIN resources and documentation.

The first draft of the RETAIN programme logic model was drafted by the evaluators from programme documentation and research evidence on effective CPD. The programme theory of change was explored and the logic model further developed in a telephone focus group involving the RETAIN team and the evaluators. The final draft of the logic model (Figure 2 in the Findings section) was produced by the evaluators and agreed by the RETAIN team. The logic model was used as a framework for designing research instruments and analysing data.

A literature review was undertaken to identify quantitative and qualitative measures of teachers' professional learning and development and effective CPD. The Teachers' Sense of Self-Efficacy Scale was selected for use in this study (see previous section for the rationale for using this scale) and a chart mapping indicative features of effective CPD with qualitative assessment was constructed based on research evidence (Table 4). In addition to providing indicative measures for this study, the intention was to assess the suitability of the Teachers' Sense of Self-Efficacy Scale to measure secondary outcomes in a future randomised controlled trial of this project. The intention was also to provide an early indication of the potential of the Indicative Characteristics of Effective CPD Matrix to provide an evidence-based qualitative assessment of the effectiveness of CPD programmes.

The light-touch professional review aimed to provide formative feedback on the planned programme at the end of development phase in relation to:

- the Indicative Characteristics of Effective CPD matrix;
- the extent to which the planned programme drew on evidence of effective approaches to improving outcomes for disadvantaged pupils in KS1; and
- the potential of the programme to impact positively on teacher outcomes.

The review was undertaken by a KS1 expert and a professional learning expert from the evaluation team. It examined all materials that had been uploaded to the RETAIN VLE (hosted on the Achievement for All 'Bubble') by 10 May 2016. This comprised:

- a brief overview of the programme and the three modules;
- module 1 knowledge documents, including a summary of related evidence;
- module 1 tools, including the module handbook;
- PowerPoint slides for the first two sessions of module 1; and
- Supplementary Achievement for All resources related to module 1 content.

The review also drew on an early focus group with the RETAIN team where they outlined the underpinning rationale for the programme and their intentions for later modules, and produced documents to support the RETAIN grant application. A formative report outlining findings and suggesting areas for further development was presented to the RETAIN team and the EFF in September 2016.

RETAIN delivery pilot

During the RETAIN pilot phase, surveys, interviews, focus groups, and observations were used to collect data on:

- the evidence of promise indicators for intermediate teacher outcomes (Table 3), and stakeholders' (ECTs, school champions, headteachers, and the RETAIN team) perceptions of outcomes for ECTs, pupils, and participating schools; as there is no comparison group in this evaluation it is not possible to make definitive claims that observed outcomes are attributable to participation in RETAIN;
- stakeholders' perceptions of the ways in which the RETAIN programme supported ECTs to achieve the intended intermediate outcomes; for studies that are not able to use comparators, such as this pilot evaluation, articulating and providing evidence of the path from inputs to outcomes described in the programme logic model helps support the plausibility of the model;
- stakeholders' perceptions of the extent to which the RETAIN programme meets the indicative criteria for effective CPD (Table 4); and
- stakeholders' experiences and perceptions of RETAIN to gain insight into how the programme might be developed and assess its feasibility.

Formative findings were presented to the EEF and the RETAIN team at the end of each module to support programme development. The scheduling of data collection was designed to take account of the EEF's requirement for the evaluators to provide findings at the end of RETAIN 2 that could be used to inform decisions on commissioning a trial of the programme. As a result, the majority of the qualitative data collection activity took place at the end of RETAIN 1 and 2.

Surveys

ECT surveys were administered by the evaluation team, in a paper-based format, at the first regional workshop where they were completed independently by the ECTs, and electronically via a link in an email sent at the end of each module. All participants completed the survey at baseline (N = 11), end of RETAIN 1 (N = 11), end of RETAIN 2 (N = 10), and end of RETAIN 3 (N = 10). To ensure comparability between the data collection points, only the surveys that were returned by the ten ECTs who completed the programme were analysed. Each survey included:

- the 12-point Teacher Sense of Self Efficacy Scale made up of the three sub-scales—efficacy for instructional strategies, student engagement, and classroom management;
- Likert scale questions developed for the study capturing ECTs' self-rating with regard to:
 - o knowledge and understanding in relation to the learning needs of disadvantaged KS1 learners and how to meet them, KS1 curriculum, KS1 teaching and learning strategies and methods, and teaching and learning methods to support reading development;
 - o confidence in relation to implementing the KS1 curriculum, using a range of teaching and learning strategies, teaching disadvantaged learners, and teaching reading; and
 - o the extent to which they are aware of where to find research to inform their practice, the ability to relate research to their own context, and use research findings to change their classroom practice.

In relation to the first of these three self-ratings, reading development, rather than literacy, was measured at the time of baseline survey as this was the intended focus of RETAIN 2. The EEF subsequently asked the RETAIN team to broaden the focus to literacy. To ensure consistency across the surveys, all of the end-of-module surveys continued to capture data related to reading.

In addition, the baseline survey captured demographic data and ECTs' motivations for joining the RETAIN programme. Each of the surveys conducted at the end of RETAIN 1, 2, and 3 included:

- ECTs' ratings of the extent to which they felt their participation in that phase of RETAIN had led to changes in their teaching and in other aspects of their work, such as how they interacted with leaders, other teachers, and parents and carers;
- ECTs' ratings of the usefulness of the core components of the RETAIN programme; and
- open questions to capture more detail on practice change and the attribution of change to RETAIN.

The end of RETAIN 1, 2, and 3 surveys also included rating and open questions related to ECTs' perceptions of the extent to which they had met the module learning outcomes as follows:

- RETAIN 1: understanding the factors that contribute to socio-economic disadvantage, the impact of these factors on pupils' learning, and how schools can address disadvantaged learners' needs;
- RETAIN 2: knowledge, understanding, and practices related to literacy; and
- RETAIN 3: career planning and development, understanding collaborative learning, and participation in professional learning communities.

The RETAIN 3 survey also included questions to explore ECTs' perceived gains from the RETAIN programme as a whole and which programme and school factors had supported them in achieving those outcomes.

Given the very small number of ECTs in the evaluation, analysis was restricted to descriptive statistics and the data is displayed within the report to provide qualitative insight into the impact of the programme. Data on the ECT who was withdrawn at the end of RETAIN 1 was not included in the analysis. This was to enable valid comparisons to be made between the four surveys.

Data from the open questions in the surveys were analysed thematically with qualitative data gathered from interviews and focus groups.

There was no comparison group for the surveys, so it is not possible to ascertain whether changes in knowledge and understanding, confidence, self-efficacy, and research-use over the period of the RETAIN programme would have occurred anyway, for example, as a result of maturation as a teacher.

Interviews and focus groups

In total, 36 semi-structured telephone interviews with stakeholders were conducted; these comprised 14 interviews with nine ECTs, ten interviews with eight school champions, six interviews with six headteachers, and six interviews with RETAIN team members (Table 5). To gain as wide a range of perspectives as possible, ECTs and school champion interviewees were selected randomly at the end of RETAIN 1. At the end of RETAIN 2, ECTs and school champions who had not previously been interviewed were selected randomly for interview. Headteachers were randomly selected for interview at the end of RETAIN 2 (they were not part of the intended sample for RETAIN 1). The ECT, school champion, and headteacher interviews at the end of RETAIN 3 were selected to ensure that for the programme as a whole there was as representative coverage as possible across all schools. Where possible this included interviewing the ECT and the school champion or headteacher. Either the school champion or headteacher was interviewed in all participating schools, and in four schools both were interviewed. Interviews with the Programme Director, the lead coach, and the relevant module leader were conducted at the end of RETAIN 1 and 2.

All interviews included questions on experiences and perceptions of the RETAIN programme and its components, perceived outcomes and impact, enablers and barriers to implementation and the achievement of intended outcomes, and recommendations for further development of the programme. ECT Interviews conducted at the end of RETAIN 1 focused specifically on RETAIN 1 and included questions about recruitment to the programme. The ECT interviews at end of RETAIN 2 focused

specifically on RETAIN 2. The ECT interviews conducted at the end of RETAIN 3 focused mainly on RETAIN 3, with the addition of some questions to elicit ECTs' reflections on the whole programme. Interviews with school champions and headteachers focused on their experiences and perceptions up to the point at which they were interviewed.

Table 5: Stakeholder interviews

Interviewees	RETAIN 1	RETAIN 2	RETAIN 3	TOTAL
ECTs	6	5	3	14
School Champions	4	3	3	10
Headteachers	0	5	1	6
RETAIN team members	3	3	0	6
TOTAL	13	16	7	36

Three focus groups were conducted at the first regional workshop—one with ECTs, one with school champions and headteachers, and one with the delivery team. Two focus groups were conducted at the final regional workshop—one with the ECTs and one with the delivery team.

All interviews and focus groups were conducted by the evaluators, recorded, and transcribed. Analysis was conducted at the end of each module. Interview and focus group data and the responses to open questions in the survey were organised using a thematic framework constructed from the research questions and the programme logic model (see Appendix 3).

Summaries of participants' data by theme were then constructed to enable interpretation of the findings. Where appropriate, sub-themes were identified inductively from the data.

Observations

A member of the evaluation team observed both regional workshops. All taught sessions were videoed by the RETAIN team. The evaluators undertook a total of four hours video observation per module. Observations were each of five minutes duration and were sampled at regular intervals across the sessions. Observations were used to inform the development of interview and focus group questions, and capture data on participants' engagement and the quality of delivery.

Other evaluation activity

Two ten-minute evaluation activities were conducted by the evaluator at the final regional workshop. In each activity the ECTs worked with their school champion or headteacher (if present). The first activity focused on identifying the impact of RETAIN on the ECT and the school; the second involved drawing out the critical factors related to the programme, ECTs, and the school considered necessary for successful outcomes to be achieved. Data from each activity was recorded by participants on pro-formas provided by the evaluators.

Timeline

Date	Activity
Nov 2015–May 2016	Programme development.
Jan–Mar 2016	School recruitment.
Dec 2015–Mar 2016	Interviews with Programme Director and full delivery team; development of programme logic model.
Mar 2016	First RETAIN regional workshop—including evaluator observation and focus groups with ECTs, school champions and headteachers, and the RETAIN delivery team.
Mar 2016	ECT baseline survey.
Mar–May 2016	Professional review by evaluators of materials produced in the development phase.
Apr–Jun 2016	Delivery of RETAIN 1 module and coaching.
May 2016	Presentation of formative findings from the professional development review to the EEF and the RETAIN team.
Jun–Jul 2016	ECT end of RETAIN 1 survey and interviews with ECTs, school champions, and the RETAIN team members; analysis of videos of module delivery.
Sept 2016	Presentation of formative findings from RETAIN 1 to the EEF and the RETAIN team.
Oct–Dec 2016	Delivery of RETAIN 2 module and coaching.
Dec 2016 -Jan 2017	ECT end of RETAIN 2 survey and interviews with ECTs, school champions, headteachers, and RETAIN team members; analysis of videos of module delivery.
Jan–Mar 2017	Delivery of RETAIN 3 module and coaching.
Feb 2017	Presentation of formative findings from RETAIN 2 to the EEF and the RETAIN team.
Mar 2017	Final RETAIN workshop—including evaluator observation, interactive evaluation activities for participants; ECT and delivery team focus groups.
Mar–May 2017	ECT end of RETAIN 3 survey and interviews with ECTs, school champions, headteachers, and RETAIN team members; analysis of videos of module delivery.
July 2017	Presentation of formative findings from RETAIN 3 to the EEF and the RETAIN team.
September 2017	Draft final report.

Findings

Participants

Schools

The profile of the participating schools at the start of the RETAIN programme (schools 1–10) is summarised in Table 6. School 11 joined the project when an ECT from one of the original participating schools took up a post in this school, but is not included in the analysis of recruited schools as it was not directly recruited to RETAIN.

As Table 6 shows, six of the ten primary schools recruited to the RETAIN programme were academies and the remainder were foundation schools. Two of the ten did not have KS2 pupils. The percentage of pupils eligible for free school meals during the previous six years (Ever 6 FSM) in these ten schools varied between 30% and 80%. The mean percentage of Ever 6 FSM pupils in recruited schools was 46%—higher than the Cornwall average of 28% and the England average of 31%. It is also higher than the mean percentage of Ever 6 FSM pupils in the target group for RETAIN, which was 35% (the target group being defined as matching the amended eligibility criteria of greater than or equal to 20%). This indicates the successful recruitment of schools with higher levels of disadvantaged pupils.

The number of pupils on the school roll in recruited schools varied from 54 to 433, although the different pupil age ranges should be noted. The average size of the recruited schools was 241, compared to the averages of 189 for targeted schools, 167 for schools in Cornwall, and 283 for England. The difference in mean school size of the recruited sample compared to the target sample may indicate that larger schools find it easier to enable ECTs to participate in this type of CPD, or be due to smaller schools being less likely to have eligible ECTs. The percentage of pupils achieving level 4 or above in reading, writing, and maths in KS2 in 2015/2016 in recruited schools that had KS2 provision varied between 9% to 76%, with a mean of 46%. This is close to the mean for the target group of 47% and below the average for both Cornwall (50%) and England (54%).

Six of the ten schools recruited were graded as 'Good' by Ofsted and one was graded 'Outstanding'. At the start of the project, there was no report available for three schools that had converted to academies. While these numbers are too low for any conclusions to be drawn, the recruited sample appears to be close to the profile for 'Good' and 'Outstanding' schools in the target sample (14% Outstanding; 75% Good) and in Cornwall (13% Outstanding; 76% Good), but have lower grades than the profile for England (18% Outstanding; 68% Good). There are no schools rated as 'Requires improvement' or 'Special Measures' in the sample compared to 12% in the target group, although one participating school had recently improved to 'Good' having previously been in special measures. This may indicate that schools requiring improvement or in special measures are less likely to see the RETAIN programme as a priority to support improvement.

Table 6: Profile of participating schools at the start of the RETAIN programme

School number	School type	Ofsted grade	Age range	No. of pupils	Ever 6 FSM	KS2 pupils reaching expected standard in reading, writing, and maths
1	Academy Converter	2	2–11	53	30%	30%
2	Academy Sponsor Led	N/A*	5–11	97	64%	9%
3	Foundation School	2	5–11	230	38%	32%
4	Academy Sponsor Led	N/A*	4–11	349	33%	50%
5	Foundation School	2	2–11	433	48%	58%
6	Academy Sponsor Led	N/A*	3–11	216	40%	76%
7	Academy Converter	1	4–11	384	36%	70%
8	Foundation School	2	5–11	205	48%	33%
9	Foundation School	2	3–7	223	40%	N/A
10	Academy Sponsor Led	2	3–11	219	80%	52%
11	Community School**	1	4–7	383	13%	N/A
Recruited sample average (schools 1–10)		2		241	46%	46%
Cornwall with >= 20% FSMEVER		2		189	35%	47%
Cornwall		2		167	28%	50%
England		2		283	31%	54%

Source: DfE school comparison website, 2015/2016 data; Ofsted website, March 2016 data.

Ofsted overall effectiveness: 1 = Outstanding, 2 = Good, 3 = Satisfactory, 4 = Requires improvement.

* Not available: no inspection report available due to conversion to an academy.

** School 11 was not recruited by RETAIN; it joined the programme when an ECT moved to the school.

Early career teachers

At the start of the RETAIN programme, out of the 11 ECTs recruited from ten schools, just over half (six) were in their first year of teaching, three were in their second year, and two in their third year. Just under half (five) were teaching Year 1 pupils, four were teaching Year 2, two did not specify the KS1 year group they taught and may have taught mixed age classes. From the start of RETAIN 2, two of the ECTs moved to teaching KS2 classes. At the start of RETAIN, three of the teachers had additional responsibilities as Physical Education Coordinator, Teaching Assistant Coordinator, and Head of Year 2 respectively. All the ECTs were employed on a full-time basis, seven on permanent contracts and four on temporary contracts.

The ECTs were all under the age of 40. Three of the eleven recruited were under 25, six were aged between 25 and 29, and two were aged between 30 and 39; seven were female and four were male.

One ECT was withdrawn from the programme by the delivery team with the agreement of their headteacher at the end of RETAIN 1 due to limited engagement with the programme. The remaining ten ECTs from a total of nine schools completed all aspects of the programme.

