Title: RETAIN' Early Career Teacher Retention Programme: Evaluating the role of research informed continuing professional development for a high quality, sustainable 21st century teaching profession.

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Paper 5:

'RETAIN' Early Career Teacher Retention Programme: Evaluating the role of research informed continuing professional development for a high quality, sustainable 21st century teaching profession.

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Abstract

Teacher recruitment and retention is an international challenge. In England the government have reported that more teachers leave before retirement age than five years ago, 30% within five years and schools are finding it difficult to fill posts with the quality of teachers they need. This paper evaluates the contribution of the research informed 'RETAIN' Early Career Teacher (ECT) Continuing Professional Development Programme (CPD) for developing and retaining quality teachers. 'RETAIN' was a yearlong CPD pilot for ECTs in primary schools in Cornwall, UK (a region with high levels of socio-economic disadvantage). The programme design was research informed and took account of factors that have been shown to support the retention of ECTs. It was contextualised using the precept that teachers should be active researchers, influencing curriculum development as 'reflective practitioners', positioned with a Professional Learning Community lens and theorised within a social constructivist frame. In addition, 'RETAIN' utilised robust evidence-informed practice approaches to support teacher development in schools with persistently disadvantaged pupils. The programme was independently evaluated using multiple-methods over the course of the programme to generate data as part of a theory-based evaluation. Evidence suggests that the contribution of this intervention to the field is the specific combination of development; taught workshops, coaching and collaborative professional learning, which improved the self-efficacy, confidence and quality of teaching of ECTs in differing but complementary ways. All ECTs that completed the programme have been retained to the teaching profession and all have achieved a leadership role in their school. We argue that these outcomes are of international significance and the promise of the

programme can be utilised for developing and retaining high quality teachers in other countries.

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1. Introduction

It is well known that one of the most significant influences on pupil outcomes is the quality of the class teacher (Barber and Mourshed, 2007; Hanushek, 2011). For pupils from disadvantaged backgrounds the quality and continuity of good teaching makes a considerable difference to their attainment (Sutton Trust, 2011). Therefore developing and retaining high quality teachers is essential for educational success. Teacher recruitment and retention is an international challenge. In the US it is estimated that there is an 8% turnover of the teaching workforce each year (Sutcher et al., 2016). Australian research has reported early career teacher attrition rates to range between 8% and 50% (Queensland College of Teachers, 2013). In England more teachers leave before retirement than five years ago, 30% within five years (House of Commons, 2017a) and schools are finding it difficult to fill posts with the quality of teachers they need (National Audit Office, 2017). Whether it is referred to as 'turnover', 'attrition' or 'leaving', teachers are not being retained in the numbers needed to sustain high quality workforce supply (House of Commons, 2017a).

Newly qualified teachers (NQTs) and early career teachers (ECTs), however, can experience 'reality shock' (Veenman, 1984) when they enter the profession. Personal and professional demands on new teachers can be overwhelming, and in many cases cause them to leave teaching (Caspersen & Raaen, 2014; Høigaard et al. 2012). There is therefore a need for enhanced support for ECTs, which becomes greater in schools with additional challenges, such as those with a high proportion of

pupils from disadvantaged backgrounds (Blandford, 2012). Continuing Professional Development (CPD) is required that improves outcomes for teachers by recognising and analysing teachers' starting points and developing teachers' ownership of their learning (CUREE, 2014).

The 'RETAIN' programme had a specific focus on teachers of children at the earliest stage of compulsory schooling (ages 5-7 years), and in particular on literacy, addressed a shortfall in England in CPD available for teachers in this phase to engage with and deploy evidence-informed approaches to teaching. It was developed to enhance ECTs' knowledge, understanding and skills for high quality teaching and outstanding learning; recognising the importance of critical thinking, live lesson observations and critical reflective practice (Cordingley et al., 2005). Informed by research, the programme also integrated structured collaborative peer support, with specific pupil aspiration in literacy as a driver for curriculum development (Shanahan & Barr, 1995).

The 'RETAIN' programme pilot was intended for ECTs working in primary schools with the highest level of pupils from socio-economically disadvantaged backgrounds in Cornwall, UK. Twelve primary schools were recruited to the pilot, each having high numbers of pupils entitled to free school meals (known as 'Ever 6' Free School Meals in England - a clear indicator of disadvantage). Two schools withdrew from the 'RETAIN' programme the week it was due to commence and one ECT was removed from the programme in November 2016 due to non-attendance. In January 2017 'RETAIN' had nine schools and ten ECTs, with all completing the full programme.

The aim of 'RETAIN' was to improve ECT retention, defined as Newly Qualified Teachers (NQTs) in the first three years of teaching, through an innovative model of CPD. The model developed new skills and knowledge through taught modules, and embedded these in practice through coaching and sustained reflective, research informed development with a supported Professional Learning Community (PLC). All the research informed resources for the programme were available to schools and ECTs through an online platform. All ECTs had a 'school champion' (an experienced mentor in their school) to support them in applying what they were learning through

'RETAIN' to their school setting. Head teachers assisted with recruitment to the programme, and participated in two workshops at the beginning and end of the programme. The 'RETAIN model' is referred to as 'RETAIN 4 C's': Classroom, Coaching, Collaboration, Child (see diagram 1)

Diagram 1: The 'RETAIN': Early Career Teacher Retention Programme Model

The programme also aimed to improve pupil outcomes in Key Stage One literacy through a focus on developing the literacy pedagogy and practice of teachers involved in the programme.

