Department for Education

TLIF Evaluation: EdDevTrust and Chartered College of Teaching Accelerate project

Final Report

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Key findings summary

- The Education Development Trust (EdDevTrust) and the Chartered College of Teaching (CCT) Accelerate project aimed to provide sustained support for early career teachers (ECTs) through specialist instructional coaching, blended learning involving face-to-face training and online modules, and peer-to-peer support through communities of practice.

- The project faced challenges in retaining participants. While DfE Management Information showed that 1,598 ECTs were initially recruited to the project against a target of 1,500, information supplied by EdDevTrust suggested that, by March 2020, this had fallen to 700.

- Various reasons were given for ECTs dropping out of the project, with the main reason being that participants felt they were unable to give the level of commitment the project required. Other reasons included reticence about video recording class teaching, and participants moving jobs or leaving teaching altogether.

- Most case-study ECTs regarded the one-day workshops and specialist coaching support as being amongst the most useful and impactful components of the project. They were described as interactive and informative, and as distilling the best research available.

- ECTs valued the opportunity to discuss and reflect on their practice with an experienced external teacher, safe in the knowledge that these conversations were confidential and entirely developmental in nature. ECTs also liked the fact the coaching conversations were tailored to their specific needs and situations.

- There is considerable evidence from both the surveys and the qualitative interviews that the project has improved participating ECTs' confidence and subject knowledge, equipped them with a growing repertoire of teaching skills, and improved their teaching practice.

- However, there is mixed evidence from the surveys and the qualitative interviews on the extent to which the project has been able to equip ECTs to better manage their workloads, and very little evidence on wider impacts in schools, such as changes in CPD culture or in the quality of other teachers' teaching across ECTs' settings.

- Analysis of School Workforce Census (SWC) data suggests the Accelerate project made some progress towards its aim to improve ECTs' retention in the profession. Participating ECTs were statistically significantly more likely to remain in teaching one and two years after the baseline than ECTs in a comparison group, although it is not possible to disentangle the effect of the project from other non-observed systematic differences between project participants and non-participants.

Key findings summary

- Qualitative evidence suggests that the project could, in the longer term, contribute to the TLIF aim of improving pupil attainment.
- One limiting factor is the apparent lack of engagement between senior leaders and their ECTs. This appears to have been a missed opportunity to spread good practice throughout participating schools. Despite this, it appears that for many of the ECTs who completed the project, their new skills and knowledge are both well-understood and well-practised.
- It was intended that school leaders would be able to access specialist training in the use of research and evidence in school. However, senior leaders interviewed by telephone seldom reported direct impacts of the project on themselves. While it should be acknowledged that senior leaders in schools in challenging circumstances will have many demands placed on them, they could have been more effectively engaged to ensure that their ECTs received the support they needed, while also encouraging them to remain on the project.
- The findings from this report were drawn from baseline (n=768) and endpoint surveys of ECTs (n=249), telephone interviews with ten ECTs, 20 coaches, seven senior leaders and the EdDevTrust Project Manager, and secondary data from the SWC. DfE management information was also analysed

Glossary of terms

Cognitive load theory (CLT) – First researched by Sweller (1998), CLT is based around the idea that working memory – the part of the mind that processes what we are currently doing – can only deal with a limited amount of information at one time. The data generated by cognitive load theory indicate that in order to reduce working memory load and facilitate transfer of domain-specific information to long-term memory, instruction provided by teachers should be explicit and detailed.

Early career teacher (ECT) – For the purposes of this report, an ECT refers to a teacher in their first five years of service.

Interleaving – Refers to the benefits of sequencing learning tasks so that similar items, such as two examples of the same concept, are interspersed with different types of items rather than being consecutive (Kang, 2016)

Opportunity Area – Local area districts identified as facing the biggest challenges to social mobility. The opportunity area programme aims to help more children and young people achieve their full potential through targeted funding and a place-based approach to improvement. This involves the whole education community, from early years to employment, in the areas of the country where social mobility is lowest.

Priority areas – Category 5 or 6 Achieving Excellence Areas (AEAs) Local Authority districts, including the 12 Government Opportunity Areas - areas identified as having weakest performance and least capacity to improve.

Senior leadership team (SLT) - The SLT take care of the daily planning and management of a school and include the headteacher as well as assistant and deputy headteachers.

Teaching and Leadership Innovation Fund (**TLIF)** – DfE programme (2017-2020) aimed at improving pupil outcomes and supporting pupil social mobility by improving teaching and leadership in priority areas and schools through outcome-focused, evidence-based and innovative professional development provision.

1 About the Accelerate Project and the evaluation

The Education Development Trust (EdDevTrust)[1] and the Chartered College of Teaching (CCT)[2] Accelerate TLIF Round 2 project[3] was designed to provide sustained support for early career teachers (ECTs), empowering them to deliver the best possible education for disadvantaged pupils. Accelerate had four strands, built on evidence on improving teacher practice, and designed to meet the Standard for Teachers' Professional Development (DfE, 2016). The four strands were designed to provide:

- expert guidance through specialist instructional coaching
- blended learning involving face-to-face training and online modules
- peer-to-peer support through communities of practice (CoPs)
- in-school support to build schools' capacity and promote sustainability.

Teaching School Alliances (TSAs) were recruited to form Delivery Hubs to lead local delivery of the project, targeting more than 395 schools and 1,500 ECTs. The hubs led local delivery utilising significant pre-existing regional networks, provided coaches and hosted communities of practice and events. The hubs received support from EdDevTrust's central team with coaches receiving face-to-face and online training, as well as expert supervision. To help increase capacity for sustained change, it was intended that newly qualified teacher (NQT) mentors within ECTs' schools would be supported in effective mentoring, effective teacher professional development as well as in instructional coaching. School leaders would be able to access specialist training in the use of research and evidence in school, with the intention being that they could then support their teachers to do the same. Accelerate was, therefore, designed to embed improvements in ECT teaching quality and retention, as well as impact positively on pupil attainment.

1.1 Theory of Change

The EdDevTrust and CCT Accelerate project had a number of intended outcomes and impacts. These are outlined in the project Theory of Change in Appendix A, which was co-constructed by the EdDevTrust and NFER. Intended shorter-term outcomes included improvements in ECTs' teaching quality, while longer-term impacts included improvements in the retention and progression of ECTs, and pupil attainment. The theory underpinning these intended outcomes was that, by providing participants with high-

[1] The Education Development Trust is an education charity that exists to transform lives by improving education around the world. They work collaboratively with national and local governments, schools and other partners to design and deliver sustainable solutions to improve education. For more information visit: https://www.educationdevelopmenttrust.com/

[2] The Chartered College of Teaching is the recognised professional body for the teaching profession in the United Kingdom. For more information visit: https://chartered.college/

[3] TLIF projects were commissioned over two rounds of funding. Accelerate was commissioned as part of round 2.

quality, evidence-informed professional development, which was tailor-made for ECTs, together with support from an expert coach and in-school mentor, they would develop the skills they need to improve the outcomes of their pupils and be more likely to stay in teaching. We would summarise this approach as 'learn-try-reflect'.

The methods (project activities/outputs) by which EdDevTrust and CCT expected to achieve the intended outcomes and impacts are also outlined in Appendix A. These included:

- residentials and one-day workshops
- five online blended learning modules
- subject- or phase-specialist coaches supporting participants on a one-to-one basis
- a peer community of practice (CoP), designed to create strong local teacher networks, supported by a coach
- 'companion materials' for in-school mentors and school leaders.

The five modules were:

1. professional behaviours (which included an overview of the Accelerate project and an introduction to instructional coaching)
2. productive classroom environment (which included managing behaviour)
3. designing effective learning (which included instructional strategies, such as planning lesson sequences/interleaving)
4. supporting pupil progress (this was focussed on assessment, including supporting pupils with diverse needs, such as special educational needs and disabilities (SEND) and English as an Additional Language (EAL))
5. an optional in-school research-based project.

Evidence has shown that high-quality teaching makes the greatest difference to disadvantaged pupils' attainment (Sutton Trust, 2011). However, schools in challenging circumstances may have limited capacity to support teacher development, so teachers in these schools may not fulfil their potential (Allen *et al.,* 2016). Built around evidence-informed professional development models (Deans for Impact, 2016), Accelerate aimed to incorporate expert instructional coaching, deliberate practice, and high-quality, evidence-informed content delivered through a flexible, blended model to address the needs of ECTs in challenging schools.

1.2 Contextual factors

The Accelerate project was one of ten DfE-funded TLIF projects. The DfE wished to test out how effectively a variety of different CPD approaches could meet project-specific and

fund-level outcomes; therefore each of the ten projects were commissioned to be intentionally different in design, scale, scope and delivery method. At fund level, the evaluation sought to compare and contrast the relative effectiveness of these projects in meeting their stated aims and objectives – taking into account a range of factors related to their differences. These included:

- **impact focus and target group** (whether impact was intended to be at whole-school, individual-teacher level, or both; and whether the project targeted leaders, teachers, or both) – the Accelerate project had an individual teacher-level focus and targeted early-career teachers
- **phase supported** (whether primary, secondary, or both phases) – the Accelerate project supported primary and secondary schools
- **per-participant cost** (calculated by comparing the overall cost specified in the project's bid against the number of participants that the project was contracted to recruit[4]). Relative to the other TLIF projects, the Accelerate project was medium cost
- **intensity of the delivery model** (categorised by creating a combined score incorporating: duration of provision offered (in months), hours of provision offered (per participant); and proportion of school staff that the project aimed to engage[5]). Relative to the other TLIF projects, the Accelerate project had an intensive delivery model
- **range of delivery modes** (categorised into two groups: a wide range (five to six modes), and a moderate range (three modes[6]). The Accelerate project had a wide range of delivery modes relative to other TLIF projects.

In the Fund-level report, we took the Accelerate project's contextual factors into account in comparing its progress in achieving outcomes with the progress made by the other TLIF projects.

1.3 Evaluation methodology

1.3.1 Overall evaluation methodology

The aim of the evaluation was to undertake a process and impact evaluation to explore indicators of effectiveness and to measure impacts (teacher retention and progression) and outcomes (including teaching and/or leadership quality – see Chapter 4, Table 2 for full details). The objective was to draw out learning and best practice, test out the project's theory of change, and identify implications for the fund-level assessment, as well as educational policy and practice more broadly. Our original evaluation design also included an impact evaluation to assess the impacts of the project on pupil attainment.

[4] High-cost projects had a relatively high per participant budget, medium-cost projects had a relatively medium per participant budget and low-cost projects had a relatively low per participant budget.
[5] We do not have dosage data – so this assessment is based on intention rather than actual involvement, but it provides an indication of the nature of delivery. Our three resulting categories were: 'intensive'; 'moderate' and 'light touch'.
[6] No projects had four modes of delivery and no projects had fewer than three.

However, due to partial school closures as a result of the Covid-19 pandemic, and the cancellation of Key Stage 2 (KS2) assessments and GCSE examinations for the 2020 cohort, DfE decided to remove this aspect of the evaluation. There is, therefore, no longer a pupil impact analysis aspect to the evaluation.

1.3.2 Evaluation methodology for this report

This final evaluation report draws on secondary data from the School Workforce Census (SWC[7]), survey, and qualitative data. It provides a measure of the project's success in achieving the TLIF programme's impacts (SWC and qualitative data), outcomes (survey and qualitative data) and project-specific outcomes (survey and qualitative data). SWC and survey findings are supported by rich qualitative data, which aids understanding of the recruitment, delivery and implementation factors that influenced achievement of these outcomes. The report explores the links between inputs, outcomes and impacts, analysing the appropriateness of the project's ToC in achieving desired results. The evaluation drew on the following data sources:

1. a comparison of secondary data from the SWC for Accelerate participants, and for a matched group of non-Accelerate participants[8]. Accelerate participants were identified via project MI data, which was collected by DfE and shared with NFER.
2. a baseline survey of 1,101 ECTs which achieved responses from 768 ECTs (a response rate of 70 per cent) (May-July 2019)
3. an endpoint survey of 1,080 ECTs which achieved responses from 249 ECTs (a response rate of 23 per cent) (February-May 2020)[9]
4. three telephone interviews with the EdDevTrust Project Manager (October 2018, October 2019 and April 2020)
5. telephone interviews with ten subject specialist coaches (five were conducted in July 2019 and five between November and December 2019)[10]
6. ten telephone case studies involving interviews with ten ECTs (the 'case'/unit of investigation), ten external coaches and seven senior leaders (typically a deputy headteacher or headteacher).

[7] This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.
[8] Non-Accelerate participants were defined as any teacher who was not enrolled on the Accelerate project, or any other TLIF intervention.
[9] The endpoint survey was launched shortly before schools in England went into lockdown as a result of the Covid-19 pandemic. This necessitated a pause in planned reminder activity, and with schools focused on dealing with the pandemic, the result was that response rates were considerably lower than expected. For the matched analysis, a maximum of 99 responses were matched between the baseline and endpoint surveys.
[10] The original expectation was to conduct interviews with ten specialist coaches before the end of the summer term 2019. However, as a result of recruitment taking longer than planned, the first few interviews revealed that, by the end of the summer term, only limited contact had been made between coaches and ECTs. For this reason, it was agreed with DfE to cease the interviews at five, and conduct five more in the autumn term 2019 when activities had progressed further.

Each telephone interview was semi-structured and lasted for between 30-45 minutes. Interviews were recorded where interviewees gave permission, and were analysed using the qualitative analysis package MAXQDA. Further details on the approach to qualitative sampling, together with the selected characteristics of case-study ECTs and their schools, can be found in Appendix B.

Factor analysis was used to explore the findings from the surveys. This was based on a matched analysis of respondents who answered at both baseline and endpoint. An analysis of the characteristics of all respondents who answered at baseline and endpoint, and how these compared to those in the matched analysis, can be found in Appendix E. Despite varying sample sizes across the baseline and endpoint surveys and matched analysis, the teacher- and school-level characteristics of ECTs in each sample were broadly similar11. A description of the quantitative analyses undertaken on the survey data can be found in Appendix F.

Appendix C describes the methods used for matching MI data to SWC data, and for constructing a comparison group. Appendix D provides the results of the impact analysis. A summary of the steps is included below.

1) The MI data was matched to the SWC using Teacher Reference Numbers (TRNs), names and dates of birth. This matched 90 per cent of Accelerate participants as recorded in the MI data with at least one record in the SWC.
2) Accelerate participants were matched with non-participants using propensity score matching. Matching for the full sample used teacher and school characteristics (age, gender, years of experience, Ofsted rating, etc. – see Appendix C for the full list) observed in the baseline year, where baseline year for Accelerate participants was defined as the year the teacher was recruited to the project.
3) The retention rates in state-sector teaching among those in the treatment and matched comparison groups were compared using a logistic regression model, one and two years after baseline and controlling for the variables used for matching. The same process was followed to estimate the impact on retention within the same school/local authority (LA)/challenging schools.
4) Differences between the groups in progression rates (to middle/senior leadership) within the profession and within the same school/LA/challenging schools were estimated using a similar model as in step 3.

[11] Compared to the baseline, there were proportionately more middle leaders in the endpoint and matched analysis samples, although this is to be expected given the maturation of ECTs over the course of the programme.

1.4 Focus of this report

This report focuses specifically on:

- **Section 2 – Project recruitment and retention** (whether the project met its targets for school and participant recruitment, and the factors that supported this).
- **Section 3 – Delivery and implementation** (whether this progressed according to plan; what worked well and not so well; and what lessons can be learned for future CPD offers).
- **Section 4 – Outcomes and impacts of the provision** (the extent to which the project met, or had the potential to meet, the TLIF programme's outcomes and impacts, and its own bespoke project outcomes).
- **Section 5 – Sustainability** (discussion of the potential for sustainability of new ways of working, new learning and outcomes in schools, which have come about through involvement with the project).
- **Section 6 – Evaluation of the Accelerate project Theory of Change.**
- **Section 7 – Summary and indicative implications for policy and CPD development.**

2 Recruitment

2.1 Progress towards recruitment targets

The recruitment targets for EdDevTrust and CCT were to sign-up and work with 1,500 ECTs drawn from a minimum of 395 schools (including primary, secondary and special schools). A minimum of 70 per cent of schools were required to be in priority areas (category 5 and 6 areas). Within priority areas, a minimum of 70 per cent of teachers were expected to come from priority schools (Ofsted category 3 or 4 schools).

Management information (MI) submitted by EdDevTrust to the DfE in February 2020 can be found at Appendix G. The MI shows that EdDevTrust and CCT recruited 1,598 participants from across 706 schools. DfE funded 1,500 places, with EdDevTrust managing the expectations of the remainder. The project met its target for school recruitment in priority areas, with 76 per cent of recruited schools located in category 5 or 6 areas against a target of 70 per cent. However, MI data shows that, of the participants in priority areas, only 42 per cent were in Ofsted categories 3 or 4 against a target of 70 per cent. In addition, the MI shows there were problems with participant *retention*. By February 2020, only 716 ECTs from a total of 391 different schools were reportedly involved in the project.

Analysis of the following MI data can be found in Appendix G:

- total school and participant numbers
- distribution of schools by phase
- distribution of schools by region
- distribution of schools by AEA Category
- distribution of schools by Index of Multiple Deprivation Decile
- teacher roles.

The Project Manager, interviewed in October 2018, October 2019 and then again in April 2020, reported that it was originally hoped that recruitment would be completed by December 2018, although the KPI agreed with the DfE was for recruitment to be completed by the end of March 2019. In the end, recruitment extended into the 2019 summer term.

Interviews with the expert coaches suggested that only those coaches that were also hub leads had a formal role in supporting the process of recruiting ECTs to the project, alongside the central EdDevTrust team. Many of the TSAs, who acted as delivery hubs, were reported to have had prior experience of working with EdDevTrust and/or CCT through previous education initiatives, such as EdDevTrust's Schools Partnership Programme (over 1300 member schools nationally). Teaching schools used their alliance partners to promote awareness of the project and to encourage participation amongst

ECTs in eligible schools. Interest was initially reported to be strong, with one coach stating: 'colleagues and partners thought this was a really valued programme and they were excited to be part of it'.

