EVALUATION OF THE METACOGNITION IN SERVICE SCHOOLS SSIF INITIATIVE:

An end of project report for the Swaledale Teaching Alliance

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Executive summary

This report presents the findings of an independent evaluation carried out for the Swaledale Teaching Alliance into their DfE Strategic School Improvement Fund (SSIF) grant to introduce metacognition into mathematics. The evaluation was conducted by CollectivED, a research and practice Centre in the Carnegie School of Education at Leeds Beckett University (LBU).

The project, which took a collaborative coaching approach, ran for five terms from September 2017 to April 2019. Ten primary schools in North Yorkshire, with a predominance of Service Children, participated in the project. KS2 data shows that outcomes for pupils at these schools has been below the national average for some years. Attainment and progress in maths has been particularly weak. One of the main issues with these pupils is their mobility. Pupils do not often stay in one school for very long and enter or leave school at times other than usual, often at short notice as whole regiments are moved.

The aim of the project was to empower pupils to understand their own learning and to develop skills to enable them to take more responsibility for their own progress. The evaluation was focused on the following critical aspects of school improvement:

- how the school improvement project was designed,
- how the school improvement practices were carried out,
- what the evidence is of the potential legacy of this school improvement project.

The evaluation did not:

- consider the quality of teaching and learning or coaching of either the Lead Practitioners or the Lead Teachers;
- assess pupil progression and attainment data; nor
- consider value for money.

What is metacognition?

The use of the terms 'metacognition and self-regulation' is relatively common in the current teaching and learning discourse and has been adopted by the Education Endowment Foundation (EEF). Previously these approaches might have been described as 'teaching thinking skills'. The inclusion of 'teaching' emphasises an active instructional and facilitative role of the teacher.

This SSIF project funding bid was based on the high relative position of 'metacognition and self-regulation' as one of the effective teaching strategies in the EEF Teachers' Toolkit. Whilst the Toolkits do not make definitive claims as to what *will* work to improve outcomes in a given school, they do provide high quality information about what is *likely to be beneficial* based on existing evidence.

As part of the project, the Alliance purchased LORIC as a resource to help deliver metacognition in schools.

Evaluation approach

The evaluation was qualitative in nature consisting of evidence from a range of stakeholders including the Lead Practitioners (or coaches); the Lead Teachers; the Head of the Alliance (the Strategic Lead); the Project Manager; and the Quality Consultant.

In addition, the evaluators consulted a range of documents provided by the Lead Practitioners including their termly school delivery plans and the results of pupil and staff surveys and cluster observations. The evaluators also had access to Basecamp (a virtual platform to facilitate the sharing of information) and attended a number of activities such as the project re-launch conference and network meetings.

Key findings

Pupil specific findings:

- There is anecdotal evidence of positive pupil impact.
- Classroom tasks have become more pupil-led.
- Pupils have become more confident learners, especially in maths.
- Pupils are no longer afraid of making mistakes, asking questions or asking for help. Instead, they see these as opportunities for learning rather than a sign of failure.
- Whilst there is no measurable, statistical pupil impact data, this was not a key aim for any of the stakeholders involved with the project and should not been seen as a weakness.

Lead Teacher specific findings:

- There is evidence of Lead Teacher impact, mainly in terms of developing new school leaders.
- The Lead Teachers valued the coaching style used by the Lead Practitioners and the time they had on the project; particularly the fact that it was ongoing over a set period rather than a one-day hit.
- It is important for schools to choose the right lead teacher to take on such projects.

Lead Practitioners:

- The Lead Practitioners have been the driving force for this project. They have been highly organised, methodical and professional.
- Having three Lead Practitioners instead of two (as originally proposed) was beneficial to the project.
- The Lead Practitioners have all grown in their teaching and coaching skills as a result of the project. The Lead Practitioners have all gained considerable insight into school improvement work and have the potential to use this effectively in future roles.

Whole-school findings:

- Stability at the school in terms of staffing – teachers and Headteachers, Ofsted ratings, Ofsted inspections due etc, all contribute to the likely success of such a project.
- Having Headteacher and Senior Leadership Team buy-in and support, throughout the project, is crucial.
- Each school delivered the project in a way appropriate to their needs and circumstances.
- Most schools intend to continue rolling out this pedagogic approach post project, without designated funding.

Resources:

- The first resource adopted was an element of the Partners in Excellence (PiXL) Primary Edge Program. This covers five areas of learning, shorted to LORIC. Lead Teachers felt that LORIC was a good vehicle on which to initially hang metacognition.
- Basecamp was also used. This online platform is designed to support collaborative working. Two closed groups were established for sharing resources and ideas, one for the Lead Practitioners and one which included the Lead Teachers.
- The most valuable resources were reported by the Lead Teachers to be those designed by the Lead Practitioners.
- The end of project video and resource pack will be a lasting legacy of the project.

Project approach / design:

- Network meetings were particularly valued by the Lead Teachers.
- Cluster observations benefited not only the Lead Teachers but other members teaching staff at the participating schools', including teaching assistants.
- It is essential to have a good working relationship between Lead Practitioners and the Lead Teachers, the Lead Practitioners and Headteachers.
- Good communication between all stakeholders is essential, along with clear lines of reporting and accountability for times of difficulty.
- The Lead Practitioners had no authority over the schools to ensure a uniform

approach to project engagement.

- Funding to cover Lead Teachers has been effective, as it has allowed all Lead Teachers to take part in cluster observations and meetings.
- Whilst acknowledging the significance of the number of Service Children in the participating schools, the pedagogic intervention took a whole-school improvement approach rather than focusing attention on Service Children specifically.

Challenges:

The main challenge was the DfE timeframe for the project. There were two issues with this. The first that the coaching started in school mid-way through the year (after February half term) when timetables and lesson plans were already set for the year. The second was deciding whether or not the Lead Teacher should follow their pupils (e.g. from year 3 into year 4) in the new school year.

There also appeared, at times, to be a missing link between the Headteachers and the Lead Practitioners.

Commendations and recommendations

The project design and implementation had many commendable features, and these should be considered as recommendations for future school improvement initiatives both in the project schools and beyond.

- ✓ Collect on-going data as deemed appropriate;
- ✓ Reflect on how well the initiative is going at regular intervals;
- ✓ Do not be afraid to change direction or add in new aspects to the project;
- ✓ Allow time for the building of relationships and trust to develop;
- ✓ Plan regular network meetings for the teachers involved to strengthen collaborative working and the sharing of knowledge, understanding and resources;
- ✓ Ensure funding and teaching cover is available for Lead Teachers to attend network meetings;
- ✓ Encourage all schools to take a contextualised specialist approach to coaching that is delivered over a period of time;
- ✓ Encourage regular cluster observations to allow Lead Teachers – and over time others - to benefit from the expertise of others;
- ✓ Encourage a change in mind-set and culture within the Alliance or the school to one of being open to new ideas and ways of working.
- ✓ The availability of follow-on funding to help participating schools develop their new pedagogic approach more fully and integrate it into their strategic development plans.
- ✓ Consider using a theory of change approach when designing, implementing and reviewing school improvement projects to allow understanding to emerge at school level.
- ✓ Support ongoing practice development through the work of Specialist Leaders in Education with coaching approaches as part of their work.

This evaluation found that, a new school improvement initiative works best where individual schools and teachers have buy-in, feel they have something to offer and see it as a collaboration whereby they are equally valued, rather than taking a top-down approach.

Introduction

The Carnegie School of Education at Leeds Beckett University (LBU) was commissioned by the Swaledale Alliance in North Yorkshire to evaluate their successful round 1 Strategic School Improvement Fund (SSIF) pedagogical approach to metacognition in mathematics. The evaluation was undertaken through CollectivED (an LBU research and practice centre).

SSIF was a DfE grant that only Teaching School Alliances, Multi-Academy Trusts and Local Authorities could apply for in 2017. It was designed to support schools most in need. The aim of the funding was to improve school performance and pupil attainment. The Alliance was successful in securing approximately £250,000 from the fund. The project ran from September 2017 to April 2019, spanning five terms across two school years.

The project title for this SSIF was:

> *Schools in Service Communities: does the development of pupil metacognition and self-regulation improve whole school outcomes and accelerate progress for disadvantaged groups and Service Children in schools serving service communities?*

Ten primary schools, with a predominance of Service Children, took part in the project. These schools were selected because data showed that, collectively, outcomes for their pupils at KS2 has been below the national average for some years. Attainment and progress in maths has been particularly weak. One of the main issues with these pupils is their mobility. Pupils enter or leave school at times other than usual, often at short notice, as whole regiments move.

The project sought to improve outcomes for all pupils in these schools through the development of pupils' metacognition and self-regulation. The aim of the project was to empower pupils to understand their own learning and to develop skills to enable them to take more responsibility for their own progress.

To sum up, initially the project had three main dimensions: metacognition, mathematics and Service Children.

A small team at LBU were invited to evaluate the project.

The evaluation was focused on the following critical aspects of **school improvement:**

- how the school improvement project was designed,
- how the school improvement practices were carried out,
- what the evidence is of the potential legacy of this school improvement project.