The 'RETAIN' programme was independently evaluated (Maxwell, Clague and Byrne, 2018) using multiple methods over the course of the programme to generate data as part of a theory-based evaluation (Rogers and Weiss, 2007). The evaluation sought to assess the plausibility of the programme's theory of change. This included gathering evidence on indicators of impact and exploring perceived linkages between the key components and design features of 'RETAIN'. The findings presented in this paper are drawn from surveys of participant ECTs, individual

interviews of ECT participants, their school champions and head teachers, and focus groups of ECTs.

2. Theory, context and practice

In this section we present how the 'RETAIN' programme, both as a concept and intervention, grew from an intersection of need within a number of contextual and theoretical perspectives aimed to enhance ECT self-efficacy and practice. Using the precept that teachers should be active researchers, influencing curriculum development as 'reflective practitioners' (Schon, 1983; Stenhouse, 1975), we framed the development and delivery of the programme within a Professional Learning Community lens (Mitchell and Sackney, 2000) and theorised within a social constructivist frame (Charmaz, 2006).

2.1 Building mechanisms for developing and retaining high quality teachers

The link between effective teachers and teaching, and improved progress and outcomes for young people has been widely evidenced (for example, Ko, et al, 2013). 'Expert' teachers require support, professional development, time and resource to develop their expertise (Hattie, 2003, and MacLellan and Soden, 2003). These findings are reflected in the conclusions of the House of Commons Education Committee (2012):

> "…*retention of those most likely to be outstanding teachers should therefore be firmly at the top of our education system's agenda.*" (p.15).

However, published data shows that the proportion of teachers leaving the profession has increased every year since 2010 in primary schools (Worth et al., 2017), and in 2015/16 (the most recently reported data) the departure figure stood at 10.2% (DfE, 2016). The departure figures for Early Career Teachers are arresting: 13% of teachers leave teaching within one year of qualifying and 30% leave within five years (House of Commons, 2017a). Within this context, 'RETAIN' was developed to address the need to support, develop and retain ECTs – those teachers with the potential to gain the professional experience and expertise that would maximise outcomes for children and young people. The 'RETAIN'

development process considered the research and data on key barriers to teacher retention, particularly the barriers to the retention of ECTs and factors affecting teachers remaining in the profession.

Pay and conditions arrangements are frequently referenced in the research findings as reason for teachers leaving the profession (Bradley et al., 2006; Hanushek et al., 2004), however there is little that 'RETAIN' could do to influence this economic factor. Research also demonstrates two important elements that affect teacher retention. The first is self-efficacy; teachers want to see their impact in their own classroom and school on the progress and development of children and young people. Bandura (2012) defined self-efficacy as one's belief in one's ability to succeed in specific situations or accomplish a task. if ECTs feel that they cannot succeed as teachers, for whatever reason, this will impact on teacher retention rates. The second element is professional value; teachers want their experience and expertise recognised and utilised (House of Commons, 2017b, and Worth and De Lazzari, 2017, Cordingley et al., 2015). 'RETAIN' embedded self-efficacy and professional value into the programme; translating into practice the research findings on these areas to secure professional development, quality of teaching and career retention.

Self-efficacy includes developing and embedding "*teachers' belief that they can bring about desirable changes in student achievement*" (Guo et al., 2012. p5). Drawing on Newman, Rutter, and Smith (1989) 'RETAIN' was developed to reflect the position that teachers with a strong sense of self-efficacy believe that they can positively affect pupil learning and accept responsibility for motivating pupils and improving their teaching skills. Caprara et al. (2006) cite several studies that demonstrate the crucial effect of teachers' self-efficacy beliefs on teacher performance and motivation. This includes their professional value (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. Some studies support the hypothesis that a teacher's sense of self-efficacy has a positive impact on a wider 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).

To engage and develop Early Career Teachers, 'RETAIN' mobilised knowledge from research findings into three key mechanisms to develop self-efficacy and professional value, to support the retention of ECTs: building professional reflective practice, building in-school professional expertise and building professional learning communities.

1. **Building professional reflective practice**

Research shows that developing effective professional reflective practice contributes to effective professional self-efficacy (Korthagen et al. 2006). Schön (1983) describes professional reflective practice as a process where professionals constantly monitor their actions and make decisions based on their accumulated and informed knowledge. The 'RETAIN' model embedded the use of evidence-informed reflective practice. Three modules were developed to support the theory of change (see Methodology section) promised by the programme and were:

1. Understanding and mitigating against the impact of socio-economic disadvantage on schools and pupil
2. Skills and Practice: Pedagogy (Literacy)
3. Professional Teaching: processes, structures and career pathways

These modules were supported with research handbooks, including summaries of core research findings, to enable the ECTs to understand, reflect on and apply evidence in their teaching choices. ECTs were also encouraged to explore and enact a wide range of reflective practice models and prompts. The learning developed through the modules was supported in its translation into practice by targeted in-school coaching.

The literature on external coaching and mentoring indicates that coaches can play an important role in encouraging those being coached to critically reflect on existing approaches within their schools and disrupt and challenge existing ways of doing things (Daly & Milton, 2017). Coaching enables the crafting of knowledge of new skills and practices to fit the personal styles and values of the ECTs (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Coaching was developed within the programme to include independent and shared observations, action (demonstration, guided practice), self-reflection, feedback, and evaluation of the coaching

process/relationship (Hanft et al. 2004). The model called for frequent interactions in each term to effect change in the ECT's behaviour, attitude and practice. Coaching was perceived as critical in building professional reflective practice.

2. Building in-school professional expertise

Stenhouse (1975) defined the effective teaching of curriculum content as an 'enquiry-based' process that required a collegiate and focused partnership between learner and teacher. 'RETAIN' has built on this by providing all participants through module content in the taught workshops with extensive research and data resources. These resources, and the supported application of the ECT's new knowledge and skills through the 'RETAIN' coaching and school champion, enhanced teachers' ability to provide valued input to curriculum and teaching and learning practice.