2.1.1 What enables and hinders effective recruitment and retention?

What hinders effective recruitment and retention?

Recruitment was a challenge, as the Project Manager explained:

> The ECTs were a hard group to find and recruit. They are in schools in challenging circumstances, and about two-thirds of those recruited were in their first year of teaching. They are the ones that have the least time to give.

Recruiting schools from the **Opportunity Areas** was reported by coaches to be particularly challenging, as the headteachers of schools in these areas were described as being 'bombarded with initiatives that are all free', making it difficult for the Accelerate project to stand out[12]. Where it had been possible for a coach to make contact with a headteacher and explain the project, most were reported to be happy to support it.

One coach reported that the biggest challenge in recruiting and retaining schools was that, while the support for ECTs was offered free of charge, some participating schools needed to **pay for supply teachers** in order to release ECTs to attend residentials, training and meetings with coaches. This was reported to be a barrier to some eligible schools given school funding challenges.

The Project Manager felt that the **original three-month recruitment window (October-December 2018) was unrealistic**, and that a longer timeline was needed to 'warm the market', recruit people, and get them started on the project:

> We had a condensed recruitment window, this was extended to March [2019] because three months just isn't long enough. Also, it's hard to warm up the market, recruit people, and get them to start all in the same academic year. It would have been better if we had started recruitment in September to get them to start the following September. Participants could then have factored the project into their development plans.

The **extended recruitment window** was also reported to have posed some challenges, as it meant that some participants missed the residential planned for March 2019. An additional residential was hosted in April 2019 to accommodate those recruited to the

[12] It should be noted that this programme was commissioned as part of the second round of TLIF. The timing meant that Opportunity Areas' development plans were well established by this point, and they may not have included ECT development as a priority.

project later on, but it is not known whether potential participating senior leaders and ECTs were dissuaded from taking part by the idea of joining the project after its planned start date.

One coach suggested that the **participating schools were generally those that regularly accept teaching schools' offers of support**, and that schools that were typically more hard-to-reach continued to be more difficult for Accelerate to reach.

While DfE's analysis shows that EdDevTrust and CCT met their recruitment targets, *retaining* those recruits appears to have been more challenging. Data collected by EdDevTrust suggested that by September 2019 some 900 ECTs were still participating in the project, with this number estimated to have dropped to some 700 by February/March 2020. The Project Manager attributed most of this attrition to workload challenges (see also Section 3.3.2), to some participants taking on new responsibilities and no longer having time for the project, and to the ease with which ECTs could drop out of the project with no repercussions:

> I think some of them [the ECTs] were surprised by how much work the project involved, and they have to focus on the things that count, like providing evidence to get through their induction year. There are no consequences for them for dropping out. No financial penalties for schools.

All of the coaches interviewed reported there had been some drop out amongst the list of up to ten ECTs they had been originally asked to support. In some cases, where ECTs had dropped out, coaches reported they had been replaced with ECTs who, due to their location relative to that of the coach, could only receive support remotely. Some coaches also reflected that those participants who dropped out of the project were sometimes those thought to be most in need of the support and most at risk of leaving the profession. Various reasons were given for ECTs dropping out of the project, including: never returning the memorandum of understanding; a rushed lead-in period; reticence about video recording class teaching; feeling unable to give the level of commitment the project required; and moving jobs or leaving teaching altogether.

<u>What enables effective recruitment and retention?</u>

The Project Manager felt that, despite the challenges with recruitment, the fact that so many ECTs initially signed up to the project suggested that the project's communications plan had been effective:

> The overall numbers we have reached were good, which suggests that we were successful in getting the messages out and that these messages were pitched well. All the feedback we've had is that we are fulfilling a need in the sector.

Responses from the coaches suggested that **teaching schools were able to utilise their links with other schools**, as well as their knowledge of local challenges, to effectively sell the project to eligible schools. Teaching schools had also adopted a **targeted approach** to the recruitment of schools, which was reported to have worked well. However, given the earlier point made by one coach who suggested that participating schools were generally those that regularly accept teaching schools' offers of support, it is also possible that this targeted approach resulted in some hard-to-reach schools being missed.

Teaching schools used a variety of mechanisms to promote the project, including word of mouth, newsletters, leaflets, and social media such as Twitter. Schools were said to be attracted by the project's promise of delivering 'local solutions to the needs of local ECTs', and the fact that the support was delivered by local teaching schools.

The Project Manager agreed that teaching schools had been instrumental to the recruitment of many ECTs to the project:

> The most successful route [to recruitment] was working with teaching school hubs. Their local voice was most powerful in reaching schools. Those who had the best, closest networks with their schools were the most successful. They know who the most likely person to pick this up is and can target them accordingly.

Factors that enabled retention were harder to identify. It was clear from the case-study ECTs that they valued the one-to-one support provided by specialist coaches (see Section 3.1), and it seems reasonable to hypothesise that, where these relationships were able to develop, this would have encouraged ECTs' ongoing participation in the project. In addition, some ECTs appeared to have found the time demands of the project more manageable than others. It is not entirely clear what accounted for this variation. It may be that differences in the support offered by ECTs' schools played a contributing factor, although the apparent lack of engagement between senior leaders and their ECTs (see Section 4.4.2) suggests that differences in the commitment of participating ECTs, and the priority they gave the project, may have been a greater factor.

3 Delivery and implementation of learning

3.1 Progress in delivery

Delivery, which started in early 2019 and concluded at the end of March 2020, consisted of a four-term professional development programme, tailor-made for ECTs. It was delivered through a number of different strands of activity, described below.

3.1.1 Residential events and one-day workshops

Engagement with the residentials and the one-day workshops was reported to have been good, with many case-study ECTs reporting that the one-day workshops were one of the most useful and impactful components of Accelerate.

Participating ECTs were expected to start the project with a regional two-day residential event[13]. This was followed by three further locally held one-day workshops, which focussed on the key content of the learning modules.

Due to the extended window for recruiting ECTs, the timeline was changed so that the first one-day workshop was held before the residentials. Two residentials were due to take place in March 2019, but an additional residential was held in April 2019 for those participants who joined the project later on. These events (the residentials and the one-day workshops) were used to cover the first four of the project's five main modules (see description of the modules in Section 1.1, and the specific modules covered by each event in Table 1 below). In addition, all five modules were covered as part of the online resources, which are described later in the report.

Table 1 Sequence for residentials and one-day workshops

Activity	Month	Modules covered
First one-day workshop	February/March 2019	1
Residentials	March/April 2019	1 and 2
Second one-day workshop	September/October 2019	3
Third one-day workshop	January/February 2020	4

The delay to the start of the project meant that module 5 (the in-school research project), which was always optional, was not undertaken before the project ended in March 2020. However, EdDevTrust kept the online modules open to the end of the 2019/20 school

[13] ECTs were expected to attend one of three events held in Birmingham, Manchester and London.

year to allow ECT participants access to resources that would allow them to complete the in-school research module, if they so wished[14].

All but two of the ten case-study ECTs reported they had attended one of the two-day residentials and had enjoyed them. Analysis of the survey data confirmed that engagement[15] with the residentials was generally good, with 75 per cent of respondents reporting they had accessed this support. Of these, 17 per cent reported the provision had 'moderately' met their needs, while 64 per cent reported it had 'fully' met their needs (see Appendix H). Where case-study ECTs had not been able to attend the residential, this was due to staffing constraints within their settings. One ECT's summary of the residential was typical of comments made by the others: 'I found that really interesting and quite exciting, because it reinforced why I wanted to do the course in the first place'.

Analysis of the survey data suggests that proportionally more ECTs engaged with the one-day workshops than the residentials, with 90 per cent of respondents reporting they had accessed this support. Of these, 27 per cent reported the provision had 'moderately' met their needs, while 57 per cent reported it had 'fully' met their needs (see Appendix H). When they did engage, case-study data suggests that the one-day workshops were effective. They were attended by all of our ECT case-study interviewees, and many regarded them to be one of the most useful and impactful components of Accelerate. The workshops covered a range of topics that were aligned to the online training modules, such as retrieval practice, instructional design and behaviour, as illustrated by these quotes:

> I would say the workshops and the information covered on the residential were the most effective parts of the programme, because the [programme material] was presented in a nice, easy to understand way, and it tied in well with the online work as well.

> The one-day workshops were very effective because they're focused on one module so although it's a lot of information, it's a lot of constructive information around the one thing that you're focusing on.

> I went to the one-day workshop on cognitive load[16] and that was really, really good. It was quite small groups and you had a mix of primary and secondary there, which I thought was quite nice. The

[14] Any ECTs who participated in module 5 would have done so after the endpoint survey and telephone interviews were undertaken, meaning we were unable to report on this aspect of the programme.
[15]Respondents answering the endpoint survey who reported they were involved in the different strands of the programme were asked to rate the extent to which the provision met their needs on a scale of 1 to 8 where 1 was 'Not at all' and 8 was 'fully'. The scale was subsequently collapsed into four categories as follows: 1-2 ('Not at all'); 3-4 ('Somewhat'); 5-6 ('Moderately'); 7-8 ('Fully').
[16] Cognitive load theory, first researched by Sweller (1998), is based around the idea that working memory – the part of the mind that processes what we are currently doing – can only deal with a limited amount of information at one time. The data generated by cognitive load theory indicates that, in order to reduce working memory load and facilitate transfer of domain-specific information to long-term memory, instruction provided by teachers should be explicit and detailed.

> day was crammed full of information, loads of stuff to take away and loads of team activities that you could take away as well. I like that it was really grounded in research, because I do like reading around. It was a distillation of all the best research out there that was available.

Others enjoyed the opportunity to network and to share ideas with other teachers at the workshops, as illustrated by these quotes:

> It has been nice to speak to other people and to bounce ideas off them and to think, 'I could do this', and evaluating ideas better…It's been great to share good practice. That has probably been the most positive part [of the programme], sharing good practice at the workshops.

> I think I have gained most from the one-day workshops. Just actually going and talking to other professionals has been really useful.

One of the coaches interviewed had been asked to support one of the residential events. He described receiving very positive feedback on the event from ECT participants, and he emphasised the importance of the informal networking opportunities with other ECTs that these events provided, as well as the value of the supporting documentation available on the online platform. One ECT queried whether the residential was too long, and suggested most of the content could have been covered in one day:

> It was nice to get away, but I didn't know if it was necessary. I have my own family, I have two children, and I didn't feel that I needed to be there for two days.

Representatives from the DfE attended and observed a residential in March 2019 and one-day workshops in October 2019 and January 2020. Their summaries of the events are presented in the boxes below. The residential and October 2019 workshop were both rated by the observers as 'excellent' overall, while the January 2020 workshop was rated as 'satisfactory'.

Residential (March 2019)

This two-day residential for teachers early in their career comes near the start of the project, which set up how they are going to develop over the following year. The project continues with activities based on a blended learning approach including regular face-to-face sessions through regional hubs, online learning, Iris video system of classroom delivery and regular coaching.

The whole project is focused on improving classroom practice establishing these teachers as effective and confident practitioners. This residential day I attended covered a range of challenging input around classroom practice, introduction of theories like Cognitive Load Theory and pupil motivation; and introductions to instructional coaching.

The sessions varied in their nature from keynote speeches to interactive discussions. Facilitators were well prepared, with appropriate background knowledge and several were still classroom practitioners, which brought credibility. The sessions were organised in phases (Early Years, Primary and Secondary) to assist discussion and networking support.

Organisationally there was seamless coordination between EDT and the Chartered College of Teaching, which was leading on delivering most of the content and the associated online resources.

There was a vibrancy about the day as it focused on helping the participants to be better teachers and make the job more manageable.

The day largely met the outcomes for this stage of the project.

The workshop successfully met the outcomes set for this stage of the project and the needs of the participants on the day.

One-day workshop (October 2019)

This event was the third workshop day linked to Module 3 of the project focused on Designing Effective Learning.

Attending were ten participants, two Facilitators, a new Head of the Hub, a representative from EdDevTrust and a representative from the Chartered College of Teaching (CCT) who had been involved in the creation of the project content and was about to go back into teaching.

The newly appointed Hub lead introduced the day, setting the scene well from a learning and safety point of view. The CCT representative reminded participants that they were made members of CCT as part of the project.

The two facilitators led all the sessions during the day with colleagues from EdDevTrust and CCT supporting as appropriate. Both were highly experienced as facilitators, well prepared and knowledgeable around all the subject matter. This experience contributed significantly to the success of the day. Both facilitators reported they had been well supported by EdDevTrust through training for each aspect of the project they helped deliver. They thought the facilitator training was well constructed and gave them the depth of knowledge they needed to deliver. The content writers delivered the training. The facilitators reflected that they were careful about the use of theory, not wanting it to be seen as the next trendy thing and that the focus was more about delivering learning opportunities focused on the needs of the participants. This approach was borne out by the quality of the delivery. The two facilitators, who had only met that day for the first time, worked cohesively together supporting each other with practical examples of concepts being put over. A further skill they used was to boost the self-confidence of these Early Career Teachers (ECT) by reinforcing the commitment the school had made to them, as effective teachers, to be on this project. This was particularly important as they all came from schools in challenging circumstances. The consistent message was ‘You are here because you will make a difference to your school- that is why you were sent.’

The content of the day was cleverly created and linked back to, and built upon, the previous learning and sessions. The sessions were as follows:

- Session 1: instructional strategies for novice learners.
- Session 2: effective questioning.
- Session 3: retrieval practice.
- Session 4: independent practice, spacing and interleaving.

The content modelled the process that teachers could use back in the classroom. The method of skillfully challenging pre-conceptions then gradually revealing another possible way of looking at a learning situation allowed participants to experience it for themselves ahead of considering how they could do the same in their own classrooms.

The workshop successfully met the outcomes set for this stage of the project and the needs of the participants on the day.

One-day workshop (January 2020)

This was the final face-to-face workshop for the cohort. There were three main sessions for the day covering ‘Principles of Assessment’, ‘Feedback’ and ‘Responsive and Adapting Teaching’. Participants were also encouraged throughout the day to consider completion of the 5th optional module and thinking about possible research activity that they could use to evidence the need for change within their schools.

A workbook was provided to participants to support delivery on the day including exercises and notes pages. The workbook also contained a “Coaching Rubric” for post workshop activity and consideration during follow up coaching sessions.

The trainers for the day were good at talking around their subject, but missed the opportuning to focus table discussions when they travelled off topic. On occasion they failed to pull tables back successfully to the main session when exercises were complete, which may have been distracting for other participants.

3.1.2 Expert guidance through specialist instructional coaching

Amongst our case-study sample of ECTs, the coaching sessions were viewed as one of the most useful components of the project. ECTs valued the opportunity to discuss and reflect on their practice with an experienced external teacher, safe in the knowledge that these conversations were confidential and entirely developmental in nature.

Specialist coaches had a remit to support ECT participants throughout the project on a one-to-one basis, guide online conversations, and run short local workshops each term to bring participants together. The intention was that coaches would focus on deliberate practice – getting results by focusing on a targeted area and working towards specific, well-defined goals.

Accelerate coaches were required to have been teaching for at least five years or have been National College of Teaching and Leadership (NCTL) designated Specialist Leaders of Education (SLEs) for at least one year. Of the 20 coaches we interviewed, two were retired (one was a retired secondary senior leader, and one was a retired primary senior leader). The other 18 were practising. Seven were primary senior leaders, five were secondary middle leaders, three were primary middle leaders, and three were secondary senior leaders. All 20 reported having prior experience of coaching and/or of supporting staff in other schools and met the Accelerate selection criteria.

The original intention was that some 150 coaches would be required, with each supporting about ten ECTs. However, challenges with recruitment and retention resulted in fewer ECTs participating in the project (see Section 2), and data collected by EdDevTrust suggested that, by November 2019, some 120 coaches were in post, with each supporting between three to six ECTs. The coaches we spoke to confirmed that these ratios were broadly correct.

Engagement with the coaching strand of the project was very high amongst our case-study sample of ECTs, with all of those interviewed reporting this had ultimately been successful. However, analysis of the survey data suggests that, at a project level, engagement was lower, with 71 per cent of respondents reporting they had accessed this support. Of these, 24 per cent reported the provision had 'moderately' met their needs, while 51 per cent reported it had 'fully' met their needs (see Appendix H).

Amongst our case-study sample of ECTs, the coaching sessions were viewed as one of the most effective components of the project, alongside the one-day workshops. Typical comments included:

> The coaching has been amazing.

> It's nice to talk to someone with her experience and then to get her expert feedback.

> It's helped me, just going through and talking to someone who is more senior, who is more experienced and who has observed many people. It just builds your confidence.

ECTs also liked the fact that the coaching conversations were tailored to their specific needs and situations, as illustrated by the following quotations:

> The coaching is tailored so the conversations can go the way they need to and the programme itself is clearly targeted at teachers in the first five years of their career, so it's more advanced than teacher training or an NQT year.

> …because I have explained my situation to her…we have really tailored what we are talking about to fit me, and it has given me the opportunity to think, right, what can I get out of this?

All but one of the ECTs we spoke to as part of the case studies reported that their coaches had been able to visit them and observe their teaching, which had been helpful in developing the relationship and in tailoring the support provided:

> It has been really useful for the coach to come and actually see my classroom, see my pupils, because then she has a better

> understanding of the place I work in. She was really good, because even though she helped me evaluate and talked me through things, she wouldn't give me answers, I had to find them for myself and she really encouraged me.

Most of the ECTs and coaches in our case-study sample appeared to have spoken once or twice each half term. In most cases, face-to-face conversations were supplemented by video and telephone calls, as well as by emails, resulting in regular, effective and responsive communication. However, while this was the case for the ECTs we spoke to, some coaches reported they had experienced problems contacting their other ECTs, some of whom had subsequently dropped out of the project. This was a problem the Project Manager was aware of and, as a result of a lack of contact from some ECTs, EdDevTrust had established a series of cut-off points, after which ECTs were automatically withdrawn from the project. Speaking in October 2019, the Project Manager explained:

> The first cut off was whether we had any real interaction from ECTs at the end of last academic year [2018/19], as we needed to let coaches know who they were working with in September [2019]. So we are doing this on a rolling basis. At the start of each term we are checking who is engaging [with the online material, to events, contact with coaches]. Those who haven't done any of these things will be withdrawn.