Evidence to support the theory of change

Programme theory of change

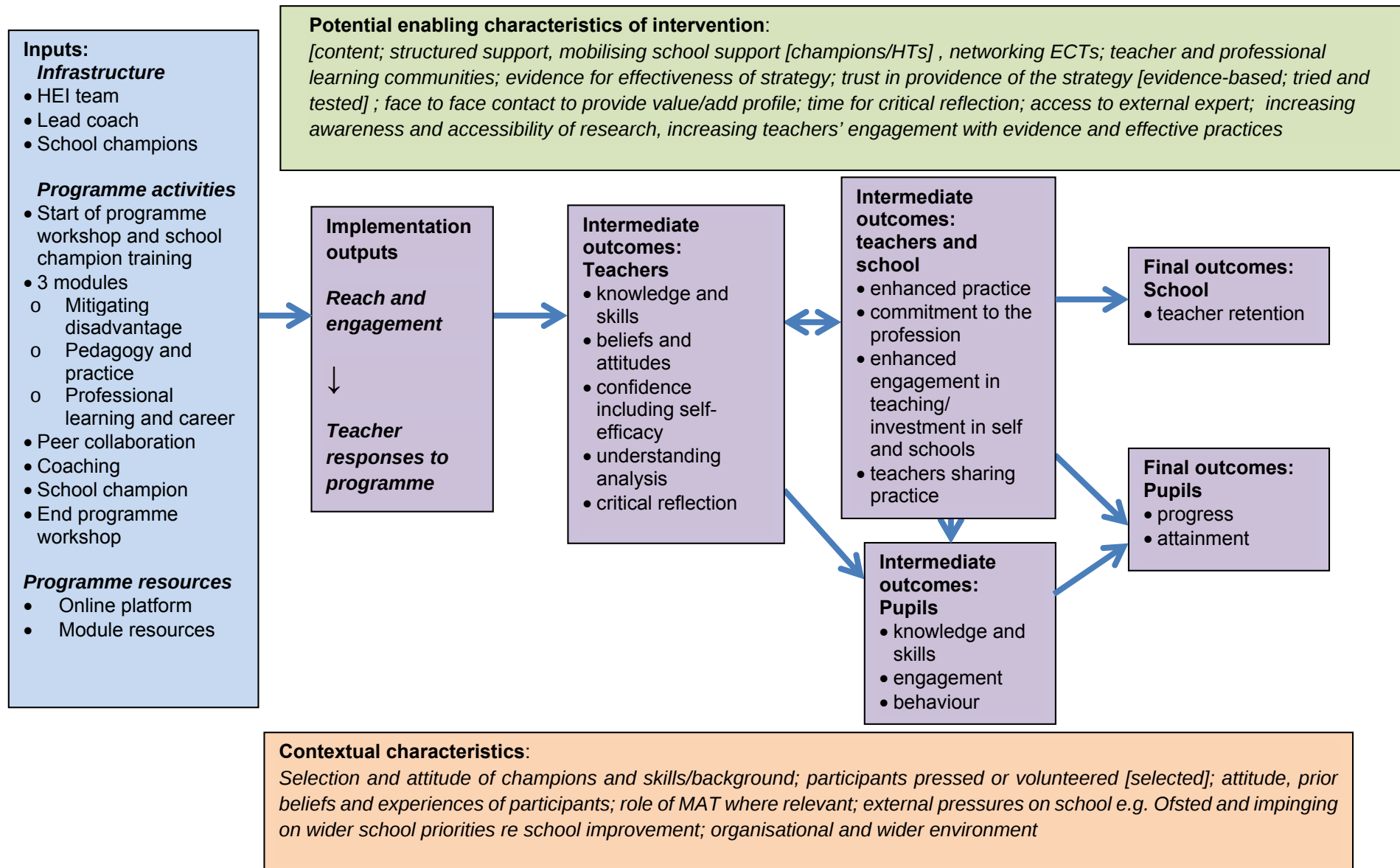
The theory of change underpinning the RETAIN programme design as conceptualised at the start of the RETAIN programme is summarised in the programme logic model (Figure 2). The programme inputs set out in the Introduction section lead, in the first instance, to the programme outputs: the recruitment and engagement of schools and ECTs perceptions of the programme delivery. These then lead to a set of interrelated intermediate outcomes for teachers including increased knowledge and understanding, self-efficacy and confidence, practice change, and a stronger commitment to the profession. Intended intermediate outcomes for pupils include knowledge and understanding, enjoyment, and behaviour; an intermediate outcome for schools is the sharing of new practices. Intended final outcomes are the retention of ECTs and pupil progress and attainment. Given the time-span of the evaluation, the focus of data collection was on intermediate outcomes, with the wider research literature providing evidence that the achievement of the intended intermediate outcomes was likely to lead to ECT retention and pupil progress and attainment.

The logic model also sets out the characteristics of the RETAIN programme that the delivery team expected would facilitate the achievement of the intended outcomes, and the contextual characteristics likely to impact, positively or negatively, on outcome achievement.

Inevitably, reducing complex change to a logic model format over-simplifies the sequence of changes and does not take account of the complex inter-relationships between the programme and outcomes and between different outcomes. Nonetheless, it provides a useful framework for organising and interpreting the evaluation findings. In this section, findings on intermediate outcomes are presented, followed by findings on the enabling characteristics of the RETAIN programme that support the achievement of intended outcomes, and then findings on the enabling contextual factors. Findings on barriers to the achievement of intended outcomes are presented in the Feasibility section. To provide further evidence on the effectiveness of the RETAIN programme, this section concludes with a summary of findings in relation to the characteristics of effective CPD matrix (Methods section: Figure 4).

Figure 2: RETAIN programme logic model as agreed with the RETAIN team at the start of the programme

RETAIN early career KS1 teacher CPD programme



Indicators of impact

This section draws together findings from all data sources to examine the effectiveness of the RETAIN programme in meeting the intended outcomes of the pilot. Given the time span of the pilot, the main focus for considering effectiveness is the achievement of the ECT intermediate outcomes. To provide an indication of longer term outcomes, perceptions of outcomes for pupils and the school are also presented.

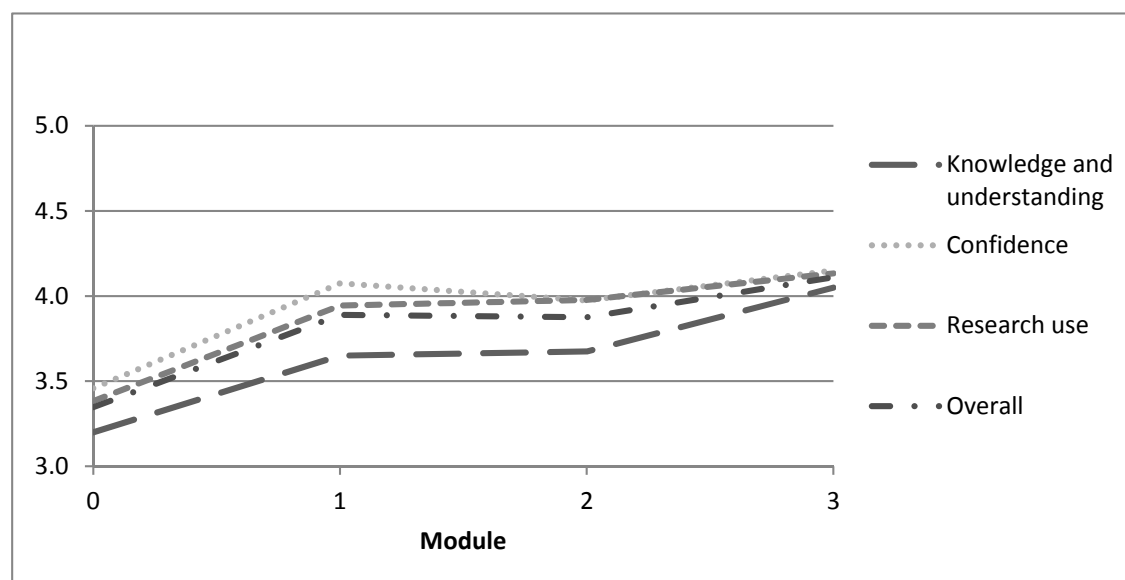
Overview

A comparison of data collected at baseline and the end of each module on the Teachers' Sense of Self Efficacy Scale and self-reports on items related to knowledge and understanding, research use, and confidence indicate that RETAIN has had some positive effect on these intended outcomes (Figures 3 and 4). Regarding the former, from a relatively high starting point of 6.5 on a nine-point scale, by the end of module 3, ECTs' scores on the Self Efficacy Scale had risen by +1.05. Likewise, on the five-point scale relating to self-reports about knowledge and understanding, research use, and confidence, the mean scores at baseline were relatively high at 3.2, 3.4, and 3.5; by the end of RETAIN 3, these means had increased by +0.85, +0.75 and +0.69, respectively.

These findings should be taken as indicating the potential of RETAIN to lead to these outcomes, however, given the lack of a comparison group and the very low number of participants (N = 10), it would be inappropriate to extrapolate these findings more widely. As would be expected, there was some variation in patterns of change between ECTs, although all broadly followed the overall trend.

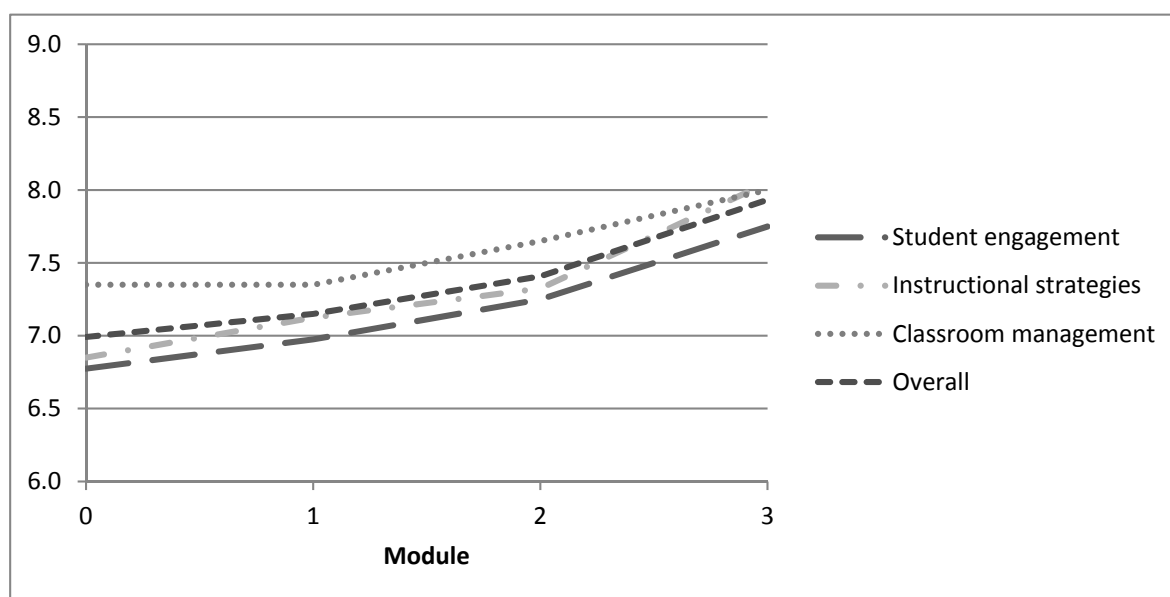
Please note: in Figure 3, the y-axis covers 3–5 on a five point scale—where 1 is the lowest self-rating and 5 is the highest—as the ratings on all the surveys fell within this range. Similarly, in Figure 4, the y-axis covers 6–9 on a nine point scale, where 1 is the lowest self-rating and 9 is the highest. Again, all responses fell in this range.

Figure 3: Trends in ECTs' knowledge and understanding, confidence, and research use



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points); Scale 1 (lowest self-rating)–5 (highest self-rating).

Figure 4: Trends in ECTs' self-efficacy (Teacher' Sense of Efficacy Scale, Tschannen-Moran and Woolfolk Hoy, 2001)



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points); Scale 1 (lowest self-rating)–9 (highest self-rating).

ECTs' ratings on the extent of practice change as a result of participating in RETAIN and outcomes relating to professional and career development also indicate that RETAIN has had some positive effects. Although measurement of pupil outcomes is beyond the scope of this evaluation, there are indications of some positive effects in the qualitative data, which also indicates that some schools, but not all, are benefitting from ECTs sharing practices that they learnt about from RETAIN.

Further details on all outcomes are presented below. It is important to note that while trends in outcomes are positive, there were mixed views on the degree to which these outcomes could be attributed to RETAIN, particularly among school champions and headteachers who pointed to the effects of maturation and school-related factors.

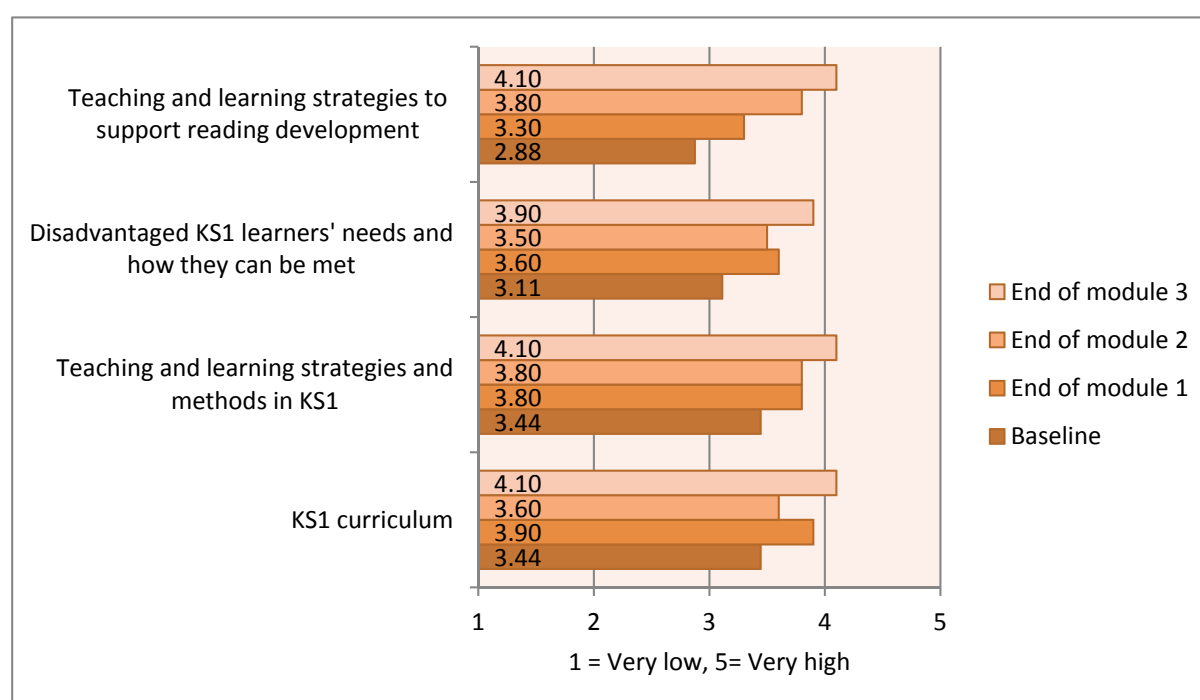
Knowledge and understanding

ECTs' ratings at the start of the programme and the end of each module on a 1 to 5 scale (very low to very high) broadly indicate a pattern of steady growth of knowledge and understanding in relation to:

1. the KS1 curriculum teaching and learning strategies in KS1;
2. teaching and learning strategies to support reading development; and
3. disadvantaged learners needs and how they can be met (Figure 5).

The only anomaly to the trend of increasing knowledge and understanding are the ECTs' ratings at the end of RETAIN 2, which indicated that their knowledge and understanding of (1) and (3) had declined since the end of RETAIN 1. There was no change in relation to (2) between the end of RETAIN 1 and the end of RETAIN 2. Given that the qualitative data indicates that the ECTs found RETAIN 2 particularly relevant and helpful in supporting their learning, this finding may reflect an over-estimation of their knowledge and understanding earlier in the programme.

Figure 5: ECTs' self-report of knowledge and understanding



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

Survey and qualitative data both indicate that participation in RETAIN 1 resulted in increased knowledge and understanding related to the module content of understanding the factors affecting social disadvantage, its impact on learning, and how disadvantaged learners' needs can be met. For example, in response to a survey question at the end of RETAIN 1 that asked ECTs to rate the extent to which participation in RETAIN 1 had enhanced their understanding of the factors contributing to social disadvantage on a four point scale (1, 'not changed at all'; 2, 'slightly changed'; 3, 'moderately changed'; and 4, 'significantly changed'), the average rating was 2.9. The average rating for the extent to which participation in RETAIN 1 had enhanced ECTs' understanding of the impact of disadvantage on learners and school practices was 2.8. These two findings indicate a perceived moderate impact.

Further positive outcomes in relation to better knowledge and understanding of classroom practices relevant to their disadvantaged pupils were reported by ECTs at the end of RETAIN 2:

'RETAIN were quite good about giving examples that we see all the time. Obviously when you do your teacher training they just give it as a blanket case of all children, whereas RETAIN is more specific to the deprived children and the struggles that we face', (ECT, R2 interview).

Some ECTs associated belief changes with their increased knowledge:

'It's changed the way I think about the children's "normal". So we were talking about how one person's "normal" is completely different to someone else's "normal" ... because I've come from a very different background to some of my children it's made me think about that child and trying to understand that child, a bit more empathy than just teaching them as a child. It's made me think about the way I speak, like the language and stuff that I use when I'm talking in a classroom', (ECT, R2 interview).

In addition, by the end of RETAIN 2, ECTs reported gains in literacy subject and pedagogical content knowledge and enhanced pedagogical knowledge, reflecting the content of the module. ECTs pointed to new understandings of the importance of reading for pleasure, strategies such as lesson openers to engage pupils in reading and writing, and how to set attainable literacy targets, appropriate differentiated tasks, develop speech, language, and writing, and improve boys' writing. For a few of

these practice changes, the research evidence on the impact on pupil attainment is more limited, although there is evidence of a wider range of pupil outcomes. For example, EEF trials of reading for pleasure programmes have had mixed results in relation to impact on attainment, but reviews of research literature indicate positive impacts on motivation, imagination, focus, and social and cultural capital (see BOP Consulting, 2015). On a 1–4 rating scale (1, 'not changed at all'; 2, 'slightly changed'; 3, 'moderately changed'; and 4, 'significantly changed'), the average rating for how much their knowledge and understanding in relation to effective practices in literacy had changed as a result of participating in RETAIN 2 was 3.10, indicating a perceived moderate to strong impact. Increased pedagogical knowledge reported by ECTs focused on understanding the need to adapt things to one's own circumstances and that pupils may experience learning differently, how to create effective learning environments, and approaches to peer assessment and marking.

At the end of RETAIN 3, ECTs mainly pointed to knowledge and understanding gains related to the content of RETAIN 1 and 2, although some participants in the ECT focus group at the final workshop reported knowing more about alternative career progression routes as a result of participating in RETAIN 3.

As the findings above indicate, overall, most ECTs attributed knowledge gains to RETAIN:

'When I started I thought I knew a lot more than I actually did. I kind of thought okay, my understanding of deprivation is at this level, but actually once I started I realised that my understanding was a lot lower ... that was quite a big learning curve. I think I did learn a lot', (ECT R3 interview).

'It has had a big impact. ... It reminded me of a lot of the things that I'd learned (in my ITE programme) but I'd forgotten about', (ECT, R3 interview).

The lead coach, who observed ECTs' practice in school, also perceived that ECTs had a better understanding of how to manage behaviour by focusing on identifying and meeting children's needs. However, some of the school champions and headteachers interviewed were less positive. Two of the three school champions interviewed at the end of RETAIN 3 felt that the knowledge and understanding was not sufficiently tailored to their pupils or practices within the school:

'I was hoping, because I know it's all based on research that's linked to schools in areas of deprivation ... to have advice or techniques or approaches that really suit children from our kind of settings. Ideas ... that I wouldn't perhaps hear about in any other way. ... I don't feel that I have got that', (SC, R3 interview).

