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DEVELOPING NON-COGNITIVE SKILLS:

AN EXPLORATION INTO SCHOOLS' PRACTICE



Acknowledgements

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About Ambition

Ambition Institute has one purpose: to help educators serving children from disadvantaged backgrounds to keep getting better.

Children from disadvantaged backgrounds, on average, do not do as well as their peers at school. When disadvantaged young children start primary school, they are often over four months behind non-disadvantaged peers. This gap doubles by the time they finish primary school and doubles again by the time they complete secondary school. At this stage, they are over a year and a half behind in terms of their attainment.

We know that improving teaching and school leadership is the best way to address this gap. No other aspects of the school system have as much influence on pupil achievement, particularly the achievement of pupils from disadvantaged backgrounds.

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Executive summary

Aims of the study

Schools support pupils to achieve a range of academic outcomes, many of which are externally assessed and reported e.g., Key Stage 2 SATs or GCSE grades. Within schools, these 'cognitive' type outcomes are generally well known by educators. The relationship between these 'cognitive' or academic outcomes and a range of important variables in later life, including university enrolment, job performance, wages and general physical and mental health are fairly well established (Peng & Kievit, 2020, Aucejo & James, 2021). What is less well established is what sort of skills, traits or characteristics that schools might develop *in addition* to academic outcomes. In response to this, Ambition Institute commissioned this qualitative exploration of the approaches schools use to develop their pupil's non-cognitive skills. It addressed the following headline research questions:

RQ1. How do schools understand the term non-cognitive skills?
RQ2. What practices are schools using to develop non-cognitive skills?
RQ3. What difference do schools perceive their work on non-cognitive skills to make?

Literature review

A critical barrier to overcome when undertaking this research was the range of terms that are typically used to describe 'non-cognitive skills' and the ways in which educators attempt to develop them. They include, but are not limited to, 'character education', 'twenty-first century skills', 'whole child development', 'personality traits', 'contemporary social-psychological approaches' and 'social and emotional learning'. Therefore, to help us define and narrow the focus of our study, we conducted a scoping review across the variety of fields referred to above, in order to identify which terms would be best to use when approaching schools, and which might reasonably assist in the operationalisation of criteria for the analysis of the data collected.

Following the review, we decided to adopt the Education Endowment Foundation's (EEF) guidance for implementation of social and emotional learning (van Poortvliet et al., 2019) as an operationalised set of criteria for the analysis of the interviews. Additionally, we adopted the phrase 'non-cognitive skills' within the interview protocols used to collect these data as it avoids a number of the issues related to some of the other terms that were examined. The full literature review is contained within Annex 1.

Case study findings

RQ1. How do schools understand the term non-cognitive skills?

Reflecting the lack of consensus in the literature, schools used varied language such as 'soft skills', 'personal development', 'character' or school 'values' to describe the area this study defines as non-cognitive skills. No single term was seen as a perfect fit for what schools aimed to cultivate and several schools talked instead about the individual skills they worked with pupils to develop.

However, all of the schools that took part in the research said they were working to develop children in a broad range of ways, and in all cases, this included skills that were associated with later life chances. Individuals in schools taking part actively and intentionally sought to develop children, rather than expecting children to develop them without intervention. Some skills, particularly self-regulation, resilience and social

skills, were targeted by schools more often than others. However, the meanings of these individual terms could also vary.

RQ2. What practices are schools using to develop non-cognitive skills?

This chapter uses the six recommendations in EEF guidance for Improving Social and Emotional Learning (SEL) in primary schools as a basis to examine the practices used by the case study schools. The six recommendations can be understood individually, they also build upon each other to describe effective practice in the different layers of a school's work, from activities used with children in the classroom up to how leaders make decisions about programmes and support staff to deliver them

Overall, most schools' practice was reflective of the recommendations, although what this looked like varied across the schools. In particular, and perhaps not surprisingly, it was activity in primary schools that most closely conformed with all six recommendations. Overall, secondary schools in the sample were less likely to be teaching skills explicitly (as per Recommendations 1-4) and instead focusing on their school environment (Recommendation 5) as a vehicle for skill development.

RQ3. What difference do schools perceive their work on non-cognitive skills to make?

Schools in this study chose to develop non-cognitive skills because they believed they were beneficial to children in different ways, especially in their later life. Staff in schools provided specific examples of what they perceived the benefits of pupils having non-cognitive skills in the short term, whilst pupils were still at school, and in the medium term, for example when children moved onto new schools, training or work. It was common for schools to draw on their understanding of their context and the needs that children were presenting to them and use this to guide decisions about what skills they felt pupils needed.

Whilst attribution (of skill development to specific interventions) wasn't easy to pinpoint, staff gave examples of children demonstrating developing new skills, or different personal behaviours. Staff reported some of the early-stage outcomes that acted as a precursor to skill development. In some cases, skills that were developed were perceived to have had an effect on behaviour and attendance. Staff reported that the effects of these interventions and practices would happen over the longer term.

Schools in the sample demonstrate these practices in a range of different contexts, elements of which may be influential in the choice, implementation and effectiveness of their practice. In particular, it may be that stable leadership and staff body and size of school contribute to how well schools can implement activities and see their effects. It was clear that in some cases levels of need following the school closures during the Covid-19 pandemic had led schools to adopt new practices.

What schools can do

The EEF has created an audit and discussion tool for schools in order to help teachers and leaders think about how they can support the development of children's social and emotional learning. The tool was written for primary schools, but much of it can be applied to secondary settings. You can access that tool by clicking here.

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INTRODUCTION

Introduction

Study Context

Ambition Institute is part of the Porticus-funded IntegratED partnership whose aim, amongst others, is to explore the idea of 'whole-child development' to promote more inclusive education practices.

Whole child development covers a breadth of developmental areas and approaches, a part of which is the development of a child's non-cognitive skills. Ambition Institute's charitable aims are to develop an education system that supports children's long-term outcomes and ability to thrive. Whilst it is generally accepted that 'doing well' at school is linked to later life chances, this is often framed in terms of a child's academic abilities. The role that non-cognitive abilities play in children's lives is less well understood, although there is a body of literature on the topic, and less is known about how teachers and leaders in schools can support such abilities. In response, Ambition's IntegratED project is exploring these questions and intends to generate new knowledge to inform programme design.

As part of a programme of work Ambition Institute commissioned this qualitative exploration of the approaches schools use to develop their pupil's non cognitive skills. It addressed the following headline research questions:

RQ1. How do schools understand the term non-cognitive skills?
RQ2. What practices are schools using to develop non-cognitive skills?
RQ3. What difference do schools perceive their work on non-cognitive skills to make?

Method

This research addressed these questions through a case study method, involving in-depth interviews in seven schools to explore the nature of the work being undertaken to develop non-cognitive skills.

The study faced two specific challenges in how schools would be sampled and selected to take part. Firstly, because there is no measure of non-cognitive skills development, or data indicating schools that work on non-cognitive skills, there was no established way to identify schools likely to be doing this work. Secondly, whilst it might be possible to find schools delivering this kind of work, this study would not have the scope to assess the positive or negative impact of such practice, and so risked identifying practices with unintended negative effects. To address these challenges as fully as possible, this study used an analysis of individual school and pupils' outcomes data, carried out by FFT Datalab, to define the sample.

The FFT Datalab analysis aimed to identify schools that were most likely to be working in a way that supported both the non-cognitive and academic abilities of their pupils, by analysing academic outcomes, as well as looking for schools with indicators of inclusivity1. By using data relating to pupil outcomes to define the sample, this study identified schools that are securing good outcomes overall for their children, and so reduced the risk of reporting practice that has unintended negative effects. Using outcomes data for all

[1] Academic performance in both primary and secondary was defined as a measure of contextual value added for attainment at KS2 and KS4 respectively. In primary schools, inclusion was indicated by below average exclusion rate, and above average attendance rate. In secondary schools, six indicators were used for inclusion: proportion of SEN, EAL and disadvantaged pupils compared with the school's local area, the rate of leavers in KS3, and levels of exclusion and absence. More detail on this analysis, and the data it drew on, is included in Annex 2 on pages 63-64.

English schools to define the sample also had the benefit of identifying schools who might not be well known for their work in this field.

The commissioned analysis identified 328 (228 Primary, 100 secondary) schools whose data indicated they may be working in a way that developed non-cognitive skills. Schools on this long list were contacted and invited to take part in the study. Participation in the study was voluntary.

Seven schools volunteered to take part in a full case study, as detailed in Table 1. Each school took part in between four and six semi-structured telephone interviews with the researcher.

Table 1: Details of case study schools.

School	Region	Roll size	Phase	% FSM	Governance model
St. Michael's C of E Primary School	North East	109	Primary	12%	Local authority voluntary aided[2]
Riverside Primary Academy	North East	310	Primary	27%	Single academy Trust
Benedict Biscop Church of England Academy	North East	257	Primary	6%	Member of a Multi-academy Trust
Oasis Academy South Bank	London	721	Secondary	52%	Member of a Multi-academy Trust
Bristnall Hall Academy	West Midlands	971	Secondary	29%	Member of a Multi-academy Trust
Harris Academy Greenwich	London	1185	Secondary	25%	Member of a Multi-academy Trust
Mossbourne Community Academy	London	1455	Secondary	41%	Member of a Multi-academy Trust

Source: Interviews; Roll and FSM data from https://www.get-information-schools.service.gov.uk/, January 2022

Limitations

This study aimed to draw a purposive, stratified sample which would explore practice in a range of different contexts. For the most part this has been achieved, although regional variation is limited to three out of the nine English regions. Although the study doesn't aim to be generalisable to a wider population, the sample is still informative.

The conclusions of this report identify some broad areas of practice that were common across the case study schools. Areas of practice may merit further consideration by schools but shouldn't be considered as 'best' or effective practice based solely on this study.

[2] Since the research took place in 2021, St Michael's has become a member of a Multi-academy Trust.

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CASE STUDY FINDINGS

Case study findings

The researchers set out to seek answers to the following three headline research questions[3]:

RQ1. How do schools understand the term non-cognitive skills?
RQ2. What practices are schools using to develop non-cognitive skills?
RQ3. What difference do schools perceive their work on non-cognitive skills to make?

The first and third research questions were further broken down into sub-questions, whilst the second research question was broken down into six strands based on the six recommendations proposed within the EEF's guidance report on social and emotional learning (van Poortvliet et al., 2019).

Recommendations	Page numbers
Research Question 1:	**11-12**
How did schools understand the term 'non-cognitive skills'?	
What language did schools use to describe non-cognitive skills? What	*11*
language did schools use to describe non-cognitive skills? Why did	*11*
schools want to develop pupils' non-cognitive skills?	*12*
Research Question 2:	**13-28**
What practices are schools using to develop non-cognitive skills?	
Recommendation 1: Teach skills explicitly	*14-15*
Recommendation 2: Integrate and model SEL through everyday teaching	*16-17*
Recommendation 3: Plan carefully for adopting a SEL programme	*18-20*
Recommendation 4: Use a SAFE curriculum (Sequential, Active, Focused, Explicit)	*21*
Recommendation 5: Reinforce SEL skills through whole-school ethos and activities	*22-24*
Recommendation 6: Plan, support and monitor SEL implementation	*25-28*
Research Question 3:	**29-30**
What difference do schools perceive their work on non-cognitive skills to make?	
What difference did schools think their approaches made? What role	*29*
did school context and characteristic play?	*30*

[3] You can find a full list of the questions that participants were asked, in order to establish the findings within this section, in Annex 3 on pages 67-68.