The research resources were designed to develop self-directed professional learning that would allow participant ECTs to reflect and explore further areas of particular interest and, it was hoped, contribute to pedagogical discussions within their own school(s) and professional learning communities (Cherniss and Goleman, 2001). The professional learning of Early Career Teachers was tailored to the contextual needs of teachers and children in rural/coastal primary schools within the 'RETAIN' pilot area, which included:

- Barriers faced by children in areas of socio-economic disadvantage (drawing on the work of Blandford and Knowles, 2013; Ovenden-Hope and Passy, 2015; Cordingley et al., 2015;; Macleod et al., 2015, and; Pickett and Vanderbloemen, 2015).
- Effective skills, practice, and pedagogy within schools facing socio-economic disadvantage, (drawing on the work of McCoy, 2013; The National Literacy Trust, 2012; Siraj and Taggart, 2014; McAdam et al., 2014; Pino-Pasternak et al., 2014; and; Radford et al., 2015).
- Career development and planning for Early Career Teachers (drawing on the work of Blankenship and Ruona, 2007; DuFour, 2004; Furlong, 2008; Hargreaves, 2014; Owen, 2016;; Watson, 2014;)

Professional learning for expertise also included the development of the ECT's skills and practice for enhanced pedagogy for literacy. This focus on specific professional development resulted in many of the ECTs achieving literacy lead roles at the end of the programme, recognizing their new in-school professional expertise in this area.

3. Building Professional Learning Communities

Activating teachers as researchers and sharers has been found to be a strong contributor to professional development (Cain, 2015). Therefore, at the heart of the 'RETAIN' programme is the engagement of teachers in Professional Learning Communities. Professional Learning Communities have been defined as a: "*means of promoting school and system-wide capacity building for sustainable improvement and pupil learning*" (Bolam et al., 2015). 'RETAIN' participant Early Career Teachers were facilitated to form their own Professional Learning Communities (PLCs), within their school and across the RETAIN schools. They were also supported in engaging critically with a number of perspectives on PLCs, as part of their self-managed professional development, and in translating this critical understanding into planning for how they could meaningfully participate in PLCs as part of their ongoing career development and planning.

The 'RETAIN' PLCs and professional learning reflected DuFour's (2004) analysis of focused and meaningful PLCs; the 'taxonomy' of effective PLC approaches developed by Blankenship and Ruona (2007); and the effective development of 'mature' PLCs investigated by Owen (2016). In synthesising these perspectives, the 'RETAIN' Early Career Teachers were participants in PLCs that intentionally modelled the key aspects of effective PLCs and were supported to critically consider these as part of their professional learning and career development planning.

The key aspects of the 'RETAIN' PLCs included the establishment of:
- A shared vision;
- Trusting relationships;
- Supportive and effective leadership;
- A genuine culture of systematic collaborative enquiry;

- The "…commitment and persistence of the educators" within the PLC (DuFour, 2004, p.11).
- Timely collegiate responses to questions and challenges with a focus on tangible intervention;
- Cycles of professional support and enquiry that "promote deep team learning" (DuFour, 2004, p.8) that, in turn, led to higher achievement by children and young people.
- A focus on results, both in terms of professional learning goals and the learning of children;
- A genuine commitment to sharing knowledge outside the PLC (Blankenship and Ruona, 2007 and Owen, 2016).

In supporting the development of high quality teachers with improved self-efficacy and confidence to support their desire to remain in teaching, establishing PLCs was critical.

2.2 Research-informed teacher professional development

The 'RETAIN' approach to research-informed teacher professional development can be conceptualized as a new approach to professional learning that embeds teacher reflection on evidence-informed practice. During the 1980s, the idea of 'learning by reflection' largely supplanted the 'theory into practice' approach in the UK and elsewhere (e.g. Korthagen et al. 2006.). This was stimulated by Stenhouse (1975) and Schön (1983). Stenhouse argued that, rather than seeing teaching as a matter of delivering a curriculum, teachers should see the curriculum as provisional, to be tested in each classroom by teacher-researchers. Schön's writing, informed by empirical work, and showed that practical learning in various professions occurs through a process of reflecting on experience. At a basic level this might be a matter of trial and error; at a more advanced level it consists of careful thinking about aims and purposes, and the result of practical attempts to achieve these.

Both Stenhouse (1975) and Schön (1983) had a profound effect on teacher education. Stenhouse's focus on experimentation and exploration, and Schön's focus on reflection countered notions of teaching as the enactment of theory, and repositioned it as constantly open to refinement and improvement. Both suggested

that teachers could improve their practice by thinking deeply about it. However, reflective teaching was not a single approach: Zeichner & Liston (1996) found five 'traditions' of reflection, each defined by the general orientation of its content. In one tradition, reflection was oriented towards the subject matter being taught, in another, it was about putting educational theory into practice; another tradition emphasized the development of the learners, whilst another focused on issues of social justice and democracy. There was also a 'generic' tradition, which saw reflection as a general good, regardless of its focus.

There are many constructs of how research is used to influence school teaching (see e.g. Stenhouse, 1980; Handscomb and MacBeath, 2003; Coldwell et al. 2017), which include research-led, evidence-informed, research-engaged etc., as well as research-informed teaching. Focusing on research-informed teaching, 'RETAIN' developed teachers that could select research findings that were most appropriate and useful for their own practice purposes, interpret and use these along with their own, situated knowledge, guided by their professional values (e.g. Hammersley 2002). This conceptualization sees research as influencing practice indirectly, rather than the direct influence implied by the research-into-practice approach, described earlier. Research-informed teaching 'draws on systematic enquiry into the teaching and learning process itself' (McLinden et al, 2015), which supports reflection on practice as part of the enquiry.