Some school champions and headteachers were also less convinced that changes in knowledge and understanding were attributable to ECTs' participation in RETAIN:

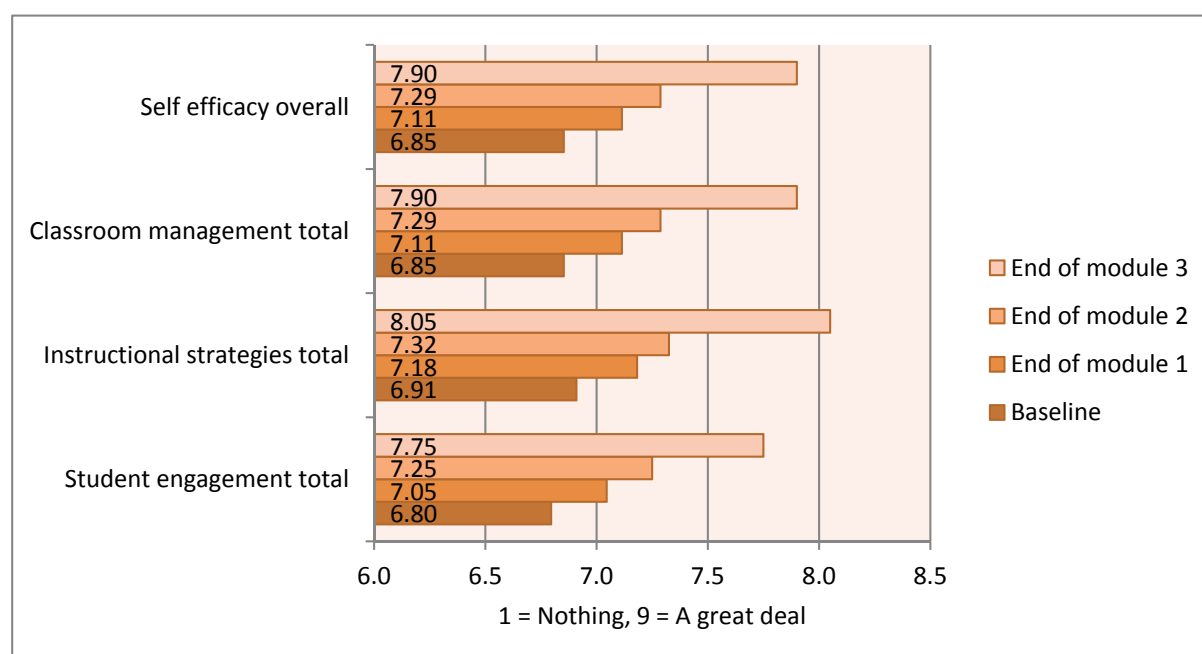
'I think it's made [the ECT] more aware that there are different strategies to dealing with the sorts of children, and it's made [the ECT] more aware of how important it is to understand the background of the children who are in this school. This school is the best school I've ever worked at in terms of dealing with children from vulnerable backgrounds ... so I think [the ECT's] gained a lot from being at this school too. So, it's difficult, like I said before, to separate out what's RETAIN and what's school', (SC, R3 interview).

Self-efficacy and confidence

ECTs' ratings on the Teachers' Sense of Efficacy Scale show a trend on the scale overall, and each sub-scale (classroom strategies, instructional strategies, and student engagement), of increasing self-efficacy over the duration of the programme, with the greatest increase on all scales occurring between RETAIN 2 and RETAIN 3 (Figure 6). This may reflect the cumulative effect of the core components of RETAIN over time, or the particular focus in RETAIN 3 on ECTs' professional learning and

development, which included recognition and affirmation of their strengths as teachers. Ratings by item on each sub-scale are presented in Appendix 4.

Figure 6: ECT's self-efficacy measured on the Teachers' Sense of Efficacy Scale



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

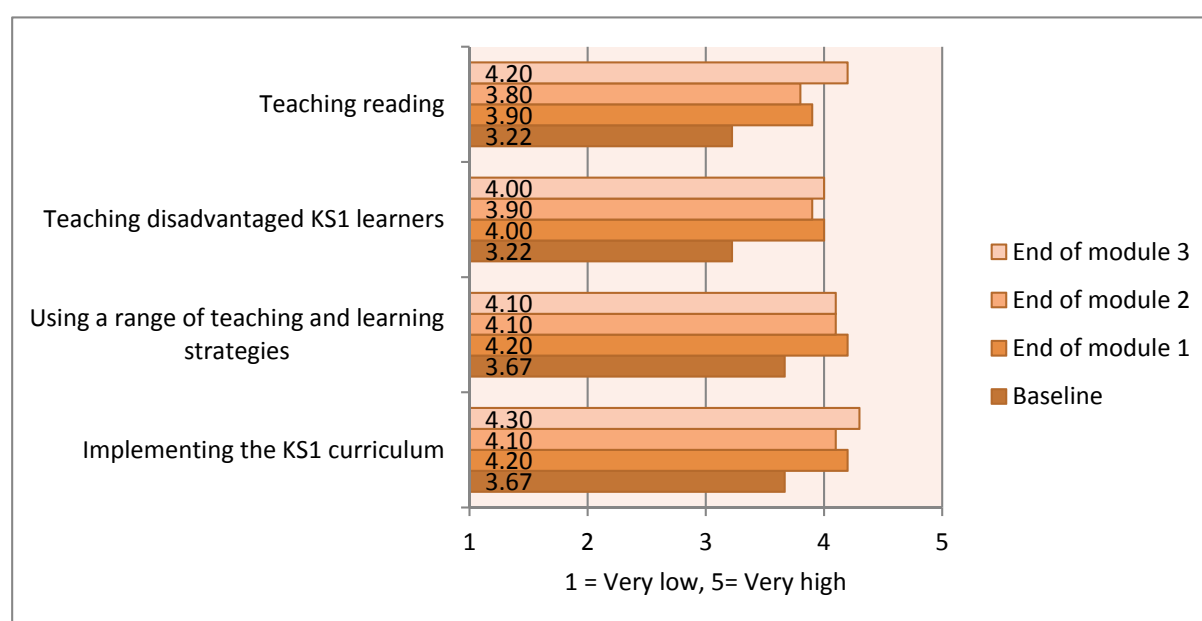
ECTs' self-report ratings on confidence related to teaching disadvantaged learners, implementing the KS1 curriculum, using a range of teaching and learning strategies and teaching reading, which are core areas of RETAIN content (Figure 7) show an increase between the baseline survey and the end of RETAIN 3. In contrast to self-efficacy, ECTs' confidence did increase at each survey point across the duration of the RETAIN programme. A further difference is that the greatest gains in ECTs' sense of self-efficacy occurred during RETAIN 3, whereas the greatest reported gains in confidence occurred between the baseline and the end of RETAIN 1. Early gains in confidence may reflect the early impact of coaching, as one ECT explained at the end of RETAIN 1:

'I think my confidence it's really helped with and that's [the lead coach] in particular coming into the setting, because she's given me lots of helpful tips, but also reassured me that what I'm doing is the right thing to be doing, which is great to have somebody like [the lead coach], who is brilliant in her field, to be giving you that reassurance', (ECT, R1 interview).

A further possible explanation for the different patterns in the development of self-efficacy and confidence may relate to the contextual barriers some ECTs encountered in the school context, such as having to follow a prescribed curriculum, which meant they were unable to implement learning from RETAIN. This may account for the small decline in their self-rating of confidence after RETAIN 1.

The decline in ECTs' confidence in teaching reading during RETAIN 2—which included input on stimulating and supporting disadvantaged learners' reading—may reflect ECTs' growing awareness of the range of strategies that they could adopt. The subsequent increase in confidence by the end of RETAIN 3 may have arisen from successful implementation and practice of these strategies.

Figure 7: ECTs' self-report of confidence



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

Within the qualitative data there was consensus amongst ECTs, school champions, headteachers, and the delivery team that participating in RETAIN had built ECTs' confidence, although there were varying starting points and degrees of change. Across all phases of the RETAIN programme, ECTs mentioned increased confidence as a teacher, confidence to experiment and make changes in their classroom, and confidence to share ideas and practices across the school. At the end of RETAIN 2 and 3, some ECTs also reported increased confidence in teaching literacy, confidence to question school practices and press their ideas with senior leaders, and confidence to lead whole-school initiatives. At the end of RETAIN 3, some ECTs felt more confident in terms of their career development and more confident to ask for help and advice from more experienced colleagues. The lead coach and school champions had also observed increases in ECTs' confidence:

'In [their] role leading reading in Key Stage 1, [the ECT] was very, very nervous about taking that on, because [they] didn't see [themselves] as having experience in that area. I know that from a few conversations with [the ECT], that the research and conversations [the ECT's] been having through RETAIN have made [the ECT] see that [the ECT] does have that experience. ... [the ECT has] been able to make changes to the structure of how [they are] leading that area when you look at it compared to what the other person was doing. So yes, I do see [the ECT] being more confident in that area', (SC, RETAIN 2).

Again, there were mixed views, particularly among school champions and headteachers, about the extent to which improved confidence could be attributed to participation in RETAIN.

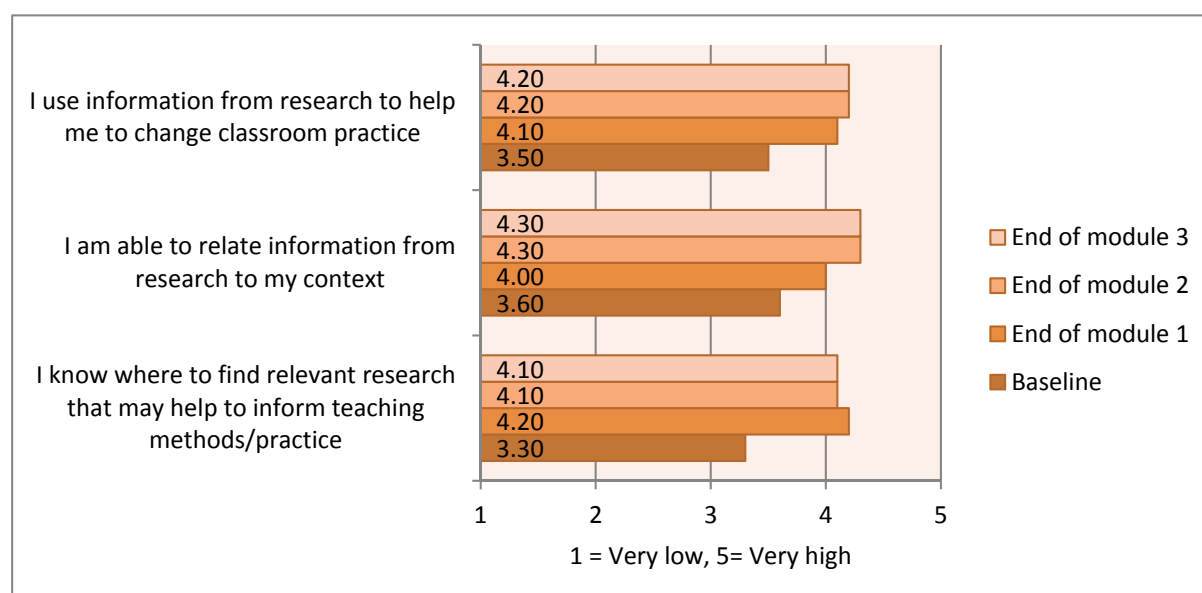
'Maybe it's given [the ECT] the confidence to try doing something a bit different. I suspect [the ECT] probably did actually have quite a good understanding anyway, because he is in his third year of teaching. I'm not really sure we'd say we've seen a great impact', (SC, RETAIN 1 interview).

Research use

ECTs' self-report ratings indicate that they were making greater use of research to inform their practices after participating in RETAIN than at the start of the programme (Figure 8). The most substantial increases in the use of research and in knowing where to find relevant research took place between the baseline and the end of RETAIN 1. ECTs' ability to relate information from research to their practice

increased during both RETAIN 1 and RETAIN 2. There was no further increase in any of the research use indicators during RETAIN 3. This may be because the delivery team made frequent references to evidence on disadvantaged learners in RETAIN 1 and on appropriate pedagogical approaches in RETAIN 2 and ECTs could access the evidence on the 'Bubble' VLE. In contrast, as RETAIN 3 focused on professional learning and career, fewer references were made to evidence on classroom practices.

Figure 8: ECTs' self-report of research use



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

In contrast to the pattern of research use indicated by the survey data, there were fewer reports in ECTs' interviews of research use during RETAIN 1 and 2 than RETAIN 3 where, for example, one ECT talked about 'significant' changes in their practice as they implemented research and tested different approaches, and another explained:

'It's benefitted me ... just because something's not working it means that there's a better way of doing it for the children that I'm working with and there's loads of research that I can use, and to go and do it rather than just panicking and keep going on with the same idea', (ECT, RETAIN 3 interview).

Most frequently, ECTs used research evidence that had been presented to them on the programme as illustrated by one school champion:

'I know they were looking at boys ... from disadvantaged backgrounds [in the taught session]. We've got in [the ECT's] class a big group of boys who are from that background. I know that that research in particular has been helpful in how [the ECT] structures what they're trying to do in literacy. They've tried to make it a lot more meaningful. ... So I think that particular piece of research was very powerful for [the ECT]', (School champion, R2 interview).

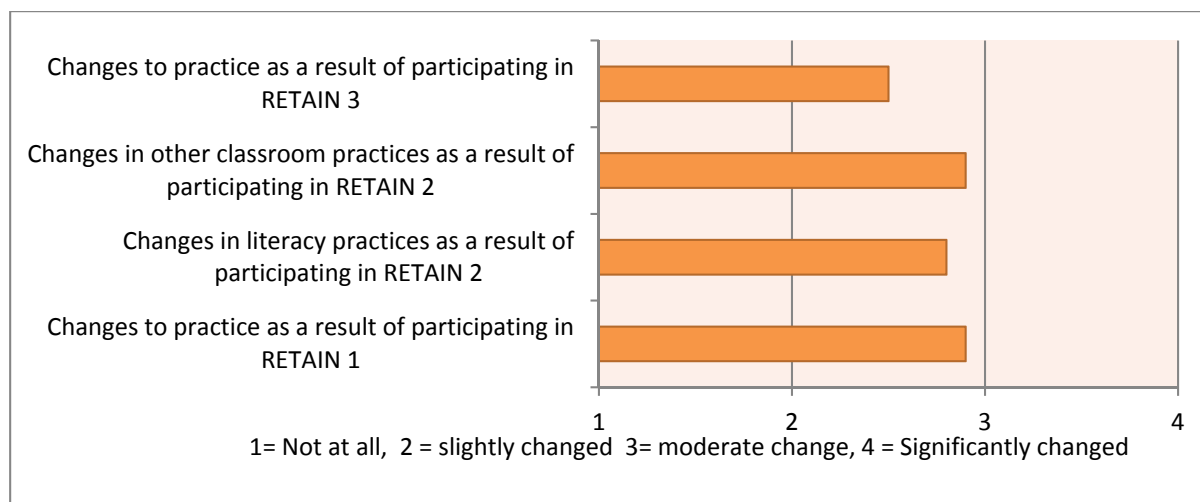
A small number ECTs were more proactive in seeking out other research sources:

'We do have conversations in the coaching now about where they can go to look for evidence, and evidence to support the changes that they're making. One teacher in particular, who wants to influence change in the classroom, is putting together a paper which is going to say this is what the evidence says and this is why I want to try and do this, and these are the outcomes I'm hoping for. That's a massive step forward. They would never have done that six months ago', (Lead coach, R2 interview).

Practice change

ECTs perceived that participating in RETAIN had led to a moderate change in their classroom practices during RETAIN 1 and 2 and slight to moderate change during RETAIN 3. This may reflect the focus in RETAIN 3 on professional learning and career development and the reduction in the number of coaching visits for most ECTs during RETAIN 3.

Figure 9: Change in practices ECTs attribute to RETAIN (mean values)



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

The most frequent changes in practice that were mentioned by ECTs at the end of RETAIN 1 related to the classroom environment, routines, and lesson structure, for example:

'The house points system ... because of what I experienced with the children from such a young age bringing into school what happens outside of school and knowing that ... the grown-ups in one family don't get on with another family, the children even at six come in knowing that they shouldn't be playing with that child from that family. ... So that was why I wanted to get the house points going, to get them to work as a team and support each other with children that they wouldn't necessarily be getting on with and working with outside of school. ... That was definitely something that came from doing the RETAIN sessions', (ECT, R1 interview).

Other changes to practice mentioned by ECTs at the end of RETAIN 1 included curriculum change—for example, reorganising the curriculum and incorporating outdoor learning—and teaching and learning strategies, such as the use of more open-ended challenge tasks, new behaviour management strategies, and using more, or different, resources.

As might be expected given the focus of RETAIN 2, all the ECTs interviewed at the end of RETAIN 2 had made changes in their practices related to literacy teaching. This included changes to guided reading strategies and how they read to children, structuring reading time, using hooks for writing, making writing tasks more focused and less technical, creating exciting book corners, and changing the language used in classroom. Other practice changes mentioned at the end of RETAIN 2 were the use of 'feelings sticks', shifting the emphasis to children 'having a go' rather than completing a task, using real life experiences, ensuring there is always a purpose to work, and changes to assessment and behaviour strategies.

Further changes in practice, particularly related to literacy, were evident at the end of RETAIN 3 as illustrated by one school champion:

'[The ECT] has been increasingly more inventive with [their] approach to the teaching of literacy. ... the speaking and listening has been quite a big factor for [them]. ... I know that [the ECT]

has been incorporating sessions into [the] week to give children opportunities to talk. That has definitely come from RETAIN. I think just when [the ECT's] hearing it from RETAIN, but also hearing it from other areas as well, that's when it really consolidates the value of it', (School champion, R3).

Inevitably, there was variation in the degree of change in practice implemented by the ECTs, as illustrated by the following quotes from two different ECTs at the end of RETAIN 2:

'A lot of what was mentioned I found already existed in my practice', (ECT, R2 interview).

'I have adapted my entire approach to maths as well as literacy through the discussions we have had in RETAIN 2', (ECT, R2 interview).