ECTs commented on coaches' willingness to travel to meet them in their school, which the ECTs appreciated and which appears to have generally worked well. For their part, coaches reported they were flexible about how and when the meetings took place (for example in the evenings or within school time), and that this was something they had discussed with their ECTs.

While the ECT/coach pairing process generally appeared to have worked well, one ECT reported experiencing a three-month break in coaching support, owing to her first coach dropping out of the project, and it taking a while for a replacement to be found:

> I had a coach who I met last summer, but she had to drop out. They [the project organisers] said that another coach would get in touch with me, but I didn't hear anything. I contacted them and they chased it up, but it was another three months before I finally got another coach.

The first meeting between coaches and ECTs was focussed on getting to know one another. During our first interviews with coaches in July 2019, coaches described spending some time in the classroom with their ECTs, but stressed that these were not 'formal observations'. As one coach described: 'It's very much about them [the ECT]

saying where they felt their areas of development were and us discussing what the next steps should be'.

The plan was that for each subsequent module, the coach would undertake one face-to-face meeting with the ECT, followed by three coaching conversations (online or over the phone) and a group workshop. The evidence from our case-study interviews is that, in most cases, these meetings appear to have taken place.

The general format for the discussions was that ECTs would identify the areas they wanted to focus on and then the coach would suggest a series of targets and activities, as one ECT explained:

> We look at the rubric[17] together and talk through different areas that I would like to work on. Then [name of coach] will suggest ideas for targets and we will mutually agree on them.

Case-study ECTs particularly valued the opportunity to record themselves teaching and then watch this back with their coach and evaluate their performance. For many ECTs this was the first time they had ever reviewed their teaching in this way, and it was reported to be a powerful tool for self-reflection and learning. However, as noted earlier, some ECTs were unable to, or did not want to, record their teaching and this was reported by some coaches to have contributed to some ECTs dropping out of the project (see Section 2.1.1).

EdDevTrust confirmed that 36 per cent of ECTs across the project were paired with a remote or virtual coach (i.e. someone not based within a reasonable travelling distance). The one ECT who was paired remotely in our case-study sample found that this approach worked, but they thought the experience would have been better still had they been able to meet face-to-face:

> I feel it would have been better to have someone close by to see what was happening in the classroom. Because the camera only picks up a certain snapshot, a certain angle of the classroom, I don't feel that everything was captured [for the coach to see].

It is perhaps worth noting that, in light of the Covid-19 pandemic, which emerged after these interviews were undertaken, the fact that this coaching model can work remotely perhaps takes on additional importance. Indeed, remotely delivered coaching may offer better promise in terms of both the sustainability and scalability of this model.

Two coaches made suggestions for improving the impact of the project with: a follow-up review session between the ECT and coach three to six months after the end of the project to support implementation of learning; opportunities to observe longer (than the

[17] A scoring guide used to evaluate the quality of pupil learning and teacher instruction. It was used by ECTs and their coaches to track ECTs' progress as they developed their teaching skills.

recommended 10 minutes) snapshots of the ECT's classroom teaching practice to take a broader view of their needs; and greater coordination of the project with in-school support structures and processes.

3.1.3 Blended learning involving face-to-face training and online modules

The online modules were met with a mixed reaction from case-study ECTs. Some reported that the quality of the resources was very high, the pacing of the videos was appropriate, and the functionality of being able to access them as and when they wanted was very useful. However, others found the content too detailed and time consuming, or difficult to navigate.

Online modules were designed to guide participants' practice and prompt reflection on development, providing practical video examples, activities and resources tailored to different subject areas and phases. With core content as well as 'advanced' modules, Accelerate's evidence-informed training materials were subject- and phase-specific, and so were designed to be directly relevant to individual ECTs' practice.

The Project Manager provided a useful overview, and confirmed that the online content was 'unlocked' in sequence with the residentials and one-day workshops:

> There is some directive study, suggested reading, video content [talking heads or examples of teaching practice], pop quiz type components/formative assessment. The ECTs do a self-assessment at the start of the course, and then revisit this at the end. Modules are unlocked as they progress through the project.

One coach remarked that the online platform had the potential to be a very powerful tool, offering off-the-shelf solutions and approaches for ECTs:

> I don't know where else you would have a bank of video exemplars of top quality practice on such a range of subjects that you can literally just go into and pick up.

ECTs' views on the online platform were more mixed. Some valued the wealth of information that had been made available:

> There is so much up-to-date information available to you while you are on the Accelerate course. There is so much information, which is great. I have started downloading quite a bit of information, so those that I'm not able to read at the time of the module, I've stored them so I can read them at my leisure.

However, others found the content too detailed and time consuming or difficult to navigate:

> The online platform is not the easiest thing to navigate. It does take quite a lot of time to sit down and navigate it.

> The online element has been difficult and I don't think it has had much impact. This is due to the time that is needed to access it.

As a self-study resource, the online modules required ECTs to set-aside sufficient time to engage with the materials. In an effort to avoid the online resources 'becoming too overbearing', the EdDevTrust did not make any of the content mandatory. However, some ECTs still appeared to struggle with the self-study component of the project, and/or found that they were not engaging properly with the content:

> I learn better [through interacting with others], than by accessing the online content. With the online tool it's very easy just to flick through if you want to, and you end up skimming through it.

Analysis of the survey data suggested that engagement with the online modules and online resources/materials (the latter including links to websites, videos, blogs and teaching tools) may have been higher than that presented in the case studies, with 89 per cent of respondents reporting they had accessed each form of support. However, compared to some of the other forms of provision, the degree to which these strands met individuals' needs was reported to be relatively low. Of those who reported accessing this support, 36 per cent reported the online modules had 'moderately' met their needs, while 33 per cent reported they had 'fully' met their needs (see Appendix H). Similarly, 35 per cent reported the online resources/materials had 'moderately' met their needs, while 36 per cent reported they had 'fully' met their needs.

One ECT remarked that he thought there was a lot of repetition between the workshops and the online modules. He suggested that, while this might be helpful for those who missed the workshops, the online modules added very little value if you had already attended the face-to-face workshops:

> There is quite a lot of repetition of what is in the workshops but I imagine that if people don't get to the workshop, it's all there for them. But when I have done them [workshops] I go on there thinking there will be something extra and it's usually actual articles or the actual information that you can refer back to, but some of it has felt like repetition.

However, another ECT found it helpful that the two strands of the project were so closely aligned:

> The online modules are set out in a way that means you can easily pick them up after the workshop, and it's good to go back to sort of verify yourself. It's all there on the platform, which is great.

The overarching message from our evaluation of this and the other project components was that the elements of provision requiring self-study had lower levels of engagement than the taught elements. However, this did not mean they were not valuable, and indeed it was clear that some ECTs appreciated the opportunity to explore particular areas in more depth.

3.1.4 Peer-to-peer support through communities of practice (CoPs)

The networking facilities offered by Accelerate appeared to be one of the main strands of the project that participants engaged with the least. A variety of views were expressed by interviewees as to why this was the case, including the time/workload commitments of ECTs and the perception that, compared to the other forms of support offered by the project, peer-to-peer support was optional, or the least important.

Accelerate was designed to provide participants with the opportunity to link up with fellow ECTs through the project's local coach-led CoPs. These constructive networks were designed to provide a framework for collaborative and supportive peer review and to offer a fresh perspective beyond participants' own school as well as a unique opportunity to learn. It was intended that face-to-face activity would be offered as locally as possible within regional hubs to minimise time out of school. However, the Project Manager confirmed that, in the end, most of the interactions were undertaken via the online portal:

> We put ECTs into subject groups. They could be anywhere in the country. They get little prompts as discussion aids…The fact that most of these interactions take place online is why the face-to-face workshops are so important. At these, we deliberately encourage them to sit with different groups of people, thereby maximising the opportunities for participants to broaden their networks.

Analysis of the survey data confirmed that engagement with peer-to-peer support was relatively low, with only 40 per cent of respondents reporting they had accessed this support. Of these, 35 per cent reported the provision had 'moderately' met their needs, while 25 per cent reported it had 'fully' met their needs (see Appendix H). A variety of views were expressed by interviewees as to why this was the case. The time/workload commitments of ECTs was one factor (see also Section 3.3.2), while others suggested that, compared to the other forms of support offered by the project, this strand of support was perceived to be optional, or the least important. This view was supported by the Project Manager:

> There has been variation in their use. It is down to individuals to decide if this is for them. It depends on how motivated the participants are.

Two ECTs reported that 'resources' had to be produced as part of a discussion, which they found to be unnecessarily burdensome:

> The forums [haven't been very successful] because I seem to have engaged well [with the project] without having to participate in them. I do understand why they are there and I think the option of them being there is fine, but I think trying to get us to produce resources just for that is the one thing I would change.

> You are signed up and then you have to introduce yourself on the forum and everything that you learn you have to post what you have thought about the module or some reflections on this forum space. I don't know how effective that is or if it's just a tick box rather than getting anything out of that.

Another ECT reported that he had not been able to engage with the peer-to-peer support because the timing of the meeting did not fit with his other work commitments. He suggested that had he had advanced notice of the requirement to produce a resource for the group meeting, he could have prepared it in advance:

> I haven't been able to attend, because I didn't have time to create a resource which I needed to share. I didn't have time to create the resource then and I haven't remembered to go back and do it. Had I known in advance that I would need to create a resource, I would have prepared it earlier.

One ECT who had been involved in coaching calls and online discussions reported he had found them useful:

> I have been involved in coaching calls and online discussions, which have also been really helpful because with the online discussions you talk to other teachers around the country and you kind of get a picture of what other schools are like, which is quite useful.

As confirmed by the Project Manager, most of the group interactions were undertaken online. It is not clear from our interviews to what extent face-to-face activity was offered, but at least one ECT reported that the people he spoke to online were not located in easy travelling distance from his school, making follow-up face-to-face meetings impractical.

In summary, it seems that the requirement to produce resources for discussion was one of the elements of the Accelerate project that ECTs found the least appealing.

3.1.5 In-school support to build schools' capacity and sustainability for success

While survey evidence suggests that some ECTs had received additional support from in-school mentors, there was no evidence from our case-study interviews that in-school mentors or senior leaders were being actively supported by the project, as was intended.

The original project design involved participating ECTs receiving support via a nominated in-school mentor, with the aim being that the mentor would align ECTs' professional development with their school's culture (see Appendix A). Additional support materials were also due to be provided for school leaders and, where participating ECTs were in their induction year, to their in-school mentor. It was also intended that in-school mentors would be supported to deliver effective mentoring, teacher professional development and instructional coaching, while school leaders would be able to access specialist training in the use of research and evidence in school and support teachers to do the same.

In a departure from the project Theory of Change, the Project Manager confirmed that the focus of this strand of the project had been to maintain schools' involvement and support for the project, rather than to train or upskill staff. The Project Manager commented:

> The more they understand about it [the project], the more likely they will support the process. We are trying to introduce some of these concepts to the senior leadership teams so that we're not just relying on the ECTs to bring these ideas back into school.

The main mechanism for working with ECTs' schools was the provision of a regular newsletter, which updated senior leaders on 'where the programme is, and what is expected of participants during that term', together with access to online materials, similar to those available to ECTs.

Analysis of the endpoint survey responses suggests that 20 per cent of ECTs received support from a nominated in-school mentor and that, of these, 27 per cent reported the provision had 'moderately' met their needs, while 51 per cent reported it had 'fully' met their needs (see Appendix H). However, there was no evidence from our case-study interviews that in-school mentors or senior leaders were being actively supported by the project. For their part, most of the ECTs had received only limited support from their senior leaders (see Section 4.4.2), and none had received support from an in-school mentor, including the three that were in their induction year at the start of the project.

3.2 Progress in the implementation of learning

The Accelerate project provided opportunities for learning to be implemented through its provision, but did not offer structured school-level support. It did this by offering a tailored approach to the implementation of learning, led by the coaching conversations between ECTs and their expert coaches. This was a key feature of the design of the project, and, for those participants who were able to find the time needed for the coaching conversations to take place, was reported by ECTs and their coaches to have worked well (see Section 3.1).

The ECTs implemented a range of teaching practices, including retrieval practice techniques such as interleaving and cognitive load theory:

> We are doing a lot of interleaving now, so we are spacing out and doing quizzes. Low stakes high impact quizzes and the children really enjoy doing those, because they don't realise they are doing them. But it also means that I can get an idea about what has been learnt.

> [Prior to Accelerate] cognitive load theory was something I'd never really heard of. Now I always have it in the back of my mind when I'm presenting resources to my pupils. That has changed a lot of the way I present my resources.

> There are things that I have taken from retrieval practice techniques, like using half termly quizzes, which I now use with my pupils.

In addition, while there was limited evidence to suggest that ECTs had shared their learning from the project with senior leaders (see Section 4.4.2), all but one of the ECTs we spoke to reported that they were **sharing project materials and learning with colleagues in their department or key stage**. This had led to discussion and reflection about teaching and learning practices and, in at least two cases, different approaches had been tested or adopted by other teachers. For example, in one secondary school, a different approach to questioning techniques had been adopted on the back of the ECT's recommendations, whereby pupils' answers had been selected at random to be read out to the whole class. This was reported to have both increased the quality of pupils' work, as they knew there was a chance their work could be shared with their classmates, while also boosting the confidence and self-esteem of those pupils whose work was read out. In another school, a primary, the ECT had worked with a colleague to revise the way they taught number bonds. This was filmed, using Iris Connect[18], and shared with the other teachers in the school, and served as an effective example of how spacing and interleaving could be used to good effect. However, at the time of the interviews, these

[18] A video-based professional learning platform.

different examples of changes in school practice all appeared to be localised, or adopted by just a few teachers, rather than as part of a coordinated effort to bring about whole-school change.

3.3 Challenges and enablers in effective delivery and implementation of learning

Research participants reported experiencing a range of challenges and enablers to the effective delivery and implementation of learning. These are grouped under the headings below.

3.3.1 Factors related to the provider/provision

As the Project Manager explained, **one of the key elements for the success of the project was the delivery partners** that EdDevTrust and CCT engaged (which, for the most part, were teaching schools). This included their role in recruiting participants to the project, as well as their role in providing coaches and leading local delivery:

> This starts with recruitment. They have the links and the knowledge, and that is very powerful. Schools are so busy. Early career teachers are not good at checking emails. When someone from the teaching school emails a teacher, they take note and reply! These people can help support schools to 'work through the noise', and draw them to this intervention.

Some ECTs reported that **one of the enabling design features of Accelerate was that it offered them flexibility,** both in the timing of, and intensity, with which they engaged with the project materials and coaching conversations, but also in how they applied this learning to their own practice. This allowed them to schedule the work around particularly busy periods:

> What has been good, is that if you don't complete a module or hand something in you're not off the course. You are able to engage as much as you are able to at the time. Things just roll on and you are able to dip in and out as much or as little as you are able to.

> I like the fact that I don't have to rigidly do an hour a week, I can pick and choose when I do it. And the flexibility of the coach. We've had phone calls at 6, 7 at night, because that's suited us both rather than trying to fit it in to the school day. And them recognising that we're in a demanding job so they don't expect this to be done overnight.

However, at least one ECT found this flexibility, or more specifically the lack of deadlines, difficult to manage, and would have preferred more structure:

> I have found it difficult to manage in terms of there being no deadlines. I don't work without deadlines. If I don't have a deadline, I don't do it. That's just how my brain works, I don't see the need to finish it.

The comment above also suggests that some ECTs needed their coach to work with them to establish their preferred approach to learning and to work out the extent to which independent learning would work for each individual.

One of the key elements for the successful implementation of learning was Accelerate's model of 'learn-try-reflect'. This provided the framework for participating ECTs to put their learning into practice, while the one-to-one support provided by specialist coaches provided a safe space for ECTs to ask questions, hone their skills, and develop their understanding.

Indeed, the role of the coach was key to the successful delivery and implementation of the project. This started with **effective training**. All of the coaches reported having undergone one full day's training at one of several different locations, which had provided an introduction to the project, to instructional coaching, to the coaching cycle, and to the evidence supporting instructional coaching. The coaches were generally very positive about this, reporting that it had prepared them well for the role, as illustrated by the three quotes below:

> The training was really clear. They gave you lots of opportunities during the day to think things through and to come back to things if you weren't sure about them. It prepared me well for the role.

> People came away from the training feeling really confident. They knew exactly what was expected of them and what participants would be going through, so that was really positive.

> By the end of the day I felt quite confident that I had the background knowledge to explain. I found the skills of guiding and coaching rather than telling people what to do, especially helpful.

Some, but not all coaches, reported that, as part of the training day, they engaged in **role play or modelling exercises. Where these took place, they were said to be very helpful**, but those who did not engage in these activities said they would have liked the opportunity to do so. One coach, who was the only one in our sample who reported that she had not undertaken coaching before (but had experience of supporting staff in other schools), reported that she found the training useful, but brief, and would have benefitted from taking part in the kinds of role play activities that other coaches had experienced:

> Having not coached before, it was interesting to hear how it's meant to be done, but there's a lot to be said for doing something rather than having it talked about – I think you learn to do it once you start doing it. It was a good, but quite brief introduction to coaching.

Coaches reported that **ongoing support from their own supervisors** (typically senior teachers based in teaching schools, who were recruited by the project) **had been helpful in ensuring that they in turn were effectively supporting their ECTs**, with semi-regular video and/or telephone calls taking place. This was an opportunity for coaches to discuss what was working well on the project, together with any issues or challenges. One coach, who had experienced problems trying to engage some of his ECTs, reported that he had found these conversations reassuring: 'It gives me some validity that it's not me doing something wrong'.

Some ECTs and coaches reported that the project felt **rushed and that this was a barrier to effective delivery**. The extended recruitment period, and the resultant delay to support being offered to ECTs, led to a perception amongst some ECTs and coaches that they were 'behind' according to schedules presented at the beginning of the project. This appeared to have caused additional stress for some ECTs and coaches. For example, one coach reported experiencing a three-week delay between the timings of the initial training course and the participants' names coming through, which meant the learning could not be put into practice straight away: 'Like anything, if you learn something but don't use it straight away – or don't practise it – you lose it. I had to go back over the material when I finally got my first teacher'.