RQ1. How did schools understand the term 'non-cognitive skills'?

All of the case study schools appeared to be working to develop the non-cognitive skills of their pupils, however the language they used to describe this and the specific skills they wanted to develop varied.

What language did schools use to describe non-cognitive skills?

The language used and the kinds of skills that schools identified in the research suggest that they are drawing on a wide definition of non-cognitive skills. This study sought to understand whether the term 'non-cognitive skills' itself was recognisable and used by schools. No school used the term, but all recognised the area it referred to. Language such as 'soft skills', 'personal development', 'character' or school 'values' were more commonly used, but any collective term was generally seen as an imperfect fit. Some of the schools said they tended not to use a collective term at all and instead simply named the specific skills that they wanted children to develop. There was little consistency in this language across the schools in the study, suggesting that whilst understanding can be built internally in a school it may be harder to find a shared language at a sector level.

What individual skills did schools say that they were trying to develop?

When asked about the specific skills that schools were working to develop for their pupils, all said they were carrying out work to develop one or more of the subset of the non-cognitive skills that have been associated with later life chances: self-perception and self-awareness, motivation, self-control and self-regulation, social skills, resilience and coping, perseverance, meta-cognitive skills and creativity (Goodman et al, 2015, Gutman & Schoon, 2013).

Some skills within this subset were targeted more often than others. In particular, self-regulation, resilience and social skills were mentioned by all schools as skills they wanted to build in their pupils. Activities to address motivation and creativity were identified less often, and no schools reported that they tried to build their pupils' self-perception, or perseverance. This may be in part because these terms are less commonly used and well understood, and therefore harder to identify in practice. It's also clear that in these schools the meanings of these individual terms could vary, for example several schools used the terms 'self-regulation' and 'resilience' interchangeably.

Schools were also carrying out work to develop other skills which they also considered as important to their pupils' personal and non-academic development. Examples they mentioned included curiosity, pride, independence, assessing risk, emotional intelligence, kindness, and service. Whilst some of these likely do sit outside the skills identified in the literature as influential in later life chances, some of this variation may simply reflect the use of language. For example, elements of encouraging children to take pride potentially reflect contributions to self-perception or motivation and goal-setting.

Some of the examples given appear to sit at the boundary of the non-cognitive skills 'space'. For example, two schools identified oracy as an important skill for pupils, which had benefits for both academic and personal development. In another example, several schools mentioned their work on emotional wellbeing and included this within the area of non-cognitive skills development, although their work on wellbeing was characterised as helping pupils develop strategies for resilience, or emotional regulation in order to help manage their emotional wellbeing in the longer term.

Why did schools want to develop pupils' non-cognitive skills?

Schools in this study said that the skills they selected for development were important for children. They had actively and intentionally decided to work on them, rather than expecting children to develop them without intervention. Most schools held the view that children had different levels of these skills already, but that all children would benefit from work in school to develop them further.

Schools chose to promote these skills because they believed they were beneficial to children in several ways, though chief amongst these was the benefit to children's later life chances. In particular:

- *Economic and labour outcomes.* Schools talked about having choice of job and careers, and the ability to attain the job you want. While rarely identified specifically, this also implied children's ability to have financial security in the future. These outcomes were particularly clear in Secondary, where staff talked explicitly about how having good personal habits and skills would help children pursue a satisfying career or job.
- *Pro-social behaviours*. In some secondary schools, staff spoke about involvement in crime as a real and pressing risk for their pupils which non-cognitive skills could help prevent. More broadly, all schools across Primary and Secondary felt non-cognitive skills would help children be good citizens and 'rounded' individuals who could make a contribution to society.

Staff in schools also gave specific examples of the benefits of having non-cognitive skills in the short term, for example, whilst still at schools, and in the medium terms, when children moved onto new schools, training or work and would encounter novel situations. This included in their next steps after school:

- Social and communication skills would help children be able to relate and get along with a range of people that they might meet in secondary school (in the case of those still at Primary) or further education/employment for older children.
- Self-regulation would prepare young adults to handle conflict in professional relationships, especially the first time they encounter this.
- Resilience would help young people cope under emotional or life pressures.

As well as within school:

- Motivation would encourage attendance at school.
- Self-regulation would leading to better emotional wellbeing.
- Resilience would help pupils develop a better attitude to learning, and be able to persist when learning was challenging.
- Social skills would help children to work together better in school.

Non-cognitive skills in the literature are often posed as in opposition to academic abilities and achievement, whereas the schools in this study anticipated a positive, knock-on effect of improving non-cognitive skills on academic ability. Yet, as outlined above, schools were motivated to develop children's non-cognitive skills because they contributed more broadly to children's abilities and not solely because of an academic benefit.

Some schools referred to using evidence from psychology to inform their decisions about which specific skills would lead to particular benefits, such as literature on the Big Five personality traits. However, it was much more common for schools to draw widely on their understanding of their context and the needs that children were presenting to them, and use this to guide decisions about what skills were needed. This meant they would sometimes draw on skills in combination, and rarely stuck to the definitions or language found in the literature to talk about these skills. Annex 4 contains more detailed theories of change for the seven case study examples.

RQ2. What practices are schools using to develop non-cognitive skills?

As discussed in the literature review, groupings of non-cognitive skills overlap with what is termed social and emotional learning or literacy. Research published by the EEF on social and emotional learning (van Poortvliet et al., 2019) informs the main source of guidance on practice relating to social and emotional learning and non-cognitive skills.

The EEF's guidance for Improving Social and Emotional Learning in primary schools[4] identifies six recommendations for how primary school in particular can support children to learn and develop their social and emotional skills (self-awareness, self-management, social awareness, relationship skills, and responsible decision making).

This analysis examines the practice in the case studies against the six recommendations. Each section begins with a short overview of the recommendation, followed by 'core examples' from the two primary school activities that most closely match all six recommendations. The remainder of each section discusses the other ways in practice from the case study schools conformed or diverged from the recommendation.

Recommendations	Page numbers
Recommendation 1: Teach skills explicitly	**14-15**
Core examples	*14-15*
Other examples and variation in practice	*15*
Recommendation 2: Integrate and model SEL through everyday teaching	**16-17**
Core examples	*16*
Other examples and variation in practice	*17*
Recommendation 3: Plan carefully for adopting a SEL programme	**18-20**
Core examples	*18-19*
Other examples and variation in practice	*19-20*
Recommendation 4: Use a SAFE curriculum (Sequential, Active, Focused, Explicit)	**21**
Core examples	*21*
Other examples and variation in practice	*21*
Recommendation 5: Reinforce SEL skills through whole-school ethos and activities	**22-24**
Core examples	*22*
Other examples and variation in practice	*22-24*
Recommendation 6: Plan, support and monitor SEL implementation	**25-28**
Core examples	*25-26*
Other examples and variation in practice	*26-28*

[4] https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/primary-sel

Recommendation 1: Teach skills explicitly

The guidance recommends that children should be explicitly taught SEL skills, with dedicated time given to them during everyday teaching. This means identifying and naming specific skills for development, and using the strategies suggested in the guidance to develop specific skills. These strategies are:

- Self-awareness: expand children's emotional vocabulary and support them to express emotions.
- Self-regulation: teach children to use self-calming strategies and positive self-talk to help deal with intense emotions.
- Social awareness: use stories to discuss others' emotions and perspectives.
- Relationship skills: role-play good communication and listening skills.
- Responsible decision-making: teach and practise problem solving strategies.

It's important that these strategies don't require large blocks of time but instead fit in as a part of everyday teaching.

In the case study schools, particularly amongst primaries, there are examples where schools explicitly teach skills in the classroom and use some of the specific strategies identified in this recommendation. However, the secondary schools in the sample were using other methods to communicate and introduce skills to their pupils often in response to a view that direct instruction in the classroom had limited value for teaching non cognitive skills.

Core examples

Two of the clearest examples of teaching skills in the classroom come from primary schools in the sample: Zones of Regulation (ZOR) at St Michael's, and Benedict Biscop's Interactive Speaking and Listening Curriculum (ISLC).

Zones of Regulation was introduced at St Michael's to support children's self-awareness: their ability to identify and express their emotions, and their emotional self-regulation in how they manage and behave in response to their emotions. St Michael's uses ZOR to help children understand how feelings influence their own behaviour and how this can affect others' feelings and behaviour.

When the programme was first introduced, teachers helped children to build their knowledge of emotions and linking these to the four 'Zones'. They did this through conversations in the classroom, starting with discussing and naming emotions with the children, and asking them what these feelings looked and felt like. This included activities such as taking and looking at photos of facial expressions, role-playing different emotions to show what they looked like in themselves and others, and asking children to think about how different body parts might feel when they experienced different emotions.

After exploring these emotions, teachers asked children to brainstorm strategies that they could use to handle their emotions in the different Zones. The emphasis was always on normalising emotions by talking about them factually and without judgement, reassuring children that whilst everyone feels these emotions they can use strategies to help them manage them and to avoid affecting how others feel. Children developed their own personal strategies which they then recorded so they had a resource to use throughout the school day. Children are reminded of the Zones regularly throughout the school day by staff and through clear displays in the classroom, reminders of staff lanyards and materials that can be shared with families so that they can continue using the Zones at home.

The Interactive Speaking and Listening Curriculum at Benedict Biscop teaches children different strategies for communicating and interacting with others, particularly in the classroom. The school introduced the ISLC into their curriculum to support children's academic learning as well as to give children the skills to work together, learn to express themselves, and share and hear other people's views constructively. The curriculum includes various communication techniques which children are shown, modelled by the teachers and teaching assistants, and then asked to use in lessons throughout the school day rather than in dedicated blocks of time. The curriculum is taught in early years, where children start by learning and using paired talk, and develops up through infants and juniors with techniques such as 'Snowballing' (where pupils initially talk in pairs, then double up to fours and eights to develop their ideas), and mini presentations where children collect and present specific information as a group.

Other examples and variation in practice

Other schools in the sample didn't begin with the explicit teaching of skills, but instead provided opportunities for children to practise and develop skills they were considered as already having. For example, whilst the two primary schools running a Forest School were seeking to develop skills such as social awareness and responsible decision making (especially problem solving), these were not explicitly taught but instead developed and encouraged through the kinds of activities that they did in the forest. These included arts and craft activities, practical tasks which had to be done in small groups, as well as independent time in the forest. In these examples, children were expected to draw on and practise social and emotional skills that they already had, with support where needed. Forest School also took place in designated blocks of time, of around 1-2 hours, rather than through 'everyday' teaching in the classroom. Whilst finding blocks of time for Forest School was not without its challenges, both schools felt that it supported their broader aim to help children develop into rounded individuals, and therefore that it was important to find time in the school day for it.

Some of the secondary schools in the sample expressed a view that non-cognitive and social and emotional skills couldn't be effectively taught. Instead, all four schools identified indirect ways of developing skills outside as well as inside the classroom, such as through the way teachers interact with children and the standards and norms of the school. Schools felt that these skills needed to be developed through experience, and that in a classroom environment it wouldn't be possible to create a situation where pupils could feel the emotions required to develop such skills as empathy, resilience or coping.

Although these secondary schools did not describe their approach to skills as using instruction, they clearly explained skills and characteristics, and their associated behaviours, to their pupils, so that they could practice them elsewhere in school. They did this in settings such as assemblies which described what skills were, why they were important, and how children should demonstrate them in their day-to-day school life. For example, Harris Academy Greenwich had a set of assemblies which explained and asked pupils to explore the three key abilities at the school of working hard, being kind and taking responsibility, as well as outlining examples of behaviour in line with these values in school. Oasis Academy South Bank had a set of resources which they used to explain self-regulation in the context of their Reactions policy. These were presented to pupils to explain and set the expectation for how they would practice this skill throughout the school day.