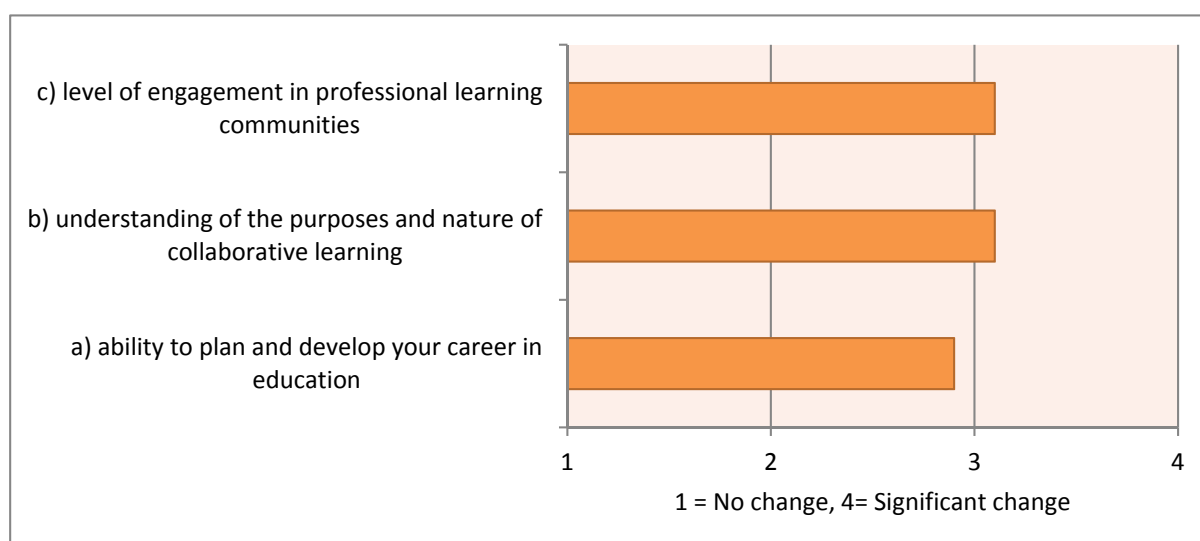
Yet again, while most school champions and headteachers had observed changes in ECTs' practice, some were cautious about attributing change to RETAIN:

'I'm not saying [practice change] hasn't happened, but (a) it would happen anyway because [the ECT] is a second year teacher, so [they are] getting better; (b) we've invested a lot. ... we spent a whole bunch of money on CPD for the staff. ... Trying to isolate, extrapolate RETAIN's impact over other factors, I'd struggle to quantify that', (headteacher, R2 interview).

Professional development and career progression

At the end of RETAIN 3, which focused on professional development and career progression, ECTs reported a moderate change in their understanding of the purposes and nature of collaborative learning and their level of engagement in professional learning communities, and slight to moderate change in their ability to plan and develop their career (Figure 10).

Figure 10: ECTs' self-report of change following participation in RETAIN 3



Data source: Baseline, R1, R2, and R3 ECT surveys (N = 10 at all survey points).

ECT focus group participants and interviewees indicated that participating in RETAIN 3 had supported them in thinking about their own career and provided information on career route options they had previously been unaware of. Most ECTs reported that it had increased their confidence and motivation to progress, or progress more quickly than they had envisaged, and a few were beginning to act on their career intentions. For one ECT, joining RETAIN had impacted on their career intentions immediately:

'I think I'm quite career driven anyway, so I think this probably just made me be, like, yes, I want to do well even more, progress or look into leadership even more than I did', (ECT, RETAIN 1 interview).

There were mixed views among ECTs about whether participating in RETAIN had stimulated their engagement in further collaborative learning. While some reported that they had not sought out further collaborative learning opportunities, members of one of the peer learning groups established as part of the RETAIN programme intended to continue supporting each other after the programme had finished:

'We've obviously got our peer learning group and that will carry on. That's made me really realise that I need to be part of other things, so I've joined an Early Years group. ... That's great because it's just sharing ideas and talking to other teachers within your year group. That's been fantastic. I don't think I would have thought about doing that if I hadn't been on the RETAIN project', (ECT, R3 interview).

Retention

There is very limited data that illuminates the potential impact of RETAIN on teacher retention as most ECTs had no intention of leaving the profession when they joined the programme or as the programme progressed. Nonetheless, one school champion's observations suggest that RETAIN has potential to support retention:

'[The ECT] was very, very much somebody who was talking about leaving and it would have been a shame, because [they've] got a lot to offer the school. ... [the ECT] doesn't talk about leaving anymore', (School champion, R3 interview).

The mostly positive trend in the intended intermediate outcomes reported above provides some indication that the programme is likely to contribute to ECT retention. However, it is possible that the

programme may not have impacted in the same way on ECTs who were thinking of leaving the profession.

Other outcomes for ECTs

One headteacher noted that the ECT in their school had become more reflective, while another thought that participating in RETAIN had helped the ECT in their school develop a better perspective on school expectations:

'Things in our school in particular can become quite overwhelming, and what I've noticed is [they've] managed to gain a better perspective on the way things are and the fact that sometimes what [they're] being asked to do isn't unreasonable, it is the same that everyone else is being asked to do. That has helped them, and me, actually, a lot', (Headteacher, R2).

Pupil outcomes

Most ECTs reported observing some positive outcomes for pupils resulting from practices they had implemented as a result of participating in RETAIN. Early outcomes were reported by some of the ECTs and school champions at the end of RETAIN 1. These spanned better engagement, calmer pupils, improved social interaction, and, in one case, increased parental involvement:

'I took a couple of suggestions from one of the sessions which was more about the children assessing their own work, which I took on board and I implemented into my classroom and actually it's had a really positive effect on how they learn', (ECT, R1 interview).

Most ECTs, school champions, and headteachers reported more impacts on pupils in the end of RETAIN 2 and 3 interviews, particularly in relation to literacy. These included pupils developing a broader conception of what is meant by 'reading', better engagement with reading, and improved reading skills—especially a noticeable improvement in boys' reading. Other literacy related outcomes included improved speaking and listening skills, using new, unexpected verbal and written language, excitement and enthusiasm about writing, and improved writing skills:

'One of the main areas that I've developed is ... writing ... and to give them opportunities to really get used to the language and to explore the language. We've been using a lot of speaking and listening ... rather than just the same activity, and really focusing on a topic, rather than zooming through stories. The children are really engaged with it. We've noticed an increased progression with reading and writing, the language they're using as well, not only with the way that they talk, but also with how they write ... it's affected all learners ... and I've got a few [English as an Additional Language] EAL children—and it's really developed them to be able to speak out their sentences and to think about what they want to say and using that language instead of me really having to help them build up those sentences. It's enabled them to become much more independent learners', (ECT, R3 interview).

Other outcomes observed were pupils' improved self-confidence and wellbeing, increased resilience for pupils with Special Educational Needs and Disability (SEND), and challenging children becoming calmer and more settled. One headteacher made an explicit link between their ECT's participation in RETAIN and improved pupil progress; another linked participation to pupil attainment in literacy.

Mirroring outcomes for changes in ECTs' practices, there was variation across the ECTs in terms of the extent of pupil change observed and a few interviewees were circumspect in attributing improved pupil progress and attainment to RETAIN.

Wider school outcomes

Some ECTs shared the knowledge and practices they had gained from participating in RETAIN with other teachers in their school. This typically took place through modelling, joint planning, or informal conversations:

'I have demonstrated to my school that for my class [mixed ability grouping] has helped many children develop socially as they are interacting with others when they may not have before', (ECT, R1 interview).

'We do ... joint learning, so both classes get the exact same taught sessions, so they've really benefited from that. Some of the Year 2s as well, they've listened in to some of the planning that we've done and they've taken some of those things on board, so using that topic, using a topic to really engage the children's learning with the literacy, with the writing, and using lots of speaking and listening activities. They've taken that on board as well, so it's really benefited the whole of Key Stage 1 here', (ECT, R3 interview).

Some school champions identified positive impacts including improved relationships between the ECT and others staff, changes in other teachers' practices, and greater innovation, which was particularly important in one school:

'We have seen some innovation with [the ECT's] classroom this year because [the ECT] has been trying things out that have been brought to [the ECT] or suggested to [them] by the RETAIN project. For a school that was recently in special measures we need innovation in the classroom, so that's been really supportive for us', (school champion, R1 interview).

One school champion noted that engaging in RETAIN had made their senior leadership team more aware of the needs of ECTs and as a consequence the school had increased support for ECTs:

'Having [the ECT] on this RETAIN programme has just made ... the senior leadership team ... more aware of those early career teachers. It's just we're focusing on those teachers a little bit more in terms of support. Not formal support necessarily, but just checking in, having those conversations, is everything okay, how are you doing? ... Just making them know that their position and their contributions are just as valuable and that they're part of the team as much as anybody else really', (school champion, R2 interview).

However, there appeared to be marked variation in the extent to which others in the participating schools benefited from their ECTs' learning from RETAIN. Three of the six headteachers interviewed reported that there had been no, or very limited, wider impact on the school, while the other three headteachers reported that other teachers (usually in the same year group as the ECT) were adopting practices that the ECT brought back to the school as a result of participating in RETAIN. In some schools, both ECTs and school champions felt that the established school approaches to teaching and learning significantly restricted the implementation of ideas from RETAIN across the school. As one school champion explained:

'Our school is very routinely run in terms of Key Stage 1. ... So in terms of core subjects I wouldn't say that there is seen to be that much flexibility there', (ECT, R3 interview).

Enabling characteristics of the RETAIN programme

Links between programme components and key features and outcomes

This section considers the perceptions of ECTs, school champions, and headteachers regarding the efficacy of the RETAIN programme in supporting the achievement of positive outcomes. For studies such as this that are not able to use comparators, articulating and providing evidence of the path from inputs to outcomes described in the logic model helps support the plausibility of the model (of course, this approach cannot demonstrate that these changes actually have occurred, or that they are more likely to have led to impact than alternative approaches or 'business as usual').

Knowledge and understanding

Some ECTs related increased knowledge and understanding to the modelling of practices and discussion in taught sessions, particularly in RETAIN 2. Peer discussion was perceived to be particularly useful to develop knowledge of practices in other schools:

'It's made [the ECT] really aware of the context that we work in. I think that has been incredibly powerful. I think our school has been hard to work at and I think you get some people who come to our school and unfortunately it's not for them. I think for [the ECT] to meet with other colleagues in other schools, that has been really powerful', (school champion, R1 Interview).

Confidence

ECTs perceived three aspects of the programme to be particularly influential in building their confidence—coaching, taught sessions, and peer discussions. The latter helped ECTs to realise that other ECTs faced similar issues to themselves. For example, one ECT explained the importance of coaching and peer discussion:

'The coaching sessions ... have definitely helped. Last year was a tough year ... and [the lead coach] has built my confidence back up again and showed me that actually I am doing things well. That's been really helpful. Then talking to other people who were in the same predicament has helped as well, to actually know that I'm not on my own', (ECT, R2 interview).

The taught sessions, combined with research evidence, built confidence by confirming that the ECTs were doing 'the right thing' and gave them the confidence to experiment with their practices:

'At some points in the taught sessions things get brought up and a couple of times I've been doing those things already, so it's really brilliant for my confidence', (ECT, R1 interview).

'[The ECT] said to me that [they] now feel that [they've] had permission to really try things out. As an NQT [Newly Qualified Teacher] often you can feel a little bit nervous about experimenting because it's very easy for things to go a bit pear-shaped, but [the ECT] said to me, "I really felt I had permission to just try". Because of it [the ECT] has had some real successes', (school champion, R2 interview).

Career development

ECTs related professional and career outcomes to conversations with the delivery team and having the space to talk about career progression and hearing others, particularly their peers, talk about their career pathways:

'When I came away from that session ... especially after speaking with [the lead coach], I felt like I had the confidence to pursue my next steps earlier ... I think if I hadn't had those conversations I might be sat here right now coasting along with how things are going and waiting for opportunities to come to me, but now I feel a little bit more proactive in wanting to try and find those opportunities and create those opportunities for myself', (ECT, R3 interview).

'Listening to the other teachers talking about their roles and things, made me think okay, these people are at a similar stage in their career to me and they're doing X, Y and Z in their career. It made me think that there are other avenues for me to go down, and if they can be in charge of outdoor learning I don't see why I can't be kind of thing ... it inspired me to think I can do some of these things', (ECT, R3 interview).

Practice change

The taught modules, coaching, and peer collaboration were also reported by ECTs as leading to practice change. ECTs made links between practice change and the content of modules, modelling of practices in taught sessions, and being encouraged and validated by the delivery team to try out new

ideas. They also explained that being supported through coaching, sharing practices, and talking to other ECTs about changes led them to feel more able to talk about their ideas in school and push for support to implement new practices.

'It's given me permission to try new things and to not worry if things don't go right, that there are other ways of doing things', (ECT, R3, interview).

'It was mainly [the R2 module leader] ... talking about the different ways of engaging children with their learning. If you're not excited about the learning then the children aren't going to be either. [The lead coach] has really supported me in getting some of those activities in place. So I made it a focus from early on and she observed me in one of the lessons and gave me a lot of ideas and that really helped me to mould it and to support the learning', (ECT, R3 interview).

The emphasis on research evidence in the RETAIN programme was also influential in supporting practice change:

'Sometimes I look at research ... and you see that you're doing something similar, but research backs up something that's slightly different and it's nice to have that research there to say okay, I'm going to give that a go and maybe show it to a senior leader at school, show it to them and say, "What do you think?" They will say, "Yes, give it a go," kind of thing', (ECT, R3, interview).

Retention

The importance of peer discussions was mentioned by the school champion whose ECT had been talking about leaving the school:

'I think it's been really useful for [the ECT] meeting other people who are in a similar situation ... especially because [the ECT] was in [their] second year of teaching at the time. When you're an NQT you get to meet other NQTs all the time, but in your second year it kind of all drops off and you're left to just deal with it. I think the RETAIN project's strength was the opportunity for [the ECT] to meet and talk over things and have a general whinge, you know, about life as a second-year teacher. That was very good for [the ECT]. I think [the ECT] got a lot out of it', (school champion, R3, interview).

Pupil and wider school outcomes

As might be expected, there were fewer direct links made between RETAIN and pupil outcomes. However, one ECT made direct links between RETAIN 2 and positive pupil outcomes:

'The children are just really engaged with it. We've noticed an increased progression with the reading and with the writing, the language they're using as well, not only with the way that they talk, but also with how they write throughout all the abilities. So I've felt as though [RETAIN's] highly impacted not only my class but the other Year 1 class as well', (ECT, R3 interview).

There was one instance of a school champion working together with an ECT to implement a playground buddy system that had impacted positively on pupils' self-confidence and well-being. However, given the existing good working relationship between the ECT and the school champion this may have occurred anyway.

'This is a definite result of RETAIN ... [the ECT] had two girls in [their] class who set up this worry buddy project independently ... We didn't have a system like that in school at the time. It was actually one of [the ECT's] and my RETAIN conversations where we started discussing how [the ECT] could support it ... like that is great, but there are certain skills that are needed to be able to do it. I had some peer mentor training at my previous school and [the ECT] has had play-leader training, so we combined the skills together and we jointly led and trained a group of about 20 children in the school to be the playground pals, with the two girls who had

started it off being the key people in charge of the project. That came out of RETAIN', (school champion, R3 interview).

The sharing of practice which supported wider school outcomes was enabled, for some ECTs, by the enhanced confidence they had gained through participating in RETAIN.

Summary

Table 7 summarises the qualitative data presented above on the links between factors related to the programme components and key features and perceived outcomes. This data should be read with caution, it represents emerging findings from a very small sample of ECTs that would need to be tested rigorously before valid conclusions could be drawn. The data indicates that peer collaboration and the content and modelling of practice in taught sessions are important factors in supporting the achievement of intended intermediate outcomes. In addition, confidence and practice are perceived to be supported by coaching and engagement with research evidence (which occurs in the taught sessions and coaching, and is available on the RETAIN VLE). The validation of ECTs' ideas and practices, as well as the 'permission' given to try new things by engagement in RETAIN, were both factors leading to perceived confidence and practice outcomes. Discussion with RETAIN members was perceived to be a factor that supported career development and school champion support was perceived to lead to pupil outcomes.

Table 7: Mapping of programme component and key features to perceived outcomes

Factors supporting achievement of outcomes	Impact on perceived outcomes					
	Knowledge and understanding	Confidence	Practice	Career development	Retention	Pupil outcomes
Peer collaboration/ discussion and sharing practices	✓	✓	✓	✓	✓	
Taught modules: content and modelling of practice	✓	✓	✓			✓
Coaching		✓	✓			
Engagement with research evidence		✓	✓			
RETAIN validation of ECTs' ideas/practice and 'permission' to try new things		✓	✓			
Discussion with RETAIN team				✓		
School champion role						✓

The combined influence of RETAIN components

ECTs, school champions, and headteachers stressed the complementary and mutually reinforcing nature of the programme components.

'I think that the taught sessions definitely are essential ... I don't think the project would have really worked if [the lead coach] hadn't come in. It really, really contextualised things. That just brought it all to life really. I think those two elements and setting up our peer learning groups ... our peer learning group in particular worked so well [as] we were based in schools that were quite near, so we could meet up. We knew each other's schools so that helped as well; it helped contextualise what we were talking about', (ECT, R3 interview).

The threading-through of research evidence across the programme components was also perceived to be important:

'It was quite easy to see links between the taught sessions, the research that was being shared, and then the way [the ECT] was talking about working collaboratively with other teachers. I got the sense that it was a very well thought out, very well-planned approach to supporting early career teachers ... it ties together very well. It brings together all sorts of different strands, which I think without one or the other the project wouldn't have been as useful or as effective. I think particularly the peer collaboration and the research as well. I don't think teachers really get enough time to consider new research, the findings and things. You're just kind of head down, ploughing through the week. Whereas actually if people had the time to look into that and to consider it against their own practice, I'm sure lots of changes would be made for the better

really. So I think that particularly has been a useful strand of the project', (school champion, R2 interview).

Programme-related implementation enablers

More pragmatic programme enablers cited by interviewees included the full day workshops in RETAIN 2 and 3 (as opposed to the twilight sessions in RETAIN 1), the central location of these taught sessions, the small group size, and the communication to ECTs from the delivery team. In addition one headteacher noted the funding provided by RETAIN, which they used to pay for cover, as an enabler for their school.

Individual and school-level enablers

The extent to which the intended intermediate outcomes were achieved varied across ECTs and schools. Analysis of interview data indicates that factors operating at the level of the individual and at school level either enabled or impeded successful outcomes. This section outlines the enabling individual and school-level factors. Findings on barriers are presented in the Feasibility section.

At the individual level, the key enabler mentioned was attitude: it was perceived that those ECTs who had embraced the programme were more likely to succeed. This willingness to fully engage in RETAIN, for some, went some way to overcome programme barriers relating to work and time pressures:

'I think if you're up for it, which she has been, I think she's taken on board what has been realistic and achievable', (school champion, R3 interview).