Recent empirical studies have shown that experienced teachers can learn about teaching through reading and discussing research, and by reviewing their own practice in the light of the research (Cain, 2015). Specifically, research texts give teachers material to think about including focuses for inquiring into their own practice, and challenges to their thinking and practice. Research can provide teachers with new educational concepts, and it can help them to develop their existing concepts. Research can also suggest ideas for action. Importantly, research can influence how teachers think: it can encourage them to be more willing to experiment, more critical; it can develop their understanding of evidence and also their ethical awareness. In short, engagement with research can encourage teachers to think like researchers (Cain 2015).

This was the approach taken in the 'RETAIN' programme. Teachers were introduced to research-informed approaches to literacy development. However, the teachers were not merely presented with the recommendations and evidence; rather, they were encouraged to discuss their own practice in the light of the research. These discussions included the type of thinking revealed in Cain (2015): the texts gave the teachers focuses for inquiring into their own practice, and challenged their thinking and practice. It provided new concepts and helped them develop existing concepts. The research suggested ideas for action; it encouraged them to be more willing to experiment and more critical; it also developed their understanding of evidence.

3. Methodology

Multiple-methods were used over the course of the 'RETAIN' programme to generate data as part of a theory-based evaluation (Rogers and Weiss, 2007) of the 'RETAIN' programme (for the evaluation report see: Maxwell, Clague and Bryne et al. 2018). The evaluation sought to assess the plausibility of the programme's theory of change. This included gathering evidence on indicators of impact and exploring perceived linkages between the key components and design features of RETAIN, which had been based on the theoretical assumptions set our earlier in this paper, and outcomes. The findings presented in this paper are drawn from surveys of early career teacher participants, interviews with ECTs, their school champions and head teachers, and focus groups of ECTs.

All ECTs (N=10) completed surveys at the start of the programme and at the end of each of the three RETAIN modules. At each survey point data collected included ECTs' self-report ratings of knowledge and skills, confidence, practice and research use and their ratings on the 12 item version of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). This scale, and its three subscales, have been shown to have good construct validity and good internal consistency (Cronbach Alpha=0.9 for the complete self-efficacy scale; 0.86 for instructional strategies; 0.86 for classroom management; and 0.81 student engagement (ibid)). Reliability and measurement invariance has also been demonstrated across countries (Klasen et al., 2012). Given the small number of participating ECTs, analysis was restricted to descriptive statistics, which are used to provide qualitative insights into indicators of impact.

Semi-structured telephone interviews were conducted at the end of each RETAIN module. Data from a total 30 interviews, 14 interviews with nine ECTs, 10 with eight school champions and six with six head teachers were analysed for this paper. To gain as wide a range of perspectives from schools as well as ECTs at least the school champion or the head teacher were interviewed in all participating schools. Interviews included exploration of perceived outcomes, the ways in participation in RETAIN had led to those outcomes and contextual factors that had enabled or impeded intended outcomes being realised.

All interviews and two ECT focus groups, one a regional workshop at the beginning of the programme (N=10) and one the workshop at the end of the programme (N=8), were transcribed. This data and data from the open questions in the survey were analysed thematically (Braun and Clarke, 2006). In the first round of coding data was undertaken deductively using an analytical framework constructed from the programme's theory of change. inductive coding aided the exploration of each theme and a summary was produced for each theme, and where appropriate sub-themes. The relationships between themes were also explored.

The research was conducted following BERA (2011) ethical guidelines and to protect the anonymity of the ECTs they are not assigned numbers or pseudonyms in our findings. It is important to note that data was collected over the period of delivery and in the following two months, therefore the findings set out below focus on exploring the outcomes that could be expected to occur during that time-scale and research evidences are likely to lead, over time, to the intended longer term outcomes of RETAIN.
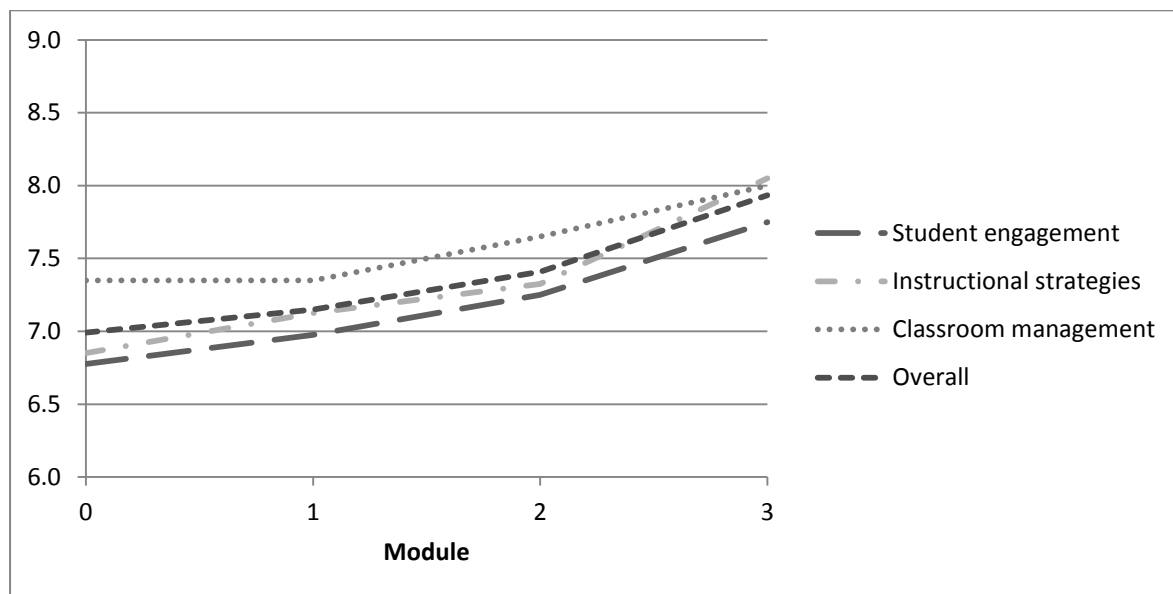
4. Findings