The evaluators **did not:**

- consider the quality of teaching and learning or coaching of either the Lead Practitioners (LPs) or the Lead Teachers (LTs);
- assess pupil progression and attainment data; nor
- consider value for money.

Report layout

The main body of this report is divided into five sections. Section 1 frames the policy context in which the funding was allocated, defines key terms such as metacognition and provides a project overview. Section 2 outlines the evaluative approach that was taken. Section 3 presents the evaluation findings under key themes covering recruitment, training, support, resources, impact and legacy. Section 4 discusses the findings using a collaborative professionalism framework. The final section, section 5, summarises the key findings and looks at lessons learnt as well as recommendations for implementing future school improvement initiatives that the Alliance (and others) might like to consider.

Section 1: Context

Metacognition and Self-regulation as the pedagogic focus

The terminology of 'metacognition and self-regulation' is relatively common in the current teaching and learning discourse and has been adopted by the Education Endowment Foundation (EEF). Previously these approaches might have been described as 'teaching thinking skills'. Teaching for metacognition has a strong history. Both Vygotsky and Bruner proposed that language and communication are at the heart of intellectual and personal development (Wood, 1998). Their work influenced a range of curricular and pedagogic approaches which share objectives to teaching thinking skills, including Dialogic Teaching (Alexander, 2017). Note the inclusion of 'teaching', which emphasises an active instructional and facilitative role of the teacher.

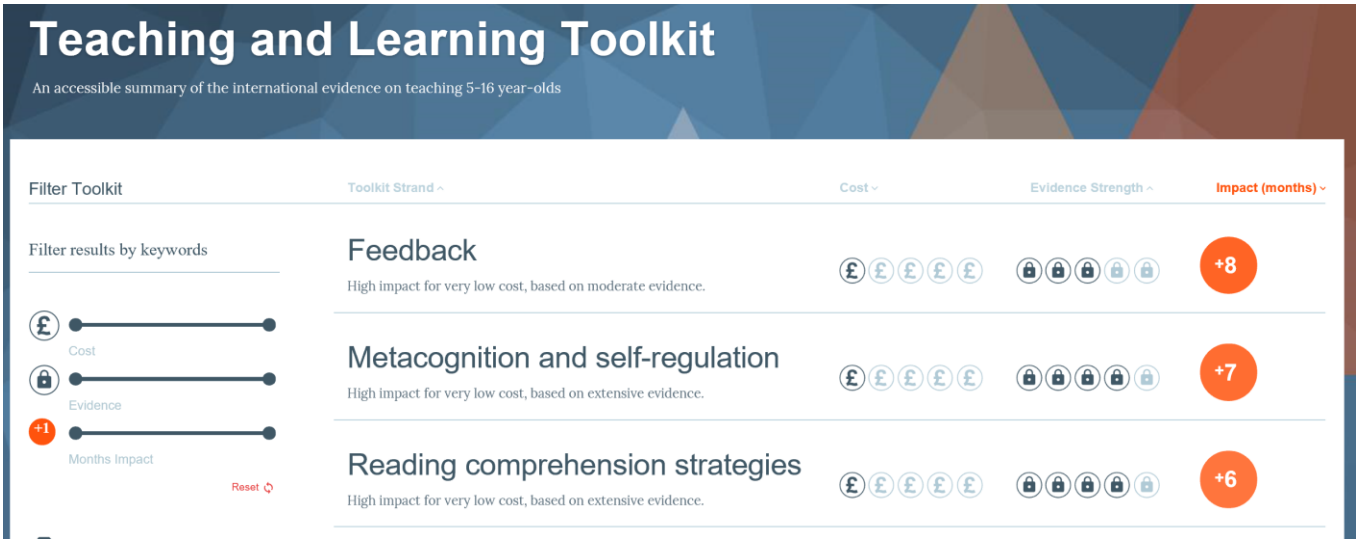
This SSIF project funding bid was based on the high relative position of 'metacognition and self-regulation' as effective teaching strategies on the EEF Teachers' Toolkit (as shown in Fig.1 below).

The Toolkit is explained by the EEF as follows:

> *The EEF Toolkit is designed to support teachers and school leaders who are making decisions about how to improve learning outcomes, particularly for disadvantaged children and young people. The Toolkit presents approaches to improving teaching and learning, each summarised in terms of:*
>
> 1. *its average impact on attainment;*
> 2. *its cost;*
> 3. *the strength of the evidence supporting it.*
>
> *The Toolkits do not make definitive claims as to what* will *work to improve outcomes in a given school. Rather they provide high quality information about what is* likely to be beneficial *based on existing evidence.*

Metacognition can be considered as a form of knowledge which is related to other forms of knowledge e.g. as defined in the Revised Bloom's Taxonomy alongside factual, procedural and conceptual (Anderson et al., 2001). Sometimes shorthand is used to describe metacognition as 'thinking about thinking'. Whilst metacognition can be seen as a form of knowledge, it can also determine metacognitive skills which allow learners to self-regulate. These include the overall disposition and motivation that learners have towards activities that promote learning such as planning, questioning, monitoring and reviewing their own thinking, work and progress. Hence the current buzz-phrase of 'Metacognition and Self-regulation'.

Fig. 1 Teaching Toolkit Screenshot



https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit.

Teaching for metacognition involves both the teacher and pupils paying attention to the cognitive processes that facilitate learning, and this demands pupils' active participation in learning activities and explicit talk about the learning process as well as the subject content of the lesson. Typically, it involves group dialogue around a challenging task and whole class debriefing with some focus on metacognition. The teacher is active in modelling, scaffolding, facilitating and providing instruction and explanation which support pupils' thinking. Critically the teacher also debriefs the learning and the thinking that supported it during a debrief, usually conducted with a whole class through skilled questioning and prompting and giving pupils adequate opportunities to provide in depth responses.

Teaching for metacognition can either be infused within the subject curriculum or be taught as an independent dimension. The EEF's conclusion is that there is evidence that infusing metacognition within subjects has greatest impact and this has historic validity. This supports the decision in this project to focus on metacognition in Mathematics. In April 2018 (part-way through this SSIF project) the EEF published its guidance report on '*metacognition and self-regulated learning*'[1] on its website and this has also been widely shared in hard copy with schools in England.

Project overview

Ten primary schools from across North Yorkshire took part in the project. Participating schools were:

- ✓ Alanbrooke Community Primary School
- ✓ Carnagill Community Primary School
- ✓ Le Cateau Community Primary School
- ✓ Dishforth Airfield Community Primary School
- ✓ Hipswell Church of England Primary School
- ✓ Leeming, RAF Community Primary School
- ✓ Linton-On-Ouse Primary School
- ✓ Michael Syddall Church of England Aided Primary School
- ✓ Wavell Community Infant and Nursery School
- ✓ Wavell Junior School

Three schools are currently rated as 'outstanding' by Ofsted, four as 'good', two as 'requires improvement' and one as 'inadequate.' Schools varied in size and two schools have just three classes. This meant that in some schools the pedagogic approach was delivered to mixed-year groups. The smallest school has approximately 60 pupils on roll and the largest nearly 500.

All schools were located in small towns or villages in rural areas but in with the unusual context of having a high proportion of children from service families. Six of the schools are located on or next to Catterick Garrison, one behind the wire of RAF Leeming and the remaining three in villages next to forces bases.

The project had a staffing infrastructure which drew together the Teaching School Alliance, the staff appointed to the project and senior leaders and teachers in each school:

- The Strategic Lead. This was the Head of the Alliance who held the funding.
- The Project Manager who was responsible for the day-day running of the project.
- The Headteachers at each of the ten participating schools. They not only ensured that the project was delivered in their school, but also sat on the Project Board that oversaw the project and met regularly.
- The Lead Practitioners (LPs). These were three experienced teachers specifically appointed to deliver the project in schools and to work with a designated teacher in each.
- The Lead Teachers (LTs). These were the designated teachers appointed by the school to work with the LPs.
- A consultant, with expertise in inspecting schools, to quality assure the teaching and coaching delivered as part of the project.

In addition, the project contracted the evaluation team – as outlined earlier.

As part of the project, the Alliance purchased LORIC as a resource to help deliver metacognition in schools. The LPs also used Basecamp, a virtual

[1] https://educationendowmentfoundation.org.uk/public/files/Support/Links/Campaigns/Metacognition/EEF_Metacognition_and_self-regulated_learning.pdf

platform to facilitate the sharing of information between all those involved with the project.

A coaching model was used to deliver the initiative. Table 1 illustrates the project schedule.

In addition, the LPs ran termly network meetings to which all LTs were invited. These meeting provided an opportunity for the LTs to network with others, share what they had been doing and to have further training. The project also held a practitioners' re-launch conference at the start of the new academic year (Term 4) to which all participating schools were invited to bring all their teachers and their teaching assistants. There was also an end of project conference that was open to schools beyond the ten that participated.