In terms of **helpful ongoing support**, the coaches reported that they had received support from the central Accelerate team in the form of email updates, as well as a monthly newsletter, designed to 'give us support in terms of identifying the upcoming priorities for participants as well as frequently asked questions'. However, one coach, interviewed in July 2019, reported that he felt 'left to get on with it' and said it would have been helpful if someone had followed-up to check on his progress:

> It would be nice to be asked how you're doing as a coach. I think at the start there was mention of having 'coaches for the coaches' but we've heard nothing more about that yet.

By contrast, another coach, who was also a hub lead, reported that he was providing support to other coaches, saying, 'they're in regular contact with me in terms of where they are with their participants'. The difference between these two views suggests there was some variation in the extent to which coaches were supported by their hub leads.

Where ECTs had been asked to **video their lessons**, this had been met with **mixed success**. In some cases, this appears to have worked well, with ECTs making the necessary recordings and coaches providing timely feedback. In other cases, ECTs had been unable to make the recordings, either due to problems with the recording

equipment, or because of data protection issues. Some coaches reported that these problems delayed the coaching process, as the recordings formed a key part of project delivery, particularly where support was being delivered remotely.

3.3.2 Factors related to the school climate/context

Some of the ECTs and coaches expressed concerns regarding **a heavy workload**. Some of these concerns were based on the demands of the project[19], while others, and particularly those from ECTs, were based on the challenge of managing the demands of the project alongside busy school workloads. The project appears to have suffered from considerable drop out (see Section 2.1), which appears to have been caused, at least in part, by ECTs feeling they could not find the time required to participate in the project. Perhaps not surprisingly, most of the ECTs we spoke to found the demands of the project to be manageable. Indeed, we were unable to speak to any ECTs that had left the project. However, ten survey respondents reported they had dropped out of the project early. Of these, most reported in response to an open response question that this was primarily to do with the challenge of managing the demands of the project alongside their own busy workloads. Of those ECTs we interviewed, some commented that they found the workload difficult, and/or that they had colleagues who had left the project because of challenges around their workload:

> There were four colleagues at my school on the programme and they all dropped out because it was too much work.

> Obviously the programme has been designed to help teachers stay in teaching and one of the biggest challenges we currently have is increased workload, and yet it [the Accelerate project] has just increased our workload more.

One of the direct consequences of ECTs' busy workloads was that some did not reply to the Accelerate team's or coaches' emails. This was a great source of frustration for both groups, and a problem to which there appeared to be no simple solution.

Some ECTs reported experiencing a **lack of support and/or engagement from their senior leaders** (see also Section 4.4.2). It is not clear whether this presented any obstacles to their participation in the project, but some ECTs felt that greater engagement from senior staff would have been a motivating factor, as illustrated by the following quote:

[19] ECT participants were originally forecast to receive 210.5 total training hours through the completion of five modules, including face-to-face events, online learning, coaching and peer community of practice meetings. It is not known how many training hours, on average, were actually delivered. However, the delayed start to the programme and ECTs' varying levels of engagement with the different project strands suggests the average number of hours delivered was lower.

> We have been left on our own with Accelerate. I know we have our coach but it's up to us to keep on track with everything. I don't know whether there was a way for the headteacher to check whether we are on track, but involving them further might have been beneficial.

It also seems likely that the sustainability of the learning and the ability of ECTs to implement what they had learned in their day-to-day practice was likely to have been constrained by a lack of SLT support.

In terms of the timing of the course, one secondary school **coach** reported that the summer term was a less busy time of year, as he had a lighter timetable due to examination groups being on study leave. The same coach said the autumn term would be busier, and that, as a result, he would need to manage his time more carefully. By contrast, a primary coach reported that 'trying to get into schools and trying to get out of my own school is really hard during the second half of the summer term'. These comments suggest that primary and secondary coaches faced different time pressures throughout the year.

4 Outcomes and impacts of the provision

This section considers the extent to which Accelerate achieved its intended project outcomes (see Appendix A and Table 2). It draws on survey data to report changes from baseline to endpoint on a number of measures and secondary analysis of SWC data to report changes in teacher retention and progression. These findings are supported by qualitative data, which adds insight into different stakeholders' perceptions of the outcomes of the project, and provides context for the interpretation of outcomes.

The analysis of impacts utilises a comparison group design. This enables us to estimate counterfactual retention outcomes for ECTs, and infer whether or not changes in teacher retention and progression might have come about in the absence of Accelerate. However, we did not adopt a comparison group design for the survey. We measured changes between baseline and endpoint in participants' views and experiences. This means that, while we can show an association between the project and observed outcomes, we cannot provide evidence to support a causal link. It is possible that any reported outcomes might still have come about in the absence of the project.

4.1 Context for interpretation of outcomes

Although we have attempted to collect comparable fund-level outcome data for all TLIF projects, in practice the projects' intentions, with regard to achieving these outcomes, differed. The Accelerate project attempted to achieve most of the fund-level outcomes, but not reduced exclusions/improved attendance, or improved school Ofsted ratings. This should be borne in mind when interpreting the outcomes reported in Section 4.3 below.

4.2 Context for interpretation of impacts

The Accelerate project attempted to achieve fund-level and project-level impacts to improve teacher retention and progression, and also improve pupil attainment. It is worth highlighting that pupil impacts are explored via teacher perceptions conveyed in survey responses, rather than attainment data, which was unavailable for the respective cohorts due to the Covid-19 pandemic.

4.3 Observed outcomes

In this section we use a statistical technique called factor analysis that summarises information from a number of items asked in both the baseline and endpoint surveys into a smaller set of reliable outcome measures. By exploring whether there are statistically significant changes in the mean scores of these factors between baseline and endpoint[20], we can explore whether the Accelerate project has had an impact on participating ECTs.

[20] Results were considered statistically significant if the probability of a result occurring by chance was less than five per cent ($p = < 0.05$).

This allows for a more robust and straightforward analysis than comparing single items from the surveys. The factor analysis is based on a matched analysis of the same respondents who answered at both baseline and endpoint. In instances where individual survey items were deemed to be particularly noteworthy, these are reported separately. Due to the relatively small underlying number of respondents in the matched analysis, it has not been possible to undertake subgroup analysis (for example to explore any variations in impact by phase or years in teaching), and some caution should be exercised in interpreting the findings. Further information about how the factors were constructed can be found in Appendix F.

The survey findings are supplemented with the findings from qualitative interviews with ECTs, their line managers and coaches, and the EdDevTrust Project Manager. These explored respondents' perceptions of the outcomes of involvement in the project on different stakeholder groups (ECT participants, other school staff and pupils) and on the wider school. We have extrapolated from both the qualitative and quantitative data to illustrate where there are indications of fund-level outcomes having been achieved, or not.

4.4 TLIF and bespoke project outcomes and impacts

The tables below detail the **outcomes** (most of which we expect to see earlier i.e. within a year of project involvement) and **impacts** (which will take longer to realise) that the Accelerate project intended to achieve. Outcomes and impacts are grouped together for each of the intended beneficiaries of the project: ECTs; schools; school leaders and mentors; and pupils.

Table 2 Intended project outcomes for ECTs

Theme	Outcome or Impact
Subject/phase knowledge (key competency)	Outcome
Subject/phase pedagogical knowledge (key competency)	Outcome
Knowledge of engaging and managing pupils (key competency)	Outcome
Knowledge/understanding of using evidence to inform practice (key competency)	Outcome
Participants collaborate to improve their teaching practice	Outcome
Increased demand for career-long CPD	Outcome
Improved teacher self-efficacy	Outcome
Positive changes in teachers' practice	Outcome
ECTs able to manage workload and wellbeing	Outcome
Support improves motivation and confidence	Outcome
Networks reduce feelings of isolation	Outcome

Table 3 Intended project outcomes and impacts for schools

Theme	Outcome or Impact
Continued demand for CPD (sustainable change)	Outcome
Continued availability of high-quality CPD and capacity to deliver within schools (sustainable change)	Outcome
Teachers' satisfaction and motivation for teaching	Outcome
Culture of coaching embedded	Outcome
Improved perception of mentoring provision from teachers within participating schools	Outcome
Schools offer career progression in mentoring roles (schools recognise mentoring as a viable route by which teachers can advance their careers)	Outcome
Increased knowledge of evidence-informed practice across participating schools	Outcome
Greater demand for mentoring support in schools	Outcome
Improved retention of NQTs/early career teachers	Impact
Improved progression of early career teachers	Impact

Table 4 Intended project outcomes for school leaders and/or mentors

Theme	Outcome or Impact
Mentors who are developed become instructional coaches for future cohorts of ECTs	Outcome
Motivation of mentors/likelihood to stay in profession	Outcome
Commitment of senior leaders to developing ECTs and ensuring their professional development needs are met	Outcome

Table 5 Intended project impacts for pupils

Theme	Outcome or Impact
Increased pupil attainment at KS2 and GCSE	Impact
Improved pupil social mobility via exploring the attainment of pupils eligible for free school meals (comparing the attainment of pupils in intervention schools to comparison group schools)	Impact

The following sections reflect on these outcomes thematically, and draw on factor analysis, which was conducted in two stages. First, it was conducted on the core question items that were asked of all respondents in exactly the same way. This resulted in Factors 1 to 4 (see Appendix F) for all respondents. Second, it was conducted on core question items that covered consistent themes, but where the wording, or the inclusion, of items varied slightly depending on the role of the respondent (i.e. whether they were a class teacher, middle leader or senior leader). This resulted in Factors 5 to 8 (see Appendix F). The Accelerate project included questions for classroom teachers, middle leaders, and senior leaders, although given respondents' status as ECTs, most of the respondents fell into the category of classroom teachers. Therefore, factors relevant to this report are 1-4 (based on all respondents) and 5-8 (based on responses from classroom teachers only). A detailed description of the factor analysis undertaken can be found in Appendix F, and the summary results are shown in section 4.4.2 and Table 7 below. Insights from the interviews with project participants, non-participants and the EdDevTrust project manager are summarised alongside those from the quantitative data.

4.4.1 ECTs' views on key outcomes related to the aims of the Accelerate project

The baseline and endpoint surveys included questions/items that directly related to the aims of the Accelerate project. These items explored ECTs' views on a range of issues which are detailed in the table below. The table also highlights where there was a statistically significant change in the findings between baseline and endpoint.

Table 6 ECTs' views on key outcomes related to the aims of the Accelerate project

Item	Mean score Baseline	Mean score Endpoint	Mean score Change	N	Statistically significant change (p = < 0.05)
Confidence to communicate to pupils expectations regarding their behaviour	3.02	3.13	0.11	94	No
Confidence to get pupils to follow classroom rules	2.72	2.83	0.11	94	No
Confidence to control disruptive behaviour in lessons	2.23	2.75	0.52	94	Yes (positive)
Confidence to effectively engage pupils in lessons	2.49	2.83	0.34	94	Yes (positive)
Confidence to collaborate effectively with other teachers in subject/key stage	2.76	3.06	0.3	94	No
I would like to take on additional responsibility/ career development in the next three years	2.69	2.65	-0.04	99	No
I plan to stay in the teaching profession for at least the next three years	3.14	2.84	-0.3	99	No
I have developed skills/approaches to help manage my workload	2.04	2.35	0.31	99	No
I am able to 'bounce back' when something stressful happens at school	2.14	2.31	0.17	99	No

Item	Mean score Baseline	Mean score Endpoint	Mean score Change	N	Statistically significant change (p = < 0.05)
My school leadership team is committed to developing early career teachers	1.81	1.89	0.08	98	No
There is a culture of coaching in my school	0.89	1.03	0.14	98	No
My pupils are making good progress	2.49	2.65	0.16	67	No
I know where to go for information and advice	2.17	2.3	0.13	99	No
I feel well supported	1.92	1.88	-0.04	99	No
I receive regular feedback on my performance	1.53	1.58	0.05	99	No
I feel able to ask for help/support	2.25	2.2	-0.05	99	No
I have access to useful teaching networks / communities of practice	1.12	1.69	0.57	99	No

Statistically significant changes were detected in items relating to ECTs' **confidence to control disruptive behaviour in lessons and to effectively engage pupils in lessons**. These are positive findings, although the case-study ECTs' accounts of the project suggested it had a broader impact. For example, in contrast to the survey findings reported above, coaches believed the support received by ECTs had made a positive impact on ECTs' sense of wellbeing. They suggested that it had been reassuring for ECTs to have a coach to talk to about any issues they were facing, without judgement or consequence. Equally, coaches and senior leaders suggested that the impacts of the support on ECTs' confidence in their teaching abilities was contributing to teacher wellbeing. As these coaches explained:

> I believe it has made a difference in the two ECTs that I am working with. Not just in their delivery but in their self-belief and self-worth in the classroom… Massively, because they are being given a voice. I do think it is going to help their wellbeing.
>
> I think her [the ECT's] mental wellbeing will improve because she didn't have someone at school to support her and now she does.

It is notable that there were no significant changes on any of the items related to ECTs' perceptions of improvements in **school culture, pupil progress or support**. Despite an initial aim of increasing senior leaders' commitment to developing ECTs, as well as developing a culture of coaching in schools, findings from the case-study interviews suggest there was little evidence that the project engaged senior school leaders or in-school mentors. Indeed, most ECTs generally felt that school leaders' engagement with the project was low, and that any impacts that the project had brought about were confined to the individual progress made by participating ECTs (see Section 4.4.2). As reported earlier, while some ECTs were able to point to specific improvements in their pupils' learning that they felt had come about because of changes they had made to their practice, many found it difficult to quantify this impact or felt it was too early for this to have a measurable impact on attainment. The lack of change in the items related to support is explained by the fact that most ECTs reported feeling well supported at baseline, leaving little room for improvement at endpoint.

4.4.2 Findings related to fund-level goals – outcomes

In addition to questions/items that directly related to the aims of the Accelerate project discussed above, cross-cutting fund-level factors were also created to explore the extent to which Accelerate contributed to fund-level goals. ECT respondents were asked to rate a series of items on a scale of one to eight, where one was 'Strongly Disagree' and eight was 'Strongly Agree'. The responses were then converted into a point score, with 'Strongly Disagree' being worth -4.0 points, and 'Strongly Agree' +4.0 points. Items were combined to produce a mean score, and compared between baseline and endpoint. To help interpret the mean scores, the maximum and minimum scores possible using this methodology were also calculated and are presented. The approach was repeated for the other factors in this section. For a full description of the analyses undertaken, please see Appendix F. A summary of the findings from the factor analysis is detailed in the table below. The table also highlights where there was a statistically significant change in the findings between baseline and endpoint.

Table 7 Findings from the factor analysis

Factor	Range Minimum	Range Maximum	Mean score Baseline	Mean score Endpoint	Mean score Change	N	Statistically significant change (p = < 0.05)
Personal knowledge for effective teaching	-12	12	7.31	9.18	1.87	68	Yes (positive)
Opportunities for career progression	-8	8	-0.25	1.51	1.76	68	Yes (positive)
Effectiveness of school leadership	-52	52	24.75	26.2	1.45	99	No
School teaching quality	-12	12	5.6	6.49	0.88	68	No
Effectiveness of school culture	-24	24	10.81	11.11	0.3	99	No
Effectiveness of professional development	-28	28	11.85	12.62	0.77	99	No
Motivation for professional development	-8	8	6.65	6.15	-0.49	99	No
Motivation for teaching-focused professional development	-8	8	5.79	5.31	-0.49	68	No

It is notable that there were significant changes in the factors related to ECTs' **personal knowledge for effective teaching and opportunities for career progression.** These were positive findings, and provided evidence in support of the project's Theory of

Change. A brief discussion of the qualitative findings, which help to shed some light on the findings from the factor analysis, follows in the sections below.

Personal knowledge for effective teaching

The findings from the case-study interviews with ECTs supported the survey findings - ECTs reported improvements in both their **confidence** and their **teaching practice**. The improvements in confidence stemmed from their growing repertoire of teaching skills and the opportunity the project created for ECTs to develop these skills with their external coaches in a safe, 'low stakes' environment:

> I would say I feel more confident in terms of the number of strategies I am able to employ. Be it behaviour management or workload. I have taken away quite a few things on that.
>
> It has developed my confidence…It's been nice being observed by some-one different, and it's been nice to have positive, low stakes feedback.

Impacts on teaching practice included greater awareness of new approaches to teaching and learning, and their application in the classroom, including retrieval practice techniques such as interleaving and cognitive load theory (see also Section 3.2). There was evidence that ECTs valued the research-based underpinnings of these approaches, and that they had become more 'research aware' as a result of their participation in Accelerate.

Only one of the ten ECTs we interviewed, a secondary teacher, felt that she had experienced only limited benefits from participating in Accelerate. She attributed this to having already had opportunities to progress quickly though her career, despite only being in her second year of teaching at the point at which she joined the project:

> Maybe if I wasn't second in department and I was still just a normal classroom teacher I might have benefitted more, because it could have helped me progress more. But I have already progressed pretty quickly through my career.

In addition, the ECT from the one special school in our case-study sample confirmed that the project had imparted guidance and skills that were relevant to a special school setting, while also providing opportunities to share learning on special needs and behaviour with colleagues in mainstream settings:

> I had reservations that it would be very mainstream, but actually, I have been able to incorporate special needs teaching into this very easily. In some ways I have been able to help mainstream teachers by sharing my experience of special needs and behaviour.

Opportunities for career progression

Interestingly, the ECTs we spoke to did not identify any impacts on career progression, but several coaches and senior leaders, interviewed as part of the case studies, suggested that the Accelerate project had led to a positive impacts in this area. Interviewees also suggested the project met a clear need in bridging, what could otherwise be, a drop in development opportunities and support after teacher training[21].

As a result of the coaching support, developments in the ECTs' teaching quality, as well as explicit discussions about progression, it was suggested that ECTs may be more confident to seek out progression opportunities and feel more prepared to take on additional responsibilities and promotion. A comment from one coach exemplified this view:

> I think it will probably encourage people to go for progression, to go for the next level, and believe they can do something.