4.1 ECT development

A comparison of the start and end of programme ECT surveys indicates that ECTs made some advances in relation to self-efficacy, knowledge and understanding, research use, practices, engagement in professional learning and career development. While there was some, fairly limited, variation between ECTs, the trends observed were similar across the group, so mean scores provide a valid

indication of the extent of change within the group. It is important to note that mean scores were relatively high at the baseline.

The increase in mean score on the Teachers Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) was +1.05 (12 items, 9 point scale, mean baseline score 6.5). There was little variation in findings between the full scale and the subscales, where the gains were +1.05 for efficacy for classroom management, +1.14 for efficacy for instructional strategies +0.95 for efficacy for student engagement. The increase in the mean score on a 4 items, 5 point, scale for knowledge and understanding was +0.85 (mean baseline score 3.2), and the increase in research-use +0.75 (3 items, 5 point scale, mean baseline score 3.4) (see Table 1).

Table 1: Trends in ECTs' self-efficacy (teacher self-efficacy scale Tschannen-Moran, & Woolfolk Hoy, 2001)
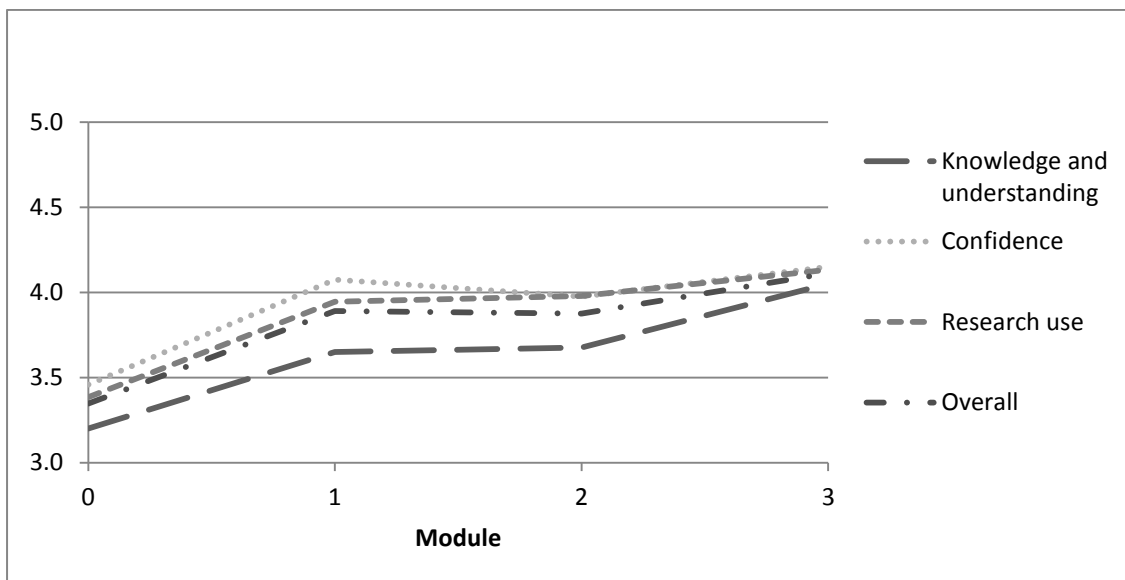

Scale 1 (lowest self-rating) - 9 (highest self-rating)

ECTs also reported a moderate change in their practices as a result of participating in RETAIN. Using a 4 point scale (1= not at all, 2= slightly changed, 3=moderate change and 4=significantly changed) the mean scores for change in teaching practices was 2.9 for the first and second RETAIN modules and 2.5 for the third module. The mean scores for changes to other aspects of their work, such as

interacting with leaders, parents and carers were 2.4 for module 1, 2.5 for module 2 and 2.9 for module 3.

At the end of the programme a moderate change was self-reported by ECTs in relation to improvements in their ability to plan and develop their career (mean score 2.9 on a four point scale ranging from 1= not improved to 4=significantly improved). Using the same scale, the mean self-rating in relation to ECTs' level of engagement in professional learning communities was 3.1. Trends in ECTs knowledge, understanding, confidence and research use over the course of the RETAIN programme can be seen in Table 2 and indicate improvement over time.

Table 2: Trends in ECTs' knowledge and understanding, confidence and research use

Scale 1 (lowest self-rating) – 5 (highest self-rating)

Analysis of the data from the interviews and focus groups provided support for the general trends in outcomes found in the survey data. Some consideration is needed in relation to the increasing engagement with professional learning communities reported in the surveys. Peer learning on 'RETAIN' was very highly valued and for some ECTs this had stimulated wider engagement in PLCs:

'*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…I don't think I would have thought about doing that if I hadn't been on the 'RETAIN' project .' (ECT, Module 3 interview)

However, a few ECTs had not sought out future collaborative learning opportunities. Similarly some caution is need in relation to on-going research-use, the survey data reflects increasing engagement with the research evidence provided during 'RETAIN', but it is unclear whether ECTs would seek out research evidence independently following the programme.