Recommendation 2: Integrate and model SEL through everyday teaching

Schools can make use of opportunities throughout the day for adults to model and children to practise the skills they have been taught through the strategies in the first recommendation. Practice can be integrated into the classroom and the school day with an emphasis on finding real life examples, modelling skills and giving opportunities for children to practise. In particular it suggests:

- Model the social and emotional behaviours you want children to adopt.
- Use 'teachable moments' for embedding skills.
- Give specific and focused praise when children display SEL skills.
- Do not rely on 'crisis moments' for teaching skills.
- Embed SEL teaching across a range of subject areas: literacy, history, drama and PE all provide good opportunities to link to SEL.
- Use simple ground-rules in group work and classroom discussion to reinforce SEL skills.

All of the case study schools made opportunities throughout the school day for children to see and use non-cognitive skills, and those associated with social and emotional learning. However, as described above, this would not always be building on previous explicit teaching.

Core examples

In the two examples of Zones of Regulation and the Interactive Speaking and Listening Curriculum, where children were also taught skills explicitly, the schools made opportunities for children to practice throughout the school day.

After Zones of Regulation had been introduced to children, they were asked to use it at the times when staff at the school observed a need for children to regulate their emotions. This is in addition to using the Zones to tackle specific behaviour incidents, and in an ad hoc way with individual children who needed additional support. The school had identified transition times, especially when children were coming in from playtime as a moment when children needed to manage their emotions in order to get themselves ready for learning in the classroom and they used this as an opportunity for children to practise their self-management skills. They asked children to say or show what Zone they were in, and prompt them to use strategies to get back to being ready to learn in the 'Green Zone'. Teachers would model this as well, by talking to the children about what Zone they were in at the beginning of a lesson. Teachers and teaching assistants also prompted children to practise and use the Zones on a one-to-one basis and with small groups of children when they were in situations where emotions needed to be managed such as when playing competitive games.

Teachers at Benedict Biscop used the ISLC strategies in all of their classes where it was beneficial for children to use communication skills to work together such as when sharing opinions, generating ideas, making an argument or collecting and organising information. These kinds of opportunities arose regularly in all classes, and so children were regularly putting their skills into practice. Thinking about how the ISLC strategies could be deployed was built-in to any new curriculum design and training so that opportunities to practise skills were taken up, and contributed to academic learning.

Other examples and variation in practice

Teachable moments using behaviour and conflict

Whilst schools in the sample recognised the need to avoid sensitive or 'crisis' moments to practise skills, many of the 'teachable moments' did take advantage of moments of conflict where children could practise social awareness, self-awareness and management. For example, Benedict Biscop's restorative practice approach was used when children came into conflict with each other. A teacher or member of staff would facilitate a conversation which asked children to express their emotions about what has happened, listen to the effect their behaviour had had on the other and consider what either child needed to do to resolve the issue. Over time, the school reported that children develop their ability to lead these conversations and resolve conflict themselves.

Some secondary schools described their behaviour policies and expectations as one way they encouraged children to develop non-cognitive skills, and this also used moments of conflict for pupils to practise such skills. Both Oasis Academy Southbank and Mossbourne Community Academy noted that their behaviour policy made a 'big deal' of behaviours that could be seen as relatively minor transgressions. Whilst this was firstly important for their behaviour standards, it also created opportunities for pupils to develop their skills, particularly self-management, in a relatively 'low-stakes' situation, and with the potential to learn and improve. South Bank's reactions policy, for example, required pupils to accept warnings about their behaviour, which could include forgetting their school planner or fidgeting with something on their desk. If they weren't able to manage their response appropriately then they completed a detention and were asked to reflect on how they can improve next time. South Bank's approach in particular was underpinned by a model of habit formation which says that pupils need to have many opportunities through the school day to practise a new habit in order for it to stick.

Specific and focused praise and linking to SEL in subject areas

Two schools, who had school values or abilities that they encouraged pupils to develop and demonstrate, designed reward schemes that acknowledged and praised pupils for demonstrating these values. As part of the work to introduce the new Bristnall Hall Academy values, teachers were asked to identify what it would look like for values to be demonstrated in their subject (for example, 'being curious' in Maths could mean asking questions about mathematical rules). Harris Academy Greenwich also asked teachers to consider how pupils could demonstrate the school's three core abilities in their topic, and to explain and praise these behaviours in their class. For example, one English teacher was able to use discussions about fictional characters to help children think about being kind and showing understanding. In both of these schools there is also a reward system aligned with these values, which acknowledges when pupils have demonstrated an ability or value in the classroom. Pupils receive shout outs or positive points for these actions which are explicitly linked to the school's relevant values or abilities.

Whilst the school day provides many 'natural' opportunities for children to practise and receive feedback on their use of social and emotional or non-cognitive skills, some schools have sought to create these opportunities. For example, St Michael's described one of the benefits of their Forest School as providing opportunities for children to put skills into practice because of the range of activities that present communication and problem-solving challenges in particular. Whilst this wasn't the only reason they introduced Forest School, it now forms an important part of its value.

Recommendation 3: Plan carefully for adopting a SEL programme

Recommendations 1 and 2 identified the strategies teachers can use to teach SEL, and when and how they can be deployed as part of everyday learning. This third recommendation examines the features of programmes that can help deliver activities effectively and coherently. These include:

- Use a planned series of lessons to teach skills in dedicated time.
- Adopting an evidence-based programme is likely to be a better bet than developing your own from scratch.
- Explore and prepare carefully before adopting a programme— review what is required to deliver it, and whether it is suitable for your needs and context.
- Use evidence summaries (such as those from EIF and EEF) as a quick way of assessing the evidence for programmes.
- Once underway, regularly review progress, and adapt with care.

The term 'programme' here is used to describe "a structured intervention or curriculum, usually supported by a manual, external training, resources, and timetabled delivery". This is in contrast to 'practice' which is "a flexible strategy that can be incorporated into everyday teaching or school life, with few external inputs or formal requirements" (p.3).

All of the schools in the research could identify and name activities and practices they used to develop their pupils' non-cognitive skills. Some were clearly discrete programmes that had been selected and formally introduced, such as Forest Schools, Zones of Regulation or Mossbourne's Bourne Scholars programme. Others were less formally defined, and often spread across different, existing activities in school, such as the use of school values, one-to-one relationships and policies and norms to encourage skill development. However, virtually all examples responded to an identified need in the school, had the explicit intention to develop skills (albeit described often in different terms) and had some degree of defined specified input and expectation.

Core examples

Within the sample in this research, primary schools were more likely than secondary schools to have adopted formal programmes to develop children's SEL and non-cognitive skills. The ISLC at Benedict Biscop demonstrated most of the common characteristics of a SEL programme. Although not taught in its own topic, interactive speaking and listening followed a defined curriculum, with associated resources that teachers used to teach its different strategies. The curriculum was progressive, with different strategies taught to different year groups, and teachers were trained on how to do this. Whilst the EEF guidance highlights the role of PSHE-style topics such as bullying or health education as a vehicle for these skills, in Benedict Biscop the ISLC was used across all topics.

The ISLC is a bespoke programme. Whilst it's not clear what evidence of effectiveness the team had about the programme at the time it was adopted, it was carefully designed, in collaboration with a local university, and had an explicit focus on interpersonal skill development, and in particular the specific needs that the children had in school to improve the ability to work together. Given the length of time it has been established, it was hard for interviewees to say how carefully planned its initial introduction was, although it's clear that the programme matched the needs it was designed to address, which the school no longer struggles with.

Zones of Regulation at St Michael's also has most of the characteristics of a SEL programme. Unlike ISCL it was initially linked to a specific activity and topic and presented to children as part of their work on emotional wellbeing and the return to school after the COVID-19 pandemic closures. However it is now used more widely

across the school. Leaders at the school were able to give considerable dedicated teaching time to introduce ZOR and teach the associated skills of self-awareness and self-management because of the unusual situation of school closures. Setting up ZOR and embedding it made use of set material and guidance which was used to train teachers to deliver the programme and which outlined lessons and activities that could be used to introduce the programme. These were adapted to be appropriate to very young children in the early years, but otherwise are consistent across the different years in the school and not intended specifically to lead to skills progression.

Zones of Regulation was a bought-in programme that had been designed and used in other schools. The school originally introduced the programme on the recommendation of their educational psychologist to support children who had additional needs, rather than through considering evidence of its effectiveness themselves. This prior knowledge meant that the school had some sense of the benefits of the programme and felt it matched the perceived need that children would have for help to manage their emotions on their return to school. This allowed the school to plan for its implementation at scale with a good degree of certainty as they already had knowledge of how the programme worked. However, they acknowledged that to make such a big investment of time in the programme was still a risk that they had to carefully consider how to take.

Other examples and variation in practice

Although Forest School wasn't designed to explicitly teach SEL skills in the way described in Recommendation 1, it is a formal, bought-in, programme that two of the three primary schools in this research were using to give children opportunities to develop and practise their skills. Forest School is taught in dedicated time, through a sequenced, planned series of lessons/activities. It draws on defined pedagogical principles and a set of resources which forest school leaders are trained to use. However, despite being a fairly formalised programme there was variation between the schools as they made adaptations whilst still maintaining key elements. For example, the schools designed activities that suited their curriculum, but maintained core elements of the sessions such as procedures for the circle around the fire pit. More structurally, the schools delivering Forest School did so with different lengths of session, happening with different regularity based on the capacity they had. Yet they were still able to offer regular, sustained provision, which is a key feature of the Forest School approach.

The Bourne Scholars programme at Mossbourne Community Academy, a secondary school, also has elements of a formal SEL programme. It links skill development with different PSHE topics, is taught following a set curriculum of skills and knowledge and is sequenced to revisit topics with more advanced content so that children accumulate and practice skills over its two years. The programme is bespoke and was developed in-house so that the school could address the specific needs of their pupils. Although the curriculum itself is bespoke, it is built on skills identified in Voice 21 Oracy Framework[9] which the teachers developing the curriculum thought provided a well researched basis for their programme. The programme is still relatively new, and rather than test it at a small scale first, the teachers running the programme are refining the work 'as they go', using active quality assurance in the first two years of its delivery.

The majority of secondary schools did not bring in formal programmes, as defined by EEF, to develop skills but they did put other formal structures in place in the school day that encouraged children and pupils to put skills into practice. One example is at Harris Academy Greenwich, where they carefully explained and discussed their three key abilities (work hard, be kind and take responsibility) in assemblies with set content, and which were accompanied by expectations for demonstrating these skills. These expectations were designed almost like a curriculum with progression from skills in Key Stage 3 expected for pupils in Key Stage 4. At Oasis Academy South Bank, the pastoral team provided a consistent set of materials and messages for explaining the

Reactions policy and helping pupils understand what was expected of them and why. Whilst the use of the policy would depend on the specifics of any classroom situation, teachers received regular and planned training to help maintain consistency in how the policy was delivered. Finally, although the Achievement Co-ordinators at Bristnall Hall Academy were not delivering a programme in the terms of the EEF, their approach to providing one-to-one support for both academic and non- cognitive skills and SEL was highly structured. They used specific data to identify a pupil's support needs, followed a triage process and procedures that would help them find appropriate support to offer each pupil, and these procedures allowed them to offer personalised support for a whole year group.