Table 1: The project's coaching schedule

Term	Activity
Term 1 (Sept-Dec)	Advertising for two Expert Coaches/LPs (on the Lead Practitioner Pay Range ISR L1-5) to deliver the project. This was a fixed term contract to run from January 2018 – April 2019. It was envisaged that each LP would work with five schools, one day a week. However, three part-time LPs, rather than two full-time, were appoint. Two LPs were allocated three schools and one four to reflect the number of days each worked.
Term 2 (Jan-April)	LPs undertook training to understand metacognition before going into schools to work with their designated LTs after February half term for one day a week. Delivery was focused on mathematics. LTs set up termly network meetings.
Term 3 (May-July)	LPs continued to work with their LT one day a week except for the last week of every half term when they had time out of school to come together for a time of sharing, reflection, continued professional development (CPD) and an opportunity to organise the next half terms delivery. LPs introduced cluster observations and ran network meetings.
Term 4 (Sept-Dec)	LPs continued to work with the LT and began the process of helping them roll out the metacognitive approach to other teachers in their school. The LPs ran network meetings and a new school year re-launch conference.
Term 5 (Jan-April)	LPs continued to work with their LT one day a week and roll out the initiative through staff training. Final round of cluster observations and network meeting. End of project conference.

Section 2: Evaluative approach

The underlying approach to this evaluation is that the SSIF project was based on a 'theory of change' held by the Teaching School Alliance and individualised in each school. In the broadest terms, the project's theory of change was that *effective development of teachers' practices to create more metacognitive learning and support greater self-regulation by pupils in maths could enhance the achievement and progress of pupils and help them to overcome some of the challenges associated with high mobility between schools*. This proposition had particular relevance for the children from service families, but the project leaders were always clear that the pedagogic approaches being used would not be specifically targeted towards these children, but that the project was about whole school improvement, albeit starting from a very specific subject and pedagogic base. The fact that the project had this implicit theory of change meant that it was appropriate to use a methodology aligned with this.

As such, the overarching method is an evaluation of the theories of change underpinning the project design and implementation, which was addressed both holistically and at individual school level. Laing and Todd (2015) state that '*a theory of change articulates explicitly how a project or initiative is intended to achieve outcomes through actions, while taking into account its context*' (p.3). This method allowed an evaluation of the way that the SSIF project was implemented, and also a recognition that the context, (e.g. policy, school and community contexts), are integral to the degree of success achieving change.

There were several key steps in the evaluation, which started with the development of a theory of change diagram for each school. This consisted of a flow chart showing anticipated causal relationships embedded in a structure which had the following outline. The content of the boxes in the table below made up the flow charts and each was drafted during interviews with the LPs after each of them had established an initial working knowledge of the schools they were attached to. Arrows between content across the grid showed how they anticipated change would occur over time and the link to the desired outcomes. This is illustrated in Table 2.

The initial diagrams for each school were revised part way through the project (end of Term 2) to recognise that the theory of change would evolve over time as the school context changed (e.g. high turn over of pupils, changing school leadership, Ofsted) and at this point a fourth row was added indicating the changes to date. The diagrams were then used as the basis of final evaluations, to establish the extent to which there was evidence of the desired outcomes and also how the project implementation and contexts had shaped those. Table 3 illustrates these additions.

Table 2: The Theory of Change outline

	Whole school	**Teachers / Other Staff**	**Pupils**
Situation at the start			
Steps to change			
Desired Outcomes			

In order to draft and re-draft the theory of change diagrams the evaluation team spoke to the LPs on a regular basis. At the start of the project, each LP was individually interviewed. Throughout the project, both formal and informal group conversations occurred as and when opportunities arose, often in and around the network meetings. In addition, the evaluators provided the LPs with informal metacognition training on at least two occasions. This was deemed appropriate as the LPs were forming an understanding of metacognitive teaching as the project proceeded and the ongoing discussions with the LBU team were part of this formative process.

The LTs were interviewed as a group in March, (Term 2), July (Term 3) and October (Term 4), during network meetings. The network meetings also provided an opportunity for the evaluators to gather observational data such as the interactions between LPs and LTs, LTs and LTs, as well as their enthusiasm – or not - for the project, their concerns and growth in terms of their metacognitive pedagogic approach to maths.

At the end of the project, the evaluation team interviewed the Alliance Strategic Lead, the Project Manager, and the independent quality assurance Consultant.

In addition, documents, provided by the LPs, were consulted over the course of the project including the LPs termly school delivery plans and the results of pupil and staff surveys and cluster observations. The evaluators also had access to Basecamp. Through this platform, the evaluators were able to see examples of metacognitive work in the classroom including learning walls.

The evaluation team attended the September re-launch conference and provided the Project Board with an interim report in May 2018.

All of the data gathered during the above interactions contributed towards the findings section of this evaluation report.

Table 3: Amended Theory of Change outline

	Whole school	Teachers / Other Staff	Pupils
Situation at the start			
Steps to change			
Desired outcomes			
Changes by summer 2018			
Actual outcomes (Spring 2019)			

Evaluation limitations

The evaluation team **did not** visit schools, talk to pupils, Headteachers or LTs on an individual basis, since this was the role of the quality assurance Consultant.

The evaluation team **have not** seen any raw pupil progress or attainment data or any tracking data, therefore we cannot present statistical, quantifiable evidence of the success, or otherwise, of the project.

Due to the small number of schools that took part in this project, the findings presented in this report are not generalizable to other schools, but they do provide an insight into when and how this pedagogical approach may or may not work in similar settings.

Evaluation challenges

There were no challenges of note to carrying out this evaluation under the parameters set out above.

Section 3: Findings

Setting up the project: appointments and training

Lead Practitioners: appointing and training

The project was designed to run with two full-time LP with each working in five schools one day a week. However, three very experienced part-time LPs were appointed. This has been beneficial to the project in that each brought their own unique complementary set of skills. The Project Manager believes that having three LPs instead of two has worked well because, ultimately, *'you get more than the sum of its parts*.' The LPs agreed that appointing three of them had worked well.

However, the LPs were not experts in metacognition, or how it might be delivered in the classroom in the context of mathematics; in fact, their knowledge in this area on appointment was fairly limited. Their first task was to gain an understanding of metacognition and how it might be delivered in the desired setting and they spent the first half term of being appointed doing just that. They sought training, attended meetings and read widely. They met with the evaluation team, one of whom specialises in metacognition, which they later reported to have been the most useful training on metacognition they received. They did not have any induction training as such. Rather they *'created opportunities to try and explore what metacognition is'*. They then pooled all of their training and shared what they had learnt. One of the LPs commented: '*In a way we have been self-led in what we have achieved rather than an induction that has been provided by any outside organisation.'* According to the Project Manager, the LPs '*rapidly*' become experts in the area.

It should be noted that their training did not stop once they went into schools. They have continued to seek CPD opportunities and met again with the LBU expert in Term 5 of the project. They found this valuable, allowing them a time to stop and reflect.

As a team, they have worked well drawing on each other's strengths and supporting each other when needed. They have worked largely autonomously and independently. The Project Manager become more and more '*hands-off*'. Each LP negotiated, with their respective Headteachers, the best time and way to deliver the project within the context of their school and have been more than capable of doing so. According to the Project Manager, appointments were made at an appropriate level for this to be an expectation of their role; two of the LPs have become Specialist Leaders of Education (SLEs) through the project, with the third already having that status on appointment.

All three were said to have made valuable contacts, developed links including to CollectivEd (a research and practice centre at Leeds Beckett University), and brought expertise back into the project.

Lead Teachers: Selection and views on training and the coaching approach

Selection of Lead Teachers

Schools were given autonomy over selecting which teacher would be the project lead. Whilst the focus of delivery was maths, not all those selected to be LTs were subject leads in maths. Small adjustments were made to the allocation of teachers to the role of LTs within the project. All of the LTs who successfully completed the coaching with the LPs were women. There was a range in the career stage of the teachers chosen, some were early career, some mid and some very experienced teachers. The pedagogic approach was delivered across different years in different schools. For example, in three schools the focus was year 2, in another three it was mixed year 3 and 4 and in one a mixed year 1 and 2 group. In one school, no one LT was appointed, rather the LP worked with a number of teachers during the project across a range of year groups.

Although some LTs had heard the term metacognition before taking part in the project, none of the LTs were fully aware of it and no one had previously, consciously, used it in their teaching practice. However, once they understood it as a pedagogical approach they were enthusiastic about using it and could quickly see its potential to improve pupil outcomes at their school.

In hindsight, the LPs felt it would have been prudent to have given schools guidance on who they should consider for the LT role. However, at the start of the project the LPs themselves were not clear as to what criteria should be considered. Points the LPs would like Headteachers to consider when selecting a classroom teacher to work on a

similar project in the future include:

- Teachers that are open to change;
- Teachers that can demonstrate high quality teaching;
- Teachers that can support pupil behaviour in an organised classroom environment; and
- Teachers that are prepared to model practice for others.

The LPs felt that consideration of the above would have positively impacted on the project and would have helped Headteachers select the right teacher to lead the project.

Lead Teachers views on the coaching and training approach taken

LTs found the ongoing coaching approach the project took as beneficial. They particularly liked working with another professional over a period of time.

(Term 3 comments)

> *Usually for the training sessions, you get half a day after the Christmas or summer holiday, whereas with this you get continued support. Other training sessions are an hour here and an hour there and there is no one afterwards to help you or check on you or to discuss it with.*
>
> *The difference between this project and anything else we've done in the past, is the support.*

They also liked the fact that the project was tailored to meet the needs of the individual schools, with one LT commenting '*often it's a one-model fits all*' and that does not work.