While trends in outcomes were positive overall, which could be taken as supporting the programme's theory of change, attribution of change to 'RETAIN' is more complex. Most ECTs attributed positive outcomes to 'RETAIN', but there were mixed views amongst school champions and head teachers, who suggested the effects of maturation and school factors. To further consider the plausibility of the programme theory of change we present data on interviewees' perceptions of the linkages between participation in the 'RETAIN' programme and desired outcomes.

4.2 Perceived links between 'RETAIN' and positive outcomes

Analysis of interview and focus group data illuminated the ways in which three elements of RETAIN, the taught sessions, peer learning and in-school coaching by an external coach together with the interweaving of research evidence through these components led to positive outcomes. While in some instances, a clear link was traced between one of these elements and a desired outcome, more often it was the combination of elements that enabled positive change and contextualised learning:

'*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…worked so well [as] we were based in schools that were quite near, so we could meet up. We knew each other's schools... it helped contextualise what we were talking about.'* (ECT, Module 3 interview)

Some ECTs related increased knowledge and understanding to the content, modelling of practices and discussion in taught sessions. Peer discussion was perceived to be particularly useful to develop knowledge of practices in other schools and the focus on disadvantaged learners was significant in changing beliefs and understanding as exemplified by one ECT:

'*It's changed the way I think about the children's 'normal'.... because I've come from a very different background to some of my children it's made me .. try to understand that child, a bit more empathy ... It's made me think about .. the language .. I use .. in a classroom*'. (ECT, Module 2 interview)

The taught sessions, combined with research evidence also built ECT's confidence by confirming that the ECTs were doing 'the right thing' and gave them the confidence to experiment with their practices. Coaching and peer discussions, where ECTs realised that other ECTs faced similar issues to themselves, were also important in fostering confidence:

'*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. … 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, Module 2 interview)

Similarly, direct links were made between the taught modules, coaching, peer collaboration and research evidence and practice change:

'*It was mainly [the second 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*'. (ECT, Module 3 interview)

'*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…rather than just panicking and keep going on with the same idea.*' (ECT, RETAIN 3 interview)

The validation of practices by the delivery team and research evidence was also particularly influential in supporting practice change:

'*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, Module 3 interview)

ECTs 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, so enabling their learning to be validated more widely. Although the extent to which this was possible varied according to the school context. In this example, the ECT received validation through observing positive pupil outcomes and positive responses from other teachers:

"*The children are just really engaged with it. We've noticed an increased progression with the reading and with the writing .. 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 Module 3 interview)

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 feel a little bit more proactive in wanting to try and find those opportunities and create those opportunities for myself.*' (ECT, Module 3 interview)

'*Listening to the other teachers talking about their roles…inspired me to think I can do some of these things.*' (ECT, Module 3 interview)

A recurring theme in the data, that in the longer term may support teacher retention, was the importance of peer discussion in enabling ECTs to recognise that others faced the same difficulties:

'*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… I think for [the ECT] to meet with other colleagues in other schools, that has been really powerful.'* (School champion, Module 1 Interview)

4.3 Contextual variation

The general trends evident in the data and common themes in ECTs' and school-based participants' narratives presented above provides support for the plausibility of the programme theory of change. A further important finding was the effect of school culture. The extent to which schools were open to change, and supportive of ECTs' experimenting with their practices as a result of their engagement with, and outcomes from, 'RETAIN' was found to vary. The following two quotes illustrate the variation found across the group:

'*My school champion is the head teacher…[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, Module 1 interview)

'*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, Module 1 interview)

In a few schools prescriptive curricula prevented ECTs experimenting with evidence-informed practices:

'*There have been a couple of times when things have been suggested to [the ECT] that perhaps shouldn't…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.*' (School champion, Module 1 interview)

5. Conclusions

It should be noted that the small survey population of the pilot, and lack of data from a comparison group, means that it is not possible to ascertain whether changes in ECT's self-efficacy, knowledge and understanding, research-use and practices where directly as a result of the 'RETAIN' programme. For example, school support or maturation as a teacher as indicated in some research literature (see for example: Henry, Bastian and Fortner, 2011) may have impacted on ECT development. However, the qualitative interviews did provide in-depth insights into the ways in which ECTs participated in, responded to and developed, as a result of their engagement with 'RETAIN' and how their development was facilitated or impeded by their school context. ECTs, school champions and head teachers, in some instances, did articulate how changes had occurred in ways that aligned with the programme theory of change and its underpinning theoretical assumptions.

As noted elsewhere (Maxwell et al., 2018) articulating and providing evidence of the path from inputs to outcomes described in a programme theory of change helps support the plausibility of the model, but cannot unequivocally demonstrate that these changes occurred as a result of a programme. A further limitation of the research is that longer term outcomes were not measured, although research evidence (EEF, 2018) indicates that the outcomes achieved over the duration of the programme are likely to lead to the intended longer term outcomes.

In conclusion, there are indicators of positive outcomes for ECTs who participated in the 'RETAIN' programme, and in some instances early indicators of positive outcomes for schools and pupils. Findings indicated that the combined influence of programme components and the opportunities that RETAIN provided for ECTs to learn/work together appear to be important in leading to positive experiences and outcomes. The findings indicate that participation in the RETAIN programme enabled ECTs to develop their knowledge and understanding, confidence and practice in relation to literacy and other classroom practices. It is also indicated that there is a close alignment between the design and delivery of the 'RETAIN' programme and many of the indicative characteristics of effective CPD set out in the methodology protocol.

Indicators of impact show that ECTs have progressed in terms of the intermediate teacher outcomes in the programme logic model, with particular enhancement of self-efficacy as measured by the Teachers' Sense of Efficacy Scale (Tschannen-Moran, M., & Woolfolk Hoy, A., 2001). Taken together the evidence from the evaluation supports the premise that the combination of 'RETAIN 4 C's' (see Diagram 1) Classroom (taught workshops) , Coaching (application of learning to practice), Collaboration (PLCs and school champions) and Child (quality of teaching) is efficacious in supporting positive outcomes for the programme aims.