It is possible that these impacts reflect the general maturation of ECTs, or the effects of other activities or influences, rather than the impacts of the Accelerate project. It is also possible that for some ECTs, the project did bring about impacts in these areas, as suggested by the findings from the SWC analysis, which are discussed in Section 4.4.3 below.

Findings related to the impact on coaches

While the project ToC did not specify impacts on coaches, many of the coaches we interviewed reported impacts on themselves as a result of their involvement in the Accelerate project. They recounted that their involvement in coaching ECTs, and sharing their experiences and knowledge with less experienced members of the profession, had been both rewarding and satisfying. Coaches had also further developed their coaching skills, drawing on both the training provided at the beginning of the project, and the practical experiences of coaching ECTs with different needs. In turn, this was reported to have benefitted them in their wider roles as coaches in their own schools. Finally, coaches also identified impacts of the project on their own knowledge of pedagogy, and particularly evidence-based practices, through engaging with the Accelerate project's resources and materials, as illustrated by the quotes below:

> I feel a lot more confident having done things like Skype calls, webinars, coaching one-to-one, with people that I don't even know and I have had to build up a relationship with. I feel a lot more

[21] The Accelerate project was delivered before the roll-out of the Early Career Framework, which provides teachers in their first two years with a funded entitlement to a structured package of high-quality professional development.

> confident going into a senior leadership role at my school or delivering training at my school now.
>
> It has had an impact on me as well, on how well I am able to put in place any of that sort of support in my own school. My own ability to do any sort of coaching. My own access to research, my own understanding of the big issues and thoughts coming from the Charted College of Teaching. That's all been very good.

It is notable that there were no significant changes in the factors related to ECTs' perceptions of improvements to **school leadership, school culture, professional development, or in their motivations to engage in professional development in general or teaching-focused professional development.** As noted earlier, the Accelerate project was aimed primarily at improving the quality of ECTs' teaching, as well as their resilience. As such, it is perhaps not surprising that our analysis found no significant change in ECTs' perceptions of the effectiveness of school-level factors, such as school leadership. A brief discussion of some of the qualitative findings, which helps to shed some light on the findings from the factor analysis, follows in the sections below.

Effectiveness of school leadership

Most of the ECTs interviewed through the case studies reported they had had few or no conversations about the project with their senior leaders. As a result, ECTs generally felt that school leaders' awareness of the progress they were making on the project was low, and that any impacts the project had brought about were confined to the individual progress being made by participating ECTs:

> They [senior leaders] don't have much to do with the project itself. I know one of the assistant headteachers has commented on my confidence and how much better I'm doing because of it, but that's the only thing I can say.
>
> I do think that it's impacted us more, as teaching staff, than senior leaders. I don't think our senior leaders are fully aware of the programme. I think our head is aware but I don't think anyone under our head is aware of why we are doing it. There are no other staff involved besides us.

However, three of the ten ECTs we spoke to said they had spoken to their headteachers about the project. Two ECTs reported they had 'fed back a few things', including the types of research they had read, while one appeared to have much greater engagement, with the headteacher eager to ensure the ECT was on-track with the project and that they

had the support they needed. This enhanced interaction between the headteacher and ECT appeared to be driven by the headteacher's personal interest in the project, rather than anything different in the way Accelerate was engaging with the school.

Similarly, in most cases, coaches reported having very little contact with anyone in participating schools other than the ECT, and, as ECTs did not usually have school leadership responsibilities, coaches and senior leaders seldom identified impacts of the Accelerate project on leadership quality. However, in one case, an Accelerate coach was able to liaise with an ECT's school to encourage a more coordinated support approach, including more tailored in-school support for the ECT's needs.

Senior leaders occasionally highlighted that ECTs involvement in the Accelerate project had provided them (the ECT) with an opportunity to lead on an aspect of school improvement associated with teaching and learning. For instance, an ECT had been given responsibility for disseminating a new approach from the Accelerate project to their school colleagues, thus providing opportunity to begin to develop their leadership skills.

Senior leaders seldom reported direct impacts of the project on themselves. However, in a couple of cases they suggested they had learned about a new approach or strategy from the information the ECT had shared from the Accelerate project. Additionally, one senior leader identified a benefit in raising their awareness of the value of sustained CPD in supporting teacher retention.

Effectiveness of school culture

One of the goals of the project was to support ECTs so that they were better able to manage their workload. On this point, the findings from the telephone interviews with ECTs suggested that, for most, the project had little impact on their experiences of workload. This was attributed to the fact that most of the ECTs' schools were in challenging circumstances, and this brought about certain expectations regarding scrutiny and marking for example, which impacted on teacher workload. It is possible that is also related to the finding that most of the case-study ECTs had received only limited support from their senior leaders. In at least one case, a teacher also commented that these additional school challenges had slowed the progress she was able to make on the project:

> The school is going through requires improvement, which means we have been given a lot to sort out from our senior leadership team. That hasn't helped me to progress with the course. It's nobody's fault, it's just the timing.

> We have quite a rigid marking policy at our school. While the programme hasn't changed this, to some extent I have been able to

> take away some of the ideas from the programme and bring them into the discussion [about how we do things at school].

However, one ECT said the project had helped them to better manage their workload by giving them the confidence to drop activities that were not enhancing their pupils' learning:

> It's made me feel better about [dropping] things that don't enhance my pupils' learning. I should be focusing on what will make a difference for my pupils. If it doesn't make a difference for my pupils I need to take it off my list and not stress over it. So, it's actually got my stress levels down, which is very positive.

Coaches' and senior leaders' views on the impact of the Accelerate project on ECTs' workload were somewhat mixed and complex. On one hand, some felt there was a positive impact on reducing teacher workload as the practices advocated in the project centred on smarter working – focusing on the most impactful teaching and learning activities and reducing less effective approaches – and the coaching support helped ECTs to more quickly resolve issues. On the other hand, in order to reap these rewards, ECTs needed to be willing to invest some additional time to engage with the project learning; thus in some ways increasing their workload. A further point raised by coaches questioned the scope of the project to impact on teacher workload. They suggested instead that, to a large extent, this was dictated by the priorities, processes and policies required of teachers by their school leadership. Some of the ECTs interviewed agreed with this assessment.

Again, as reported above, there was limited evidence that Accelerate had a wider impact in schools, beyond improving the teaching practice of participating ECTs and, in some cases, their immediate co-workers. This finding speaks to the potential limitations of interventions that are targeted at individuals, but which have goals which are linked to school-wide policies/cultures.

Motivation for professional development

ECTs were already highly motivated at baseline, as indicated by a mean score of 6.65 out of a possible eight points. Therefore, it is perhaps not surprising that our analysis found no significant change in ECTs' motivations to engage in professional development. In addition, it is also possible that involvement in Accelerate has actually lessened ECTs' sense of need to engage in other forms of professional development, although we have no evidence to support this.

Interviewed senior leaders commented on ECTs' positive attitudes to CPD, and how they valued the Accelerate project. Some noted that they would be keen to engage with

similar support in the future. Coaches and senior leaders suggested, for those ECTs who had a successful experience on the Accelerate project, it was likely to have encouraged a life-long learning attitude and valuing of CPD. Occasionally senior leaders reported that ECTs were requesting further opportunities for CPD in order to continue developments from the Accelerate project. However, there was no suggestion that involvement in the Accelerate project had led to a greater demand for CPD beyond direct participants. One senior leader explained the positive impacts of the Accelerate project on the attitude to CPD of ECTs participating in their school:

> It's building a culture of people being positive about learning and being positive about improving their practice, which is fantastic.

However, the findings from the qualitative interviews, particularly the views of coaches, suggest that many ECTs struggled to engage properly with the project. This was attributed to the lack of ECT time and support from senior leaders. As one coach explained, the approach whereby senior leaders nominated ECTs did not necessarily ensure that ECTs in recruited schools were given the time to engage with the project: 'Headteachers sign people up for all the right reasons, but teachers don't necessarily have the space to do it in their working days'. It is possible, therefore, that a lack of engagement from some ECTs may have affected their motivation for CPD, and/or that the recruitment approach and school conditions impeded ECTs' motivation to engage with the project.

Several coaches suggested that there may have been modest impacts on the school leaders in participating schools in terms of their awareness of, commitment to, and valuing of, CPD for ECTs. This impact may have arisen as school leaders witnessed the benefits of the Accelerate project and coaching on ECTs' teaching quality, confidence, and wellbeing, as this coach explained:

> It does depend on the department you are in or the school you're in for support, but hopefully people are seeing now that there might be some benefit to supporting people up to five years and beyond, but especially in the first five years before you start moving up pay bands.

However, there was little evidence to suggest the project had impacted on school-wide CPD cultures or approaches. Indeed, rather than being an impact of the project, a positive CPD culture appeared to be an important pre-condition for effective engagement with, and implementation of, the Accelerate project.

Motivation for teaching-focused professional development

It should be noted that at baseline, most ECTs were already using professional development to inform their teaching practice, as indicated by a mean score of 5.79 out of a possible eight points. Therefore, it is perhaps not surprising that our analysis found no significant change in this regard.

4.4.3 Findings related to fund-level goals – impacts

This section explores the extent to which the Accelerate project achieved its longer-term impacts. It measures the impact of the project on teacher retention and progression. It also explores participants' perceptions of the impact of the project on teacher retention and progression and on pupil outcomes.

Retention and progression analysis

The evaluation aimed to explore the impact of the Accelerate project on the fund-level goals to improve teacher retention and progression. As outlined previously, the Accelerate project intended to achieve teacher-level, rather than whole-school level impacts and therefore this analysis was conducted on Accelerate participants and a matched comparison sample of ECTs, rather than on all teachers from Accelerate schools.

The analysis used the set of Accelerate ECTs compared to non-Accelerate ECTs matched on a range of key characteristics (see Appendix C) to estimate what counterfactual retention and progression rates might have been with and without the Accelerate project. Co-variates from the SWC included age, experience, and full-time equivalence, plus school characteristics such as phase, FSM band, attainment band, Ofsted rating and year indicators, as well as identifiers of treatment/comparison school.

For both the teacher retention and progression measures, we wanted to explore whether there were statistically significant differences between treatment and comparison ECTs:

- within the profession as a whole
- within the school they were in initially
- within the same local authority district (LAD)
- within 'challenging schools' (i.e. schools that had an Ofsted rating 3/4 but which were not in a priority area (category 5/6)).

The findings are presented in the sections below.

Teacher retention

The tables below summarise the Accelerate project's impacts across the four retention measures analysed. We use the descriptor 'teacher-level' to describe analyses of all project participants, irrespective of their level of seniority.

Retention in the state-funded sector in England

Table 8 Difference in the estimated rate of retention in state-funded teaching in England between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated retention rate in state-funded teaching 1 year after baseline (%)	92.3	89.1	3.2	Yes
Number of ECTs	**1447**	**11070**		
Estimated retention rate in state-funded teaching 2 years after baseline (%)	87.2	84.3	2.8	Yes
Number of ECTs	**1447**	**11070**		

Note: Estimated retention rates are the average predicted retention rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted retention rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Table 8 shows that the Accelerate project is associated with a statistically significant higher rate of retention within the state-funded teaching profession. Treatment ECTs were between 2.8 and 3.2 percentage points more likely to be retained in teaching one and two years after the baseline date, than comparison ECTs. This suggests that the Accelerate project had a positive impact on teacher retention in the profession.

Retention in the school

Table 9 Difference in the estimated rate of retention in the same school between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated retention rate in the same school 1 year after baseline (%)	94.6	88.1	6.6	Yes
Number of ECTs	**1235**	**9292**		
Estimated retention rate in the same school 2 years after baseline (%)	87.6	82.1	5.5	Yes
Number of ECTs	**1235**	**9292**		

Note: Estimated retention rates are the average predicted retention rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted retention rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Table 9 shows that there was a statistically significant difference in the estimated rate of retention of ECTs within the same school they were in at baseline between treatment ECTs and matched comparison ECTs. Specifically, the estimated retention rate within the same school for treatment ECTs was 6.6 percentage points higher than for the comparison group one year after baseline, and 5.5 percentage points higher two years after baseline.

Retention in the same local authority district (LAD)

Table 10 Difference in the estimated rate of retention in the same local authority district (LAD) between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated retention rate in the same LAD 1 year after baseline (%)	96.2	91.8	4.3	Yes
Number of ECTs	**1235**	**9292**		
Estimated retention rate in the same LAD 2 years after baseline (%)	91	87.8	3.2	Yes
Number of ECTs	**1235**	**9292**		

Note: Estimated retention rates are the average predicted retention rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted retention rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Table 10 shows that there was a statistically significant difference in the estimated rate of retention of ECTs within the same LAD they were in at baseline between treatment ECTs and matched comparison ECTs. Specifically, the estimated retention rate within the same LAD for treatment ECTs was 4.3 percentage points higher than for the comparison group one year after baseline, and 3.2 percentage points higher two years after baseline.

Retention in challenging schools

Table 11 Difference in the estimated rate of retention in challenging schools[22] between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated retention rate in challenging schools 1 year after baseline (%)	96.7	91.2	5.5	Yes
Number of ECTs	**1227**	**9156**		
Estimated retention rate in challenging schools 2 years after baseline (%)	91.3	86.8	4.5	Yes
Number of ECTs	**1217**	**9080**		

Note: Estimated retention rates are the average predicted retention rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted retention rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Table 11 shows that there was a statistically significant difference in the estimated rate of retention of ECTs within challenging schools between treatment ECTs and matched comparison ECTs. Specifically, the estimated retention rate within challenging schools for treatment ECTs was 5.5 percentage points higher than for the comparison group one year after baseline, and 4.5 percentage points higher two years after baseline.

Collectively, the retention findings suggest an initial positive impact of the project, with statistically significant increases in the rate of retention one and two years after baseline in: 1) the state-funded sector in England; 2) the same school; 3) the same LAD; and 4) challenging schools. However, a number of factors lend caution to the findings. First, the presence of a significant difference just one year after baseline indicates that there may have been systematic differences between the treatment and comparison samples at baseline that are not accounted for in this analysis. This may have introduced a potential positive bias to the findings. Second, and by contrast, one might anticipate that the delayed start to the project, ECTs' varying levels of engagement with the different project

[22] For the purposes of this analysis, challenging schools were defined as schools rated by Ofsted as 'requires improvement' or 'inadequate'. A teacher was defined as remaining in a challenging school if they either stayed within the same school, or they moved to a different school which was rated 'requires improvement' or 'inadequate'.

strands, and the high participant drop out, would have diluted the impacts of the project and introduced a negative bias to the findings.

Teacher progression

The tables below summarise the Accelerate project's impacts across the four progression measures analysed.

Progression in the state-funded sector in England

Table 12 Difference in the estimated rate of progression in state-funded teaching in England between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated progression rate in state-funded teaching 1 year after baseline (%)	5.9	5.4	0.5	No
Number of ECTs	**1235**	**9292**		
Estimated progression rate in state-funded teaching 2 years after baseline (%)	10.3	10.2	0.1	No
Number of ECTs	**1235**	**9292**		

Note: Estimated progression rates are the average predicted progression rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted progression rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Table 12 shows that there were no statistically significant differences in the progression rates of ECTs who stayed in teaching between treatment and comparison ECTs one or two years after baseline.

Progression in the school

Table 13 Difference in the estimated rate of progression in the same school between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated progression rate in the same school 1 year after baseline (%)	5.6	5.1	0.6	No
Number of ECTs	**1165**	**8202**		
Estimated progression rate in the same school 2 years after baseline (%)	10.1	9.5	0.6	No
Number of ECTs	**1074**	**7660**		

Note: Estimated progression rates are the average predicted progression rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted progression rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

As with the table above, the analysis shown in Table 13 shows no statistically significant differences in the progression rates of treatment and comparison ECTs who stayed in the same school one or two years after baseline.

Progression in the same local authority district (LAD)

Table 14 Difference in the estimated rate of progression in the same local authority district (LAD) between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated progression rate in the same LAD 1 year after baseline (%)	5.7	5.1	0.6	No
Number of ECTs	**1185**	**8543**		
Estimated progression rate in the same LAD 2 years after baseline (%)	10.1	9.5	0.6	No
Number of ECTs	**1118**	**8173**		

Note: Estimated progression rates are the average predicted progression rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted progression rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

As with the table above, the analysis shown in Table 14 shows no statistically significant differences in the progression rates of treatment and comparison ECTs who stayed in the same LAD one or two years after baseline.

Progression in challenging schools

Table 15 Difference in the estimated rate of progression in challenging schools[23] between treatment and comparison ECTs

	Treatment ECTs	Comparison ECTs	Difference	Statistically significant?
Estimated progression rate in challenging schools 1 year after baseline (%)	5.6	5.3	0.4	No
Number of ECTs	**1184**	**8372**		
Estimated progression rate in challenging schools 2 years after baseline (%)	10.1	9.7	0.3	No
Number of ECTs	**1106**	**7917**		

Note: Estimated progression rates are the average predicted progression rates from a logistic regression model for treatment and comparison schools, controlling for observed characteristics. The difference in average predicted progression rates is the marginal effect. Statistical significance of these differences is assessed at the five per cent level. Due to rounding, some estimated marginal effects may not exactly equal the difference between treatment and comparison schools.

Again, the analysis shown in Table 15 shows no statistically significant differences in the progression rates of treatment and comparison ECTs in challenging schools one or two years after baseline. Collectively, the findings suggest the project had no impact on the progression rates of participating ECTs, relative to the comparison group.

Interpretation of retention and progression findings

Contrary to the SWC findings reported above, there was no clear evidence, from either the survey or telephone interviews, to suggest that participating ECTs were more likely to remain in the profession as a result of the project. This is explored further in the section below.

[23] For the purposes of this analysis, challenging schools are defined as schools rated by Ofsted as 're-quires improvement' or 'inadequate'. A teacher is defined as progressing in a challenging school if they move to a middle/senior leadership position from a classroom teaching position or a senior leadership posi-tion from a middle leadership or classroom teaching position *and* stay within the same school or move to a different challenging school.