These approaches all fall between the definition of a programme and a practice as used by the EEF. Whilst they don't share all the characteristics of a programme taught to a curriculum, neither are they used entirely flexibly. Most examples given by the case study schools had highly structured inputs and expectations for how they were delivered. They show some of the ways in which similar principles are applied to non-teaching programmes to develop skills progressively, and build coherence and consistency across the school.

Recommendation 4: Use a SAFE curriculum (Sequential, Active, Focused, Explicit)

Recommendation 4 is that any programme used should conform to SAFE criteria, which has been found as a characteristic of effective programmes. These are:

- Ensure your curriculum builds skills sequentially across lessons and year groups. Start early and think long term.
- Balance teacher-led activities with active forms of learning, such as: role-play, discussion and small group work, to practise skills.
- Focus your time: quality matters more than quantity. Brief regular instruction appears more effective than infrequent long sessions.
- Do not rely on 'crisis moments' for teaching skills.
- Be explicit: clearly identify the skills that are being taught and why they are important.

As discussed under the three previous recommendations, even where schools were using programmes or formal elements to structure their provision, not all were teaching these skills explicitly in the classroom, meaning that SAFE criteria does not fully apply. However, there are elements of the SAFE criteria evident in several examples given by schools in the research.

Core examples

The Interactive Speaking and Listening curriculum was a long-term programme, sequenced to build skills throughout the full time that children are in primary school from Early Years up to Year 6. The curriculum is taught with some teacher-led activities, where strategies are introduced and modelled, but the greater emphasis is on active learning through practice in the classroom throughout the school day. Learning and using the strategies in the ISLC is woven into the wider curriculum at the school, and there is no set amount of time that teachers are asked to spend using the strategies. However, teachers reported that they asked children to use techniques from the strategy multiple times in a day. Finally, as discussed in Recommendation 1, these strategies were taught explicitly. Whilst the strategies in the curriculum were often deployed in support of academic learning, they are focused on building a sense of community through interpersonal and social skills.

The teaching element of Zones of Regulation at St Michael's was delivered over a short time period, and its content isn't sequenced to be progressive over time. Instead the programme is focused on establishing the skills and embedding them through practice. However, it does conform with other elements of the SAFE curriculum, for example it uses a mixture of active and teacher-led learning, such as role plays and discussion. As with the ISLC, Zones of Regulation is used in the classroom several times a day, with teachers talking about it and reconfirming its key messages regularly.

Other examples and variation in practice

Individual elements of the SAFE curriculum are evident across the other programmes and activities in the sample. Some activities were sequenced, such as Mossbourne's Bourne Scholars programme and the work on communicating abilities at Harris Academy Greenwich. However, the most common element of SAFE was the use of active forms of learning, which all schools employed and may be reflective of the importance of to practise in developing children's skills. Whilst not in dedicated lessons or sessions, most schools expected or created frequent opportunities for skills to be practised and demonstrated multiple times in the day-to-day life of the school.

Recommendation 5: Reinforce SEL skills through whole-school ethos and activities

Recommendations 1-4 focus on the strategies that can be used to teach social and emotional skills to children, and how they can most effectively be mobilised and organised across a school. The next recommendation moves away from what happens in everyday teaching to how whole-school structures can reinforce SEL skills. The guidance notes that there is less evidence of how whole-school approaches can make effective change and acknowledges that it is complex and challenging. Nevertheless, it recommends making use of the following areas of whole-school life to reinforce SEL:

- Establish schoolwide norms, expectations and routines that support children's social and emotional development.
- Align your school's behaviour and anti-bullying policies with SEL.
- Seek ideas and support from staff and pupils in how the school environment can be improved.
- Actively engage with parents to reinforce skills in the home environment.

Using whole-school resources to influence skills development was reported as crucial in all of the schools interviewed. In this research, secondary schools in particular spoke regularly about the importance of what happens outside of the classroom as the key to ensuring children develop skills. For many schools that did not teach skills explicitly, they instead made use of whole-school structures, such as their behaviour policies or pastoral systems, relationships and interactions, and whole-school norms to help pupils develop and practice skills.

Core examples

Zones of Regulation and the Interactive Speaking and Listening Curriculum are both teaching-based programmes but are backed up to some extent by their wider school environment. Both programmes aligned with each school's existing ethos and commitment to personal development, and they were both introduced in response to what the schools perceived as important gaps in children's all-round development, which was something they already prioritised in their school culture. However, staff at both schools pointed to ways in which these programmes influenced the school beyond the classroom, with conversations about emotions having become the norm at St Michael's and good communication demonstrated throughout the school, including between adult staff, at Benedict Biscop.

Both schools had strong relationships with parents, but it was at St Michael's where the Zones of Regulation programme was most clearly extended into the home environment. As the school acknowledged, the need to regulate emotions continued outside of school, and so where needed the school gave ZOR materials to families so that they could support and reinforce use of the Zones at home.

Other examples and variation in practice

<u>Shared expectations</u>

Elsewhere in the sample of schools interviewed for this research, schools had carried out work to define and agree a set of expectations which defined the social and emotional behaviours expected of children and pupils, sometimes alongside other kinds of characteristics (eg. pride, curiosity, kindness). These were presented in the form of school 'values' such as those at Bristnall Hall Academy, and the three abilities at Harris Academy Greenwich. Both schools felt that messages about values or abilities had to be made to 'live and breathe' in the school. At Bristnall Hall, the values were initially developed with pupils and staff and continue to be

refined and explored based on pupils' perceptions and ideas of how they could be demonstrated. At Harris Greenwich, the three abilities were identified by staff and related specifically to the needs they felt their pupils would have both at school and in the future.

SEL routines

The EEF's recommendations point out the value of SEL routines that can be established in schools, giving the examples of circle time and assemblies in primary to build on activities that are happening in the classroom. In secondary school, all schools in the sample used assemblies throughout the year as an opportunity to talk to their pupils about non-cognitive skills and social emotional learning. This included initial sessions that introduced and explained the rationale for different skills, as well as further time to develop thinking on them, or as reminders when conduct or behaviour suggested that pupils were not practising these skills. Form time, and particularly the relationship held with a form tutor, was also used to support children's social and emotional development. This was primarily because the form group were able to build strong relationships and a feeling of community. In at least two of the secondary schools in this study, some enrichment and PSHE activities which also address SEL were held in form groups, in recognition that these groups provided a positive and developmental environment for learning. Form time also allowed staff to get to know individual pupils and create a trusted relationship that could be used when pupils faced challenges or problems that the schools needed to help resolve.

Changes to the physical environment

Schools in the sample made minor changes to their school's physical environment to support their pupils' non-cognitive skills development. For example, one school had created a 'wall of kindness' where pupils could post a message to highlight kind acts, and some primary and secondary schools had specific spaces for children to go to request and receive emotional support. Setting up a Forest School, or other type of outdoor learning, represented a major change to the school environment. All three primary schools with outdoor provision felt that the outdoor environment provided different kinds of challenges and opportunities for children to practise their social and non-cognitive skills, as well as describing the change in pace and 'feel' of the forest as helpful for pupils who found the classroom environment challenging.

Behaviour policies and standards

The guidance recognises the potential of aligning behaviour and anti-bullying policies with a school's approach to SEL, and the role of social and emotional learning in improving behaviour. Many of the activities taking place in primary schools, such as ZOR and the restorative practice, were intended to help children manage their interactions and improve behaviour towards each other and adults in the school. However, in secondary schools in the sample, behaviour policies could be used at a whole school level to help shape and develop pupil's non-cognitive skills themselves, especially pupil's ability to self-manage and regulate. For example, the Reactions policy at Oasis Academy South Bank is part of the school's behaviour policy and is one of the ways in which pupils are required to practise self-regulation. Similarly, the 'No Excuses' ethos at Mossbourne is intended to encourage pupils to take responsibility for their own conduct and practice resilience, self-management and independence. Whilst these schools described their own policies as strict, they were also carefully balanced with showing care and warmth at all times, and always had a focus on the potential for pupils to improve upon and change their behaviour through practising their skills.

Work with parents to extend learning to home

All schools in the sample, both primary and secondary, worked with families, parents and carers to help support skills development for their children. Schools in the primary sample described several different ways

that they worked with parents in general, for example through open days, shared worship, and regular communication which were intended to build relationships and understanding of how the school worked in order to support children more widely. Non-cognitive skills or SEL would tend to only feature specifically in discussions with parents when there was a particular issue or challenge. In some cases, this required just a conversation, whilst in others, such as the ZOR example described above, it meant providing additional resources for use at home.

Within the secondary schools in the sample for this research, it was slightly more common for schools to be working with parents to explicitly target skills development. For example, the Hub at Oasis Academy South Bank was a youth service positioned alongside the school so that staff can work closely with both parents and the school when pupils need additional support. Staff at The Hub were able to get to know parents and work with them to address challenges at home that might be hindering pupils' ability to develop and demonstrate skills such as self-regulation whilst in school. Similarly, one of the key pillars of pastoral care at Bristnall Hall Academy was their careers provision, which they use to motivate pupils to use their persistence and resilience, and to set and achieve goals. However, the school recognised that part of the challenge for some pupils to set and achieve goals comes from home and as a result they had begun to offer careers support to the family members as well as children in the school.

Few schools mentioned making SEL part of the parents' feedback, although many did share information with parents about their aims and activities.

Recommendation 6: Plan, support and monitor SEL implementation

Careful implementation is needed in order for SEL programmes to be effective, and to avoid damaging staff morale or wasting time with an ineffective programme or activity. This is especially important in the context of complex, whole-school change described in Recommendation 5. The guidance highlights the following key elements of good implementation:

- Establish a shared vision for SEL: ensure it is connected to rather than competing with other school priorities.
- Treat implementation as a process, not an event.
- Involve teachers and school staff in planning for SEL.
- Provide training and support to all school staff, covering: readiness for change; development of skills and knowledge; and support for embedding change.
- Prioritise implementation quality: teacher preparedness and enthusiasm for SEL are associated with better outcomes.
- Monitor implementation and evaluate the impact of your approaches.

Both the primary and secondary schools in the sample for this research had thought carefully about implementation, and in particular recognised the importance of preparing and training staff to play an active role in the delivery of quality, non-cognitive and SEL activities. However, very few had followed formal steps of implementation, such as the EEF's implementation guidance, and in some cases implementation had taken place long enough ago that the school's practice was more focused on sustaining established activities.

Core examples

The Interactive Speaking and Listening Curriculum was introduced over 12 years ago, and so it wasn't possible for this research to get a complete picture of how it was first implemented. Some of the known features of its implementation, and how it has since been sustained resonate with the recommendations made by the EEF. When the ISLC was first set up, staff at the school were involved in its overall design. Both staff and students together used an inset day to name the different strategies and prepare resources, such as illustrations, that were then used to describe and share the strategies in the classroom. The school has never had external or specialist staff to deliver the programme, but always trained and supported teachers and teaching assistants to deliver the curriculum. Whilst several staff attested to how well embedded the curriculum is that they no longer need to think about using it, leaders at the school had continued to offer training and support to staff and maintain the ISLC as a priority. This is communicated to staff through regular discussion about practice, and the presence of the ISLC in the school's School Improvement Plan.