References

Barber, M. and Mourshed M., 2007, How the World's Best Performing School Systems Come Out on Top (London: McKinsey and Co.)

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. Journal of Management, 38(1), 9–44.

Bamford, S. and Worth, J. (2017). Teacher Retention and Turnover Research. Research Update 3: Is the Grass Greener Beyond Teaching . Slough: NFER.

BERA (2011), Ethical Guidelines for Educational Research. London: British Educational Research Association.

Blandford, S. and Knowles, C. (2013) Achievement for All: Raising Aspirations, Access and Achievement, London: Bloomsbury

Blankenship, S, and Ruona, W. (2007) Professional Learning Communities and Communities of Practice: a comparison of models. Literature review presented at Academy of Human Resource Development International Research Conference in the Americas

Bradley, S., Green, C. P. and Leeves, G. (2006) The Role of Pecuniary and Non-Pecuniary Factors in Teacher Turnover and Mobility Decisions. (August 24, 2006). Accessed at SSRN: https://ssrn.com/abstract=926319 or http://dx.doi.org/10.2139/ssrn.926319

Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. Qualitative Research in Psychology, 3 (2). pp. 77-101. ISSN1478-0887

Buchanan, J., Prescott, A., Schuck, S., Aubusson, P. and Burke, P.. (2013). Teacher retention and attrition: Views of early career teachers. Australian Journal of Teacher Education. 38 (3), 112-129.

Cain, T. (2015). Teachers' engagement with research texts: beyond instrumental, conceptual or strategic use. Journal of Education for Teaching, 41(5), 1-15.

Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. Journal of school psychology, 44(6), 473-490.

Caspersen, J. and Raaen, F. D. (2014) Novice teachers and how they cope. Teachers and Teaching: Theory and Practice, V20 No. 2, pp.189 – 211.

Charmaz, K. (2006). Constructing grounded theory. London: SAGE.

Cherniss, C., & Goleman, D. (2001). The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations. San Francisco: Jossey-Bass.

Coldwell, M., Greany, T. Higgins, S., Brown, C., Maxwell, B., Stiell, B., Stoll, L., Willis, B. and Burns, H. (2017) Evidence-informed teaching: an evaluation of progress in England. London, Department for Education.

Cordingley, P., Higgins, S., Greany, T., Buckler, N., Coles-Jordan, D., Crisp, B., Saunders, L., Coe, R. (2015) Developing Great Teaching: Lessons from the international reviews into effective professional development. Teacher Development Trust.

CUREE, (2014). What makes for better CPD. London: CUREE. Accessed at http://www.curee.co.uk/home

DfE (2016) School workforce in England: November 2016. London: The Stationery Office.

DuFour, R. (2004) What is a professional learning community? Educational Leadership, May 2004, 8:6-11

Fixsen DL, Naoom SF, Blase KA, Friedman RM, Wallace F.(2005) Implementation research: A synthesis of the literature. Tampa, FL: University of South Florida, Louise de la Parte Florida Mental Health Institute, The National Implementation Research Network

Furlong, J. (2008) Making teaching a 21st century profession: Tony Blair's big prize. Oxford Review of Education, 34(6):727-739

Guo, Ying; Connor, Carol McDonald; Yang, Yanyun; Roehrig, Alysia D.; Morrison, Frederick J (2012). The Effects of Teacher Qualification, Teacher Self-Efficacy, and Classroom Practices on Fifth Graders' Literacy Outcomes Elementary School Journal, v113 n1 p3-24 Sep 2012

Handscomb, G. and MacBeath, J. (2003). The Research-engaged School. Chelmsford: Essex County Council

Hammersley, M. (2002). Educational Research, Policymaking and Practice. London: Paul Chapman.

Hanft B, Rush D, Shelden M. (2004) Coaching families and colleagues in early childhood. Baltimore: Paul H. Brookes Publishing.

Hanushek, E. A., Kain, J. F., and Rivkin, S, G. (2004) Why Public Schools Lose Teachers. The Journal of Human Resources, xxxix, 2. University of Wisconsin.

Hanushek, E. A. (2011) The economic value of higher teaching quality. Economics of Education Review 30, pp. 466-479.

Hargreaves, D. (2014) A self-improving school system and its potential for reducing inequality. Oxford Review of Education, 40(6):696-714

Hattie, J. (2003). Teachers make a difference: What is the research evidence? Paper presented at the Building Teacher Quality: What does the research tell us? ACER Research Conference, Melbourne, Australia. Accessed at http://research.acer.edu.au/research_conference_2003/4/.

Henry, G. T., Bastian, K. C., & Fortner, C. K. (2011). Stayers and leavers: Early-career teacher effectiveness and attrition. Educational Researcher, 40(6), 271-280.

Hoigaard, R., Giske, R., & Sundsli, K. (2012). Newly qualified teachers' work engagement and teacher efficacy influences on job satisfaction, burnout, and the intention to quit. *European Journal of Teacher Education*, *35*(3), 347–357.

House of Commons (2012). Great teachers: Attracting, training and retaining the best (Ninth Report of the House of Commons Education Committee 2010–12). London: The Stationery Office.

House of Commons (2017a) Education Committee. Recruitment and retention of teachers. London: The Stationery Office.

House of Commons (2017b) Teacher recruitment and retention in England. Briefing paper Number 7222, 12 June 2017. London: The Stationery Office.