This need for positivity and confidence, which is also an intended programme outcome, was emphasised by other interviewees. One ECT, in reflecting on what had enabled them to implement their learning from RETAIN in their own classroom and share their learning with colleagues, responded:

'I think it's just general confidence in your own abilities, even when you may have a class that makes you feel that you're not necessarily doing the best job, but actually knowing that you are and having that confidence in yourself. Again the big thing for me was being able to share my ideas and make suggestions, even though there are other teachers who are much more experienced—just understanding that everyone has got a different take on things and just having the confidence to suggest those ideas', (ECT, R1 interview).

An ECT's approach to implementing change also appeared influential. As one school champion explained, implementing change in manageable steps was key to successful behavioural outcomes in their ECT's class:

'[The ECT] did some reading around behaviour management ... and decided that [they] would break the day down into specific areas to target ... and not do it all at once. So not think "this is an impossible task", but to break it down and to just focus on the transition from carpet to tables and back again and focus on that for a week. Then [the ECT] thought that worked really well; now I'm going to try ... the home time routine. So not trying to do everything at once, but tiny little bits have been really good and then sharing that with the other NQT as well', (school champion, R2 interview).

At school level, many ECTs, school champions, and headteachers highlighted the importance of the supportive school culture and openness to changes in school practice. This provided space for ECTs to discuss their learning from RETAIN with their school champion or headteacher, and provided the flexibility and encouragement for ECTs to make changes in classroom practice:

'I did have a really supportive school. Our headteacher has been really excited about it and really on board and that's made it quite easy for me to just come in and really use RETAIN to benefit me as much as possible', (ECT, R3 interview).

For the delivery team and some ECTs, a key school-level enabler was the ECT having a supportive school champion with whom there is an open and productive relationship:

'Another enabler is having that good relationship with your champion as well, so that you feel confident to challenge things with your champion', (school champion, R1 interview).

In one school, the ECT and headteacher reported that implementing change from RETAIN was facilitated by the headteacher undertaking the school champion role. While such an approach was supported by another headteacher interviewed, another headteacher felt that they would be unable to have open conversations with their ECT given their responsibility for the ECT's performance management.

Incorporating RETAIN into school priorities and processes was perceived by headteachers to support the achievement of positive outcomes. Two pointed to the enabling effect of incorporating targets related to RETAIN in ECTs' performance management:

'We didn't want RETAIN to be an addition for [the ECT]. I wanted it to be part of [their] first-year package. So we looked very closely at [their] NQT target and the RETAIN project and set [their] performance management targets around the use of RETAIN in [their] classroom ... [the ECT] presented at the end of the year a really strong portfolio of evidence of how [they'd] used information from RETAIN to support the individual children and the practice [they had] developed because of RETAIN', (headteacher, R2 interview).

Another headteacher interviewed reported that the in-school support for the programme that the school had been able to provide came from time spent ensuring the 'fit' of RETAIN activity to school priorities.

Where there was alignment of RETAIN content and the focus of CPD in the school, this was perceived by one school champion to 'consolidate' their ECT's knowledge and understanding:

'In addition to RETAIN we've had some Pie Corbett training, and we're also doing lots of the talk for writing. I think a positive thing is that lots of the messages that [the ECT] was getting from RETAIN [they] has also been hearing through the other training that we were getting. That really consolidated it for [the ECT]', (school champion, R3 interview).

Summary of enabling factors

Table 8 summarises the enabling factors related to the programme, individuals, and schools that supported implementation and perceived successful outcomes. This summarises the data presented in the four previous sub-sections: linkages between programme components and features and outcomes, the combined influence of RETAIN components, programme-related implementation enablers, and individual and school enablers.

Table 8: Factors enabling implementation and perceived successful outcomes

Enabling factors	
RETAIN programme	Components and features • peer collaboration/discussion and sharing practices • taught modules—content and modelling of practice • coaching • engagement with research evidence • RETAIN validation of ECTs' ideas/practice and 'permission' to try new things • discussion with RETAIN team • school champion role Cumulative effective of components and features • the combination of the RETAIN components, particularly peer collaboration, the taught sessions, and coaching Practical arrangements • full day sessions for workshop • central location for workshops • small group size • communication to ECTs by RETAIN team • funding to schools used to provide cover
Individual	• willingness to engage with the RETAIN programme • positive attitude • confidence to trial new learning in school • understanding of processes that lead to successful change in the classroom
School	• supportive school culture • openness to change • supportive school champion • alignment of school CPD with aspects of the RETAIN programme

Indicators of effective CPD

ECTs and school champions were asked to comment on the extent to which they perceived that RETAIN met the indicative characteristics of effective CPD (Table 4). Heads were asked about the extent to which the characteristic of creating a shared sense of purpose about professional development had been met. This interview data, together with evaluators' observations of the start- and end-of-programme regional workshops and taught session videos, were mapped onto the effective CPD matrix (Table 4). This mapping, set out in Appendix 5, shows that there is a strong alignment between the RETAIN programme and most of the indicative characteristics of effective CPD. There was good alignment with the indicative characteristics for content, active learning, relevance, and duration and rhythm. There was also good alignment with the indicative characteristics of collaborative learning relating to ECTs collaborating with their RETAIN peers, but variation between schools in the extent to which the ECTs had been able to share and discuss learning with school colleagues. There was also variation, by school, in relation to the critical feature of developing a shared sense of purpose of CPD with the schools. Nonetheless, the mapping indicates that, overall, RETAIN aligns well with the indicative characteristics of effective CPD. The reasons for variation across schools are explored in the Feasibility section.

The alignment of RETAIN to most of the indicative characteristics of effective CPD, which existing research indicates are likely to lead to positive outcomes for participating teachers, provides support for the plausibility of the programme theory of change.

Feasibility

This section presents findings relating to:

- recruitment;
- attendance and engagement of ECTs and schools; and
- perceptions of the quality and usefulness of the RETAIN programme as reported by ECTs, school champions, and headteachers.

Barriers to delivery and successful outcomes are summarised and areas for consideration in the future development of the programme are drawn out.

Recruitment

The RETAIN team found recruiting schools challenging and, as noted earlier, the criteria for eligibility in relation to the proportion of Ever 6 FSM pupils was lowered to aid recruitment. In response to concerns from headteachers about the potential workload for ECTs and the implications for staff cover during the promotion of RETAIN, the delivery time per module was reduced and in-school coaching increased. Nonetheless, concerns were still expressed in the focus groups at the first regional workshop about the time commitment that would be required of ECTs and conflicts with school demands.

The focus groups held with ECTs, headteachers, and school champions at the first regional workshop and interviews conducted during the programme also indicate that there was a lack of clarity about the programme aims and a perceived lack of information about RETAIN. This may have discouraged other schools and their ECTs from participating.

'My head seemed quite unsure what it was about, but he was under the impression that because I'm an NQT I haven't really had any support, so it was another way of giving some support. He didn't really understand himself I think', (ECT, first regional workshop focus group).

The ECTs were particularly bemused about the project title and its focus on teacher retention:

'I was told it was retaining newly qualified teachers, and I said, "I'm not going anywhere". ... I'm in my third year, I'm not going anywhere', (ECT, first regional workshop focus group).

Some ECTs did not know, prior to the launch day, that the programme would focus on disadvantaged learners—a point that, for most, was an important motivator for joining such a programme:

'I do feel it's worthwhile being here now, but before I was a bit, like, I'm not going anywhere. Now that we're talking about disadvantaged areas that's great, it makes a lot more sense why I'm here. Beforehand I was a bit like I don't know why I'm coming to this', (ECT, first regional workshop focus group).

There was a consensus among all interviewees that more effective communication of the programme aims and intentions before the start of the programme was needed; as one ECT explained:

'I think it's just making sure that the schools have more of an understanding, because they kind of didn't really sell it to me. They're not usually like that. They kind of said, it was almost like they were apologising for it. They said it was one of those things that once you've done it, it will be really useful, but it is going to be a lot of work. I thought you're really not selling this to me very well. So I think it's just making sure the schools know what it's going to entail before as well', (ECT, R1 interview).

Given the title of the programme and the long term aim of retaining teachers, an important consideration for the RETAIN team is how the programme can ensure that it is recruiting ECTs that are considering leaving the profession or are likely to consider leaving in the next few years. This is, of course, problematic; for example, an ECT may be unwilling to share that they are considering leaving with their

headteacher. However, more specific guidance on the selection of the ECT—when there is more than one in a school—could be provided to headteachers. The RETAIN team could also consider how they could make the programme more accessible and attractive to ECTs who are struggling with managing their workload and who are therefore more likely to be thinking of leaving the profession.

Attendance

Attendance of ECTs at taught sessions was generally high, particularly in RETAIN 2 and 3 (Table 9). Observation of videos of taught sessions by the evaluators also indicated greater enthusiasm and higher levels of engagement during RETAIN 2 and 3 than RETAIN 1. These patterns reflect two issues raised by ECTs. First, ECTs found the scheduling of RETAIN 1 as twilight sessions tiring after a full day's teaching, particularly those with a long journey to the venue. School champions and headteachers also expressed concern that ECTs were missing staff meetings or not able to run after-school clubs. Second, RETAIN 1, particularly in the earlier sessions, included a lot of input from the delivery team; from the ECTs' perspective, there was insufficient active learning and discussion. Both of these issues were addressed before RETAIN 2. Taught sessions were rescheduled to two days per module and included a much higher proportion of active learning. Observations of taught session videos evidence a marked increase in the level of ECT engagement by the end of RETAIN 1.

Table 9: ECT attendance at taught sessions

	RETAIN 1 (11 ECTs) Twilights					RETAIN 2 (10 ECTs) Days		RETAIN 3 (10 ECTs) Days	
Session no.	1	2	3	4	5	6	7	8	9
No. of ECTs	11	8	9*	10	6	10	9	9	7**

Data source: RETAIN team's records.

* One ECT attended by telephone; ** two ECTs were not allowed to attend by their school due to an Ofsted inspection in their school.

In addition, all the ECTs received coaching ranging from six to eight visits over the programme duration. The variation, in part, may be attributed to logistical difficulties in arranging visits at suitable times for schools. Fewer coaching visits were undertaken in RETAIN 3 than RETAIN 1 and 2.

As previously noted, one ECT was withdrawn from the programme after RETAIN 1 due to poor attendance and a lack of engagement with other aspects of the programme. This, according to the headteacher, was down to excessive travel times to attend sessions, and difficulties the ECT had in arranging coaching sessions.

Attendance at the regional workshops is summarised in Table 10. All 13 ECTs (from 12 schools) who had been recruited at the time of the first regional workshop attended the workshop and eight of the ten on the programme at the end of RETAIN 3 attended the final regional workshop. Eight of the potential twelve school champions at the time of the first regional workshop attended the event and three headteachers also attended.² For just under half of the ten schools participating at the end of the programme, either a school champion (3) or a headteacher (1) attended the final regional workshop. Lower participation at the final workshop than the first may, in part, be attributed to the requests sent out by the RETAIN team, which invited all headteachers and school champions to the first workshop, but only requested attendance by either a school champion or headteacher at the final workshop. However, the low attendance may also indicate a decline in enthusiasm for the programme in some schools. This is discussed in the Perceptions section below exploring the quality and usefulness of RETAIN.

² One of these headteachers was also a school champion and is also included in the total of eight school champions.

Table 10: Attendance at the regional workshops

	Regional workshop: Mar 2016	Regional workshop: Mar 2017
ECTs	13 (N=13)*	8 (N=10)
School champions	8 (N=12)	3 (N=10)
Headteachers	3 (N=12)**	1 (N=10)

Data source: RETAIN team's records

* Two schools and two ECTs from these schools dropped out before the start of RETAIN 1.

** One of these headteachers was also a school champion and is also included in the total of eight school champions.

Perceptions of the quality and usefulness of the RETAIN programme

Overview

Overall, the programme—and particularly RETAIN 2 and 3—was positively received by most (but not all) ECTs. ECTs became more positive once early issues around the scheduling of workshops and the need for more discussion in taught sessions were resolved by the RETAIN team. A perceived lack of clarity around the programme aims and about what was expected of ECTs in terms of programme engagement remained an issue for some until RETAIN 2. This is illustrated by the response of an ECT interviewed at the end of RETAIN 1:

'I've found the course pretty vague. ... I attended four sessions and each one I came away thinking okay, that was really interesting; it's great talking about this stuff; what exactly am I meant to be doing about it? What's the end product of me being on this course? I suppose that's what I've been struggling to really work out', (ECT, R1 interview).

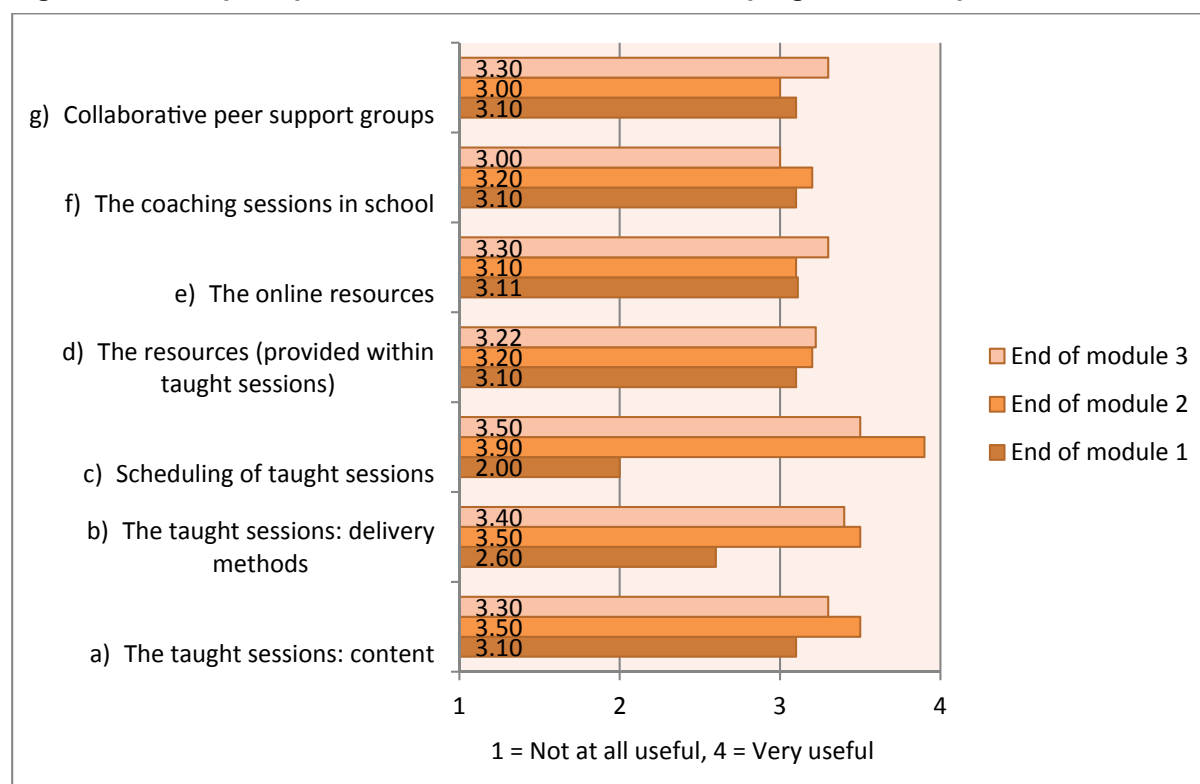
ECTs' perceptions of the programme in terms of it generating a heavy workload and an assumption they made, based on their experiences of initial teacher education, that the demands would be similar to a Master's programme also impacted negatively on their early orientation to the programme. These misconceptions were addressed in RETAIN 1 by the RETAIN team.

ECTs' changing perceptions over the programme are illustrated by one ECT's reflections at the end of RETAIN 3:

'I was very unsure of what I was going to gain from the course. I think that's just because it was obviously in the pilot; it seemed very open and unspecific and almost as though nobody wanted to direct reasoning or the purpose of the course because maybe people weren't too sure themselves. I think when I went into RETAIN 2 that was definitely when RETAIN started to change. I thought that [the RETAIN 2 module leader's] sessions with regards to literacy and collaborative peer learning and all that, I thought they were really beneficial and I really enjoyed those. I think that raised my expectations of RETAIN. I probably got everything I expected to get from it, sort of a general understanding of disadvantaged children and maybe some new approaches and ideas that I could try in my classroom', (ECT, R3 interview).

ECTs' rating of the usefulness of the different components of RETAIN on a four-point scale (1, 'not all useful'; 2, 'not very useful'; 3, 'somewhat useful'; and 4, 'very useful') indicate that they found all the components at least 'somewhat' useful (Figure 11). There were only small variations in the ratings given to each component of RETAIN at the end of RETAIN 1, 2, and 3. The only exceptions being the lower ratings given for taught session delivery methods and scheduling in RETAIN 1.

Figure 11: ECTs perceptions of the usefulness of RETAIN programme components



Data source: End of R1, R2, and R3 ECT surveys (N = 10 at all survey points).

The qualitative findings on interviewees' perceptions of the quality and usefulness of each component are outlined below.

Regional workshops

ECTs had mixed views on the first regional workshop. In a focus group held at the end of the day they were positive about developing a network with other ECTs but felt unclear about what they were expected to do in relation to the modules and in their school. ECTs valued the peer presentations in the end-of-programme workshop, but were less positive about some of the external speakers and would have appreciated more time for discussion:

'It was good to hear from all of the different [ECTs] that were there and how [RETAIN had] impacted, what they did to impact their teaching and that was really beneficial, but the rest of the time there was a lot of talking and a lot of it we'd already learnt or we'd already gone over. It would have been good to have that evaluation where we think about where we've come from, what have we learnt, what's been most beneficial and where we're going to next. That wasn't really done during the session', (ECT, R3 interview).

School champions thought it had been valuable to attend the first regional workshop. However, some with prior experience of mentoring had reservations about the training session for school champions:

'I was really pleased that I'd come to the whole day, so I had a better overview of what it was, what the potential for impact was across the whole school. My only concern was because they hadn't really skills-assessed us going in, there was quite a long session on mentoring ... Lots of people in the room had had experience of that before ... We kind of all went, "Yes, we've got that"', (school champion, R1 interview).