By contrast, scaling-up Zones of Regulation was a decision St Michael's took in response to the school closures associated with the COVID-19 lockdowns in 2020 and implemented quickly afterwards. Whilst leaders were confident that the programme was appropriate for the school and the needs of the children, they recognised that teachers would need both time and support to be able to deliver it well. Partly because of the unusual circumstances after the school closures, leaders decided to dedicate the first three weeks of term to introducing the programme. This began with practical training for teachers and teaching assistants in what the Zones were and how they should be introduced in the classroom. This had a focus on ensuring consistency across the whole school.

Although the school was able to clear a long stretch of time to introduce the Zones, they now have to carefully balance the mixture of activities that children receive in school time. Doing this through conversations with their curriculum leader means that the school prioritises activities and the two aims are not in tension. This is partly possible because of the school's shared vision that children have a right to development beyond academic learning.

Other examples and variation in practice

Establish a shared vision for SEL, connected to school priorities

In all of the schools interviewed for this research, their work on non-cognitive skills was led by headteachers and senior leaders, with leadership usually shared across more than one person. In secondary schools it was common for the leaders with responsibility for pastoral, behaviour and areas such as safeguarding to hold responsibility for different elements of the approach. Several school leadership teams met together to discuss and agree activities and approaches to non-cognitive skills and SEL. For example, at Harris Greenwich, a group of senior leaders identified the abilities they thought were important for children to develop and planned the programmes of work that would help develop them. At Bristnall Hall Academy leaders talked about how their small leadership team would discuss, challenge and take decisions together about this area of their work, rather than responsibility sitting with just one member of staff.

Several of the schools interviewed had made an element of their approach to non-cognitive skills an item on their School Improvement Plan (SIP), which not only gave visibility to the work, but also made it clear that it was something all staff needed to contribute to. It meant that governors could review this area of work, and some schools had link governors attached to non-cognitive skills activities because of their presence in the SIP. There were examples in the case studies of schools who used the presence of the work in the SIP as a tool for encouraging buy-in to new activities, as well as one where a well-established practice remained in the SIP so that it's continuing importance wouldn't be forgotten.

All of the schools interviewed for this research described non-academic development, such as through SEL, non-cognitive skills or personal development, as important not only because of contribution to a child's overall development and life chances but also as an important factor in their academic development. Whilst schools still encountered tensions in balancing these priorities, there was no sense in any of the schools that they were seen as competing with children's academic achievement.

Treat implementation as a process, not an event

The majority of the schools in the sample had recently introduced and implemented new programmes of work to develop non-cognitive skills and SEL. A small number were focused on sustaining programmes that had been established for several years. The extent to which schools followed a formal implementation process varied across schools. No school referenced the EEF's implementation guidance specifically, but the processes they followed broadly echo the sequence of explore, prepare, deliver and sustain and the accompanying case studies to this report describe these in more detail.

Several senior leader interviewees said that the talents and abilities of their staff needed to be supported by systems and this was a further way in which schools tried to sustain their activities in a way that maintained consistency. Bristnall Hall Academy's Achievement Leads are a good example of where highly skilled and specialised staff are worked across a breadth of issues in the school, and the systems put in place to support them (such as data monitoring, triage and pathways for different issues, and an existing range of interventions to access) were essential for staff in these roles to be able to do their job and offer rapid, reliable support that was considered important.

Involving and training staff to deliver SEL

The EEF's guidance highlights the benefits of discussing and addressing the concerns of staff about SEL when introducing a new programme or activity. In the sample of schools interviewed, there was little reference to the risk of staff holding different views on SEL or non-cognitive skills, but there was a strong recognition that gaining staff 'buy-in' to any new programme or approach was important. This required schools to communicate clearly why skills were important and how the programme was intended to address them. For example, when new staff at Oasis Academy South Bank were trained in the Reactions policy, the first stage of this training was to explain why reactions are important and the role of the policy and its associated practice in helping pupils develop good habits. Similar messages were communicated alongside the introduction of the Positive-Assertive behaviour approach at Harris Greenwich, and when introducing new staff to the 'No Excuses' culture at Mossbourne.

All schools spoke about how they used training and continuing professional development (CPD) to not only ensure teachers had the right skills and knowledge to put approaches into practices effectively, but also to build consistency in how they were delivered over time. Whilst the specific design of CPD varied, it would often involve:

- Gaining 'buy-in' to why an activity was important.
- Developing a shared understanding of concepts - including some of the challenging definitions of non-cognitive skills and what they looked like in the school context.
- Introducing and giving opportunities to practice using the activity - for example, deliberate practice, or other role play approaches. Because of the universality of some of the concepts, some staff could test approaches on themselves or on each other, as was the case in Zones of Regulation.
- Providing structured opportunities following the CPD to practice and improve - for example, with coaching and mentoring or setting and tracking action-steps.

Most schools had thought carefully about what were the essential areas of practice for staff to develop, and how this could be linked in with their existing ways of working. Both of these features were considered as important for effective development that would not overload staff.

Whilst structured CPD was an important tool for schools to establish and develop practice, some - particularly the primary schools - reported that their wider school culture enabled training to lead to improvement. For example, teachers and leaders reported that having an 'open' culture, where members of staff felt supported to try new practice, made change more likely. One school actively recruited for staff who showed a commitment to improvement. This suggests that whilst good CPD is important for building consistency and quality, it's likely to be most effective in a wider culture that supports improvement and change.

Although much CPD was delivered in house, schools also noted that for some roles, which involved specialist teaching or knowledge, skills needed to be drawn from external provision. For example, Forest School training had to be accessed externally and Bristnall Hall Academy's Achievement Coordinators needed to access training, for example from the local authority, to have the specialist knowledge needed to be able to offer care to the community they served.

The schools in the sample also monitored practice in the school and they encouraged staff to reflect on their own practice and take responsibility for improving it as needed. The primary schools in the sample, which were considerably smaller than the secondaries, tended to do this informally. For example, at St Michaels leaders found that it was sufficient to talk to staff as they saw them around the school to ask how they were finding a new programme and address any issues raised on an individual basis. At Benedict Biscop the school's

existing joint practice development process is used to reflect upon and discuss all types of practice, both in academic learning and regarding other skills. In secondary schools, there were often more formal structures such as data on behaviour incidents which could identify where practice needed to be improved or refreshed. A couple of the secondary schools in the sample used action steps to help staff adopt new practices.

Virtually all of the schools interviewed for this study described a culture of learning and improvement amongst their staff, who were generally willing to have conversations about performance and practice, and to make changes if they were supported to do so.

Teaching staff

Nearly all of the activities described by schools in this sample were delivered by teachers and other school staff who worked directly with the children, rather than by specialist or external staff. This might be reflective of how classroom staff are well positioned to cover many different 'touchpoints' in the school day. Additionally, in primary school in particular, several of the targeted approaches such as Forest School and Zones of Regulation, were delivered by teaching assistants, and would involve lunchtime organisers to the extent that these staff were trained or supervising activities became part of their job descriptions. Whilst some activities were delivered by specialists, for example youth workers at The Hub in Oasis Academy South Bank, these relationships were still held within the school, rather than with external agencies.

Monitoring implementation and impact

The schools in this sample felt limited by the data they had to monitor the impact of their activities, with none saying they could fully evidence the effect of their work. They saw non-cognitive or social and emotional skills, seeing this as something that would be challenging to measure. Instead, they used proxy data to indicate whether their work made a difference to children's' skills, and this was usually for the purposes of managing interventions rather than to establish impact. For example, both Harris Academy Greenwich and Bristnall Hall Academy's rewards programme were also used to provide data on whether pupils were demonstrating skills. Other schools used existing data indicators, such as attendance or overall performance, as headline measures of how children were engaged in school. However, schools generally recognised that measuring the specific non-cognitive skills they were trying to develop would be, if not impossible, then at least very challenging and of limited additional value.

RQ3. What difference do schools perceive their work on non-cognitive skills to make?

What difference did schools think their approaches made?

Schools were making efforts to develop the non-cognitive skills of their pupils because they believed that these skills would help them to be successful in later life, as well making a difference to pupils in the short and medium terms.

When asked about the specific effects that different activities had, teachers and leaders reported modest impact and often found it difficult to know whether the effects they observed were a result of a particular intervention alone. This may be in part as many of these approaches had been in place for a long time, and so staff couldn't reflect readily on a 'before' and 'after' picture of pupil's skills (for example, Benedict Biscop's ISL curriculum and their Restorative approach which had been in place for over 12 years). On the other hand, some activities had been quite recently introduced and so staff couldn't yet say whether there were any resulting changes. Most staff also took the view that these practices were intended to make a contribution to children's outcomes amongst a range of other factors.

This said, there were examples given of where teachers observed a clear difference which they felt could be attributed to specific activities - for example staff at St Michael's had observed that children were better behaved as a result of self-regulation built through their whole-school implementation of Zones of Regulation. As this has been introduced at scale, and implemented intensively then they felt confident linking the change to the introduction of the programme.

Although not necessarily comfortable attributing change to specific interventions, teachers did give examples of children demonstrating having new skills (such as self-regulation, social skills), or different personal behaviours, for example where children were more kind or confident. Staff also observed some of the early stage outcomes that acted as a precursor to skills development, for example that children understood what different skills were, why they were important, and that they had an intention to change. In some cases, skills that were developed were perceived to have had an effect on behaviour. Schools in the sample generally felt they had good behaviour compared to other, similar schools, and attributed this to work on non-cognitive skills. Two schools who employed these approaches to support attendance felt that they too made a contribution.

Staff thought that the effects of these interventions and practices would come over the longer term. Whilst they generally felt that non-cognitive skills could be developed they also recognised that children were in the process of growing up, and other factors would influence how their skills developed . This was sometimes evident when staff compared pupils over time, for example in students who came back to visit the school as young adults.

Finally, it should be noted that this section draws on staff perceptions of change and for the various reasons outlined above they did not always report change taking place. Other evidence was used by schools to try to establish whether their work made a difference to children's skills for the purposes of managing interventions. The use of programmes like Class Charts/behaviour points or having a matrix of skills for students to demonstrate and record against played a role both in helping develop skills and in collecting data on them. Other indicators, such as attendance or overall performance, were also used as headline measures of how children were engaged in school. However, schools generally recognised that measuring the specific non-cognitive skills they were trying to develop would be, if not impossible, then at least very challenging and of limited additional value.

What role did school context and characteristic play?

The case study schools demonstrate these practices in a range of different contexts, some of which may be influential in the choice, implementation and effectiveness of their practice.

Schools identified consistency as a key enabler of success, and whilst they took steps to achieve this, there were also structural factors which may have made consistency easier to achieve. For example, schools talked about how long-term implementation with the same staff team meant that staff got to know practice in depth and become more skilled at delivering it consistently. Stable staffing bodies are also more likely to know the school well and understand what children have experienced in different year groups. There were also schools who felt that long standing members of staff were better placed to work with communities and families.

The relative stability in staffing may also have benefits more broadly for these schools that then supports all activities, for better academic outcomes, which as one school in the sample pointed out gave them room to also look at children's wider development.

However, some of the schools in the sample didn't report especially low turnover, or in the case of secondary schools where the larger size of schools means more staff do change routinely. In these cases, induction training and systems could support consistency amongst changes in staff.

These case studies covered some smaller than average schools, especially amongst the Secondary sample. A number of schools talked about the benefit this brought to them. Firstly, a small staff team could often work effectively together without the need for additional systems, but more important because it meant that staff knew more about each of their students and had more experience of interacting with them. This, argued staff, meant staff could make better judgments about what kind of activities would and would not help them echoing other comments made by schools, and evidence in the literature, about the importance of personal relationships to support non-cognitive skills.