Klassen, R.M., Tze, V, Betts, S. & Gordon, K. (2011) Teacher Efficacy Research 1998–2009: Signs of Progress or Unfulfilled Promise? Educational Psychology Review 23 (1), 21-43.

Ko. J, Sammons., P., and, Bakkum, L (2013) Effective Teaching: A Review of Research and Evidence. London: CfBT Education Trust.

Korthagen, F., Loughran, J., & Russell, T. (2006). Developing fundamental principles for teacher education programs and practices. Teaching and teacher education, 22(8), 1020-1041.

MacLellan, E., and Soden, R. (2003), Expertise, expert teaching and experienced teachers' knowledge of learning theory Scottish Educational Review, vol 35, no. 2, pp. 110-120.

Macleod, S. et al (2015) Supporting the attainment of disadvantaged pupils: articulating success and good practice. Research report. London: DfE

Maxwell, B. Clague, L., Byrne, E., Coldwell, M., Culliney, M. and Hobson, A. (2018 in press) Evaluation of the RETAIN early career CPD programme for Key Stage 1 teachers. London: Educational Endowment Foundation.

McAdam, J. E., Arizpe, E., Devlin, A. M., Farrell, M., and Farrar, J. (2014) Journeys from Images to Words. Project Report. Esmée Fairbairn Foundation

McCoy, E (2013) Lost for Words: Poor literacy, the hidden issue in child poverty. A policy position paper. National Literacy Trust

McLinden, M., Edwards, C., Garfield, J. and Moron-Garcia, S. (2015) Strengthening the Links Between Research and Teaching: Cultivating Student Expectations of Research-informed Teaching Approaches. Education in Practice, Vol. 2, November 2015.

Mitchell, C. & Sackney, L. (2000): Profound improvement. Building capacity for a learning community. Lisse: Swets & Zeitlinger Publishers.

Muijs, R & Reynolds, D (2001), Effective teaching. Evidence and Practice. 1st edn, Paul Chapman Publishing, London

National Audit Office (2017) Retaining and developing the teaching workforce. London: NAO.

Newmann, F., Rutter, R., and Smith, M. (1989). Organizational factors that affect school sense of efficacy, community, and expectations. Sociology of Education, 62, 221-238

National Literacy Trust (2011) Research Review. Literacy: A route to addressing child poverty? National Literacy Trust

Ovenden-Hope, T. and Passy, R. (2015) Coastal academies: changing school cultures in disadvantaged coastal regions in England. Cornwall: The Cornwall College Group. Accessed at https://www.cornwall.ac.uk/documents/reports/Coastal%20Academies%20Report_2015_final_2%20Tanya%20Ovenden-Hope%20and%20Rowena%20Passy.pdf

Owen, S. (2016) Professional learning communities: building skills, reinvigorating the passion, and nurturing teacher wellbeing and "flourishing" within significantly innovative schooling contexts. Educational Review, January 2016, 1-17

Pickett, K. and Vanderbloemen, L. (2015) Mind the Gap: tackling social and educational inequality. York: Cambridge Primary Review Trust

Pino-Pasternak, D., Basilio, M. & Whitebread, D. (2014). Interventions and classroom contexts that promote self-regulated learning: Two intervention studies in United Kingdom primary classrooms. Psykh., 23(2), 1-13.

Radford, J., et al. (2015) 'Scaffolding learning for independence: Clarifying teacher and teaching assistant roles for children with special educational needs'. Learning and Instruction. 36, 1-10.

Rogers, P. and Weiss, C. (2007) Theory-based evaluation: reflections ten years on: Theory-based evaluation: past, present, and future. New Directions for Evaluation 114, 63-81.

Schon, D. A. (1983). The reflective practitioner: How professionals think in action. New York: Basic books.

Shanahan, T., & Barr, R. (1995). 'A Synthesis of Research on Reading Recovery'. Reading Research Quarterly, 30, 958-996.

Siraj, I. and Taggart, B. (2014) Exploring Effective Pedagogy in Primary Schools: Evidence from Research. London: Pearson

Stenhouse, L. (1975) An introduction to Curriculum Research and Development, London: Heineman.

Stenhouse, L. (1980). 'The study of samples and the study of cases', British Educational Research Journal, 6, 1, 1-6.

Stoll, L., Fink, D. & Earl, L. (2003) It's about learning (and it's about time). London: Routledge Falmer.

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.. Palo Alto, CA: Learning Policy Institute.

Sutton Trust (2011) Improving the Impact of Teachers on Pupil Achievement in the UK – Interim Findings (London: Sutton Trust)

The National Literacy Trust (2012) Children's and Young People's Reading Today: Findings from the 2011 National Literacy Trust's annual survey. Accessed at https://literacytrust.org.uk/research-services/research-reports/childrens-and-young-peoples-reading-2011/

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001) Teacher efficacy: Capturing an elusive concept. Teaching and Teacher Education, 17, 783−805.

Queensland College of Teachers. (2013). Attrition of recent Queensland graduate teachers. Brisbane: Queensland College of Teachers. Accessed at http://www.qct.edu.au/Publications/Retention_Research_Report_RP01.pdf

Veenman, S. (1984) 'Perceived Problems of Beginning Teachers'. Review of Educational Research, Vol. 54, No. 2 (Summer, 1984), pp. 143-178

Watson, C. (2014) Effective professional learning communities? The possibilities for teachers as agents of change in schools. British Educational Research Journal, 40(1):18-29

Worth, J. and De Lazzari. G. (2017). Teacher Retention and Turnover Research. Research Update 1: Teacher Retention by Subject. Slough: NFER

Zeichner, K. M. & Liston, D.P (1996). Reflective teaching: an introduction Mahwah, NJ: Lawrence Erlbaum Associates.