Perceived impacts on teacher retention and progression

Unfortunately, most case-study ECTs did not speak about the impact, or conversely lack of impact, the project had on their intentions to stay in the profession, or on their resilience or general wellbeing, which are factors related to teacher retention. In addition, there were no statistically significant changes in the proportion of ECTs responding to the baseline and endpoint surveys who reported they had developed their skills/ approaches to help manage their workload, or that planned to stay in the teaching profession. This is important, as a high or unmanageable workload is often cited by teachers as one of the key reasons why they leave the state sector (Worth, 2020).

Despite this, several coaches and senior leaders suggested that the culmination of impacts on ECTs' teaching quality, confidence and wellbeing, and the resulting benefits for pupils, had the potential to encourage ECTs to remain in the profession as they were more likely to find it a fulfilling and successful career. It is also possible that those ECTs who completed the project, and therefore experienced the project benefits more acutely, may have been more likely to stay in the profession than those who dropped out.

Perceived impacts on pupils

While we were not able to measure the impact of the project on pupil outcomes, our qualitative findings suggest that the project had the scope to influence, and in some cases may already have been influencing, pupil outcomes. As reported earlier, most of the ECTs we interviewed reported that the project had helped them to improve their teaching practice, a finding supported by the surveys and the qualitative interviews (see Section 4.4.2). Most felt these improvements would eventually lead to improved pupil outcomes, with some reporting they had already begun to have an impact on their pupils. In some cases ECTs found it difficult to separate out the impacts resulting from the project from other initiatives going on in the school, or from their general maturation as ECTs. As one ECT explained: 'It's hard to tell which has impact, whether it's the course or other things.' Some ECTs were able to point to specific improvements in their pupils' learning that they felt had come about because of changes they had made to their practice. While we found no clear evidence to suggest that Accelerate had been more effective in improving pupil outcomes in primary schools, compared to secondary schools, primary ECTs were more likely to describe specific impacts on pupils. For example, one primary teacher pointed to the accelerated progress her pupils were making in reading and writing that had resulted from her using chalk pens to encourage children to 'make marks' on a variety of surfaces:

> I have got children reading and writing in the first term before Christmas. It hasn't happened before. In our school children were learning to segment and blend at Easter time. Because I have been so rigorous in my routine, so it's been the same routine daily for the

> children it has become normal for them and they want to pick up a pen, they want to make marks, they are writing on tables, which I would never let them do before.

Another primary teacher reported she had observed her Year 6 class become ‘more independent’ as a result of the additional scaffolding work and guided tasks that she had introduced as a result of Accelerate. One primary teacher described the improvements that had been brought about in pupils’ decoding skills as a result of the application of spacing and interleaving strategies developed through Accelerate:

> It was quick and snappy phonics sessions through the day. I saw the impact of this technique within two weeks. Nearly all of my children had learned all of the phase two sounds and they were writing, starting segmenting and blending phase two phonics. It was amazing to see that massive, massive impact within such a short space of time.

A third primary teacher gave the example of improvements in pupils’ understanding brought about by changes in questioning technique:

> With my questioning, I think I have been challenging them a bit more. [Accelerate] made me reflect on that actually, I had made it a bit too easy for them. Last year I had a tricky class and this year I was wanting them to achieve well, but then it’s balancing that with feeding them the answer or work that is too easy. They have really risen to the challenge as I’ve improved my questioning.

Improving pupils’ behaviour was another area where the project was reported to have had an impact, as one secondary teacher explained:

> Disruption is a massive thing in our school so, myself and my coach have been working on the low-level disruption and keeping them engaged so they’re ready for learning and they don’t know what’s going to come next. I think that’s been a massive thing and it’s worked really well.

In addition, all interviewed coaches and senior leaders were positive about the impacts of the Accelerate project on the ECTs’ pupils. While the findings from the surveys revealed no significant changes in ECTs’ perceptions of improvements in pupils’ attainment, coaches and senior leaders suggested that the developments in ECTs’ teaching quality were resulting in other pupil impacts, including improvements in pupil behaviour, engagement and understanding. Coaches were aware of such benefits on pupils having

reviewed the impact of practice changes with ECTs during coaching sessions and observed ECTs' classroom teaching. They identified that pupils were more engaged in lessons and discussion, were better able to edit and improve their own work, and could more effectively make connections between topics and concepts. In one case, a coach had supported an ECT with behaviour management, and, as a result, reasoned that pupils would be better supported in their learning in the classroom:

> There's more learning going on in the lesson because there's much less low-level disruption and the children are buying in to her lessons more. So, therefore, the pupils are making more progress, because there's more time for learning.

Senior leaders also reported observing impacts on pupils in ECTs' lessons and pupils' performance, as illustrated by the quote below:

> We have seen a huge improvement in engagement with languages, particularly in the classes of the two people in the faculty who are doing the Accelerate programme. I think it is impacting on the way that they plan and deliver their lessons, which is improving engagement.

However, as reported above, there was limited evidence that Accelerate had brought about wider impact in schools, beyond improving the teaching practice of participating ECTs and, in some cases, their immediate co-workers. As a result, it seems likely that any future improvements in pupil outcomes, for example in attainment or social mobility, will be largely limited to the classes taught by participating ECTs, at least until they move into positions where they can more directly affect the work of others. This has implications for the timing and design of any future evaluation where the impacts of CPD for ECTs on pupils' outcomes is being assessed.

4.4.4 Findings related to fund-level goals – wider outcomes

It should be noted that not all of the TLIF's wider outcomes/impacts have been identified as intended impacts by all projects. For example, Accelerate was designed to ultimately lead to improvements in teacher retention and progression and improved pupil attainment (through improved quality of teaching). It was not, however, designed to lead to improvements in pupil attendance/reduced exclusions, or improved school Ofsted ratings. Therefore, there is no data to report on these areas.

4.5 Interpretation of outcomes and impacts

Overall, the project has met with mixed success. There is considerable evidence from the surveys and/or qualitative interviews that, where the project had been completed, it had improved participating ECTs' confidence and subject knowledge, equipped them with a growing repertoire of teaching skills, and improved key elements of their teaching practice. There is also some qualitative evidence to suggest that these improvements may already be leading to improved pupil outcomes, and that, at an individual teacher-level, some ECTs may have become more resilient, and more likely to remain in the teaching profession. The SWC findings suggest statistically significant increases in the rate of retention one and two years after baseline between treatment ECTs and matched comparison ECTs. However, there was no evidence that the project had impacted on the progression rates of participating ECTs, relative to the comparison group. There was, though, mixed evidence on the extent to which the project has been able to equip ECTs to better manage their workloads, and very little evidence that Accelerate had brought about wider impacts in schools, such as changes in CPD culture or in the quality of teaching across their settings.

5 Sustainability

As part of the evaluation of Accelerate, we are interested in the sustainability of the new ways of working, new learning and outcomes in schools which have come about through participants' involvement with the project. For their part, the ECTs we spoke to certainly felt that they would be able to use, and had embedded, the approaches gained through the Accelerate Project:

> These approaches have been embedded in my practice and I will be using them all the time, because I have seen the impact it has had on children's learning.

> I will carry on using what I have learnt, and I will try to encourage other people to use these approaches.

> I have embedded spacing and interleaving into my practice. I have enjoyed using these approaches, so there's a buzz in my teaching and the children are buzzing as well. It has increased their attainment, their attention and engagement so it's a win win.

Indeed, as summarised in the sections above, there is considerable evidence that the project has successfully equipped participating ECTs with a growing repertoire of teaching skills, while also improving key elements of their teaching practice. However, these are not skills that sit in a virtual toolbox, waiting to be brought out for some future opportunity. The training pattern of learn-try-reflect provided the framework for participating ECTs to put this learning into practice, while the one-to-one support provided by specialist coaches provided a safe space for ECTs to ask questions, hone their skills, and develop their understanding. The only limiting factor was the apparent lack of engagement between senior school leaders and their ECTs. This appears to have been a missed opportunity to spread good practice throughout participating schools, or at the very least to start a conversation about what constitutes effective practice. Despite this, it appears that, for many ECTs, these new skills and knowledge were both well-understood and well-practised. There is, therefore, every reason to be hopeful that these new approaches have, or will, become embedded within participating ECTs' practice. Despite this, the scope for embedding at whole-school level was limited. This needs to be taken into account in any future discussions about scaling-up this, or similar, projects.

6 Evaluation of the Accelerate project Theory of Change

We have already outlined the mixed effects of the intervention in the sections above (see for example Chapter 4). However, in order to evaluate the Theory of Change (ToC), it is important to also consider the activities and target outputs, and whether these were delivered as expected (see Appendix A). For the most part they were, but there were some important differences between intentions and actual delivery. The main difference is that we found limited evidence to suggest that Accelerate had engaged senior leaders and in-school mentors in the ways outlined in the ToC, for example by engaging them in online training. Engagement in some of the key activities also appeared to have been mixed, as was the extent to which the different strands of the project were reported to have fully met participants' needs. For example, relatively few ECT participants reported that the online modules fully met their needs, while only a third of ECTs appeared to have engaged with the peer-to-peer support through CoPs. Where group meetings did take place, they were online rather than face-to-face. In addition, despite the SWC analysis suggesting that the project achieved its intended impacts on retention, there was little qualitative or survey evidence to suggest the project had positively impacted on ECTs' workload, resilience or general wellbeing; factors one would expect to be associated with an improvement in retention. Given the mixed evidence on the effects of the intervention, and the low fidelity to some of the key implementation measures, it is difficult to fully validate the ToC developed by the Accelerate team. However, it is clear that, while some ECTs experienced a number of benefits from the project, most notably improvements in the quality of their teaching, it appears that some did not experience the full range of benefits outlined in the 'process' chain.

7 Learning about effective CPD for schools in challenging circumstances

7.1 Recruiting and engaging schools

This project has demonstrated that there is demand for specialist support projects for ECTs, and that, with an effective communications strategy and local partners, considerable numbers of ECTs and schools can be recruited to interventions of this sort. However, this evaluation has also found that the retention of ECTs to intensive, 12-18 month interventions is difficult. ECTs typically have high workloads, are highly mobile, and can find that their workloads change very rapidly, for example as they move into new roles and take on additional responsibilities. The evaluation of the Accelerate project emphasises the importance of clearly communicating the demands of the project upfront to participants, and suggests that rapidly establishing relationships between coaches and ECTs, which were highly valued by ECTs, might be one way of engaging and motivating more participants to stay on the project. It also highlights the need for robust monitoring systems and early intervention where ECTs are at risk of dropping out. However, it also suggests that greater consideration should be given to engaging ECTs' senior leaders. While it should be acknowledged that senior leaders in schools in challenging circumstances will have many demands placed on them, they could have been more effectively engaged to ensure that their ECTs received the support they needed, while also encouraging them to remain on the project. This approach would need to be handled sensitively, and could not impinge on the confidentially of the discussions between the ECT and their coach, which is one of the key features of the project.

7.2 Characteristics of effective CPD

Coe (2020) has drawn together a list of practical implications for the design of CPD. These are based on the broad congruence of evidence found in reviews about the characteristics of effective CPD that support changes in teachers' classroom practice which, in turn, are likely to lead to substantive gains in pupil learning. These are set out in Appendix I. The first purpose of this section is to highlight key features of the Accelerate project, which appeared to lead to positive outcomes indicative of effective CPD that align with Coe's list. The second is to identify any key features of the Accelerate project that appeared to lead to positive outcomes indicative of effective CPD, which are not included in Coe's list.

As an evidence-based intervention, it is perhaps not surprising that Accelerate shares many of the components that Coe (2020) identifies regarding CPD that are most likely to lead to substantive gains in pupils' learning. For example, the intensive four-term project involving both online and face-to-face components provided both the duration and frequency to enable learning to become embedded. The two-day residential and

additional one-day workshops focussed on promoting best-practice teacher skills, knowledge and behaviours, which were aligned to the key content of the learning modules. The use of specialist expert coaches provided ECTs with an element of challenge, while also creating a safe space in which ECTs could experiment with new approaches and reflect on their effectiveness. In addition, the online modules guided participants' practice and prompted reflection on development, providing practical video examples, activities and resources tailored to different subject areas and phases. However, while these elements of the project are recognised to be features of good CPD, it should be remembered that actual engagement with these elements varied in this case.

While not a specific item on Coe's list, the fact that the coaches were entirely independent of ECTs' schools was an important feature of the project, and ensured that the coaching conversations were purely developmental rather than being focused on assessing performance. The one area on Coe's list where Accelerate was less able to make a difference was in its ability to shape local school culture and processes. This was demonstrated by the apparent inability of the project to improve case-study ECTs' workloads, which some attributed to the pervasive additional work that comes from working in a school in challenging circumstances. Greater, more active support from ECTs' senior leaders may have enhanced the project's impact.

7.3 Summary

Overall, the project achieved mixed success. The recruitment of more than 1,500 ECTs in such a short period of time was both ambitious and challenging, and the fact that this target was initially reached must be regarded as a success. However, drop out was very high, with the best estimate being that approximately half of those who originally embarked on the project actually completed it. This is unfortunate, as there is qualitative and survey evidence to suggest that the project has improved participating ECTs' confidence and subject knowledge, equipped them with a growing repertoire of teaching skills, and improved key elements of their teaching practice. Moreover, despite the high drop out, SWC analysis suggests that there were statistically significant increases in the rates of retention for treatment ECTs, relative to those in the comparison group, one and two years after baseline. This particular finding should be treated with caution, but it seems likely that these new teaching approaches and skills have, or will, become embedded within participating ECTs' practice, suggesting that the impacts will not be short-lived. Limiting factors included participants' lack of engagement with some of the project strands, most notably the communities of practice, the project's apparent failure to engage senior leaders and in-school mentors, and the lack of engagement between senior school leaders and their ECTs. The latter appears to have been a missed opportunity to spread good practice and to build a whole-school learning culture, and is something that if the project, or something like it, was ever to be scaled-up or delivered again, should be revisited.

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Appendix A: Accelerate project Theory of Change

Aims of Accelerate:

- To provide early career teachers (ECTs) in schools in challenging circumstances with instructional coaching and support.
- To embed improvements in participating ECTs' teaching quality, retention and pupil attainment.

Rationale and evidence:

High-quality teaching makes the greatest difference to disadvantaged pupils' attainment (Sutton Trust, 2011). However, schools in challenging circumstances may have limited capacity to provide this, so teachers in these schools may not fulfil their potential (Allen *et al.,* 2016). Built around professional development models (Deans for Impact, 2016), Accelerate aims to incorporate expert instructional coaching, deliberate practice, and high-quality, evidence-informed content delivered through a flexible, blended model.

Inputs	Activities	Target outputs	Shorter-term outcomes	Longer- term impacts
Cost to deliver programme and its range of activities.	1. **Marketing/promoting** Accelerate through Delivery Hubs/CCT members/central marcoms 2. **Five online blended learning modules**; focus on building knowledge of evidence-informed teaching 3. **150 Instructional Coaches recruited/trained** 4. Participants grouped into local coach led **Communities of Practice (CoPs)** 5. Programme of **online training** for in-school mentors developed, including online induction and tailored online courses 6. **SLT provided with online induction**/ optional online training 7. **Follow-up of participants with drop-out risk** by coaches/online tracking	1. Recruitment of 1,500 ECTs from 395+ priority schools. ECT engage with key messages, attend briefing events/ follow-up activity, sign up 2. Participants engage with module content 3. Participants undertake structured programme of deliberate practice with expert instructional coach 4. Peer groups meet twice per term. Participants learn behaviours/ approaches enabling professional growth. A bank of subject specific videos used as reflective tools by participants improving teaching 5. Mentors complete optional modules, developing knowledge in the following areas: research around effective mentoring, effective teacher PD, supervision/instructional coaching/PD opportunities 6. SLT complete training, develop understanding to use research and evidence, and support teachers to do the same.	**ECTs:** • Improved quality of teaching • Better able to manage workload/ better wellbeing • Improved resilience **Schools:** Improved CPD, including: • Culture of coaching embedded • Greater demand for mentoring support in schools **School leaders/ mentors:** • Mentors who are developed become instructional coaches for future cohorts • Improved motivation of mentors/likelihood to stay in profession • Commitment of senior leaders to developing ECTs	**Schools/ECTs:** • Improved retention of NQTs/early career teachers • Improved progression of early career teachers and achievement of NPQs **Pupils:** • Increased attainment at KS2 and GCSE • Improved social mobility

Contextual, mediating and moderating factors

Characteristics of participating ECTs and schools and priority school cultures and capacity to support ECTs.

Appendix B: Qualitative sampling

Selection of coaches

As part of the evaluation we undertook telephone interviews with ten subject- and phase-specialist coaches. The coaches were sampled to ensure they were from different hubs, different phases (primary, secondary and special), and in different parts of the country (North, Midlands, South). The intention was to capture a broad range of perspectives on participants' experiences of supporting a range of ECTs. This was in contrast to the coach interviews undertaken as part of the school case studies (see below), which focused on coaches' experiences of supporting one particular ECT.

In June 2019 we emailed half of the coach sample (~60), with the aim of completing interviews with ten coaches before the end of the summer term. However, as a result of the extended recruitment period, and subsequent delays to the roll out of the project, the first few interviews revealed that by the end of the summer term 2019, only limited contact had been made between the coaches and the ECTs. For this reason, it was agreed with DfE that we would cease the interviews at five, with the final five interviews undertaken between November and December 2019, when things had progressed further.

Selection of school case studies

In order to capture a range of different perspectives/ 'cases' of the impact of the project we undertook ten school telephone case studies, each focusing on a different Priority School (those in Ofsted category 3 or 4 and in DfE-identified category 5 and 6 Local Area Districts). The case studies were built around the participation of the ECT, but rather than approaching ECTs directly, the research team took the decision to approach subject- and phase-specialist coaches, and to ask them to identify an ECT that they were coaching that met our recruitment criteria. This was because we were aware that there had be a lot of drop out from ECTs on the project, and we did not know who was still participating. We also thought that the coaches would be more responsive, and would be able to help to arrange the ECT interview.