Finally, the Covid-19 pandemic has been an important contextual factor in how work has taken place. Although some of the approaches covered in the case studies predate the Covid-19 pandemic and school closures, in others Covid was a catalyst for new approaches. In particular, several schools expected that children would return from school closures with more acute social and emotional challenges than. This prompted some of the schools in the sample, especially primary schools, to do more work on social and emotional elements of learning, and to introduce or increase their outdoor learning provision. In the secondary schools, Covid-19 has seen a greater number of safeguarding issues identified in schools meaning that they have needed to work more closely with care and therapeutic provision available to them, or to augment their internal approaches to providing care and support to students beyond their academic development.

Ambition Institute

CONCLUSIONS

Conclusions

Definition and purpose

RQ1. How did schools understand the term 'non-cognitive skills'?

How schools in this study used and understood the term non-cognitive skills varied, and indeed most described this work using other terms: 'soft skills', 'personal development', 'character' or school 'values'. However, the individual skills that schools wanted to develop in their pupils tended to align with those non-cognitive skills identified in the literature as important for children's development and life chances.

Whilst the interest in this study in non-cognitive skills comes from their perceived role in later life outcomes, school staff mainly considered the short and medium term need for these skills when deciding which to develop. Leaders in schools thought carefully about the needs of their children and the context they worked in and asked themselves what skills would help them be successful in school now, with the expectation that these skills would continue to develop into later life.

Practice

RQ2. What practices are schools using to develop non-cognitive skills?

The EEF's guidance on social and emotional learning, which is closely linked to non-cognitive skills, provides evidence-informed recommendations for schools wishing to develop their pupils' social and emotional learning, particularly in the Primary phase. Although none of the schools in this study referred to this guidance specifically, the practice observed in these case studies largely aligns with its recommendations.

In particular, the core examples discussed in this report from Primary are illustrative of all six recommendations and show how these schools have introduced and embedded practice based upon programmes that address specific skills by helping children to explore, understand and practise them in the classroom.

Practice from other schools in the sample reflected the recommendations but with clear variation. A difference seen in this sample was that whereas primary schools often were teaching skills programmes in the classroom (reflecting recommendations 1-4) in secondary schools there was less of a focus on explicit teaching of skills and instead these schools used features of their school environment to encourage pupils to develop their skills. This provides some illustration of how practice can vary from the guidance but hold to similar principles. For example:

- Whilst some schools did not teach skills in the curriculum, they were still explaining and exploring skills with their pupils in pastoral or enrichment time, such as through assemblies or discussion in tutor groups. These kinds of settings were also where praise was given to pupils and children demonstrating these skills.
- Every school in the sample made opportunities for pupils to practise skills in 'real' situations, and many identified this as essential for skill development. For example, several schools used low-stakes situations in their behaviour policy as an opportunity for pupils to practice and then improve upon skills such as resilience and self-regulation.
- Although few schools were delivering skills teaching programmes in the formal sense used in the guidance, they deployed programme-like systems and structures, including clear expectations for staff and pupils, to support consistent approaches to skill development across the school.

However, despite this variation in what programmes and approaches were used in schools, schools across both phases used a whole-school ethos to reinforce skill learning, and considered implementation carefully so that whatever practice they chose would be as effective and sustainable as possible. This strongly reflected the final two recommendations in the guidance, in particular:

- Several schools worked closely with parents to extend approaches into the home where skills could be reinforced. Where this wasn't possible or practical schools worked in ways that responded to pupils' home contexts.
- All of the schools in the research had made social, emotional and non-cognitive development a part of their school ethos and worked to balance this with academic learning. Key programmes or activities were often included in the schools' Improvement Plans which formalised them as priorities for staff and governors.
- Much of the work in schools was led by Headteachers and other senior leaders and was delivered by staff at many different levels. This required schools to work hard at embedding programmes and to provide regular and purposeful CPD.

The two main areas where schools diverged from the guidance related to the availability of evidence on effective programmes and in how development of skills could be measured or tracked. This was a challenge for most schools. Only a few schools had used formal evidence to inform their selection of an approach, instead either buying in programmes they had seen in use elsewhere or developing practice in house. Some schools reported that there wasn't much evidence available, whilst others were content that they could judge what would be effective for their school.

Similarly, whilst most schools were keen to monitor and review their programmes, very few had specific metrics which they used to measure non-cognitive skill development, and most were not aware of any measures they could use. Instead, they used proxies such as behaviour and attendance data, or relied on feedback from colleagues and their own observation of children in school.

Perceptions of impact

RQ3. What difference do schools perceive their work on non-cognitive skills to make?

Schools in the sample felt their practice was successful, and staff reported that they perceived changes in children's behaviour, knowledge and awareness of skills as well as some skill development. However, several schools felt that skill development would happen over a long period of time, and that they hadn't yet seen the full effects of their work on skills. Schools also acknowledged that their programmes were part of a wider range of factors that made a contribution to skills development.

Future Research

The challenges experienced by schools tended to relate to the availability of evidence on non-cognitive skill development and so there may be a role for future research to address these issues. In particular, whilst there is some secure evidence of the effectiveness of practices in primary education, less is known about social and emotional learning, and non-cognitive skills development in secondary schools. This study suggests that secondary schools are less likely to be using classroom teaching and instead be developing skills through the whole school approach. Understanding what makes these approaches most effective, for example exploring whether the SAFE curriculum model can be applied in these contexts, could support practice.

Given that most school were using some sort of proxy data in place of measures of non-cognitive development, further work to establish whether measures such as attendance or behaviour, which are accessible within schools, are reliable indicators of particular non-cognitive skills development could help produce a robust approach to monitoring of non-cognitive skills programmes.

Annex 1: Literature review

The impact of non-cognitive skills

Introduction

Schools support pupils to achieve a range of academic outcomes, many of which are externally assessed and reported (e.g., Key Stage 2 SATs or GCSE grades), and within schools, these outcomes – sometimes referred to as 'cognitive' outcomes – are well understood by educators and relatively straightforward to define[5]. Furthermore, the relationship between academic skills and achievement and a range of important variables in later life, like university enrolment, job performance and wages, physical and mental health, and longevity are fairly well established (Peng & Kievit, 2020, Aucejo & James, 2021). However, to investigate approaches used in schools to support 'non-academic' outcomes, we recognised there would be work needed to operationalise[6] the concepts involved.

Even a cursory examination of the literature investigating the sorts of skills, traits or characteristics schools might potentially support pupils to develop in addition to achieving academic outcomes, reveals a daunting variety of definitions and constructs. We found a range of over-lapping and complex constructs referencing non-attainment-related outcomes under a variety of different guises, including 'character education', 'twenty-first century skills', 'whole child development', 'social and emotional learning', 'non-cognitive skills', and a range of associated psychological constructs such as 'personality traits' or 'growth mindset'. The process of operationalising our research question was complicated by the fact that there are numerous fields of enquiry related to these non-academic outcomes, and relatively little consensus between, and even within, many of them (Duckworth & Yeager, 2015).

Some of the psychological constructs possessed reasonably operationalised definitions, but ones that might not be widely recognised by educators (e.g., the components of the 'Big-5' model of personality[7]). There were also terms that would likely be recognised by educators but that we had reason to believe could possess a meaning for the teachers and school leaders involved in our study which was different to the way researchers defined them (e.g., 'growth mindset'). On the other hand, some terms might be well-known, but appear to lack an unambiguous definition (e.g., 'character education', 'twenty-first century skills' or 'social and emotional learning') or represent constructs[8] which were complex to define and might not be recognised by educators across all phases of education (e.g., 'whole child development').

Due to scope, a systematic review across all these fields was not possible. Therefore, to help us define and narrow the focus of our study, we conducted a scoping review across the variety of fields discussed above. In selecting literature for this review, we prioritised reviews of empirical studies (where available), rather than purely theoretical papers, particularly studies related to outcomes for school-aged children. Acknowledging the inherent limitations of such a process, we cannot claim that that the approaches we examined represent a comprehensive or exhaustive list, or that – despite drawing on systematic reviews where they were available –

[5] By relatively, we do not mean to imply that there are no complications in the assessment methods used to measure these outcomes, for examples see: Breadmore, H. L., & Carroll, J. M. (2021). *A systematic review of standardised measures of attainment in literacy, mathematics, and science.* Education Endowment Foundation

[6] In research design, especially in social sciences, "operationalisation" is a process of defining the measurement of a phenomenon for the purposes of a research question. Operationalisation involves seeking to provide a definition that makes something clearly distinguishable or measurable within the context of that study (i.e., so that it can be identified and coded for within an analysis of the interviews with teachers and school leaders).

[7] The 'Big-5' or OCEAN personality framework is discussed in more detail later in the report.

[8] In social sciences, a "construct" is a label for a mental trait or condition which is inferred from the behaviour of an individual. For example, if a psychologist uses a questionnaire to measure a psychological trait like anxiety, then anxiety is the 'construct' that underlies the observable behaviour (i.e., responses on the questionnaire).

the literature we examined necessarily represents the evidence-base. However, the purpose of the review was not intended to answer the complex question of what construct might best represent these non-academic outcomes across research and practice, or whether there was robust evidence to support their implementation in schools, but to critically assess each of these fields to identify which terms would be best to use when approaching schools, and which might reasonably assist in the operationalisation of criteria for the analysis of the data collected.

Character education

An education that focuses on developing character traits and values has been a focus within education for some time, with character education receiving a resurgence in popularity in some areas from the 1960s onwards (Lickona, 1993). In more recent times, Department for Education (DfE) projects have attempted to develop desirable character traits in children and young people through the Character Innovation Fund. DfE research (e.g., Marshall et al., 2017) has focused primarily on what schools in England currently do to try to develop desirable character traits among their pupils, and to explore their experiences of putting this provision into place.

However, the term 'character education' appears not to provide any great clarity regarding its definition. In their report for Demos, Birdwell & Reynolds (2015) note that an extremely wide range of traits and qualities might reasonably be considered part of character development. For example, The DfE (2015) defines 'character' as the 'attributes and behaviours that underpin success in education and work', and include traits such as: perseverance, resilience and grit; confidence and optimism; motivation, drive and ambition; neighbourliness and community spirit; tolerance and respect; honesty, integrity and dignity; conscientiousness, curiosity and focus. However, other organisations adopt a different set of traits under the umbrella of 'character'. For example, the Jubilee Centre (2015) defines character as 'a set of personal traits or dispositions that produce specific moral emotions, inform motivation and guide conduct' and identify four broad, main categories of good character including: moral virtues such as courage, honesty, humility, empathy and gratitude; intellectual virtues such as curiosity and critical thinking; performance virtues such as resilience, application and self-regulation; and civic virtues such as acts of service and volunteering.

This diverse range of traits and characteristics creates a problem for evaluating the outcomes of character education initiatives. There are examples where the role of 'character education' in supporting pupils' academic outcomes has been subject to a degree of evaluation. For example, Benninga et al., (2003) examined applications from 681 elementary schools in the US and found small but positive correlations between self-reported character education indicators (e.g., a clean & safe environment, parents and teachers modelled and promoted character, and opportunities for pupils to contribute through volunteering or community service) and pupil outcome measures. Overall, however, the field of character education has suffered from a long-standing problem created by a lack conceptual clarity, and, as a consequence, evaluation questions have not been examined with methods approaching empirical rigour (for examples see, Pritchard, 1988; Was et al, 2006, Lueng & Shek, 2021). For example, a recent review by Lueng & Shek (2021) examined the related education policies in Asian (Hong Kong, Taiwan, and Singapore) and Western (the United Kingdom and the United States) contexts and found progress within character education has essentially stagnated over the last two decades due to the blurred concepts, lack of theory, lack of validated and standard curriculum materials, problems with implementation, and unsystematic evaluation.