As part of the project, and their ongoing CPD, LTs were all offered the opportunity at the end of Term 3 and the middle of Term 5, to visit another school and see good practice during cluster observations; something they, as a classroom teacher, do not often get the opportunity to do. The LTs valued this opportunity which provided them with new ideas of how they might deliver metacognition. LTs at the Term 4 network meeting commented:

> *Seeing other practitioners has been very beneficial.*
>
> *Being observed was really good because it reinforced the fact that I was doing it right. You have that benefit of reassurance. And also, this is what you could do.*
>
> *It's actually quite nice to get out there and see what everybody else is doing and magpie ideas.*

The EEF Metacognition and Self-regulated Learning Guidance Report became available in April 2018, part way through the project. At the end of the third term, (July 2018) just one LT had read it, having been given it by her Headteacher. She found it interesting, useful and the first chance since leaving university to look at something on a more theoretical level commenting that as a practitioner, '*you don't often sit down and do that professional reading.*' Another LT said it was '*one of those things that I thought I shall read that in the summer.*' Another LT said it had helped them to explain the metacognition approach to other members of staff '*a bit more professionally*', giving her the language she needed.

Network meetings

The LTs greatly valued the network meetings and the opportunity it gave them to share ideas and network with others involved in the project. They liked having time out of class (made possible by funding for cover allocated within the project budget for each school) to concentrate on the project, reporting that this does not usually happen when they take part in new interventions. They felt it was '*crucial*' to the success of the project. The network meetings gave the LTs a chance to reflect; something they were asking the children to do but that they do not often have time for. They found it useful to sit and talk with other professionals and to hear that they were doing the '*the right sort of things, that you are going along the right track, it's very reassuring,*' (LT, Term 3). Other comments included:

> *I find that when I come to these meetings I always go back with tons of new stuff to remind me to put into lesson plans, to add on to do in staff meetings.*
>
> *They energise you.*
>
> *They motivate you again to keep it going.*
>
> *It has motived us to get on and move it forward even for others.*

The network meetings gave the LTs new ideas and more exciting work with one LT commenting:

> *Because you want it to be a success. Well, I*

do in my school; I want it to be a success. Because I feel it's been a success in my class. So it does generate more work.

Conference

They all felt that the September re-launch conference - intended to re-start the project in the new academic year and raise its profile amongst all staff at participating schools - had been beneficial. They especially like the fact that all staff involved with teaching at the participating schools (bar one) were there. It helped others in school to see what the LTs had been doing and to understand what metacognition is. They felt it put the project into context beyond LORIC and helped others understand that LORIC is there to help support the metacognition approach, but that it is *not* metacognition.

The LPs mini lesson / demonstration in maths was reported to have been particularly valuable; especially the language used. They felt other members of staff now knew who their LP was, why she had been coming into school and that it had motivated others to get involved. One described it as taking the project '*a step up*.'

Initial challenges:

Most of the challenges experienced at the start of the project were logistical and included:

- Setting up IT systems for the LPs.
- Finding adequate and appropriate space for the LPs to work in when not in school.
- Training on metacognition for the LPs which was somewhat ad-hoc and largely dependent upon their own contacts and networks.
- Establishing initial contact with the Headteachers. This was largely due to changes in the circumstances of particular schools.
- One school withdrew from the project early on, but it was quickly replaced by another.
- The main challenge LTs faced throughout the project – not just at the start - was that of time.
- Another significant challenge at the start of the project was that not all schools were familiar with LORIC. This meant some schools were having to get to grips with both LORIC and metacognition at the same time.

Resources

A range of resources were used to deliver the project. Some were brought-in packages and some were developed in-house by the LPs, often to tail the individual needs of each school. However, the LTs agreed that the most valuable resource they had on the project were the LPs.

LORIC

The initial resource used for the project was one element of the Partners in Excellence (PiXL) Primary Edge Programme. This covers five key areas namely: developing skills in Leadership, Organisation, Resilience, using Initiative and improving Communication, or LORIC for short. Each skill has a character attached:

- Laura Leadership;
- Olly Organisation;
- Raj Resilience;
- Izzy Initiative; and
- Charlie Communication.

The Alliance purchased LORIC as a tool on which to hang the metacognitive pedagogic approach. One school was fully using LORIC before the project started, having already implemented it into their whole-school teaching and learning practice. They were keen advocates for it when the project started. The LPs were initially sceptical about using LORIC and a little confused as to how it fitted into the project since it seemingly had nothing to do with mathematics and they perceived it is definitely *not* metacognition. Rather than being a metacognition tool, LORIC is designed to encourage group projects and tasks that schools can undertake on a termly basis by working through the various different characters. The LPs have always been really clear with the LTs that LORIC is *not* metacognition. Rather they came to view it as a foundation for, or a way into, metacognition; the building blocks that needed to be in place for the metacognitive pedagogical approach to be successful.

LTs themselves found LORIC a really useful starting point and felt the characters represented core skills their pupils needed to learn before going onto metacognition. One LT commented:

> *The characters, like Izzy Initiative and Raj Resilience, played a big role in helping the children approach things metacognitively.*

Most of the LTs began by using just one character – Charlie communication. As the project progressed, the LTs reported being less and less reliant on LORIC to help them deliver metacognition in the classroom. The Project Manager agreed that on reflection, it was, to some degree, a distraction, but that it had served a purpose initially as a way in.

Basecamp

The project also invested in Basecamp, an on-line platform to support collaborative working. Two Basecamp groups were established – a closed area for the LPs and Project Management to share resources and monitoring reports; a shared area for the LPs and LTs to share resources and ideas.

Whilst it was initially well received by the LTs, some did have reservations about how their fellow teachers would feel about using when the project was rolled out. Some felt they already had too many 'systems' in school and that another would not be welcomed.

At the end of Term 3 the LTs described Basecamp as '*not a bad resource*,' but most admitted that they were '*shockingly bad'* at putting things onto it. The main difficulties were remembering yet another password and time. Ultimately, they did not feel that populating Basecamp or looking at it regularly, was a priority. However, some did like having it available, especially for the resources. One LT commented that they would have found a Facebook page more useful because they already use it on a daily basis.

Looking at the use of Basecamp over the lifetime of the project, it would appear that it has mainly been used by the LPs, predominantly for information sharing, i.e. the LPs notifying the LTs of meetings and other events. The sharing of pupils work has been sporadic and mainly undertaken by just one of the LPs. There has been little activity on LTs area of Basecamp since the middle of Term 4 (October 2018).

Classroom resources

In addition to LORIC and Basecamp, the LPs have drawn-upon and developed a range of teaching resources to help LTs deliver metacognition in the classroom in the context of mathematics. These have been well received by the LTs. They liked the quality of the resources and particularly appreciated that they had not had to create '*them from scratch'. One LT commented: 'it has meant that the resources are there ready and available for us. We're not having to go away and think about them because they are there for us*.' Another described the resources their LP had developed as '*amazing'* and that: '*the kids just really take to them. The children are a lot more engaged.*'

As the project progressed the LTs reported that they became more comfortable and confident at adapting the LPs' resources to fit their particular teaching contexts and needs. They also appreciated the opportunity to go to other schools in the project (via the cluster observations) and see the resources other LTs were using.

Roll-out

Initially the LTs were nervous and hesitant of rolling out the programme to others in their school. They felt they would need a lot of support from the LPs to do it effectively. They also felt they would need more time than allocated in the project to support other staff with this new pedagogic approach as it was rolled out. However, by the middle of Term 4 they were gaining confidence that they would be able to successfully roll it out, albeit with LP support, as these extracts from the Term 3 network meeting illustrate.

> *We are still going to have the support so it's not going to be a daunting challenge because we have the support of someone who is more experienced, and they will help us plan how to do that. You're not just being left on your own to flounder with something totally new, and you're not scratting around trying to find all the information all on your own. You're doing it with somebody.*

> *I think, we've had the initial training and then we've had the LP coming in each week, our staff are now going to get that initial training in September. We're taking on the role in a way of the lead, and if a practitioner wants to know a bit more about it we can help them.*

By mid-way through Term 4, the LTs felt confident to help others to develop their metacognitive practice. Some had already been working with staff showing them how to check and monitor metacognition in their classroom. The LTs' main focus was to embed the pedagogic approach with

school support staff so that it becomes a whole-school approach. By the end of the project, all the LTs were confident of doing this successfully.

LPs have run staff training sessions and specifically worked with TAs, as well as the LTs, in how to plan metacognition lessons. The LPs have been working with other class teachers to roll out the project. The LTs appreciated the LPs working with other members of staff as they felt it did *'release the pressure a bit*' for them.

The project had been welcomed by others. One LT commented (Term 4):

> *I didn't think they could react in any other way, as it's not exactly something new. It's just reminding yourself to it. It's cyclical; it's been around since the 70's. It's more of a tweak on that and a slight shift there, and bringing it back to the forefront.*

By the end of the project, many of the schools were introducing metacognition in other subjects, notably, Science and English. Some schools were also delivering metacognition across Key Stages. One LT is applying the principles of metacognition to Pupil Premium children stating:

> *There are major links between that and metacognition. It's very much the way our school wants to go now to improve outcomes for these pupils*

The LTs hope that eventually metacognition will be embedded across the curriculum, from early years upwards, in all of their schools.