Taught sessions

As the overview above has indicated, there were differing views among interviewees in relation to the RETAIN 1 sessions and mostly positive perceptions of the RETAIN 2 and 3 sessions. Some ECT's felt

that aspects of RETAIN 1 were unnecessary given their experience of working with disadvantaged pupils:

'Where they were talking about what deprived was and what it meant to be a deprived school, when all of us sat there going, well we know because we work in ... It felt like they were going over things we should know if we were working in a school like that', (ECT, R1 interview).

In contrast ECTs found RETAIN 2 more useful and directly relevant to their teaching.

'[RETAIN 2] was a lot more beneficial because there was more time and we didn't feel under pressure to get things done. I definitely think [the taught sessions] were really useful this time actually—lots of discussion, a lot more talking between us rather than listening. The first module was more about learning about things and this time it was more about putting it into context. Yes, the taught sessions were good', (ECT, R2 interview).

'[The RETAIN 2 module leader] showed us a few things that I could immediately use in my classroom, just things to think about, tips, general knowledge about reading and how to make a bigger impact, which I found really useful', (ECT, R2 interview).

All the ECTs who participated in the outdoor centre team building activity in RETAIN 3 enjoyed it and recommended that it was done at the beginning of the programme, as this was when they 'really got to know each other' (ECT final workshop focus group). The afternoon session at the outdoor centre was also valued—as they 'sat down and really talked about what it was like in their own school'; they described it as real opportunity to 'vent' (ECT final workshop focus group).

ECTs valued the advice and suggestions from the delivery team and presentations by other ECTs during sessions related to both classroom practices and their career development which they found 'inspiring' (ECT, final workshop focus group).

Coaching

By the end of RETAIN, ECTs were positive about the coaching they received and perceived it to be beneficial, in particular the external one-to-one support to develop their ideas, plan changes, understand the purpose of the course, consolidate learning from taught sessions, and get useful feedback on changes they had made:

'I really, really got a lot from the coaching ... I thought it was really fantastic, especially having somebody to come into school and not be from your school. I talked to her quite honestly about things and I knew that she was there to support me, so there was never any hidden agenda. She wanted to support me in my teaching, it was really good, just coming up with ideas and directing me to places to look for things. It was really, really valuable', (ECT, R3 interview).

However, most ECTs had initially been confused about the purpose and the nature of coaching which meant that they did not always maximise the opportunity for learning from coaching visits. Some remained confused at the end of RETAIN 2:

'[The lead coach] is great, [but] I don't really know what I'm expected to do for her. It's lovely her coming in, because I've tried to get her in to watch a lesson, rather than just have a chat, and just get ideas and she's very, very helpful and she gives you loads of good ideas and information, but I don't really know how to use [the lead coach]', (ECT, R2 interview).

Headteachers and school champions had mixed views about the coaching. Some enthusiastically highlighted the support and 'really practical ideas' it had provided for their ECT, while others either were unable to comment on its effectiveness due to the lack of, or limited, communication they had had with the lead coach, and a few perceived it to be of limited usefulness:

'The general thing was very vague ... it didn't seem to be ... [the coach] coming in and saying, "Right, I think we need to work on this and this, or this is going to help. We'll identify that you

use this initiative or this strategy.” [The ECT] couldn’t give me feedback of stuff that was tangible that was going to make a difference’, (school champion interview, R2).

There was also concern from a few of the schools that the practices that the coach was advocating were not commensurate with school teaching and learning strategies:

‘What I’ve struggled with a bit is that between what [the lead coach] would like me to try and what she’s suggesting and how much my [senior leadership team] will allow me to go off course’, (ECT, R1 interview).

School champions

Most ECTs interviewed at the end of RETAIN 1 and 2 were receiving regular support from their school champion and found this valuable:

‘It’s really good actually because it gives me an opportunity to discuss the theory of everything but really relate it specifically to my classroom’, (ECT, R1 interview).

‘My school champion is the headteacher ... [they have] been very supportive. If I’ve come back and said, “I’d really like to trial this in my classroom”, [they’ve] been very supportive of that’, (ECT, R1 interview).

However, ECTs views were more mixed at the end of RETAIN 3 and it appeared that support had declined over time. Schools were not required to record the amount of support provided by school champions so there is no objective measure of school champion support. The RETAIN team reported that a small number of school champions were only minimally engaged with the programme. Headteachers had mixed views on the value of the role and some school champions felt that they had been unable to fulfil their role:

‘To be honest I don’t think it’s really lived up to what I was expecting, because I feel a bit like I’ve been a bit redundant’, (school champion, R3 interview).

Issues raised by some school champions were (a) a lack of clarity about the expected role and how the role related to the lead coach role, (b) feeling distant from the RETAIN programme, (c) limited interaction with the lead coach during visits to the school, and (d) difficulties finding time within the school day to provide support to the ECT:

‘I think there needs to be more collaboration really, making it more inclusive for me. I felt very much left out in the wings. [The ECT] always talks to me about what [they’d] been doing ... It would be informal ... and [the ECT] seemed quite happy at the time to continue what there were doing. ... I’d say, “How’s it gone?” and stuff like that, and [the ECT] would say, “Yeah, yeah, fine; we did this and we did that,” but then I’d say, “Any problems?” and [the ECT would] say, “No, no, I’m fine.” It was kind of like that. I think it would have been useful for me to have known what each session was about so that I could have had something to talk to [the ECT] about. I didn’t know what [the ECT] was doing from one week to the next really’, (school champion, R3).

Issues were amplified where the school champion changed during the programme as they did not receive an induction to RETAIN. Problems were also exacerbated in schools that had more prescriptive curricula that offered less opportunity for the school champion to support changes in their ECT’s practices.

The importance of selecting an appropriate school champion with sufficient teaching experience and status within the school was illustrated by one ECT reflecting back on the school champion support in their previous school:

‘My last school champion didn’t see why [they were] my champion, because [they weren’t] that much further ahead than me ... so [they] didn’t really know what [they] could do for me. Because I was a Year 2 teacher and [the school champion] was a Foundation teacher, it was also a bit

difficult for [them] to share things because the curriculum is completely different', (ECT, R2 interview).

There was an expectation among a few school champions that they (and the school more widely) should learn through RETAIN, which these school champions reported was not realised:

'I would have liked to have been more involved with it. I was expecting to be more involved with it ... actually I thought I'd probably benefit from it as well, from all the conversations that [the ECT] was going to have I was expecting to get something out of it too. I've come out of it not knowing any more than when I went in ... I would have liked some more communication so that I'd know. I also think it would have been good to have got the school to be more involved with the whole thing, so RETAIN was something that we were all familiar with and knew about', (school champion, R3 interview).

Peer collaboration

As earlier findings have indicated, ECTs particularly valued the opportunities the programme provided for peer collaboration, including visits to each other's schools:

'It's great to throw ideas around with each other ... we were working in the group and one person had to say what their problem was and the other two just had to listen ... and they had time to give feedback. ... That was really, really great. I think we all got a lot from that session, it was good ... We've been into each other's schools and had a look around, which has been really good, so we get a better idea of each other's settings', (ECT, R1 interview).

However, some ECTs found it difficult to meet or undertake visits to other schools due to the logistics of time and geography or resistance from their school.

'The school seemed a bit dubious about giving me more time off to go over and do that, which was a bit annoying', (ECT, R1 interview).

There was significant variation between ECTs in terms of the degree of engagement with their peer learning group—some meeting regularly and others finding discussion within the taught sessions sufficient.

Resources and online communication

Generally, ECTs found the programme resources useful, in particular the research summaries and supporting materials provided during taught sessions:

'They've got ... summary documents of some of the big papers and stuff, which has been useful, because I actually find time is the hardest thing. I'd love to have time to sit down and read all these interesting documents, but actually the summary documents were really useful to have a quick look at something and getting that overview of it', (ECT, R2 interview).

The professional review of resources at the end of the development phase found the descriptions of the programme and modules in the module handbooks overly complex. This may have contributed to the early confusion around the programme aims.

ECTs found the Bubble—the online platform that hosted the resources—difficult to access initially and difficult to navigate on an ongoing basis; this led some to give up searching for resources. Although school champions were aware of the Bubble through their participation in the first regional workshop, few had accessed it during the programme. The use of Yammer, which was set up by the programme team for communication with and between ECTs, was limited, in part by technical difficulties and some resistance to being told to communicate, although some ECTs did use other social media to network between sessions.

Most ECTs recognised that the impact log they were expected to complete during each module was designed to support their reflection, but they reported finding it too complicated, overly bureaucratic, and repetitive:

'[Completing the impact log] made me reflect on what I had done and it made me reflect throughout the process ... I found the wording of the impact log really, really tricky to get my head around. I felt that it was almost written like an academic journal kind of wording ... It made me dread filling [it] in ... because it was extra work. ... If it was just really simple statements, e.g. Have you done this? What have you done to implement this? That would have been a lot easier', (ECT, R3 interview).

Participating schools' receptiveness to RETAIN

School champions and headteachers who attended the start of programme regional workshop were enthusiastic about the programme and perceived that RETAIN would build ECTs' teaching capacity and provide them with the opportunity to meet other colleagues and develop a support network:

'We're an extremely small school, so for us it will be meeting up with other colleagues, giving our NQT a chance to meet other people and engage in wider professional development than perhaps we can offer in such a small school ... [The ECT] will teach Reception and Years 1 and 2 in one classroom, so she needs all the help she can get, quite honestly', (school champion, first regional workshop focus group).

Headteachers and school champions at the start of programme regional workshop were also particularly positive that RETAIN appeared to be addressing the challenges of teaching in deprived areas, which was not available through other CPD opportunities, and the potential for wider impact on the school through the sharing of practices ECTs learnt on RETAIN:

'Our school is two-thirds at least, growing every year, disadvantaged children. We just need more resources and focus on the disadvantaged because sometimes when there's a course to raise standards, or CPD for standards, it seems some bits apply and some don't, whereas this focuses on that disadvantaged area', (headteacher, first regional workshop focus group).

However, data presented in the previous subsections relating to perceptions of the quality and usefulness of the RETAIN programme has highlighted a number of issues encountered by schools during the programme. These issues included the specification of, and support for, the school champion's role and the focus of some coaching visits. Also, as evidence presented in the Evidence of Promise section shows, some school champions and headteachers were not, or not fully, convinced of the benefits of RETAIN and were disappointed that the programme had not impacted more widely on their school, or, in the case of a few school champions, on themselves. The perceived lack of communication from the RETAIN team made some headteachers and school champions feel distant from the programme. This sense of distancing may have contributed to the relatively low attendance by participating schools at the final regional workshops (a headteacher or schools champion attended from four of the ten schools). The sense of distancing was amplified where an ECT changed school champion or moved school as there did not appear to be a systematic induction process for new school champions or headteachers in new schools.

There was a mismatch between some headteachers' and school champions' perceptions of the amount of communication from the RETAIN team and the RETAIN team's perceptions. School champions' and headteachers' perspectives indicate that the content and mode of communication, which was heavily reliant on email, together with some phone calls, had not been effective in engaging schools. A few school champions and headteachers perceived that they had not received any communication. In a few schools, the limited communication exacerbated tensions that arose when there was a conflict between school policy and the classroom practices being advocated by the RETAIN programme; for example, one school champion explained:

'I assumed that [the lead coach] would come in ... and speak to me about a general "how's it going". It just hasn't happened. ... There have been a couple of times when things have been suggested to [the ECT] that perhaps shouldn't have been suggested because they jumped in and it's been a lot more work and I didn't realise. If I did I would have said that's not school policy, that's why we don't do that. ... I've found it quite bizarre and it's not helped me at all. Our time spent together is [the ECT] filling me in on what's happened and what they've done, but time is very precious, so we rush through then the bit that we need to get done [i.e. focusing on implementing what the ECT had learnt from RETAIN]', (school champion, R1 interview).

This suggests that stronger engagement with schools by the RETAIN team—including discussion of the fit of RETAIN to school priorities, curricula, and CPD, and more tailoring to school needs—would make the programme more attractive to schools. In schools that are less open to change, the RETAIN team could increase its effectiveness in supporting ECTs to implement learning from RETAIN by acting directly as advocates for evidence-based practices with senior leaders. This could become an aspect of the lead coach's role.

Barriers and areas for development

As the findings presented above have shown, there were a number of barriers to delivery and successful outcomes that were removed during the programme—most notably the rescheduling of taught sessions from twilights to daytime sessions and the inclusion of more opportunities for active learning. There remain a number of barriers at the programme level that were not resolved during the programme, these include:

- Perceived limited communication with school champions and headteachers by the RETAIN team in general, and specifically during coaching visits. This indicates that the methods used by RETAIN had limited effectiveness in engaging school staff—a perennial issue in schools nationally where staff have many demands on their time.
- Some senior leaders and school champions perceived that limited consideration had been given to the fit between what ECTs were advised to do and school priorities. Although school priorities were discussed in taught sessions, and ECTs were encouraged to talk to leaders in their schools where the practices advocated on RETAIN did not align with school practices, concerns regarding the lack of fit with school priorities continued to be raised. This is likely to have limited the extent to which some of the practices advocated on RETAIN could be implemented by some ECTs.
- Limited guidance on the selection of school champions and their role.
- Lack of differentiated training at the regional workshops and perceptions of a lack of ongoing support for some school champions.
- Time and logistical issues or school resistance impeding ECTs from undertaking visits to each other's schools.
- Accessibility and usability difficulties encountered on the 'Bubble' VLE and accessibility and limited attractiveness of the Yammer communication platform to most ECTs.
- The complexity of some programme documents, for example, handbooks and the impact log.

In addition, some individual-level barriers such as ECTs' early misconceptions about the nature of the programme, and school-level barriers such as the limiting impact of prescriptive curricula and being unwilling to change practices, are likely to reoccur in future runs of the programme. Drawing on the findings on unresolved barriers, and barriers likely to reoccur, we set out in Table 11 areas for consideration for further development of RETAIN.

Table 11: Areas for future development

Area for development	Issues to be addressed
Recruitment	Ensuring all headteachers in eligible schools understand the programme aims, intentions, and focus on disadvantaged learners and are able to address ECTs concerns about workload.
	Considering how RETAIN may more effectively target, and then support, those ECTs who are most likely to leave the profession.
Clarity of programme aims	Refining strategies for developing ECTs', school champions', and headteachers' understanding of the aims of RETAIN.
	Considering the appropriateness of using 'RETAIN' as the programme title—particularly if strategies are not put in place to target and support those most likely to leave the profession.
Taught modules	Reshaping of the modules to include a greater emphasis on pedagogy earlier in the programme alongside deepening ECTs' understanding of disadvantage and its impact on learners.
Coaching	Ensuring that ECTs and school champions understand the aims and processes of coaching from the beginning of the programme.
	Developing the role of the coach to work more closely with the school to ensure that RETAIN takes account of school priorities and ensures fit with school policies. Where appropriate, the coach may need to explain to school leaders why RETAIN is advocating evidence-based practices that conflict with school practices which are not evidence-based.
School champion role	Developing the school champion role in ways that enable the school champion to engage effectively with the programme and setting out clearly the responsibilities of the role for school champions and headteachers.
	Providing differentiated initial training and ongoing support that enhances the school champion's professional learning and development.
Resources and online platform	Developing the online platform to ensure that resources are easy to access and navigate.
	Simplifying information about the programme and modules in the module handbooks and revising the impact log to make it more user-friendly.
Communication and direct engagement with schools	Developing communication strategies that schools perceive to be more effective, given the constraints of school capacity, including ensuring enhanced communication between the lead coach and the school champions and headteacher during coaching visits.
	Considering ways in which RETAIN could work more closely with schools, for example, gaining greater 'buy-in' and ownership by co-constructing some aspects of the programme, and building on expectations in the Memorandum of Understanding so that schools have a better understanding of the programme, the expectations that RETAIN has of the school, the progress of the ECT on the programme, and opportunities are identified to more closely align ECT activity with school priorities.

Readiness for trial

Readiness

There are a number of factors that indicate the readiness of the RETAIN programme for scale-up. First, as findings reported earlier indicate, the RETAIN programme is clearly defined and supporting documentation is in place that would enable replication of the programme. Second, the delivery of the pilot by a partnership that includes education providers from the south-west and north-west of England and London means there is capacity and experience to support delivery of the programme in different areas of England. Finally, addressing the areas for improvement set out in the previous section could improve the effectiveness of the programme in meeting its intended intermediate outcomes and increase its attractiveness to schools.

However, there are issues related to recruitment to be addressed in considering scale-up. The pilot recruited ten schools (nine of which completed the programme) from the 61 eligible in Cornwall.³ The target number to be recruited was 12. It may therefore be beneficial to conduct market research before a trial to ensure that there are sufficient eligible schools, and within those schools sufficient ECTs teaching KS1, interested in participating to ensure viability within regions where scale-up is planned. Market research would also be useful to identify promotion and recruitment strategies that are likely to be successful and any amendments to the programme that would increase its attractiveness to schools. This could include gathering views on the effectiveness of using 'RETAIN' as the programme title for marketing purposes. To improve recruitment, the RETAIN team may also wish to consider extending the programme to include KS2 as well as KS1. Both of the ECTs who moved from KS1 to KS2 during the programme reported that RETAIN was as beneficial in supporting them as KS2 teachers as it had been in supporting them as KS1 teachers.

A further recruitment issue that needs to be considered in relation to scale-up is the extent to which RETAIN is able to recruit and support ECTs at the greatest risk of leaving the profession, and thereby achieve the intended longer-term programme retention outcome. As explained in the Feasibility section, specifically targeting ECTs who are thinking of leaving the profession is problematic. Market research, including gaining views on the programme title, could also help address this issue.

Pilot measures and indicators

This pilot tested the utility of one measure, the Teacher Sense of Efficacy Scale, and a matrix providing indicators of CPD (Table 4). The Scale was easy to administer. Given the research evidence on correlations between this scale and other intermediate outcomes for teachers and between self-efficacy and teacher retention (see the Background evidence section), this could provide a useful secondary measure in a trial of RETAIN to assess teacher outcomes.

The 'indicative characteristics of effective CPD' matrix (Table 4) constructed for this pilot had utility in enabling findings to be drawn together to provide a qualitative assessment of the extent to which the programme design features and emerging outcomes aligned with research evidence on effective CPD. This in turn provided further evidence to assess the plausibility of the programme logic model.