Within a UK context, the Marshall et al., (2017) survey of 880 schools found that schools seek to develop a wide variety of character skills, including traits like 'resilience', 'self-control' or 'curiosity', though the traits of 'honesty', 'integrity' and 'respect for others' were identified as a 'high priority' across almost all schools. The

Marshall et al., (2017) survey also examined the range of activities schools utilised in order to influence the development of these character traits. They identified that the vast majority of schools which responded to the survey had a mission statement or set of core values intended to contribute to character education (97%). Approaches which involved strategies like promoting pupil leadership (95%), a focus on character in assemblies (92%), or extra-curricular clubs and activities (97%) were near-universal, other approaches such as house systems (62%) and peer support and tutoring (65%) were also used by the majority of schools (especially secondary schools).

The Marshall et al., (2017) survey analysis also identified a range of barriers associated with developing character education in schools. A majority of schools (57%) reported that competing time demands was a significant barrier, whilst other issues included a lack of pupil and/or parental engagement (26%), and a lack of knowledge and information (24%). However, far fewer schools had systems in place to monitor and evaluate these character education initiatives. Only 17% of schools responding to the survey had a specific plan or policy for character education, and only 33% had implemented a system for formally monitoring the character development of their pupils. One consequence of this absence of specific planning and evaluation, that the Marshall et al., (2017) found, was that there was a general lack of clarity around the intended purpose of activities related to developing character, so they recommended that the next steps should focus in more detail on why different types of provision are in place and attempt to form judgments on how effective they are for developing character traits. In addition to the difficulty inherent in defining this construct, the range of traits and characteristics which might feasibly be included within 'character education' were considered too diverse to form the basis of analysing interviews.

There were also potentially some other issues with using this term when approaching educators in schools. For example, some researchers argue that terms such as 'character education' or 'virtue' possess moral connotations which are problematic. For example, Pike et al (2021) note the debate as to the extent to which character education initiatives relate to societal factors, for instance the importance of avoiding conflation between societal inequalities associated with poverty or unemployment and an individual's 'lack of character'. Bull & Allen (2018) highlight a similar concern that an emphasis on 'character' and 'resilience' can influence perceptions and understandings of social problems and their solutions, pointing to how the notion of 'resilience' can be uncritically promoted as both the cause and the solution to a wide range of social problems such as educational underachievement, poverty or the gender pay gap. This might imply that some of the participants could hold negative prior associations with the term 'character education' which could feasibly influence either their willingness to take part in the study, or distort the responses they gave regarding the work undertaken in schools. Consequently, we decided to avoid this term when approaching schools to take part in the study.

Twenty-first century skills

Another framework which considers the contribution of non-academic outcomes in relation to education relates to skills considered especially relevant to life in the twenty-first century. A question frequently raised by critics, is whether these are genuinely traits and skills which are specific to the twenty-first century rather than previous periods of history. For example, Lucas (2019) points to the fact that proponents fail to distinguish between skills that are eternally useful, as opposed to those which are legitimate responses to the world we live in now.

However, proponents defend the focus on the twenty-first century. For example, Dede (2010) suggests that discussion of skills within the context of the twenty-first century is justified on the basis that the capabilities people need for work, citizenship and self-actualisation are different to those needed in the previous century,

primarily because of the emergence of information and communication technologies, and because of changes in the nature of the workplace – with an increasing number of jobs being carried out by machines. Martin (2018) articulates similar concerns, suggesting that the advent of a new technologies – sometimes referred to as the "Fourth Industrial Revolution" – has led to fears of large-scale unemployment caused by technological encroachment into the workplace.

Like other approaches to non-academic outcomes, twenty-first century skills are difficult to define. The World Economic Forum (2015) suggest that in order to thrive in modern economies, workers need a different mix of skills than in the past. In addition to 'cognitive' skills like literacy and numeracy, people will need competencies like collaboration, creativity and problem-solving, along with character qualities like persistence, curiosity and initiative. Binkley et al., (2012) tried to summarise some of the skills into some major components of twenty-first century skills:

Domain	Key Skills
Ways of Thinking	1. Creativity and innovation 2. Critical thinking, problem solving, decision making 3. Learning to learn, Metacognition
Ways of Working	4. Communication 5. Collaboration (teamwork)
Tools for Working	6. Information literacy 7. ICT literacy
Living in the World	8. Citizenship – local and global 9. Life and career 10. Personal and social responsibility – including cultural awareness and competence

In a more recent systematic review of studies on twenty-first century skills, Chalkiadaki (2018) discovered a very broad range of skills, attributes, and traits that were invoked within research studies in the context of primary education. The review organised these into four categories:

Category	Description
Personal skills	Self- development and autonomy (self-management, self-organization, self-regulation, self-direction, self-reflection, independent thought, autonomous acting, ability to form and conduct life plans and projects and to defend assert rights, emotional intelligence) Creativity (curiosity, imagination, playfulness, creative production, co-creativity, innovation) Problem-solving, critical thinking (in authentic learning environments, analytical thinking, analysis and evaluation of evidence, ability to provide solutions in given challenges, higher-order thinking, sound reasoning, informed decision-making, innovation) Presence in the globalized environment (adaptability, agility, managing complexity, risk-taking)
Social Skills	Communication- collaboration (skilled oral and written communication in the mother tongue and foreign languages, team-working especially in heterogeneous environments, open-mindedness, conflict management) Cultural awareness, global awareness (ability to appreciate the value of the varied cultures and to intentionally construct cross cultural relationships and networks)

	Leadership (self-motivation, initiative taking, entrepreneurship, leading by influence)
Information and Knowledge	Learning (self-reflection, self-assessment, self-improvement, meta-cognition, e-learning, self-directed learning, independent learning, knowledge construction, social and collaborative learning, intellectual risks) Information management (information literacy, data access and analysis, managing multiple streams of simultaneous information, applying knowledge to new situations, creating new knowledge, content knowledge)
Digital Literacy	Confidence in the use of media and ICT, proficiency in the use of digital tools, interactive digital skills, critical use of digital tools (analysis, critique, evaluation, creation), ability to attend to ethical responsibilities required in complex environments, participatory culture in technology

Despite something of a consensus regarding the sorts of global challenges which might influence the forms of learning taking place in schools, Joynes et al., (2019) argue that there is "no unique and single approach to either the definition of '21st Century Skills', or models for framing these within the context of education of children for the 21st century" (p. 18). It is difficult to see how a numerous and complex list of human characteristics such as the ones presented above could feasibly be measured and evaluated with anything approaching rigour, and it appears this is another inherent limitation of twenty-first century skills frameworks. For example, reporting for the OECD, Ananiadou & Claro (2009) suggest that whilst most countries claim to have assessment policies or guidelines in place relating to twenty-first century skill development, scrutiny suggests a different state of affairs, with many countries either having no specific assessment of twenty-first century skills in place, or at best implicit assessment as part of a school inspection framework.

Nearly a decade later, Care et al., (2018) relate a similar criticism, that although twenty-first century skills are widely regarded as important, there is no body of curriculum research that helps teachers or schools identify what levels of skill should reasonably be expected at different stages of education. For example, "what level of problem solving capability or collaborative capabilities should be expected of pupils at different grades or ages, for example?" (p. 14). In the absence of agreed methods for assessing the range of complex skills or competencies which have been suggested to make up twenty-first century skills, it is difficult to see how claims regarding their importance for young people or different approaches to teaching them could be rigorously evaluated.

However, there have been some attempts to evaluate the theoretical structures and conceptual coherence of twenty-first century learning. For example, McPhail & Rata (2016) compared twenty-first century learning against an alternative curriculum framework based on 'powerful knowledge'[9]. The review compared curricula against a range of criteria: the underpinning theory of knowledge in each curriculum design type; the knowledge structures used to organise the curriculum material; the organisation of the concepts and content according to the principle of conceptual progression; and the pedagogy associated with the curriculum design, such as direct instruction or personalised learning.

McPhail & Rata (2016) identified a number of criticisms regarding twenty-first century curricula. For example, they argue that a twenty-first century curriculum provides no framework for considering the matter of conceptual progression, and that the subjectivity with which knowledge is granted 'authority' presents a risk that distinctly non-scientific ideas (e.g., creationism) are treated as worthwhile content. They also note that pedagogy associated with twenty-first century curricula tends to focus on 'relevance' - engage pupils by

[9] Discussion of which is beyond the scope of this review, see Young & Muller (2013).

choosing curriculum knowledge that is relevant to their lives – which comes with a number of risks, not least potentially reinforcing class inequalities, for example working-class pupils continuing to take vocational subjects while middle-class pupils continue with academic subjects.

This highlights another issue identified, which is that the term 'twenty-first century' skills has become uncritically accepted to mean things like teachers no longer engaging in direct instruction, or that knowledge has become less important because it can be looked up on the internet (Lucas, 2019). For example, Rotheram & Willingham (2010) suggest that it would be more accurate to consider the development of knowledge and skill as inseparable. They argue that that learning follows a fairly predictable path, with pupils' knowledge being quite shallow when they encounter new ideas and their understanding bound to the specific examples they have seen. Only after exposure to varied examples does their understanding become decontextualised – more abstract – and they can more successfully apply that understanding to new situations. This means that 'skills', like critical thinking or problem-solving, are inherently tied to the subjects or topics in which we want pupils to apply them. For example, the capability of a doctor to think critically about a medical issue they are presented with, or a mechanic to solve problems related to a car breaking down, are inherently tied to the knowledge they possess related to medicine and car mechanics respectively rather than interchangeable.

According to Willingham (2019), programmes intended to teach skills like 'critical thinking' have, overall, been unsuccessful. Firstly, few programmes include robust evaluation measures which could establish whether skill development has taken place, and "When investigators have tested for transfer in such curricular programs, positive results have been absent or modest and quick to fade" (Willingham, 2019 p. 6). One of the reasons for why generic attempts to develop such skills tend to be unsuccessful relates to the problem of 'transfer'. It has been established for over a century that treating the brain like a 'muscle' – and seeking to extend its capabilities to process information through generic 'exercises' – does not work. For example, learning chess or a musical instrument, and 'brain training' exercises appear to have no lasting influence on general cognitive ability (Sala & Gobet, 2017).

More specifically, attempts to cultivate skill development related to workplace needs tends to fail because the skills learned in training tend not to transfer in practice to the job. For example, Baldwin & Ford (1988) examined the question of whether workplace training successfully transferred to the job and found that even when the person learned specific skills needed for their specific role, there was a general failure for these skills to be applied when the person was back at work; estimating that not more than 10% of training successfully transfers to the job. Thirty years later, Botke et al (2018) identify a similar problem. In their review of empirical studies examining the influence of workplace training they found little evidence for the transfer of skills like 'collaboration' or 'self-regulation'. Part of the problem was the influence of the work environment: for example, the limited immediate job relevance, restricted degrees of task autonomy, workload demands, and an organisational culture which inhibits the application of learning. Given that workplace training specifically targeting skills needed for a person's current job appears to fail to transfer, it appears extremely unlikely that generic teaching of twenty-first century skills in school would necessarily be more successful at transferring to a workplace setting perhaps many years later.