Lead Teacher/Lead Practitioner relationship and support

The relationship between LTs and LPs was extremely positive. The LTs felt part of the project and that the LPs valued their input; they did not feel that the project was being done unto them, but rather *with them*, in full partnership.

The LTs reported from early on that the LPs had been very supportive and committed to the project. There were many examples of them going above and beyond their remit; especially in terms of the time they gave. The LPs were available via email or phone, quick to respond to queries and supportive when Ofsted arrived. Comments from the LTs on how they felt about the project and the support they received from the LPs included:

It's certainly been a positive experience having the Lead Practitioners there to support us through it. We know that the project is really good and we've done the research but having been left to our own devises to push it thought would have been quite a challenge. It probably wouldn't have been as effective. Having other people on it and having someone to work with you once a week I think has been really helpful.

I like that the Lead Practitioners have just got involved in the lesson and picking out points that we can do and it's something I've been more conscious about doing.

I just wish that all our training was like this because the support has just been absolutely outstanding. I couldn't have done this without my Lead Practitioner. The Lead Practitioners are just so good and I just wish all of our training was the same.

Given that we do have a lot of plates to spin and there are weeks or particular half terms when we have more plates to spin. We've had a lot going on at the school and I think my Lead Practitioner has been really understanding and made sure that I haven't had any extra pressure put on me

Can I add that when we had Ofsted in, my Lead Practitioner was timetabled in with me on a Thursday and we had a call on Monday that Ofsted was happening. I messaged her and she came in and helped me sort it out in the evening and she stayed on Tuesday, stayed on Wednesday. She stayed late on Monday night, she came and stayed and supported me through whilst they were there on the Tuesday and the Wednesday.

What's been nice for me is having a professional conversation. I know that in school, we like that but we don't have time anymore. And if you go on a training course where someone tells you something, it's all great, but it's like you said, when you come back, you're fired up to do it. But you get hit the next day with someone whose parents are not friends with the parents next door and some kids walloped him, it's gone. This is not. It's a continuous, professional discussion with someone who is only looking at metacognition. Which is

another thing, the amount of plates and balls that we are juggling at the same time, a proper professional conversation with somebody who actually knows what they are talking about and can actually say: "well I don't know that, but I'll find out for you or I'll look into that". When we started this process I had no idea what it was about - but I've never felt de-skilled. I've been through many processes in my teaching career that I have felt de-skilled by things and this has not been one of them.

Impact

The project has impacted on a number of key stakeholders namely the pupils, the LTs, the LPs and participating schools. However, it is not possible to measure impact in any quantifiable way through 'hard' data. There are several reasons for this. Firstly, the length of the project, spanning as it did two partial academic years. Secondly, the turnover of pupils in the project schools can occur at any time during the school year. Thirdly, no control classes were used in any of the schools.

Fourthly, and probably most importantly, due to current DfE guidance, the data that the ten schools collect on pupil progress and attainment is inconsistent in terms of both the materials they use and how the data is collected. The LPs noted at the end of Term 3 that they had no control over this and other aspects of the project with one commenting: *'it is going to be extremely challenging for us to be able to say any progress has been made as a result of the project and our intervention.'* Therefore, all of the reported impact is anecdotal, based on what might be termed, 'soft' outcomes, especially in relation to pupil impact. Indeed, according to the theory of change diagrams for each school, none of the desired outcomes stated at the start of the project were quantifiable. Desired outcomes were not only 'soft' but often generic and included the following, as shown in Table 4.

Table 4: Desired outcomes of SSIF project as derived from Theory of Change evaluation.

Whole school	Teaching staff	Pupils
Metacognition to be viewed as an element or tool of outstanding practice.	To develop metacognition as much as they can.	Best outcomes for all pupils not matter how long they stay at the school.
Metacognition will build on growth mind-set work.	Encourage staff to be more creative.	Improve pupil class learning.
Positively change the school culture.	Encourage teachers to be aspirational for their pupils.	Broaden out pupils metacognition skills.
Move the school out of requires improvement.	Staff development especially in terms of leadership skills.	Pupils to be able to quickly access the curriculum.
Put the learning back into the heart of what the school does.	Fire up and energise staff.	Pupils to develop metacognitive skills and behaviours for learning.
Create a legacy for the school by embedding metacognition into a whole-school approach.	Develop metacognition approach in core subjects i.e. English as well as maths.	Improve the learning environment to facilitate metacognition.
Develop metacognition using LORIC	Improve staff skills and knowledge in metacognition.	Raise pupil progress and attainment.
		Improve pupil aspirations.
		Improve pupil behaviour.
		Pupils to develop reasoning skills.
		Pupils to take pride in their work and no longer switch off from learning.
		Something pupils can take with them, even if they are only at the school a short time.
		Pupils to become more resilient and better at self-regulation.

The following sections look at the impact of the project on the various stakeholders.

Impact on pupils

Whilst there is no tangible 'hard' evidence of positive pupil impact, there was much anecdotal evidence supplied by both the LPs and the LTs. In the first term, most LTs elected to use Charlie Communication as their first LORIC character.

Rapid pupil progress was reported by the LTs in the first half term as a result of using LORIC. After using LORIC for just half a term, some LTs reported a marked improvement in their pupils' communication skills – both written and oral - and especially their ability to listen to others and engage in collaborative talking. One school even invented their own character, Larry Learning. Overall, the children were said to like the LORIC characters and took to the new pedagogic approach.

Pupil impact reported by the LTs in the early stages of the project included:

- Children being more aware of using their communication skills and the different situations that demand different responses.
- Collaborative talking improved in class.
- Pupils who did not usually contribute were reported to be contributing to class discussions and more pupils began to listen and work collaboratively.
- A growth in the confidence of their pupils.

As a result of high-quality resources, one LT reported that her pupils' level of understanding and use of language had '*really increased*.'

LTs also reported an increase in pupil resilience, one stating that now '*there is such resilience*'. This LT (Term 3) further commented:

> *They now quote things that I've said to them or that was up on the board. And they just keep each other going as well. Like really quietly and sensibly getting up, seeing that somebody's card might be on red and that they are feeling that way and then they're going and sitting next to them and asking are you ok? And they are getting each other through it as well.*

The LPs agreed that the pupils had become more resilient and felt confident the pupils would develop more resilience in secondary school than they might otherwise have done.

One LT described metacognition as *'powerful'* and taking us back to using the skills that they used to but have lost in the stats-driven culture we currently live in.

> *I think my favourite model is I ask them about their favourite topics they learnt in maths and one of them said: "I really like fractions because it was challenging and that meant I was learning."*

Some LTs were seeing impact evidenced in their data monitoring systems. One stating:

> *It's in their reasoning and their confidence. They are more likely to be able to identify how they have learnt. Definitely, from the data and the assessments, the maths [scores] have increased.*

LTs reported they were using metacognition beyond maths and that this was having an impact on pupil progress and attainment. One LT was using it in their guided reading and in technology commenting that, *'it's beautifully aligned to science. You can do it everywhere*.'

Children no longer saw mistakes negatively, but instead viewed getting things wrong as an opportunity for learning.

Examples of impact came mainly in stories of how pupils now approach their learning in the classroom.

Term 3 examples:

> *There was one boy who in lesson had switched off and a girl saw him, stood up and went over and said "do you want some help?" and he went (pause) "yes please." And it was just him saying yes, and she sat down with him and they did it, they worked through it. And then carried on. And that to me was just, wow.*
>
> *One or two of mine have come back from home with their homework and have said, "you'll be so proud of me miss, I just carried on doing it like Raj did." Then someone else*

said, "I did the same". Or "I'm doing it like Raj said too."

By Term 4 the LTs were reporting that pupils in some classes were becoming more confident in their mathematical talk with several reporting that this had noticeably increased. One teacher in a mixed year group class reported that there was a marked difference between those who had been part of the project last year and those who had started in her class in September:

> *I've noticed in my class, of three year groups, the children that have come up that haven't had metacognitive development, they aren't at the same stage as the older ones in terms of the language that they can pick up and how they address things, how they word things. Whereas my older ones will say, "I can see a pattern there, I noticed that, and this has happened because". The younger ones aren't at that stage yet because they've not had two terms of it.*

Pupils were more willing to share their work, were said not to be as afraid of challenge as they once were or to ask for help when they are struggling. LTs felt their children were more resilient.