The Teacher Sense of Efficacy Scale and the qualitative 'indicative characteristics effective CPD' matrix could be used more routinely in pilot evaluations of CPD programmes and where there is a significant CPD component to an intervention to provide evidence to test the programme theory of change. Using both measures in efficacy and efficiency trials of interventions would test their predictive utility.

Costs

The pilot was provided free to schools and £1,000 was paid to each participating school to defray the costs of school champion support. It is only possible to give an indication of the potential costs to

³ That is, ten schools were on programme at the beginning of RETAIN 1.

schools at this pilot stage. The RETAIN team estimate that the delivery cost of the pilot programme was £138,790, as detailed in Table 12.

Table 12: RETAIN pilot delivery costs

Item	Cost (£)
Regional workshops	9,641
Module delivery	80,287
Coaching	33,271
VLE maintenance	2,500
Project management	12,641
Total delivery cost	138,340

This equates to a cost of £13,879 per ECT. Using the assumptions in the EEF cost calculation guidance that the benefit of an intervention should be over three years, and assuming that each ECT teaches classes of 27 pupils (the average size of a primary school class in England in 2016), in each of those three years, the cost per pupil is £171. It is likely that if the project is scaled-up the cost per ECT, and therefore the cost per pupil, will be reduced as economies of scale are made, for example, in the delivery of modules and VLE maintenance.

Schools, particularly small schools, may find the direct cost per ECT too high. In addition, a school would need to provide eight days of cover for ECTs to attend the taught sessions and two regional workshops, and two days of cover for the school champion to attend the regional workshops. The school would also need to provide time each week for the school champion and ECT to meet. In the Memorandum of Understanding this is stated as two hours per week.

The initial cost may be too high for some schools. However, there may be some longer-term cost savings, for example in recruitment costs if the teacher remains at the school.

Headteachers interviewed reported that the RETAIN programme did not displace other available CPD activity, and in some instances, as reported in the Evidence of promise section, where there was alignment with school CPD, RETAIN supported the desired practice changes.

Conclusion

Key conclusions

1. There were increases in ECTs' knowledge and understanding of approaches to teaching disadvantaged students and changes in their classroom practice. Their self-efficacy, confidence and research-use also increased. The absence of a comparison group means that it is not possible to estimate the level of improvement that may have occurred without the programme, due to maturation and school support.
2. The pilot was not intended to assess the longer-term impact of RETAIN on the retention of ECTs in the profession. However, most ECTs perceived that RETAIN was beneficial to their professional and career development and supported them in teaching disadvantaged pupils, and none left the profession during the pilot.
3. Overall, RETAIN was positively received, but some school staff felt that communication from the delivery team could be improved, and would have welcomed closer working with their school.
4. ECTs found it easier to apply the learning from RETAIN in schools which were open to changing existing school practices and willing to support ECTs in implementing new approaches.
5. The RETAIN programme and its components are clearly defined and supporting resources have been produced, so that the programme is ready for an impact evaluation. However, the pilot indicates that recruitment at scale may be challenging.

Formative findings

The theory of change for the RETAIN programme identified a set of intermediate outcomes for participating ECTs that research literature indicates are likely to impact in the longer term on pupil attainment. A comparison of data collected at baseline and the end of each module on the Teachers' Sense of Efficacy Scale (Tschannen-Moran and Woolfolk Hoy, 2001) and self-reports on items related to knowledge and understanding, research use, and confidence indicate positive effects on these intermediate outcomes. ECTs also reported a moderate level of change in their practice. Qualitative data support these findings and indicate that there have been positive effects in terms of ECTs' professional learning and career development. Most ECTs—and some school champions and headteachers—attributed ECT outcomes to RETAIN. There was some limited qualitative evidence that RETAIN had impacted on the intermediate pupil outcomes set out in the programme logic model and evidence in a few schools that practices that ECTs had developed in their own classes as a result of participating in RETAIN had been adopted more widely across their school.

The findings indicate that it is feasible to deliver RETAIN and that it has, as intended, engaged schools with a high proportion of disadvantaged pupils, although no ECTs intending to leave the profession joined the programme. Most of the ECTs who participated in the programme were positive about their experiences and valued the outcomes they achieved. There were more mixed views among headteachers and school champions, and there appeared to be significant variation in the support offered by school champions to their ECT. The programme could be made more attractive to schools if the RETAIN team built stronger relationships with participating schools to ensure a better 'fit' with school policies and priorities.

The programme could be improved by:

- considering how RETAIN may more effectively target and secure the participation of ECTs who are most likely to leave the profession, as part of a broader cohort of ECTs;
- ensuring ECTs, school champions, and headteachers have a clear understanding of the programme aims and requirements at the recruitment stage;
- refining the module structure to provide a stronger emphasis on pedagogy earlier in the programme;

- ensuring ECTs understand the purposes and processes of coaching at an early stage;
- developing the role of the coach to ensure that there is a fit between coaching activities and school policies and priorities including, where appropriate, the coach communicating directly with school leaders as an advocate for evidence-based practices;
- developing the school champion role in ways that enable the school champion to engage more effectively with the programme; this would include setting out the school champion's responsibilities clearly, providing differentiated initial training, and more effective ongoing support;
- developing the online platform to make it easier to use and simplifying module handbooks and the impact log;
- developing communication strategies that schools perceive to be more effective, given the given the context of busy schools being inundated with information;
- considering ways in which RETAIN could work more closely with schools to ensure a deeper understanding of, and commitment to, the programme and to maximise the opportunities for ECTs to implement their learning from RETAIN by addressing issues of 'fit' to school processes and priorities; and
- considering if naming the programme RETAIN is appropriate given the confusion of ECTs at the recruitment stage.

The evaluators consider that the RETAIN programme is in a form ready to be evaluated in a trial. The programme and its components are clearly defined and supporting documentation is in place. Only minor refinements to the programme structure and associated documentation are considered necessary. Addressing the issues set out above should make the programme more attractive to schools and support the achievement of intended programme outcomes. However, consideration needs to be given to the feasibility of recruiting sufficient schools for a trial. Market research prior to scale-up would be beneficial to ascertain interest and explore effective recruitment strategies. Consideration also needs to be given to recruiting ECTs likely to leave the profession.

Interpretation

The pilot indicates that the RETAIN programme has the potential to improve the knowledge and understanding, sense of self-efficacy, confidence, practices, professional learning, and career development of ECTs working with disadvantaged learners. The absence of a comparison group means that it not possible to estimate the level of improvement that would have occurred anyway due to maturation and school support. A significant issue is that without a comparator group, the changes found might be plausibly attributed to maturation effects as identified by some school champions and headteachers and outlined in the research literature. For example, Henry, Bastian and Fortner (2011) identified a leap in effectiveness in the first two years of teaching.

However, teachers and leaders were, in some cases, able to articulate examples of how changes had occurred in line with the change process predicted by the programme logic model and in particular how the combined influences of participating in (1) the taught sessions underpinned by research evidence, (2) coaching and (3) peer collaboration had led to positive intermediate outcomes. For studies that are not able to use comparators, such as this, articulating and providing evidence of the path from inputs to outcomes described in the logic model helps support the plausibility of the model. However, this approach cannot demonstrate that these changes have actually occurred because of the programme.

In terms of the wider learning from this study, there is evidence that well-structured CPD for early career teachers can have plausibly positive impacts, which supports a body of research in the field as outlined in the Background evidence section. The implications of this are important for the school system: good quality, structured CPD aligning with the 'indicative characteristics of effective CPD' (Table 4) are likely a good investment.

What this study cannot do is identify that RETAIN is more or less successful than other alternative programmes, or alternative models of early career support that also show promise. However, the evaluators consider that the indicative evidence justifies developing the model to take into account some of the limitations of the programme that have been identified and testing via an efficacy trial. Addressing the suggested improvements set out above is likely to both strengthen the hypothesised links between programme inputs and intended outcomes and increase the attractiveness of the programme to ECTs and schools.

The evaluation also illuminated a key issue for RETAIN, and other CPD programmes: that the effectiveness of CPD, in terms of practice change and, ultimately, pupil outcomes, appears to be limited when schools are not open to change or are very prescriptive about teaching and learning approaches and resources. In such instances, schools may perpetuate practices that are not supported by research evidence. The literature indicates that external mentors can play an important role in encouraging mentees to critically reflect on existing approaches within their schools and disrupt and challenge existing ways of doing things (Daly and Milton, 2017). Further consideration and development of the role of the RETAIN external coach may also have the potential to support ECTs to challenge and change existing practices to align them more closely with research evidence. This would also require the coach to act as an advocate for evidence-based practices with school leaders.

A further contribution of this study was the development of qualitative criteria to measure the extent to which a programme aligns with research on effective CPD in CPD-focused evaluations more broadly (Table 4) and of the testing of The Teachers' Sense of Efficacy Scale as a measure for achievement of intermediate outcomes. These tools could be further tested in longer term studies to better understand their predictive utility in relation final outcomes occurring.

Future research and publications

- We recommend that any future trial of the RETAIN programme includes three levels of analysis—the school level, the teacher level, and the pupil level. This would enable further exploration and quantification of the factors that impinge on successful outcomes. A further avenue for exploration in a trial is the extent to which the core components of RETAIN, individually and in combination, contribute to the achievement of intended outcomes. For example, a three-arm trial could be conducted with one group of ECTs allocated to receive the full programme, one group of ECTs receiving the programme excluding coaching (which appears from the pilot to be effective but the high cost of one-to-one support and may deter schools from participating), and one group who do not participate in RETAIN at all.
- Both the RETAIN delivery team and the evaluators plan to produce publications related to this pilot evaluation. The evaluators intend to develop a publication focused on approaches to measuring the indicative characteristics of effective CPD.

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Appendix 1: Memorandum of Understanding

The RETAIN Project

Memorandum of Understanding

Between

The Cornwall College Group (The College) and Sheffield Institute of Education (The Evaluators)

And

School

Dated: 1 February 2016

1. Context

The College has a contract with the Education Endowment Foundation (hereinafter referred to as EEF) to deliver the RETAIN project.

The College aims to deliver the project in collaboration with a number of regional higher education institutions (HEIs) and participating schools.

The purpose of the project is to support by intervention Early Careers Teachers (ECTs) in eligible primary schools in order to improve learning outcomes, and help improve the retention rate of ECTs.

The Evaluators have been contracted by EEF to provide an independent assessment of the project implementation and impact.

The College, the Evaluators and the schools have agreed that their relationship should be underpinned by a Memorandum of Understanding (MoU).

This MoU sets out the basis on which the College, the Evaluators and participating schools in the RETAIN Project have agreed to operate.

2. The School

- a) The school will identify an ECT who will attend a continuing professional development (CPD) programme for a period of no longer than 12 months.

The ECT will undertake 3 x CPD modules. Each CPD module will be delivered over 10 weeks (one per term to be completed within an academic year). A variety of scheduled activities will be used for delivery that will include workshops, tutorials, coaching, mentoring, observations of practice (including peer to peer), guided independent learning and engagement with an online ECT Professional Learning Community.

At the beginning of the CPD programme, there will be a one-day regional workshop for induction to the project, the CPD programme and the online platform and to meet project personnel.

Each module will have the same balance of delivery:

- 20 hours of taught workshops/seminars (delivered as a twilight session)
- 30 hours of mentoring (in school)
- 90 hours guided independent learning

At the end of Module 3 there will be a one day regional workshop for ECTs to share learning and best practice and to further develop the ECT Professional Learning Community.

- b) The school will identify and appoint to the project a School Champion (Mentor) who will:
 - Attend regional workshop training for the role prior to CPD activity
 - Demonstrate following training the ability to mentor ECTs on the programme effectively
 - Deliver regular (2 hours, once a week for 30 weeks) formal mentoring on a one to one basis with ECT
 - Champion the programme engagement with the school to support CPD being undertaken by ECT
 - Support ECT in applying taught module content to practice in the classroom
 - Meet with Teaching School Lead on a regular basis to support mentoring activity of ECTs and report engagement/success of ECTs with taught element of the programme
 - Report on progress of each ECT to project/regional lead in relation to module participation, development of career plans and engagement with teaching as profession through ECT community of practice.
 - Attend meetings for the project as required and undertake actions resulting from these e.g. monitoring meetings with Project/Regional Lead.
- c) In addition to the specific roles of the ECT and School Champion, schools will be required to participate in the project evaluation process. This will involve school heads as well as the ECTs and School Champions. Specifically this will involve schools participating in:
- d) Pre-programme and end of module surveys with a number of ECTs.
- e) Telephone interviews with ECTs, the School Champion, and headteacher
- f) Informal data gathering activities at the regional workshops
- g) Observations of course delivery

3. The College

The College will, through the RETAIN Project team:

- Design and deliver the CPD programme to ECTs, via a dedicated Lead Teacher supported by experienced regional leads with expertise in each module area.
- develop and manage the ECT Professional Learning Community online platform
- train the school champions/mentors
- arrange and host 2 x one-day workshops to share learning and best practice and to further develop the ECT Professional Learning Community.
- Share and disseminate with participating schools the evaluation report
- Provide equipment, materials and resources to ECTs as appropriate
- Reimburse each school for the participation of each School Champion/mentor on the basis of 60 hours plus 3 hours training (63 hours) at the rate of £12.00 per hour plus 30% on-costs; a maximum of £982.80 per mentor over the course of the project.

4. The Evaluators

a) The Evaluators will:

- Provide a detailed information sheet about the evaluation to all participants and ask individuals if they are willing to participate in the evaluation.
- Ensure that no individuals or schools are named in reporting.
- Hold all data securely and in accordance with data protection legislation.

b) Anonymised data may be shared between the evaluation team, EEF and EEF's data contractor FFT Education. Anonymised data sets may also be made available to other researchers through secure data repositories, such as the UK data archive.

c) The evaluation protocol can be found on the EEF website:
<https://educationendowmentfoundation.org.uk/>

5. Other provisions

- The school will be registered as participating in the project with the Funding Body ie the Education endowment fund (EEF)
- Both the College and the School agree to use the project iDent/logo and the EEF logo on all promotional and other material which relates to the project.
- Other than the direct provision of and payment for services set out above, there will be no project payment by the College to the school for or towards any activity.

6. This Memorandum of Understanding is duly agreed and signed herewith:

a) The College

Signed:

Name: Tanya Ovenden-Hope

Position; Director of Education, The Cornwall College Group; and RETAIN Project Director

Date: 1 February 2016.

b) The Evaluators

Signed:

Name: Bronwen Maxwell

Position: Director of the Evaluation Team

Date:

c) The School

Signed:

Name:

Position:

Date:

Appendix 2: Project information sheet and consent form



RETAIN: CPD for Early Career Teachers of KS1: Evaluation Information Sheet:

The RETAIN programme

The RETAIN early career professional development (CPD) programme is designed to support the development of, and as a consequence retain, early career Key Stage 1 teachers, who work in socio-economically disadvantaged areas.

The programme, developed and delivered through a partnership of Cornwall College, the Institute of Education: University College London (UCL), Birmingham City University and Edge Hill University comprises three modules:

- Understanding and mitigating against the impact of socio-economic disadvantage.
- Skills and practice: pedagogy.
- Professional Teaching: processes, structures and career pathways.

The Evaluation

The evaluation conducted by the Centre for Development and Research in Education (CDARE) at Sheffield Hallam University for the Education Endowment Foundation, will look at the feasibility of implementing the programme more widely, explore whether there is evidence that the programme is likely to impact on the professional learning and development of teachers and contribute to the retention of teachers.

In the inception and development phase of the Project (September 2015 to March 2016) the evaluators will conduct telephone interviews focus groups with the programme developers and undertake a light touch professional review of the programme documents and resources.

In the pilot phase the evaluators will conduct:

- Surveys of teacher participants at the beginning of the programme and the end of each module
- Telephone interviews with :
 - The delivery team (3 interviews at the end of RETAIN 1 and 2 and a focus group at the end of R3)
 - Teacher Participants (a maximum of two 30 - 45 minute interviews per participant)
 - School Champions (one 30 - 45minute interview)
 - Headteachers (one 20 - 30 minutes interview)
 - The development and delivery team (two interviews or focus groups of up to one hour)
 - The Lead Teacher (a maximum of two 45 minute interviews)
 - Informal data gathering activities at the initial and final regional workshop.
 - Observations of the delivery of the modules.

The full research protocol can be found on the EEF website: <https://educationendowmentfoundation.org.uk/>

Evaluation outputs

During the project the evaluators will summarise anonymised findings in PowerPoint presentations and present these to the EEF and the programme team. On conclusion of the pilot findings may also be disseminated at educational research conferences and in academic or professional journals.

Anonymity and confidentiality

No individuals or schools will be named in reporting. It is however possible, given the small-scale of the project someone familiar with the project may be able to recognise individual contributions, even though they are not directly attributed to an individual.

Data protection

All data will be held securely and in accordance with data protection legislation. Anonymised data may be shared between the evaluation team, EEF and EEF's data contractor FFT Education. Fully anonymised data sets may be made available to other researchers through secure data repositories, such as the UK data archive.

Right to Withdraw

Participation in the evaluation is voluntary and you may withdraw from data collection activities at any time. You can also ask for any interview data to be withdrawn for up to two weeks after it has been collected, by contacting the project manager (details below). You do not need to give any reason for withdrawing from the evaluation.