In November 2019 we emailed the other half of the coach sample (~60), and asked for their help in setting up interviews with them, an ECT, and, where it was suitable to do so, a senior leader and/or in-school mentor in the ECT's school. Given the eligibility for the project, we explained that we were particularly interested in speaking to ECTs who were:

- in an Ofsted category 3 or 4 school
- at a school in a DfE-identified 'priority area' or 'opportunity area'.

Across the sample, we aimed to speak to ECTs in different years of teaching, from year 1 (NQT) to Year 5, as well as in different phases. In the end, telephone interviews were undertaken with ten ECTs, ten external coaches and seven senior leaders (typically a

deputy headteacher or headteacher). The interviews were undertaken between November and December 2019. Selected characteristics of this sample are shown below.

Table 16 Details of who was interviewed as part of each telephone case study, together with selected ECT and school characteristics

Case study number	ECT	Coach	Senior leader	Phase of ECT	ECTs' years in teaching (at start of intervention)	School Region	School Ofsted* category	School Ever 6 FSM quintile **
1	✓	✓	-	Primary	1	SE	2	4
2	✓	✓	✓	Secondary	2	WM	1	2
3	✓	✓	✓	Secondary	4	SE	3	2
4	✓	✓	-	Secondary	1	NW	4	5
5	✓	✓	✓	Primary	3	NW	3	4
6	✓	✓	✓	Secondary	2	NW	3	5
7	✓	✓	✓	Primary	1	SE	3	4
8	✓	✓	✓	Primary	4	E	4	2
9	✓	✓	-	Special	SUPP	SUPP	SUPP	SUPP
10	✓	✓	✓	Primary	3	SE	3	1

*1=Outstanding; 2=Good; 3=Requires Improvement; 4=Inadequate

**Quintile 1 is the lowest and quintile 5 is highest.

SUPP – some information has been suppressed to protect the anonymity of participants.

Appendix C: SWC matching and comparison group construction

Data sources

The main data source used for the retention and progression analysis was the School Workforce Census (SWC). The SWC has been collected annually on the first Thursday of November since 2010 and it observes teaching staff and their characteristics from all state-sector schools in England. The key teacher characteristics recorded in the SWC and used for the analysis include gender, age, qualification date and role, while key school characteristics include school phase, type and region.

Each teacher in the SWC is assigned a unique identifier, which enables analysis of the same individual over multiple censuses. This allows observation of key pieces of information about teachers' careers, such as whether they leave state-sector teaching, move school/ area, or progress into a more senior role. The SWC records the school in which each teacher is employed, meaning it is also possible to identify teachers who move to different schools, LAs and regions.[24] However, since the SWC does not include teachers in private sector schools or schools outside of England, any teachers who move to one of those schools will appear to have left teaching, even though, in reality, they may not have.

The data quality and response rates to the SWC are very high, so the data has good coverage and few gaps. However, it has some gaps due to schools not submitting returns or individual teachers missing from submitted returns, so to minimise the influence of errors and data gaps, and improve the reliability of the retention outcomes, records were imputed where gaps or errors were evident. While this is unlikely to have completely eliminated all instances of SWC data gaps it is unlikely to affect the interpretation of the findings as they are very likely to affect treatment teachers/ schools in a similar way to comparison teachers/ schools.

In addition to the teacher-level variables, school-level data was used for the analysis including region, phase, Ofsted rating and Achieving Excellence Area (AEA) category, all data which is published by the DfE.[25]

The final data source consisted of the management information (MI) data collected by the TLIF providers on the teachers participating in each project, and collated by DfE. The MI data observes teachers' personal details, participation in TLIF projects, along with the provider, the name of the school in which the teacher participated in the training and, for some projects, the training start and end dates.

[24] Teachers may have contracts in multiple schools, but the file that we used for this evaluation contains one record per teacher per year of the 'main school' that a teacher is working in. The school changes that we observe are therefore changes in the 'main school', as recorded in the SWC.
[25] The latest data is available here: https://www.get-information-schools.service.gov.uk/

Each teacher in the MI data was linked to their SWC records using their name, Teacher Reference Number (TRN) and birth date. Across all TLIF projects, 97 per cent of teachers in the MI data were matched to at least one record in the SWC. Match rates varied somewhat across the different projects, although were generally very good, even after accounting for teachers in the MI data who linked to multiple teachers in the SWC, or did not link to an SWC record in the year in which they were recruited to the project.[26]

Table 17 shows that the match rate for teachers listed in the MI data as participating in the Accelerate project was 90 per cent to an SWC record in the year in which, according to the MI data, they were recruited to the project.

Table 17 Matching MI data to the SWC

MI data	Frequency or percentage
Total Accelerate participants identified in the MI data	1,617
Total Accelerate participants matched to at least one SWC record	1,605
Total Accelerate participants matched to an SWC record after removing SWC inconsistencies and records with missing baseline information	1,454
Match rate (%)	90

Methodology

After linking the MI data to the SWC, the group of comparison teachers was derived whose retention and progression outcomes were compared to Accelerate-participating teachers. Both general science and physics teachers were included as potential comparison teachers (defined as having spent at least one of their teaching hours teaching either general science or physics) who did not participate in any TLIF project.

For each treatment and comparison teacher, a baseline year was defined, relative to which subsequent retention and progression outcomes were observed. For Accelerate participant teachers, this was defined differently based on the SWC census year in which the teacher began the CPD training. For those recruited to the project in calendar year 2017, it was assumed they began the training within two months, and for those recruited in the 2018 and 2019 calendar years, it was assumed they began the training within one month of being recruited.[27]

[26] Cases such as these where the match was clearly wrong were removed from the analysis.
[27] Date of recruitment to the project is one of the variables recorded in the MI data. In practice, this meant that the baseline SWC census year was identical to the census year of recruitment for most teachers, with

With this full set of potential comparator teachers, a statistical technique called *propensity score matching* was used to ensure that the treatment and comparison teacher groups were highly comparable in observable characteristics. First, the probability (propensity score) that a particular teacher with given characteristics was part of the treatment group was estimated. Accelerate participant teachers were then matched with up to ten of their 'nearest neighbours' – comparison teachers with the most-similar likelihood of being in the treatment group, and therefore with the most similar observed characteristics.

When propensity score matching is able to match on all of the variables that influence selection into the treatment group, then the only remaining difference between the treatment and matched comparison group is the effect participating in the project had. However, variables can only be included in the matching if they are observed in the data. If other unobserved variables influence selection into the treatment group, and also affect retention (for example personality traits such as the desire to improve teaching skills, passion for physics or teaching, etc.), then this may partially explain some of the differences in outcomes between the two groups. The potential for this 'selection bias' means caution should be exercised about interpreting the differences between the groups as only representing the causal impact of the project.

Both teacher and school characteristics (observed at the baseline year) were used as variables in the matching. The teacher characteristics included age, gender, years since qualification,[28] full-time/part-time status, post and baseline year. The school characteristics used for matching included Ofsted rating, AEA category, phase, quintile of free school meal (FSM) eligibility, quintile of attainment[29] and region.

The quality of the match was assessed by examining cross-tabulations of the matching variables across the treatment and comparison groups. Where the variables are balanced – meaning the distribution of characteristics is similar between the treatment and comparison groups – the propensity score matching can be said to have performed well (see Tables 25 and 26 for the matching output).

As all of the outcome variables are dichotomous (i.e. yes or no), the differences in retention and progression outcomes between the two groups were estimated using logistic regression modelling. Retention and progression are considered separately from four different perspectives:

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the exception of those teachers who were recruited with one month (or two months for 2017 participants) of the November SWC census date.

[28] We used years since qualification as a stand-in for experience as the variable observing year of entry into the profession (which was used to calculate years of experience) had a substantial amount of missing observations.

[29] Attainment was measured as the proportion of pupils in the school that met the minimum requirements in Reading, Maths and Science at Key Stage 2 (for primary schools) or GCSEs (for secondary schools). Schools were assigned to an attainment quintile based on this proportion.

1. Within the same school one and two years after baseline
2. Within the same LA one and two years after baseline
3. Within the profession as a whole one and two years after baseline
4. Within a 'challenging' school one and two years after baseline.

A teacher was considered to have been 'retained' in the same school/LA if they were teaching in a particular school/LA in a given year, and were then recorded as teaching in the same school/LA (based on URN and LA codes) one or two years later. Similarly, a teacher was considered to have been 'retained' in the profession if they were recorded as teaching in a state-sector school in England in a given year, and then were also teaching in a state-sector school in England one or two years later.[30]

'Challenging schools' were generally defined as schools that were rated by Ofsted as 'requires improvement' or 'inadequate'. However, it was also assumed that all Accelerate participant teachers were teaching in a 'challenging school' when they were recruited to the project at baseline (even if they were in a 'good' or 'outstanding' school). A teacher was therefore considered as having been retained in a 'challenging school' if they were either still in the same school after baseline, or had moved to another school which was rated 'requires improvement' or 'inadequate'. For example, an Accelerate teacher in a 'good' school who stayed in the same school, or a non-Accelerate teacher in a 'requires improvement' school who moved to an 'inadequate' school would both be considered to have been 'retained in a challenging school'. Any teachers who moved to another school with a 'good' or 'outstanding' rating were considered to have moved to a 'non-challenging' school, regardless of the rating of the school they were in at baseline.

Progression was defined according to three broad role categories – classroom teachers, middle leaders, and senior leaders. Middle leaders were defined as teachers in a "Leading Practitioner", "Excellent Teacher", "Advanced Skills Teacher", or "Advisory Teacher" post, or who received a Teacher Leadership Responsibility (TLR) payment of £100 or more in a given year.[31] Senior leaders were defined by those in an "Executive Head Teacher", "Head Teacher", "Deputy Head Teacher" or "Assistant Head Teacher" post in a given year.

A teacher was considered to have 'progressed' if they moved from a classroom teacher role to either a middle or senior leadership role, or a middle leadership role to a senior leadership role one or two years after baseline. Progression within a school/LA/challeng-

[30] To reiterate, since the SWC only observes teachers in state-sector schools in England, any teacher who moves to a private school or to a school outside of England will be considered to have left the profession.
[31] This is a definition of middle leader that has been used by DfE in the past. See Footnote 14 in https://www.gov.uk/government/statistics/teachers-analysis-compendium-2017

ing school is defined as those teachers who remain within the same school/LA/a challenging school and progressed from classroom teacher to middle leadership or middle leadership to senior leadership.

Eight different regression models were estimated, one each for retention and progression within the same school/the same LA/challenging schools/the profession. As independent variables, all of the variables from the propensity score matching were included – in order to control for any remaining imbalances in the matching variables between the treatment and comparison groups after matching – as well as the treatment indicator and year dummy variables to account for specific time period effects (e.g. the impact of Covid-19 on the 2020 data).

To compare the differences between the two groups, the probability of 'retention' or 'progression' was estimated if every teacher had been involved in the project, and then again if every teacher had not been involved in the project. The average of these predicted probabilities is the average estimated retention/progression rate for treatment and comparison teachers, respectively. The difference between treatment and comparison teachers is the estimated 'marginal effect', which is presented in the tables in Section 4.4.3, with the accompanying odds ratio estimates in Appendix D. Standard errors for the marginal effect estimates are calculated using the delta method and statistical significance is assessed at the five per cent level.

Statistical Matching

Table 18 below highlights the sample characteristics for the full treatment and comparison groups. Some characteristics, such as gender and full-time status, were fairly closely aligned even in the unmatched sample. However, other characteristics, like teacher age, experience, school deprivation and attainment, were not.

Teachers in the potential comparison group tended to be fairly evenly spread over attainment and FSM quintiles, and the majority were teaching in non-priority schools (AEA categories 1-4). Accelerate participant teachers, however, were much more likely than potential comparison teachers to be younger, less experienced, and teaching in more deprived and lower-attaining schools. Unlike comparison teachers, nearly all treatment teachers were teaching in AEA category 5 or 6 schools, most of which were outside of London, as these were the schools targeted by the project.

After matching, the proportions of comparison teachers in each of the key matching characteristics were much more closely aligned with treatment teachers. The propensity score matching ensured that teachers in the matched comparison group were drawn primarily from AEA category 5 and 6, more-deprived and lower-attaining schools. While some small differences between treatment and comparison teachers still existed after

matching, including the matching variables in the logistic regression modelling ensured that the final estimates controlled for any of these outstanding differences.

Focussing on the subset of potential comparison teachers who were the most similar to treatment teachers necessarily involved discarding some potential comparison teachers from the matched sample, when there were no sufficiently similar treatment teachers with which to match. Of the 489,807 potential comparison teachers, only 11,070 were matched to a treatment teacher, highlighting how most comparison teachers were fairly dissimilar to teachers recruited to the Accelerate project (at least in observed teacher and school characteristics).

Seven potential treatment teachers were also discarded from the matched sample, as these teachers have no sufficiently similar counterpart in the potential comparison teacher sample.

Table 18 Characteristics of comparison and treatment teachers before and after matching in the full sample

Characteristic	Treatment teachers (%)	Potential comparison teachers (%)	Matched treatment teachers (%)	Matched comparison teachers (%)
Male	24.3	24.3	24.4	22.8
Female	75.7	75.7	75.6	77.2
Aged under 30	69.9	22.2	69.9	72.2
Aged 30-49	27.9	59.8	27.7	25.7
Aged 50 or older	2.3	18.0	2.3	2.0
0 years since qualifying	23.0	5.6	23.2	24.3
1 year since qualifying	29.7	4.6	29.4	27.7
2 years since qualifying	19.3	4.6	19.4	19.3
3 years since qualifying	13.5	4.7	13.6	14.5
4 years since qualifying	7.8	4.4	7.8	8.5

Characteristic	Treatment teachers (%)	Potential comparison teachers (%)	Matched treatment teachers (%)	Matched comparison teachers (%)
Between 5 and 10 years since qualifying	< 4.0*	19.9	< 4.0*	3.1
10 or more years since qualifying	< 1.0*	51.7	< 1.0*	0.7
Unknown years since qualification	2.1	4.5	2.1	1.9
Classroom teacher	94.8	67.9	94.7	95.2
Middle/Senior leader	5.2	32.1	5.3	4.8
Full-time	96.2	76.4	96.2	96.5
Part-time	3.8	23.6	3.8	3.5
Ofsted outstanding	8.6	22.7	8.6	8.8
Ofsted good	39.2	60.5	39.4	43.0
Ofsted requires improvement	35.7	10.5	35.7	32.9
Ofsted inadequate	9.9	3.5	9.7	9.0
Ofsted score unknown	6.6	2.8	6.6	6.3
Nursery/Primary school	54.4	50.5	54.3	55.3
Secondary/16 Plus school	43.6	44.2	43.7	42.3
Special school	2.0	5.3	2.0	2.4
FSM lowest 20%	9.1	19.0	9.2	8.5
FSM middle-lowest 20%	12.0	18.8	12.1	12.1
FSM middle 20%	17.0	19.0	17.1	17.7
FSM middle-highest 20%	27.2	18.6	27.2	27.2
FSM highest 20%	30.1	18.2	30.1	30.2
FSM unknown	4.5	6.3	4.4	4.3

Characteristic	Treatment teachers (%)	Potential comparison teachers (%)	Matched treatment teachers (%)	Matched comparison teachers (%)
Attainment lowest 20%	21.2	11.0	21.0	21.1
Attainment middle-lowest 20%	30.1	18.5	30.1	29.4
Attainment middle 20%	21.7	20.7	21.8	22.2
Attainment middle-highest 20%	14.6	22.5	14.6	15.0
Attainment highest 20%	6.7	19.8	6.8	6.0
Attainment unknown	5.7	7.4	5.7	6.3
AEA Category 1	3.4	18	3.5	2.4
AEA Category 2	3.6	14.5	3.7	2.9
AEA Category 3	5.5	16.8	5.5	4.9
AEA Category 4	11.5	19.3	11.5	11.3
AEA Category 5	32.7	15.9	32.6	34.3
AEA Category 6	43.3	15.5	43.2	44.2
East of England	15.1	11.3	15.1	15.7
East Midlands	14.2	8.3	14.2	14.3
West Midlands	12.2	11.0	12.2	13.0
London	2.2	16.6	2.2	1.5
North East	2.7	4.7	2.7	2.7
North West	18.5	13.1	18.4	18.2
South East	15.4	15.9	15.3	14.1
South West	2.1	9.6	2.1	2.0
Yorkshire and the Humber	17.6	9.5	17.7	18.6
Number of teachers	**1,454**	**489,807**	**1,447**	**11,070**

Note: * indicates proportion has been rounded due to small sample sizes.

In addition to the full matched sample, a second matched sample was derived, with which to estimate the differences in career progression and retention within the same school/same LA/a challenging school. Given that career progression or retention within the same school/same LA/a challenging school for teachers who left the profession is not observed for teachers who leave the profession, this additional matched sample consisted of a subset of teachers in the full sample who did not leave the profession in the two years after baseline. Characteristics of teachers in the matched sample of non-leavers were very similar to the full matched sample.