> *They are not afraid to say they are struggling a little bit. Whereas before they would just sit there and do nothing. Now they are saying: "I'm struggling a little bit, can someone help me". They don't necessarily mean the teacher, but can somebody help me…Before they would sit there, put the wrong answers down and think that they would get away with it. Or else they will sit there and do very little, whereas now they are actually speaking up. And I just think that is showing that they are a bit more resilient. They are more willing to ask for help, they are not afraid to come out when they have got a wrong answer, and they look at each other's answers and think, "oh, I know where I went wrong now". And they are not afraid to do that whereas in the past they would have been.*

Other Term 4 comments on the impact of metacognition on pupils included:

> *They share more because they are more willing to learn from others.*
>
> *They share more regularly in that they will look to other people for help. And the others are more willing to help them.*
>
> *It's amazing how they have progressed in that language…not measured, you can't measure it but you can see it.*

Several LTs pointed out that this type of impact is not measurable; that there is no data to prove it, but that it is happening, with one stating that '*it's more of an interaction with others kind of an impact.'*

One LT had found it difficult to watch the class she had taught the previous year for two terms go to somebody else. She was concerned that they had begun to lose the skills and techniques she had taught them because the staff had not had the project training. However, at the final network meeting, she reported subsequently having positive feedback from the new class teacher about her former pupils' readiness and ability to learn:

> *The feedback I've had from the class teacher is how independent and how keen they are to cope with maths and how well-rounded they are as people. She can set them off on a task and they go for it.*

It would appear the pupils are still using their metacognition skills despite the LTs initial concerns. The LT also felt the situation would get better once there was a whole-school approach in place.

One LT commented that '*whilst the children are with us, we want to give them as much as we can of MC. So that we can prepare them and they can take that with them when they go to their next school wherever that might be.'*

Several LTs felt there had been a change to some pupils aspirations, not in terms of long-term goals but in what they could and could not achieve within maths. One LT reported that some of her pupils now say, "*I'm really good at this now*". Something they would not have said before. And a few have actually said: "*you know what, I'm really good at maths. I thought I was bad".*

LTs reported that overall pupils were more engaged in maths lessons. They believed that this was because pupils knew that they would have time to talk to each other, to explain concepts, show their work and think problems through.

> *There is less teacher talk and less them sitting and listening. It's more child-led. They are much more willing to do it and*

want to do it.

LTs reported an increase in the language pupils used in maths with one LT commenting, '*I teach year 1s and they have bowled me away with what they can do.'*

LPs were more cautious to claim that impact was a direct result of the project intervention. However, in two schools the LPs were 100% confident that pupil improvement in maths was a direct result of the project intervention. It was said to be very distinctive to anything that had been delivered in the school before, '*hand on heart, its metacognition*.'

Impact on Lead Teachers

Perhaps the most significant and measurable impact of the project has been on the LTs. Some have applied to be SLEs and some have moved, or are considering moving, into middle leadership roles.

Of the nine active LTs all had applied, or were considering applying, to become SLEs where their personal circumstances allowed, and it seemed likely that five would apply. Two of the LTs were reported as being actively involved in action planning, school development planning and monitoring. All of the active LTs at the end of the project were female.

Impact on LTs was evident from early on in the project (end of Term 2) with one LT commenting that taking a middle leadership qualification was now on their radar. By the end of Term 3 several LTs reported that they were more open with their children.

Both the LPs and the LTs themselves, reported a growth in LT confidence as a result of being involved in the project. An example of this was given by one of the LPs who told how one of her LTs had held a leadership role several years ago. However, she disliked the role so much that she went back to being a classroom teacher. The LP commented, '*it is through this project that she told me her confidence is back and she feels that she could actually go back to leadership*.' Given that one of the original Key Performance Targets (KPIs) for LPs was around developing leaders, they believe the project has been successful in achieving this.

The LTs also felt being part of the project had made them more reflective practitioners. It has also changed how they approach and deliver lessons. By the end of the project, some reported having a '*very different questioning technique'* in the classroom and that the questions they asked the children were now very different to before. They also now give their children a lot more opportunities to have *'purposeful talk'* in the classroom.

As a result of the project, the LPs felt that many of the LTs now realised that transformation of practice takes time.

Overall, the LT found the project valuable, to have greatly enhanced their teaching, boosted their confidence (as evidenced in the teacher confidence audits the LPs had sent to all participating LTs) and in some cases it has led to them looking for further career development opportunities that they would not have considered prior to working on the project. They all agreed it had been an amazing opportunity, and were grateful for the chance to be involved. They felt it had enhanced their teaching career with one LT describing it as the best CPD they have ever had. Other comments included:

> *I wish I'd been on it sooner.*
>
> *I'm just grateful I had the chance to be part of it.*
>
> *I think how it's been set out in terms of the structure it has been brilliant. Because you have always had someone alongside you for the whole year. There has never been a time when you were floundering, or had to find out things for yourself. There has always been someone to go to.*

The LTs particularly valued the termly network meetings and cluster observations as an opportunity to network and share with other practitioners; something many of the LTs had not previously had the opportunity to do, at least not on this scale. The LTs were actively looking at ways of keeping the network meetings going post-project.

The LPs believe that their original motto of '*Think big, Start small'* had been an important point to emphasise at the very beginning; emphasising that embedding new pedagogic approaches takes time. One LP commented: '*for them, they will go into leadership roles and think, change does not happen overnight. They are going to have that mind-set and that's a fantastic place to be in moving forward and moving schools forward.'*

Challenges for Lead Teachers

The main issue the LTs had with the project was its timing. Whilst they acknowledged it was out of everyone's control they would have liked the coaching to have started at the beginning of the school year. One LT commented at the Term 3 network meeting:

> *Even if we had been introduced to it at this time of year ready to start in September. It wasn't quite right the timing. I feel at the beginning that I was kind of running to catch a train that I couldn't catch up with. And at first, I couldn't even marry the LORIC with the MC bit. I was wondering why I was doing that and where the MC was coming in. But I think I've caught the train. But I did feel a little bit…*

Whole-school impact

LPs believe the project has led to many more teachers in participating schools taking part in peer classroom observations, both internally and externally. This was said to be a direct result of the cluster observations with one LP commenting, *'in the period of our project, I think you can absolutely say, that across the nine active schools, there has been a massive lift in terms of how many teachers have observed other teachers teaching.*' The LPs further felt it had led to a greater level of teacher reflection in the project schools due to the scaffolding they had put in place. Another commented: *'I think with this latest round of observations, it shows how the schools and the SLTs, believe in what we have done, because of the uptake.'* It was noted that the schools have not just sent the teachers but also teaching assistants or, in some cases, the whole class team. This has led to professional dialogue and '*has potentially made a shift in those schools and all of the headteachers have recognised the benefits'*. The LPs have been pleasantly surprised by the level of uptake with the cluster observations which has far exceeded their expectations. The quality assurance consultant and the Project Manager agreed that the use of cluster observations was one of the most significant and successful elements of the project.

All schools and their Headteachers have engaged with the project, to a greater or lesser degree. An indicator of the project's success was reported to be the continued attendance of, and engagement in, the Project Steering Board for nine out of the ten Headteachers. Everyone agreed that this was unusual and that on a project of this length you would naturally expect to see interest wane.

In one school, the Headteacher has changed the planning format as a direct result of the project, encouraging staff to, *'really home in on what is important'* when they plan lessons. This has '*really helped our staff*'. In the main, the schools were said to have been *'incredibly accommodating'* of the project.

Impact on Lead Practitioners

The LPs all felt that they had benefited from being part of the project. They particularly felt that having three LPs instead of two had been beneficial both to them as practitioners and to the project overall. One of the LPs felt that as a result of the project she was now '*a dammed good, better teacher'*. They reported improved coaching and communication skills as well as the ability to negotiate difficult situations and relationships. This was a particular issue for one of the LPs in one of the schools. The LPs all felt they had - at times - been hampered by the philosophy and ethos of the project that it would be done *with* the school not *to* the schools. This meant following the schools lead at all times and being reliant on them to engage in the project, which had on a few occasions caused them difficulties.

The LPs had formed a good, collaborative working relationships drawing on their complementary skill sets. They had set up a WhatsApp group for sharing information and supporting each other. They felt that their job had been made slightly easier with the schools by the timely publication of the EEFs metacognition booklets. This had given the LPs credibility or '*kudos'* with both schools and LTs in terms of taking the metacognition pedagogic approach.

Challenges assessing impact

One of the issues with anecdotally assessing pupil, LT and whole-school impact, (i.e. not have any hard data to compare before and after) has been that the Quality Assurance Consultant only viewed three of the schools twice. Therefore, he was not able to assess changes to pedagogic practice, nor the engagement of pupils, over time across all ten participating project schools.

To sum up, there were several challenges to assessing impact including the turnover of pupils at the schools - an inevitability given their high

composition of Service Children - and the projects timeframe. The running of the project over part of two different years rather than over one complete school year would make evidencing impact in any statistically meaningful way virtually impossible.

Challenges delivering the project

As well as challenges around impact, the LPs encountered a number of challenges to successfully delivering the project in schools including:

- A tendency for some teachers to cram as much metacognition into a lesson as possible leading to 'overkill', rather than peppering it in.
- Whilst the Headteachers were fully supportive of the approach, some were unsure if it delivered what an Ofsted Inspector would be looking for in terms of pace in a lesson.
- Some schools were in a better position to run with the project and invest time and resources in it than others. Those expecting an Ofsted visit were least likely to be in a position to give it their full attention.
- Some schools were too big for the LPs and the LTs to meet their rollout targets.
- Staff turnover. When a new LT were recruited to the project, the LPs had to re-introduce the process to new teachers. While this was essential, it did have an impact on the momentum of the project in the affected schools.
- Pupil behaviour needed to addressed in some classes before metacognition could be introduced.
- In some cases, the LP would have liked to have had more time with their original LT before moving on to another teacher.
- Some LTs were more skilled practitioners than others and more open to working on new learning strategies in new ways.