For further information please contact:

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PARTICIPANT CONSENT FORM

Evaluation project

RETAIN: CPD for Early Career Teachers of KS1

I confirm that I have been given the evaluation information sheet for this study and have had the opportunity to ask questions. ☐

I understand that my participation is voluntary and I am free to withdraw from the study at any time and/or ask for any interview data to be withdrawn within two weeks of the interview. ☐

I agree that for the purpose of the study, anonymised data may be shared between the evaluation team, the Education Endowment Foundation (EEF), and EEF's data contractor FFT Education and lodged in the UK Data Archive where it may be accessed by other researchers. ☐

I am willing for the information I give to be used anonymously in research reports and publications. I understand that in reporting during the project to EEF and the project team, someone familiar with the project may be able recognise my contribution, even though I will not be named. ☐

By signing below, I agree to take part in the above study

Name of participant

Date

Signature

Name of researcher

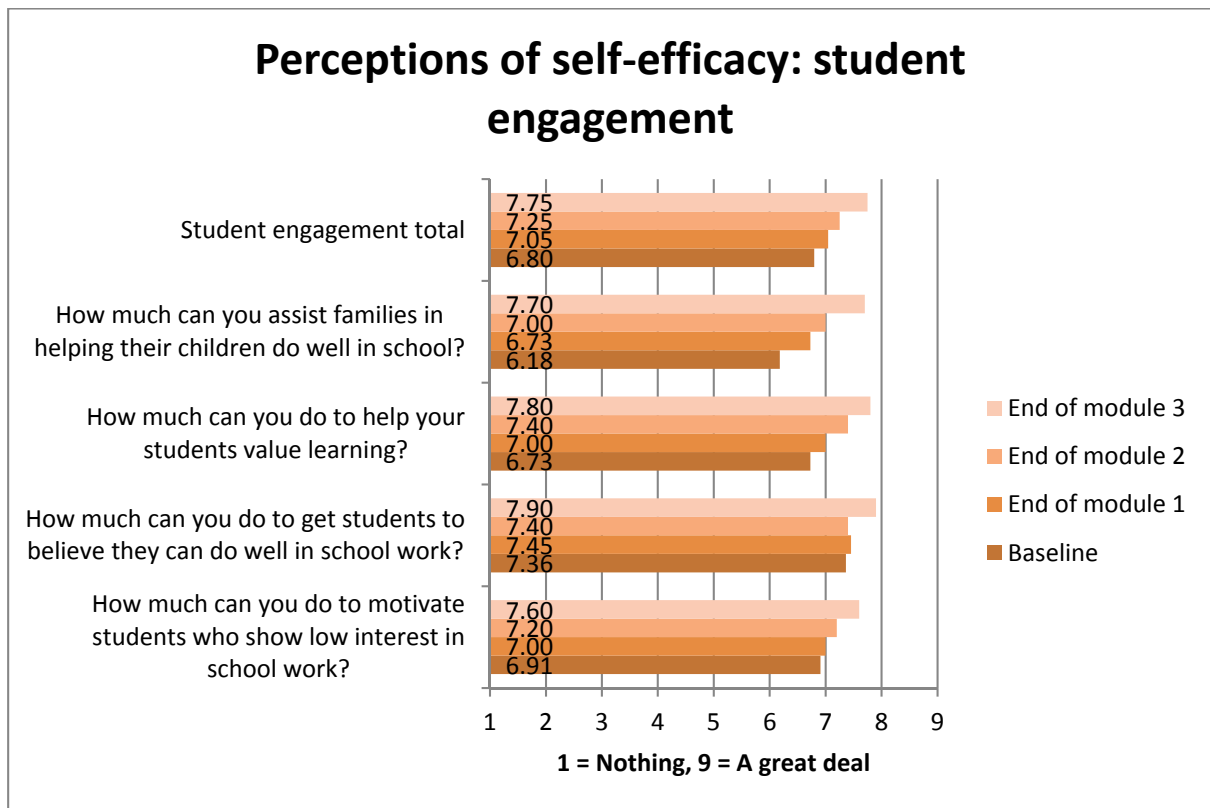
Date

Signature

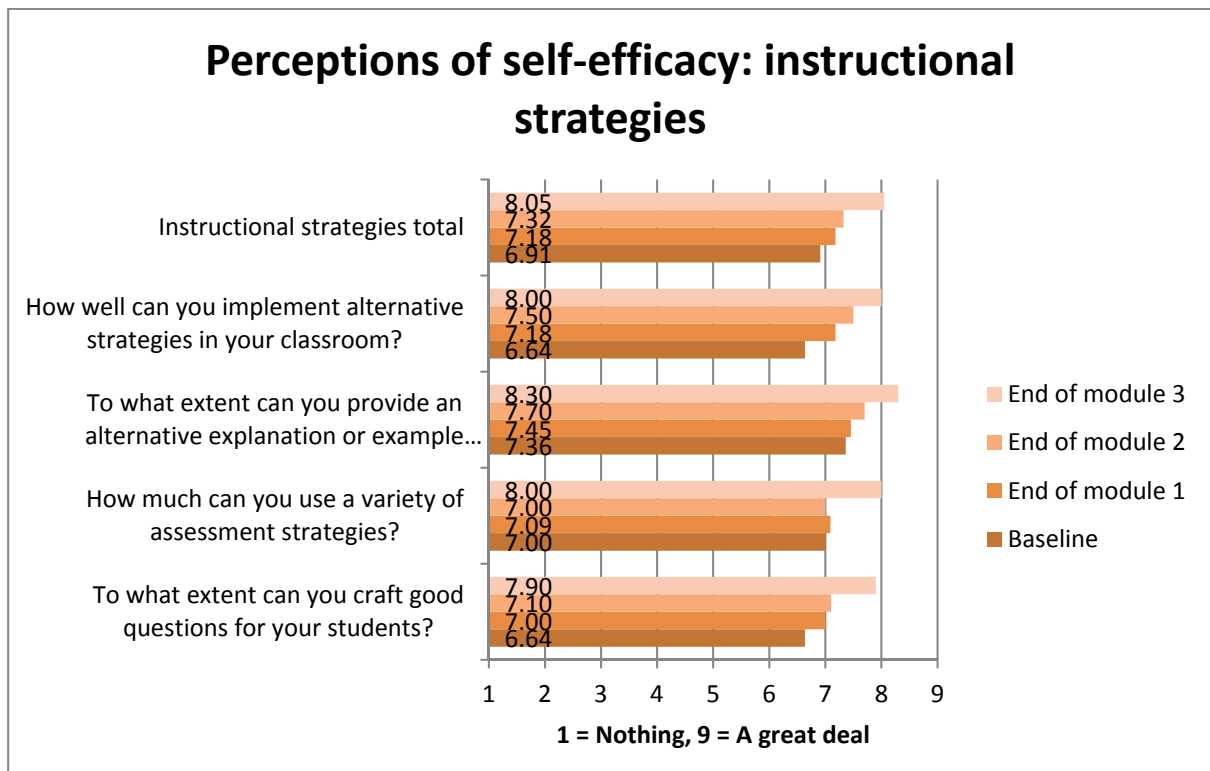
Appendix 3: Framework for the analysis of qualitative data

1. Implementation fidelity
 - 1.1. Implementation of programme components
 - 1.2. School champion role
 - 1.3. Adaptation and variation to intended programme during the current RETAIN module
 - 1.4. Changes from previous module and planned for future modules (as appropriate)
2. Indicators of impact
 - 2.1. On ECTs
 - 2.1.1. Knowledge and understanding
 - 2.1.2. Confidence
 - 2.1.3. Research use
 - 2.2. Other
 - 2.3. On pupils
 - 2.4. On wider school
 - 2.5. Other
3. Engagement and perceptions of the programme
 - 3.1. Perceived aims and objectives
 - 3.2. Reasons for, and expectations of participation and expected impact on school
 - 3.3. Taught sessions
 - 3.4. Coaching
 - 3.5. Support from school champion
 - 3.6. Peer Collaboration
 - 3.7. Online resources
 - 3.8. Impact log
 - 3.9. View on whether the components complement each other
 - 3.10. Alignment with characteristics of effective CPD
 - 3.11. Training for school champions and communication and guidance from delivery team to schools.
4. Barriers and enablers
5. Recommendations

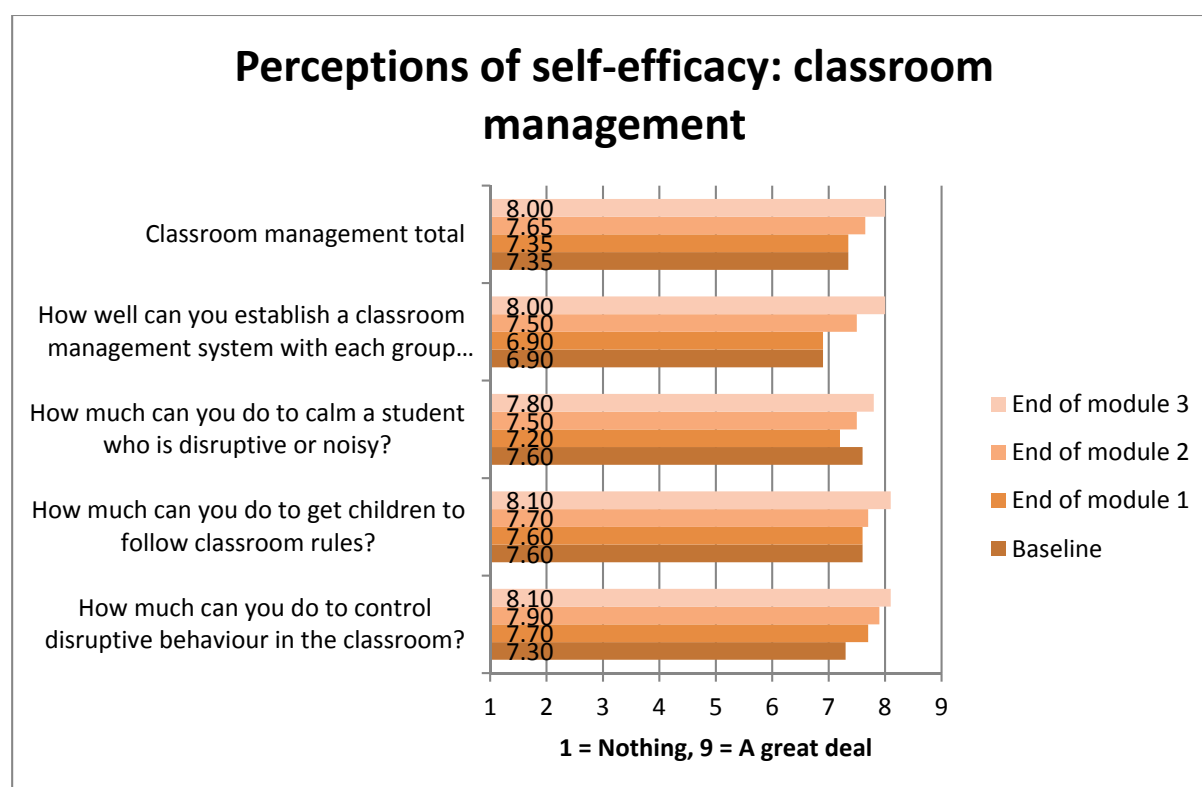
Appendix 4: ECT self-efficacy sub-scales



Data source: ECT surveys- baseline, end of R1, R2 and R3 (N=10)



Data source: ECT surveys- baseline, end of R1, R2 and R3 (N=10)



Data source: ECT surveys- baseline, end of R1, R2 and R3 (N=10)

Appendix 5: Mapping of RETAIN programme to the indicative characteristics of effective CPD

Critical features of effective CPD	Indicative characteristics of effective CPD	Findings from interviews, observations of session videos and professional review of resources
Content focus	Overview	All seven ECTs who commented on this critical feature at either the end of R2 or 3 thought that RETAIN aligned with the indicative characteristics related to content. There was a consensus that alignment was stronger in R2 and 3 than R1.
	Curriculum content that helps teachers understand how pupils learn, both generally and in specific subject areas: including subject-specific pedagogy and enables participants to access the theory and evidence underlying the relevant pedagogy, subject knowledge, and strategies.	RETAIN 2 aligned most closely with this criterion - including providing a subject-specific focus on literacy pedagogy. The professional review of R1 found that many of the R1 resources did not relate specifically to KS1 and there was only limited reference to subject-specific pedagogy, although the link to pedagogy was made in taught sessions. Coaching focused both generally on supporting learning and on subject specific pedagogy as appropriate to ECTs' needs.
	A logical thread between the various components of the programme.	Both R2 and R3 began with a consolidation of learning from the previous module/s and observations of taught session videos indicate that links between the modules and sessions within modules were made frequently throughout the programme. The lead coach supported ECTs in making links between the taught sessions, research and practice. Some school champions fulfilled a similar role in helping ECTs to link theory and practice but this was limited in some cases by school champions' limited awareness of the content of modules.
	A focus on learner progression, starting points and next steps, including formative assessment, to enable teachers to see the impact of their learning and work on their pupil.	Both the taught sessions and, where appropriate, coaching supported ECTs to explore learner progression and assess the impact of changes in their practice on pupils. Discussion about appropriate approaches to formative assessment was threaded through a number of taught sessions and where appropriate supported through coaching.
	Content includes alternative pedagogies for pupils with different needs.	R1 particularly included inputs and activities on alternative pedagogies for pupils with different needs.
	Content takes account of different teachers' starting points.	During taught sessions discussion and activities enabled ECTs to explore the module content in relation to their own context and starting points. The coaching and school champion support were individually tailored to support the ECTs' practice in areas where they felt less knowledgeable and/or less confident. In R3 discussions on career development were based on a thorough understanding of the different needs and career stages of the ECTs.

Active learning	Overview	All seven ECTs who commented on this critical feature felt that there was strong alignment with the indicative characteristics towards the end in RETAIN 2 and 3. Observations of session videos also indicate there was a stronger focus on active learning in the later sessions of the module.
	Opportunities are provided for teachers to reveal and discuss their beliefs activities and test ideas from different perspectives. This includes helping participants believe that better outcomes are possible, particularly among schools where achievement has been depressed over time.	Inputs, activities and resources in RETAIN 1 were designed to challenge participants in considering their beliefs about disadvantage and the possibility of different outcomes. Similarly in RETAIN 2 and 3 ECTs were engaged in exploring their beliefs around pedagogy and professional and career development respectively. Coaching and school champion support also enabled discussions that explored and/or challenged beliefs and peer discussion provided different perspectives and ideas. There were mixed views on the extent to which this had resulted in belief change.
	Teachers are engaged in analysis of and reflection around the underpinning rationale for practices changes, and the supporting evidence.	Providing opportunities for analysis and reflection was an integral part of programme design, for example the R2 module aims included a focus on supporting the teachers to 'identify, critically evaluate, and deploy a range of research and guidance perspectives to drive forward teaching practice in literacy'. Facilitators in taught sessions regularly made links to research evidence and there are some examples of the lead coach making links to supporting evidence. Questions are embedded within resources to stimulate reflection. The impact log provides an ongoing opportunity for participants to reflect on their knowledge and practices, however ECTs found the log cumbersome to use.
	Activities include explicit discussions, following the initial input, about how to translate CPD content to the classroom. This includes teachers making links between professional learning and pupil learning explicit through discussion of pupil progression and analysis of assessment data	There are a number of ways in which the RETAIN programme helps ECTs to translate content to the classroom mostly notably through coaching, school champion support and discussion within taught sessions. In some instances, as appropriate, this included explicit discussion of pupil progress and analysis of assessment data.
	Teachers implement what they have learned by experimenting in the classroom.	All ECTs experimented with some new practices in their classrooms and were supported in doing this by the lead coach and to varying degrees by their school champions. However the level of experimentation and extent to which practices promoted on the RETAIN programme were implemented varied. The willingness or otherwise of the school to allow the ECT to trial new techniques and approaches was an important determining factor.
	Specialists support teachers through modelling, providing observation and feedback, and coaching.	The RETAIN team modelled teaching approaches, particularly in RETAIN 2, which ECTs reported as directly impacting on their practices. The lead coach observed both the classroom environment, and where appropriate teaching, and both the lead coach and most school champions provided feedback to ECTs on a one to one basis.
Relevance	The content and activities have overt relevance to participants' day-to-day experiences with, and aspirations for, their pupils.	All but one of the ECTs interviewed at the end of R2 and 3 felt that there was a strong and direct link between the programme and their practice and context. R2 and R3 were perceived to have greater relevance than R1, as they perceived that they were already aware of the issues facing disadvantaged learners. Again coaching and school champion support were crucial in supporting ECTs to see the relevance of taught sessions to their every day practices.

Duration and rhythm	The duration (total time and the spread over time) is sufficient to lead to, and the 'rhythm' of follow-up, support and consolidation enables, changes in teachers' practices.	All ECTs interviewed at the end of R2 and R3 felt that, following the changes in the scheduling of R1, the duration and rhythm of the programme and its components were appropriate, 1. They perceived that there was a 'good spread and no sudden pressures'. One school champion reported that being able to implement change in small steps, over time, was important in enabling the ECT in their school to implement change. One ECT recommended that the programme was scheduled over an academic year (rather than the split in the pilot over two academic years) to maintain the focus on one class. The mutually supporting programme components were perceived by all interviewees to be important in enabling follow-up, consolidation and practice change.
Collaborative participation	Teachers engage in peer learning with colleagues attending the programme.	ECTs interviewed at the end of RETAIN 2 and 3 reported that the taught sessions offered plenty of opportunities for peer collaboration. There were more formalised opportunities for collaboration through action learning sets in R1 and R3 and a school visit built into the curriculum in R1. R3 included a focus on developing ECTs' professional learning networks and an outdoor activity to support ECTs to build an enduring professional learning community. It is too early to ascertain whether this has been sustained beyond the final workshop. Some ECTs met outside of the taught sessions and others communicated electronically. Of the second group a few reported that they had engaged in very limited collaboration outside the taught sessions, but did not think that this had impeded their learning.
	Teachers share and discuss learning with colleagues in their own school.	Most ECTs reported sharing and discussing their learning with their school champion and/or headteacher. There was notable variation in the extent to which ECTs had shared their learning more widely with colleagues in their school. This was facilitated in schools where there was an openness to change and/ or the headteacher or school champion actively supported the ECT to share their learning with colleagues.
	The design of collaboration participation leads to positive outcomes for teachers and minimises the negative outcomes that can be associated with collaborative activity.	The effectiveness and impact of peer collaboration was spoken of very positively by all ECTs and many ECTs gave examples of how peer collaboration had impacted on their knowledge, confidence and practices. Some school champions and headteachers also highlighted the beneficial impact of peer collaboration on the ECTs.
Shared sense of purpose about professional development	There is a shared sense of purpose about professional development between teachers and their schools.	Most ECTs agreed that there was a shared sense of purpose about CPD between them and either their senior leaders in their school and most attributed this to the RETAIN programme. Some school champions said the programme had offered them the opportunity to develop a shared sense of purpose about CPD with their ECT, although one school champion was disappointed because this had not happened. Some headteachers thought that a shared sense of purpose was in place prior to RETAIN. One headteacher reported that they had a much better understanding of ECTs' needs more generally and how to meet them as a result of the RETAIN programme.
	Senior leaders in schools ensure that enabling mechanisms are in place to support teachers in implementing what they have learned from the programme and share that learning with school colleagues.	As indicated above there was variation in the extent to which senior leaders put in place enabling mechanisms to support ECTs to implement their learning and share that learning with school colleagues.

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