Appendix D: Outcomes of SWC impact analysis

Table 19 Odds ratios from the retention and progression outcome analysis

	1 year after baseline	2 years after baseline
Retention in state-sector teaching	1.5 (1.2, 1.8)	1.3 (1.1, 1.5)
Retention in the same school	2.4 (1.9, 3.1)	1.6 (1.3, 1.9)
Retention in the same LA	2.3 (1.7, 3.1)	1.4 (1.2, 1.7)
Retention in a challenging school	2.9 (2.1, 4)	1.6 (1.3, 2)
Progression in state-sector teaching	1.1 (0.8, 1.4)	1 (0.8, 1.3)
Progression in the same school	1.1 (0.8, 1.5)	1.1 (0.9, 1.4)
Progression in the same LA	1.1 (0.9, 1.5)	1.1 (0.9, 1.4)
Progression in a challenging school	1.1 (0.8, 1.4)	1 (0.8, 1.3)

Note: Figures in brackets represent the 95 per cent confidence interval of the odds ratio

Appendix E: Sample characteristics

Table 20 Selected characteristics of achieved survey samples at baseline, endpoint and in the matched analysis

	Baseline N	Baseline %	Endpoint N	Endpoint %	Matched analysis N	Matched analysis %
Role						
Classroom teacher	675	89	195	81	80	81
Middle leader	86	11	46	19	18	18
Senior leader	2	<1	1	<1	1	1.0
Years in teaching						
Six years or more	11	1	19	8	8	8
Fifth year of teaching	61	8	34	15	15	15
Fourth year of teaching	120	16	54	24	23	23
Third year of teaching	167	22	73	32	27	27
Second year of teaching	236	31	47	20	24	24
First year of teaching (NQT)	168	22	3	1	2	2
Participation in the project						
Joined from the start and completed*	N/A	N/A	152	61	60	61
Joined after the start but completed*	N/A	N/A	45	18	16	16

	Baseline N	Baseline %	Endpoint N	Endpoint %	Matched analysis N	Matched analysis %
Dropped out early; did not complete	N/A	N/A	33	13	23	23
Phase of teaching						
Primary	444	58	127	55	53	54
Secondary	319	42	92	40	37	37
Other	0	0	11	5	9	9
Ever6 FSM quintiles						
Quintile 1 (lowest)	51	7	27	11	10	10
Quintile 2	107	14	39	16	17	17
Quintile 3	144	19	54	22	18	18
Quintile 4	230	30	70	28	25	25
Quintile 5 (highest)	189	25	55	22	25	25
Missing	42	6	4	2	4	4
Ofsted rating						
Outstanding	89	12	37	15	11	11
Good	334	44	114	46	43	43
Requires improvement	248	33	80	32	37	37
Inadequate	84	11	17	7	7	7
Missing	8	1	1	<1	1	1

*These responses include respondents who completed the project prior to completing the endpoint survey, as well as those who were still participating in the project at the time they completed the end-point survey.

Appendix F: Description of factor analysis undertaken on core survey questions

Approach to fund-level factor analysis

The TLIF project evaluations included surveys of participants at baseline and endpoint. The surveys included 'core questions' – common questions and items included in all the TLIF surveys - with the aim of providing data that could be combined across all projects to analyse fund-level outcomes. Surveys also included, to differing extents, 'bespoke questions' – questions that were specific to the project focus and outcomes. This section explains the approach taken to factor analysis of the survey 'core questions'.

Factor analysis is a statistical technique that summarises information from a number of survey items into a smaller set of reliable outcome measures. It combines survey items that are correlated and assess the same underlying latent construct by grouping together question items that have similar patterns of responses. This enables more robust and straightforward analysis than reporting single items. We used the factors derived through this analysis as our outcome measures to report the survey findings in this report.

Factor analysis was conducted in two stages. First, it was conducted on the core question items that were asked of *all* respondents in exactly the same way. This resulted in Factors 1 to 4 in Section 1.2 below for all respondents. Second, it was conducted on core question items that covered consistent themes but where the wording, or the inclusion, of items varied slightly depending on the *role of the respondent* (class teachers, middle leaders, or senior leaders). This resulted in Factors 5 to 8 for class teachers, Factors 9 to 12 for middle leaders, and Factors 13 and 14 for senior leaders (see Sections 1.3, 1.4 and 1.5 below). The Accelerate project included questions for classroom teachers, middle leaders, and senior leaders, although given respondents' status as ECTs, most of the respondents fell into the category of classroom teachers. Therefore, factors relevant to this report are 1-4 (based on all respondents) and 5-8 (based on responses from classroom teachers only).

Each survey question was designed to measure a specific construct – for example 'leadership quality' – through a series of items related to that construct. In our analysis, the items that loaded onto each individual factor were, in most cases, derived from a single survey question. This indicates that our survey was successful in measuring the constructs that it intended to. Most survey questions were answered on a Likert scale (e.g. an 8-point agree-disagree scale). The response on the scale was converted to a score for each item, then combined to produce a mean score and score range for each of the factors. Any teacher, middle or senior leader that answered a third or less of the items entered into the factor analysis were removed from the analysis for the purpose of constructing the factors on a consistent set of responses.

Factors were selected that met the following criteria:

- strong internal consistency of each factor which indicates reliability (indicated by a high Cronbach's Alpha statistic on a range from 0 to 1)
- loadings above 0.3 which indicate an association between items and the underlying factors. The relationship of each item to a factor is expressed by a factor loading. Factor loadings are similar to correlation coefficients – a higher value on a range from -1 to 1 indicates a stronger correlation with the factor
- Eigenvalues greater than 1 which indicate strong validity of the factors (the additional variance explained by bringing items together into a single factor)
- low levels of correlation between factors, indicating that each factor is measuring something slightly different.

Several factors were only comprised of two items. However, we deemed this to be acceptable as a two-item factor provides a more robust measure of a concept than two separate items.

Some questions and items that were entered into factor analysis did not load onto factors, or form reliable factors. These are analysed separately in each report, as applicable to the project.

Factors for all respondents

Table 21 Factor 1: Effectiveness of school leadership (all)

Effectiveness of school leadership (all): Item statements	Loading
Reliability of measure: Alpha = 0.941	
My school leadership team: sets a clear vision	0.769
My school leadership team: is effective	0.768
My school leadership team: creates an ethos within which all staff are motivated and supported to develop their own skills and subject knowledge	0.734
My school leadership team: sets high expectations for all pupils	0.721
My school leadership team: challenges assumptions about low capabilities of disadvantaged pupils	0.694
My school leadership team: uses data to monitor the quality of teaching and learning and to initiate improvements where required	0.683
My school leadership team: identifies professional development as a priority for all teachers	0.673

Effectiveness of school leadership (all): Item statements	Loading
My school leadership team: values experimentation and the introduction of new ideas for teaching and learning	0.660
My school leadership team: trusts staff to adapt teaching practices to meet the needs of pupils	0.650
My school leadership team: sets the conditions for effective behaviour management	0.649
My school leadership team: supports teachers to develop their careers (either via a teaching or leadership route, depending on their interest)	0.646
My school leadership team: identifies professional development as a priority for all support staff	0.597
My school leadership team: facilitates collaborative work with other schools	0.569

Table 22 Factor 2: Effectiveness of professional development (all)

Effectiveness of school leadership (all): Item statements	Loading
Reliability of measure: Alpha = 0.917	
The facilitation of the professional development I have received is effective	0.806
The content of the professional development I have received is relevant to my needs	0.796
The professional development I have undertaken has been effective	0.755
There is support to implement learning from professional development	0.709
I have access to high-quality professional development	0.687
I am encouraged to undertake professional development	0.589
I receive support to undertake endpoint activities when engaging in professional development	0.584

Table 23 Factor 3: Effectiveness of school culture (all)

Effectiveness of school leadership (all): Item statements	Loading
Reliability of measure: Alpha = 0.818	
I enjoy working at my school	0.679
Most pupils achieve the goals that are set for them in my school	0.588
My school has a collaborative culture characterised by mutual support	0.558
All in all, I am satisfied with my job	0.529
The atmosphere throughout my school encourages pupils to learn	0.524
My workload is manageable	0.507

Table 24 Factor 4: Motivation for professional development (all)

Effectiveness of school leadership (all): Item statements	Loading
Reliability of measure: Alpha = 0.831	
I am keen to engage in professional development	0.807
Professional development plays a major role in helping me to improve the quality of my teaching / leadership	0.772

Factors for classroom teachers (CT)

Table 25 Factor 5: Personal knowledge for effective teaching (CT)

Personal knowledge for effective teaching (CT): Item statements	Loading
Reliability of measure: Alpha = 0.877	
I have the required subject pedagogical knowledge to effectively teach my subject(s) / key stage	0.920
I have the required generic pedagogical knowledge to effectively teach my subject(s) / key stage	0.794
I have the required subject knowledge to effectively teach my subject(s) / key stage	0.733

Table 26 Factor 6: School teaching quality (CT

School teaching quality (CT): Item statements	Loading
Reliability of measure: Alpha = 0.665	
Teachers in this school manage behaviour effectively to ensure a safe learning environment	0.723
Teachers set high expectations for all pupils' achievement	0.708
Teaching in my subject(s) / key stage is generally very good	0.348

Table 27 Factor 7: Motivation for teaching-focused professional development (CT)

Motivation for teaching-focused professional development (CT): Item statements	Loading
Reliability of measure: Alpha = 0.878	
I use professional development both to maintain and to extent my knowledge of my subject area(s) / key stage	0.889
I use professional development both to maintain and to extend my critical understanding of a range of subject- or key stage-specific pedagogical approaches	0.843

Table 28 Factor 8: Opportunities for career progression (CT)

Opportunities for career progression: Item statements	Loading
Reliability of measure: Alpha = 0.840	
I have the opportunity to progress as a classroom teacher within my school if I want to (e.g. as a specialist subject leader)	0.897
I have the opportunity to progress into a middle/senior leadership position within my school if I want to	0.786

Appendix G: Analysis of Management Information for the Teaching and Leadership Innovation Fund: Education Development Trust

Introduction

The Teaching and Leadership Innovation Fund (TLIF) was a DfE fund through which 10 providers offered support to schools in a variety of areas from behaviour management to phonics and STEM teaching. The aim of the fund was to create and develop a sustainable market for high-quality Continuous Professional Development (CPD). This is a summary of Management Information (MI) data submitted by all ten providers receiving TLIF funding and **does not** assess project impact. The data was submitted in February 2020 and covers the schools and participants recruited, as indicated by the providers. Comparable national figures in this report are based on the 2018 School Workforce Census covering teaching staff in state-funded schools, and Ofsted as at the most recent inspection. The 2018 School Workforce Census was chosen in order to align with the most schools across programme cohorts between 2017 and 2020. The school level analysis refers to all schools that were recruited by providers to participate in the project, including those that withdrew. Schools may have been recruited by more than one provider and participants may have been registered for more than one project.

Targets: Background

Each provider had a number of Key Performance Indicators (KPIs). These were broken down into three different categories:

- **geography**: whether specific areas were targeted by providers (e.g. regional targets, Opportunity Areas, priority areas) and whether particular schools should be targeted by providers (e.g. based on Ofsted rating)
- **schools**: the target number of schools
- **participants**: the target number of participants

All providers had a geography target and either a participant or a school target, but not necessarily both.

In the context of the TLIF evaluation, a priority area is defined as Achieving Excellence Areas (AEAs) 5 or 6 (Opportunity Areas fall within this category), and a priority school is defined as a school with an Ofsted rating of Requires improvement (Ofsted grade 3) Or Inadequate (Ofsted grade 4).

Note: there are some discrepancies between the overall numbers from providers and those in the data set sent to us. The provider numbers cannot be broken down in school/area type etc. so analysis will not be conducted on this data, however headline figures will be presented where available.

Targets: Breakdown

Education Development Trust (EDT) delivered the Accelerate Programme, a support project for Early Career Teachers (ECTs), with the overall aim of improving teacher practice. EDT had the following KPI targets:

Geography Level:

- A minimum of 70% of participating schools were to be located in priority areas (category 5 and 6 areas).
- Within priority areas, a minimum of 70% teachers were to be recruited from priority schools (Ofsted rated 3 or 4).
- All teachers in non-priority areas were to be from priority schools.
- EDT aimed to recruit participants from at least four priority areas **or** at least 30 priority schools.
- The programme recruited nationwide.

School Level:

- The programme aimed to recruit a minimum of 395 schools
- The programme was aimed at Primary, Secondary and Special schools

Participant Level:

- A minimum of 1500 participants were to be recruited during the programme.

Total school numbers

A total of 706 schools were recruited by EDT. However, removing schools where all participants withdrew reduces this to 391 schools. The initial target was 395 schools.

Note: EDT's own data puts the number of schools at 478, however, not all of these schools are present in DfE's Management Information data set.

76% of schools recruited were from priority areas. The target was for 70% of schools to be recruited from priority areas.

341 priority schools were recruited. Removing those where all participants withdrew reduces this to 195. The target was 30.

Total participant numbers

The total number of teachers that participated in the course was 1598. Removing those that withdrew gives a total of 716. The target number of participants was 1500.

Note: EDT's own data puts the number of participants at 716, in line with our count of those that completed the programme.

- Of the participants in Priority Areas, 42% were from priority schools. The target was 70%.
- Of the participants not in Priority Areas, 89% were from priority schools. The target was 100%

Note: 8 schools have no Ofsted rating data and have not been included in the priority schools analysis.

Schools by Phase

Of all EDT participant schools (including withdrawals):

- 61% of schools were primary schools, 36% were secondary and 3% special.
- 2 schools could not be assigned a phase and were classed as "Not Applicable".
- Secondary schools were over-represented, making up 36% of recruited schools compared to 16% of all schools nationally.

Schools by Region

EDT recruited from schools in all 8 RSC Regions. The region with the highest proportion of schools recruited by EDT (including withdrawals) was Lancashire and West Yorkshire where 25% of participating schools were based.

Of the remaining schools:

- 22% were based in the West Midlands and the Humber,
- 14% in the South East & South London,
- 13% in East of England and North East London,
- 12% in the West Midlands,
- 8% in South Central and North West London,
- 4% in the North of England,
- 2% in the South West.

Schools by AEA Category

AEA categories are DfE classifications of Local Authority Districts (LADs) by educational performance and capacity to improve, introduced in 2016. It splits areas into six categories from "Strong” Category 1 areas to "Weak” Category 6 areas.

Of all the schools recruited by EDT (including withdrawals) 76% were in Categories 5 and 6.

Schools by Index of Multiple Deprivation Decile

The Index of Multiple Deprivation (IMD) is a "neighbourhood" measure of deprivation produced by the Ministry of Housing, Communities and Local Government. Each neighbourhood is placed into a decile with decile 1 containing the most deprived areas and decile 10 containing the least deprived.

EDT recruited across all deciles, however recruited tended to be higher in more deprived areas with 46% of schools (including withdrawals) recruited from deciles 1-3.

Participants by role

Roles were provided in TLIF Management Information as free text and matched to a standardised leadership level. Below these have been compared to national figures taken from the 2018 School Workforce Census Publication.

Of all participants recruited by EDT (including withdrawals), 98% were classroom teachers (compared to 57% nationally) with the rest (2%) being middle leaders.

This is in line with the programme's focus on Early Career Teacher

Appendix H: Extent to which ECTs were involved in each of the main elements of Accelerate

ECTs answering the endpoint survey were asked to indicate whether they were involved in each of the main elements of Accelerate. Those who were, were then asked to rate the extent to which each element met their needs on a scale of 1 to 8 where 1 was 'Not at all' and 8 was 'fully'. The scale has subsequently been collapsed into four categories as follows: 1-2 ('Not at all'); 3-4 ('Somewhat'); 5-6 ('Moderately'); 7-8 ('Fully').

The findings are based on all of the ECTs who responded to the endpoint survey. However, some caution should be taken in interpreting the findings due the small underlying numbers. Percentages may not sum to 100 due to rounding. Missing responses have been removed.

Table 29 Two-day residential (held in London, Manchester and Birmingham) - Whether involved

	Yes	No
N	173	57
%	75	25

Table 30 Two-day residential (held in London, Manchester and Birmingham) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	13	19	30	111
%	8	11	17	64

Table 31 One-day workshops (held within local regional hubs) - Whether involved

	Yes	No
N	207	23
%	90	10

Table 32 One-day workshops (held within local regional hubs) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	14	20	55	118
%	7	10	27	57

Table 33 Specialist instructional coaching (1:1 coaching sessions and webinars) - Whether involved

	Yes	No
N	163	66
%	71	29

Table 34 Specialist instructional coaching (1:1 coaching sessions and webinars) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	13	28	39	83
%	8	17	24	51

Table 35 Support from a nominated in-school mentor (if appropriate, i.e. for NQT teachers) -Whether involved

	Yes	No
N	45	185
%	20	80

Table 36 Support from a nominated in-school mentor (if appropriate, i.e. for NQT teachers) -Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	6	4	12	23
%	13	9	27	51

Table 37 Online modules (i.e. accessed via the Accelerate Platform) - Whether involved

	Yes	No
N	205	25
%	89	11

Table 38 Online modules (i.e. accessed via the Accelerate Platform) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	20	43	74	68
%	10	21	36	33

Table 39 Online resources/materials (including links to websites, videos, blogs, teaching tools) - Whether involved

	Yes	No
N	205	25
%	89	11

Table 40 Online resources/materials (including links to websites, videos, blogs, teaching tools) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	17	43	71	74
%	8	21	35	36

Table 41 Peer-to-peer support through CoPs (i.e. online subject specific forums on the Accelerate Platform) - Whether involved

	Yes	No
N	91	139
%	40	60

Table 42 Peer-to-peer support through CoPs (i.e. online subject specific forums on the Accelerate Platform) - Extent to which provision met needs

	Not at all	Somewhat	Moderately	Fully
Likert scale	1-2	3-4	5-6	7-8
N	15	21	32	23
%	16	23	35	25

Appendix I: Practical summary of the evidence about effective CPD (Coe, 2020)

CPD that aims to support the kinds of changes in teachers' classroom practice that are likely to lead to substantive gains in pupil learning should:

1) Focus on promoting the teacher skills, knowledge and behaviours that are best evidenced as determining pupil learning. Such content should be appropriately sequenced and differentiated to match the needs of participants.

2) Have sufficient duration (two terms) and frequency (fortnightly) to enable changes to be embedded.

3) Give participants opportunities to:

a) be presented with new ideas, knowledge, research evidence and practices

b) reflect on and discuss that input in ways that surface and challenge their existing beliefs, theories and practices

c) see examples of new practices/materials/ideas modelled by experts

d) experiment with guided changes in their practice that are consistent with these challenging new ideas and their own context

e) receive feedback and coaching from experts in those practices, on an ongoing basis

f) evaluate, review and regulate their own learning.

4) Create/require an environment where:

a) participants can collaborate with their peers to support, challenge and explore

b) school leadership promotes a culture of trust and continuous professional learning

c) teachers believe they can and need to be better than they are

d) the process and aims of the CPD are aligned with the wider context (e.g. accountability).

Source: Coe, R. (2020). 'The case for subject-specific CPD.' Paper presented at the Subject CPD Roundtable, Institute of Physics, London, 22 January.

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