Project legacy

During the project, the LPs ran the re-launch conference, which all (bar one) project school sent all teachers and teaching assistants to. It is impossible to gauge the direct impact of this but it is likely that for some staff at least it will have acted to support their understanding and application of metacognition in their practice. Half way through the project, the LPs also contributed to a CollectivED CPD event which focused on '*Supporting teachers to develop metacognitive teaching'* at which they ran roundtable discussions based on the project. This event was attended by about 50 teachers and school leaders from outside of the project schools.

Several outputs and activities are planned post-project. Two tangible outputs will be the resource pack a professionally produced video.

The resource pack will be available to all schools that have taken part in the project in both hard copy and electronically. The aim of the pack is that schools can use it for ongoing CPD or to train new members of staff. The pack consists of all the resources that they have used during the project including tools to assess impact such as staff and pupil questionnaires. It also includes a metacognition guide for other stakeholders such as parents and governors as well as links to relevant research and useful websites. At the final network meeting, the resource pack was well received by the LTs. They felt it would be a valuable resource to help them roll out metacognition in their school.

The video will be available for both project schools and other schools who may wish to take such a pedagogic approach. Whilst the video will be 45-50 minutes long, it will be a resource that can be '*dipped in and out of'* as and when required.

The video will consist of maths lessons across the key stages to '*try and capture the metacognitive strategies used*.' The video will have several sections including explaining what metacognition is, about the SSIF project and showcasing some metacognitive maths sessions. These will cover topics such as Activating Prior Knowledge, Scaffolding and Modelling and Reflective Evaluation. The video will also include interviews with some of the Headteachers, SLEs and LTs involved in the project as well as the pupil voice and an animated version of the revised EEF model.

The branding and copywriting of outputs was looked into by the LPs and it was considered unnecessary. However, they have concerns that once the packs are distributed, they will be widely shared with other schools beyond the project with one of the LPs commenting: '*Straightaway the legacy of the project isn't going to be copyrighted, it's just going to be a free for all*.' This was not seen as an

issue in of itself, rather there were concerns that it becomes watered-down or not used as intended.

An end of project conference is planned for April 2019 which will be open to all schools in the area, not just those that took part in the project. This conference will allow both the outcomes of this project to be shared and to be situated in a wider context of metacognition and will include keynotes and workshops led by both the LPs, academics, EEF staff and others working in the field.

The Alliance did consider keeping at least one of the LPs on until the end of the school year to continue with the work, but this has not been financially possible. The finishing of the project two-thirds of the way through the school year was felt by a number of those involved with the project – including the LPs and the Project Manager - to be highly unsatisfactory.

The LTs would like the network meetings to continue and were actively looking at ways of keeping them post-project. However, the LPs cautioned that for them to be meaningful and productive someone would need to facilitate the sessions with a clear focus. This role could potentially fall to one of the LTs that has applied to be an SLE, if they are successful.

In terms of the project legacy in the ten participating schools, most intend to roll this pedagogic approach out school-wide. Some are training up their teachers to take on the role of the LP and several now include metacognition in their teaching and learning plans and specifically in their maths action plans.

When the LTs were asked at the final network meeting how they would 'sell' or 'promote' the implementation of metacognition in the classroom to other teachers in their school, they said they would tell colleagues of the benefits it held for both them and their pupils. For teachers it was no extra work and it frees up time which can be spent helping struggling pupils. For pupils, it changes their learning behaviours as they become independent learners, are constantly engaged in lessons and grow in confidence. They felt it has the potential to be high impact with very little outlay *'once you have it in your head'* with one LT commenting, *'it's not one of those horrendous initiatives. Now it doesn't take anything to do.'*

Finally, one of the LTs commented on the potential for the project going forward:

> *I can see this lasting. With other projects you think that will last for about two months in school and then it will pettier out a bit. But with this, I can actually see the follow-up, it will keep going and because we have been trained so well, and because we have had that support for the whole year, it will then go for the next year and the next year after that.*

Section 4: Discussion

Metacognition and self-regulation as the basis of Powerful Pedagogic Strategies

Teaching for metacognition and self-regulation is a tight and skilled process, not a laisse faire pedagogy. Leat and Higgins (2002) coined the term Powerful Pedagogic Strategies (PPS) to describe metacognitive teaching approaches. They did so deliberately and with an evidence base, demonstrating that:

- PPS represent a manageable unit of change for teachers aiming to innovate;
- PPS are flexible across subjects, ages and curriculum contexts;
- PPS have no single correct answer so they encourage engagement with ideas;
- PPS extend our understanding of subject knowledge from something to be mastered to become the stimulus to reasoning;
- PPS encourage exploratory talk between pupils and provide rich learning experience suitable for metacognitive plenary (debrief).

As such, the power of metacognitive teaching approaches is that they can transform both the acts of teaching and learning, as well as the self-efficacy of both the teacher and learner.

Part of the evidence base drawn on by Leat and Higgins was the work originating from the 'Thinking through…' approach which was developed in teacher networks supported by teacher educators at Newcastle University. These networks created a subject-based infused approach to teaching thinking skills (e.g. Baumfield, 2002) and in addition a specialist primary knowledge base (Higgins et al., 2003). These differ from many current metacognitive teaching interventions because they promote the teacher design and application of a repertoire of Powerful Pedagogic Strategies (Leat and Higgins, 2002), such as Odd One Out, Mysteries and Living Graphs. Critically, these were not deployed out of context, but are infused within schemes of work, and develop thinking skills attuned to subject knowledge and skills.

Developing the professional skills to design bespoke lessons using PPS can make a huge difference to teaching and learning. In this SSIF project, the LPs framed their work through this relationship between developing teachers' professional skills and teaching and learning development.

Coaching practices and culture

This SSIF project adopted a model of coaching which might best be described as *contextualised specialist coaching*. As the LPs were experienced teachers, but not themselves experts in metacognition at the start of their employment, the pedagogic approaches they developed were designed with the needs of the project's teachers and pupils in mind. Their approach was also contextualised by the individual challenges in each school, the different year groups in focus, the different levels of experience and the different roles of the LTs they were working with. To support this, the LPs continually gathered data, reflected on how and where the project was going and adapted their delivery model and pedagogical approach accordingly. Consequently, the coaching approach included modelling, joint planning and co-teaching and debriefing with the LTs. The LPs offered specialist insight of metacognition and also of primary teaching and learning more generally. This was not a 'clean coaching' model, but had some elements of mentoring, guidance and feedback integral to it in it, aligning it with the 'specialist coaching' approach defined by CUREE (2005).

The coaching evolved over time and the support available through it was enhanced because the three LPs had to develop appropriate teaching and learning materials and strategies for metacognition in maths, and these were added to across the project duration and as the LPs' own understanding and repertoire grew. In this regard they could be considered to be engaging in co-constructive co-coaching (Lofthouse et al., 2010) of each other as peers with equivalent roles through the project.

Teacher coaching has a strong history and evidence base in this area. For example, in the Newcastle University Schools-based Research Consortium Teaching Thinking Skills project funded by the Teacher Development Agency in the late 1990s and early 2000s coaching was embedded alongside other forms of teacher CPD. The coaching in that project was influenced by the work of Costa and Garmstorm (2002), and also drew on the Cognitive Acceleration in Science Education (CASE) approach to supporting teachers to develop metacognitive

practices.

Like many uses of coaching in education, this SSIF project aimed to 'close a gap' in attainment and contribute to improving school performance. Although the coaching undertaken in this project may not have the same definition as other forms, it corresponds with research by Lofthouse (2019) that demonstrates the significance of building good working relationships and developing productive dialogue in the coaching, and the structures and protocols that support that. Coaching is suited to helping individuals dealing with authentic challenges, professional interests and dilemmas experienced in complex educational settings, which even the smallest primary schools are. The coaching approach adopted here corresponds with suggestion that coaching is a valuable means to deploy the expertise of experienced professionals (the LPs) to support teachers and contribute to school improvement.

Alongside the coaching itself a coaching culture (Campbell and van Nieurwerburgh, 2018) has begun to emerge within the project. This was achieved through the network meetings of LTs where the LPs offered a networking space to share the practices that were being developed and trialled across the schools. With the different year groups being included as focus classes this led to a broad consideration of teaching and learning and the impacts of metacognition and self-regulation. Despite some initial nervousness from some teachers, the cluster observations provided a further means by which teachers became more engaged, more open to new ideas and more confident about sharing and reviewing their own and each other's teaching practices. Whether this emerging coaching culture can be embedded in the schools will depend on how successfully they can 'transfer what is powerful about one-to-one coaching conversations into everyday culture of [the] schools' (Campbell and van Nieuwerburgh, 2018, p. 110).

Teacher development

There is evidence of genuine teacher development as a result of this SSIF project, with specific examples given in the findings section. This development is a critical component of school improvement. In the case of this project, this development might relate to the proposition of metacognition-based teaching creating the opportunity to develop PPS, which are potentially powerful for both learners and teachers. Leat et al., (2006) identified phases in teacher engagement in pedagogic innovation, from 'initiation', through 'developing questions from practice' and onto 'commitment'. These research conclusions drew on data from the Schools Based Research Consortium project referred to above. These phases of engagement can be recognised in this SSIF project. Leat et al. argued that underpinning the transitions between the phases (which not all teachers made) was the necessary space and time for pedagogic creativity. This is fostered by access to new ideas, engagement in problem solving and professional conversations and the permission to think and act creatively to make connections between ideas and practice. They also identified three stages which describe the development of collaborative practices which can be summarised and illustrated from this project as follows:

> ***Stage 1: the personal***. Through their work with LPs, teachers focused on their own understanding rooted in developing classroom practice and analysing data which emerged. With the help of the LPs, they arrived at generalizations about metacognition and self-regulation and perceived its relevance to their teaching situations.
>
> ***Stage 2: the collegial.*** The network meetings and observations became significant as a community in which teaching and learning approaches was shared, designed and reviewed, in an environment characterised by professional intimacy.
>
> ***Stage 3: the collective.*** The collegial group has developed sufficient confidence to work with others (in their own schools and beyond) allowing the approaches to be more commonly recognised, and collectively explored across a wider range of settings. In this SSIF project the LPs have certainly reached this stage, but also many of the teachers as evidenced (for example) by their applications to become Specialist Leaders in Education through the Teaching School Alliance.

This cumulative teacher development reinforces the significance of teacher collaboration, supported practically through the emergence of the collegial and collective networks. It also recognises the role of the project context in that the transitions

happened as teachers learned to develop a metacognitive-based pedagogy in real time, with their own students, colleagues and in extended networks within which they became confident professionals.

Developing women in leadership

The DfE has acknowledged the need to further develop women in educational leadership, given that they are underrepresented at leadership level in both primary and secondary schools. This is illustrated by the DfE's 2016 data showing that 73% of heads in primary schools were female, whilst 85% of all teachers in primary schools were female. In response, they have established a Women in Educational Leadership strategy which is operationalised through the Teaching School Council. Alongside this, an international network has emerged through WomenED. It seems evident that one of the benefits of this SSIF project, which has been led by three female LPs and sustained by female LTs, has allowed women to shine and gain that confidence. In this respect this project achieved broad strategic school improvement outcomes, even though these were not articulated as a gendered issue in the theory of change underpinning the project, by showing good evidence of the capacity to grow whole school improvement, especially in developing middle leaders.

Collaborative Professionalism

The strength of this SSIF project, and indeed its greatest likely legacy, is the collaborative work between professionals. This may contribute to greater teacher collective efficacy which Donohoo (2017) recognises can be developed through enhanced professional learning structures and protocols. Collective efficacy is the collective belief of teachers in their ability to positively affect students. It might also be seen as contributing to what Hargreaves and O'Connor (2018) define as 'collaborative professionalism' which they contrast with professional collaboration.

Hargreaves and O'Connor suggest that collaborative professionalism involves ten tenets, which include collective efficacy, collaborative inquiry, collective responsibility, joint work and mutual dialogue. When reviewing a case study of teachers mentoring and coaching each other in Columbian network of schools, Hargreaves and O'Connor describe the teachers' 'thoughtful work that involves dialogue as well as doing' going on to state that in collaborative professionalism 'talk is part of the work' (p.160). This description could be applied to the ways that the LPs and LTs developed their work together as the project evolved. Hargreaves and O'Connor go on to caution that 'not all collaboration is equally effective' (p. 20), and to draw attention to the degrees to which teachers collaborative work can be characterised as having different degrees of solidarity and solidity (substance). They reinforce this by stating that 'collaborative professionalism is about integrating relationships and rigor' (p. 23). While there was some variation across the schools in the SSIF project, overall the ways that the LPs worked with teachers and other stakeholders could be considered as such in part because as their work as LPs developed they were able to bring the relevant 'solid expertise' which Hargreaves and O'Connor see as critical too.

A clear limitation of the nature of the DfE funded SSIF projects is that they are short in duration and have and offer no funding for built-in long-term strategic plans for school improvements. In this SSIF project there is evidence in a change in school practices and also in teachers' mind-sets (for example with regard to cluster observations), which might allow an optimistic evaluation of the potential for ongoing and even deepening collaborative professionalism, which Hargreaves and O'Connor propose as essential if schools are to be improved for the long term.

Section 5: Key findings and recommendations

Key findings

Pupil specific findings:

- There is anecdotal evidence of positive pupil impact.
- Classroom tasks have become more pupil-led.
- Pupils have become more confident learners, especially in maths.
- Pupils are no longer afraid of making mistakes, asking questions or asking for help. Instead, they see these as opportunities for learning rather than a sign of failure.
- Whilst there is no measurable, statistical pupil impact data, this was not a key aim for any of the stakeholders involved with the project and should not been seen as a weakness.

Lead Teacher specific findings:

- There is evidence of Lead Teacher impact, mainly in terms of developing new school leaders.
- The Lead Teachers valued the coaching style used by the Lead Practitioners and the time they had on the project; that it was ongoing over a set period rather than a one-day hit.
- It is important for schools to choose the right lead teacher to take on such projects.

Lead Practitioners:

- The Lead Practitioners have been the driving force for this project. They have been highly organised, methodical and professional.
- Having three Lead Practitioners instead of two (as originally proposed) was beneficial to the project.
- The Lead Practitioners have all grown in their teaching and coaching skills as a result of the project. The Lead Practitioners have all gained considerable insight into school improvement work and have the potential to use this effectively in future roles.

Whole-school findings:

- Stability at the school in terms of staffing – teachers and Headteachers, Ofsted ratings, Ofsted inspections due etc, all contribute to the likely success of such a project.
- Having Headteacher and Senior Leadership Team buy-in and support throughout the project, is crucial.
- Each school delivered the project in a way appropriate to their needs and circumstances.
- Most schools intend to continue rolling out this pedagogic approach post project, without designated funding.

Resources:

- Lead Teachers felt that whilst LORIC is a good package, it is not metacognition and at the start they did not have the time or capacity to do both. However, in hindsight they did agree it was a good vehicle on which to initially hang metacognition.
- Basecamp – the Lead Teachers would have liked a virtual platform that is more accessible and in everyday use such as a Facebook page.
- The most valuable resources were reported by the Lead Teachers to be those designed by the Lead Practitioners.
- The end of project video and resource pack will be a lasting legacy of the project.

Project approach / design:

- Network meetings were particularly valued by the Lead Teachers.
- Cluster observations benefited not only the Lead Teachers but other members of teaching staff at the participating schools', including teaching assistants.
- It is essential to have a good working relationship between Lead Practitioners and the Lead Teachers, the Lead Practitioners and their Headteacher.
- Good communication between all

stakeholders is essential, along with clear lines of reporting and accountability for times of difficulty.

- The Lead Practitioners had no 'teeth' or authority over the schools to ensure full project engagement.
- Funding to cover Lead Teachers has been effective, as it has allowed all Lead Teachers to take part in cluster observations and network meetings.
- Whilst acknowledging the prevalence of Service Children in participating schools, the pedagogic intervention took a whole-school improvement approach rather than focusing attention on Service Children specifically.

Challenges:

The main challenge was the timing of the project. There were two issues with this. The first that the coaching started in school mid-way through the year (After February half term) when timetables and lesson plans were already set for the year. The second was deciding whether or not the Lead Teacher should follow their pupils (e.g. from year 3 into year 4) in the new school year.

There also appeared, at times, to be a missing link between the Headteachers and the Lead Practitioners.

Commendations and recommendations

The project design and implementation had many commendable features, and these should be considered as recommendations for future school improvement initiatives both in the project schools and beyond.

- ✓ Collect on-going data as deemed appropriate;
- ✓ Reflect on how well the initiative is going at regular intervals;
- ✓ Do not be afraid to change direction or add in new aspects to the project;
- ✓ Allow time for the building of relationships and trust to develop;
- ✓ Plan regular network meetings for the teachers involved to strengthen collaborative working and the sharing of knowledge, understanding and resources;
- ✓ Ensure funding and teaching cover is available for Lead Teachers to attend network meetings;
- ✓ Encourage all schools to take a contextualised specialist approach to coaching that is delivered over a period of time;
- ✓ Encourage regular cluster observations to allow lead teachers – and over time others - to benefit from the expertise of others;
- ✓ Encourage a change in mind-set and culture within the Alliance or the school to one of being open to new ideas and ways of working.
- ✓ The availability of follow-on funding to help participating schools develop their new pedagogic approach more fully and integrate it into their strategic development plans.
- ✓ Consider using a theory of change approach when designing, implementing and reviewing school improvement projects to allow understanding to emerge at school level.
- ✓ Support ongoing practice development through the work of Specialist Leaders in Education with coaching approaches as part of their work.

The evaluation found that, a new school improvement initiative works best where individual schools and teachers have buy-in, feel they have something to offer and see it as a collaboration whereby they are equally valued, rather than taking a top-down approach.

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