In addition to issues regarding definition, measurement and evaluation (Joynes et al., 2019), some critics have argued that the debate surrounding ideas around twenty-first century skills has 'mutated'; "A legitimate concern about what skills pupils might need today has gradually morphed into a mantra and, more recently, into an uncritical movement." (Lucas, 2019, p.3). There are debates within education as to the extent to which these 'skills' are genuinely teachable (Rotherham & Willingham, 2010) or transferrable (Willingham, 2019) and this means that some educators might already have negative associations with the term. In addition, whilst frameworks like those offered by Binkley et al., (2012) or Chalkiadaki (2018) might act as a basis for analysis,

there appears to have been less evaluation of effective methods for teaching twenty-first century skills compared to other frameworks like social and emotional learning (see below). Therefore, these frameworks were not adopted for the purposes of operationalising our research questions and analysis of school responses.

Whole child development

Another term that was considered was 'whole child development', sometimes referred to as 'whole child education' or 'holistic education'. Whilst some of the concepts related to whole child development date back centuries, it was during the mid-twentieth century that this school of thought gained prominence (Davis, 2018). Whole child development as a movement has historically positioned itself as counteracting a status quo in which a 'narrow' evaluation of a child – for example, through examination results, IQ scores and so forth – is favoured over a more 'holistic' assessment. In his 1960 article, *The Plight of the Whole Child*, for *The Elementary School Journal*, Lanning begins the piece with a four-word opening sentence, "Educate the whole child", before critiquing the contemporary state of educational discourse within which "[w]e are hearing less about the whole child and more about intellect" (Lanning, 1960, p.283). Ron Miller, who founded the journal *Holistic Education Review* in 1988, referred to holistic education as a "dissident perspective", one which sought to respond to the "tide of technicism, reductionism, and conservative political and corporate agendas" which Miller and others saw as representing mainstream educational thought and policy (Miller, 1992, p.7). And this trend of responding to a status quo which purportedly favours a limited and limiting set of outcomes has continued into the twenty-first century. In their report on *Educating the Whole Child* (2018), authors Darling-Hammond and Cook-Harvey explain that, from their perspective, one of the causes of a "renewed interest in a whole child approach to learning is that this perspective on education was largely pushed aside during the No Child Left Behind (NCLB) era" (p.2) (approximately 2001-2015). This era, they go on to say, was too often defined by "drill and kill", "test and punish" and a focus on examination results "to the exclusion of other goals" (Darling-Hammond & Cook-Harvey, 2018, p.2).

However, whilst there is a reasonable consensus on what whole child development advocates do *not* endorse, agreeing what they favour has proved more challenging. Whilst various researchers do define whole child development, whole child education and holistic education in their own terms, it is widely acknowledged that there is no singular, agreed upon definition (Martin, 2002; Hare, 2006; Lauricella & MacAskill, 2015; Burstein, 2019; Teach First, 2019; Tarricone et al., 2020). This was illustrated in a 2018 survey carried out by EdSurge Research. The researchers asked 115 educators, all of whom believed that whole child education was both "important" and "relevant" to their work, to define the term 'whole child education'. Of the 78 free responses that they received, the researchers were able to form four distinct definitions of whole child education, each of which held a different degree of support (adapted from Burstein, 2019):

	Definition of Whole Child Education	Number of responses	Percentage
1	All types of learning and development (e.g., academic, social-emotional, etc.)	39	50
2	Personalised learning and/or responding to each student's circumstances to advance learning	17	22
3	Providing emotional support and/or creating safe and nurturing learning environments	13	17
4	Strengthening communities and building relationships	7	9

Despite acknowledging that there was some overlap, the researchers concluded:

"… there wasn't a universal definition or interpretation of whole child education that surfaced. That matters because the way educators understand whole child education and how they perceive their related roles and responsibilities impact how school communities can best support educators interested in integrating whole child approaches in their teaching." (Burstein, 2019, para. 24)

Another study, by Tarricone and colleagues (2020), came to a similar conclusion. In their study, *Measuring What Matters: Insights on the value of Whole Child Development*, the researchers undertook a mixed-method approach in order to understand to what extent, and the ways in which, education departments attached to governments around the world defined, valued and supported whole child development. The researchers sent out surveys to 29 different 'sites' (cities and countries) and analysed relevant policy documents for eight of the sites. The sites, that were selected as part of the sample, were considered to be supportive of whole child development and were intentionally chosen. However, of the 21 sites that responded to the surveys, fewer than half had an official definition of whole child development. Furthermore, the researchers noted both a lack of agreement between sites, who *did* have a formal definition, about what constituted whole child development, and significant discrepancies between what an education department claimed it considered to be a core part of its whole child development definition and what its policies actually focused on developing. The researchers conclude by saying that whilst there was evidence that all of the sites intended to provide a holistic education, there was a clear "mismatch" in how governments thought about whole child development, what they considered central to it or out of bounds, and, as a result, what policies, pedagogical practices and resources they invested in (Tarricone et al., 2020, p.8).

This lack of conceptual clarity may well be a feature, not a bug. As Miller explains, holistic education "is *not* to be defined as a particular method or technique" but as a worldview, and set of corresponding beliefs, which can be enacted in a multitude of ways (Miller, 1992, p.21 in Rudge, 2010, p.6). As a result, a number of different theoretical frameworks have emerged which attempt to conceptualise what a whole child, or holistic, education comprises. According to Miller (2008), holistic education focuses on developing a child's skills across seven categories: intellectual, emotional, psychological, physical, spirited, moral and interpersonal. Methods for achieving this include experiential learning, prioritising personal relationships, having concern for the feelings and aspirations of children and ecological consciousness.

Teach First (2019, p.9) refer to just four overarching categories within their conceptual framework:

Category	Related terms/construct
Physical well-being	Nutrition; fitness; safety; physical activity
Emotional / Intrapersonal	Self-perception; resilience; motivation; self-control; perseverance; behavioural / self-regulation; mental health
Social / Interpersonal	Cooperation / collaboration; communication; relationships; attachment; cultural responsiveness
Cognitive	Metacognitive skills; critical thinking; executive functioning; problem-solving; decision-making

In comparison, Tarricone and colleagues (2020, pp.16-17) used 11 categories as part of their conceptual framework:

Category	Related terms/construct
Health	Hygiene' nutrition; physical and mental well-being; physical development; physical fitness
Values	Acceptance of others and difference (empathetic, kind, caring and fair); consideration; honest, trustworthiness; integrity; respect for others; respect of rules; self-respect; understanding, tolerance and inclusion
Safe environments	Caring school community; connected and belonging; trust
Spirituality	Compassion; faith; hope; mindfulness / awareness
Student engagement	Attitudes; adaptability; curiosity; differentiated instruction; engaging with others; imagination; inclusive learning environment; initiative; motivation; open-mindedness; perseverance
Academic knowledge	Arts; digital literacy; information literacy; languages; literacy (reading and writing); mathematics and numeracy; science
Adult support	Encouraging, interesting and personable teachers; high expectations (attendance, success, behaviour); high-quality teaching and teachers; holistic development of individuals; nurturing individual personalities / attitudes / values; nurturing learning environments; significant adversities; positive and caring adults (personal interest in each child and their success)
Life skills	21st century competencies; collaboration; communication; creative thinking; critical thinking; global competencies; metacognition (memory, reasoning, self-regulation); problem-solving; transferrable skills; transversal competencies
Academically challenging learning	Academic excellence; curriculum that challenges students; further education and career ready; higher-order thinking and problem-solving skills; learning a second language and culture
Social and emotional learning	Coping skills; emotional self-regulation; empathy; establish and maintain positive relationships; identity; resilience; responsible decision making; self-efficacy; self-reflection
Community	Citizenship; community engagement; diversity; global citizen; history of indigenous peoples; migration background; promotion of peace; Relationships (families, friends)

Whilst there may well be some overlap between these, and other frameworks, the divergence creates problems for teachers and researchers alike. Imprecisely defined concepts can lead to a situation wherein teachers, as Martin (2002) puts it, might use "the same words as other teachers but mean completely different things" (p.2). As a result, colleagues, who believe that they are aligned, may in fact be teaching and behaving in ways that are noticeably dissimilar, or perhaps even counterproductive to one another's aims. Martin goes on to assert that "fuzzy" concepts are a greater problem for "educational alternatives", such as holistic education, than for "traditional education", and that this can lead to situations where proponents are not unified by anything specific except that "they are NOT talking about traditional (or transmission) approaches" (p.22).

For researchers, divergence with regards to definitions and conceptual frameworks creates another problem: it mitigates the growth of an evidence base from which decisions about practice and policy could be made. Much of the research related to whole child and holistic education, despite the resurgence in interest amongst practitioners, researchers and governments alike during the past fifty years, has been confined to theoretical papers and small-scale studies (Forbes & Martin, 2004). Ironically, the growth in interest in holistic education may have contributed to the challenges it now faces: as more researchers have looked to investigate how best to develop the whole child, they have each developed their own conceptual frameworks, made up of slightly varying categories and related concepts, which have led to a movement that is so broad, with approaches that are so diverse, that it is stifling attempts to build up a large evidence base for any one thing in particular. Forbes and Martin summarise the problem as follows:

"It is analogous to having a category of living things we call "plants" – if we want to study them further we need to have further categories such as "trees," "grasses," "ferns," etc. in order study the different forms. The problem with holistic education is that it doesn't break down into such neatly defined and mutually exclusive categories." (Forbes & Martin, 2004, p.3)

Forbes and Martin go on to conclude that, without attending to this fundamental problem, "further research is stymied" (p.3)

Many of the concepts associated with whole child development are of interest to governments and teachers alike. A recent survey by Gradient Learning, which surveyed 1,481 teachers in the United States, reported that 91% of its respondents agreed that students perform better when their schools prioritise whole child learning (Gradient Learning Poll, 2022). However, a lack specificity about what whole child education means, includes and excludes, makes using it impractical. For example, another survey, this time administered by Teacher Tapp (2020), which surveyed over 6,000 primary and secondary teachers in England, asked teachers what term(s) – of which 'whole-child development' was an option – they would apply to the following statement: "A focus on developing all aspects of a person, including values, academic knowledge, life skills and social emotional learning". The responses indicated a significant difference in either familiarity with, or the interpretation of, the term 'whole-child development' between primary teachers, of whom 54% made the connection, and secondary teachers, of whom just 35% drew a link. This finding raised concerns that secondary participants might be more reticent or unable to respond to questions about that term. Additionally, the fact that, on average, fewer than half of the respondents felt inclined to describe a focus on "all aspects of a person" as 'whole child' indicated that the term lacked the precision that was needed. Therefore, we decided not to use this term, or similar terms, to operationalise the criteria for our analysis or use them within our interview protocols.

Personality Traits

A range of psychological constructs attempt to define and measure traits outside of academic or cognitive ability. Personality traits are arguably the most well established – defined as "the relatively enduring patterns of thoughts, feelings, and behaviours that distinguish individuals from one another" (Roberts & Mroczek, 2008). The Five-factor model of personality (McCrea & Costa, 1987) – also known as OCEAN or the 'Big-5' (Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) – represents a personality profile which has been extensively tested and evaluated over many years (McCrea & John, 1992).

There is a relationship between these psychological constructs related to personality and the sorts of non-academic outcomes discussed within education. For example, Abrahams et al., (2019) discusses how skills included in social-emotional frameworks can be categorised within the broad domains of the Big Five

personality traits and how it might serve as an integrative framework: Self-management (related to Conscientiousness), the interpersonal dimensions Engaging with Others (related to Extraversion) and Amity (related to Agreeableness), Negative Emotion Regulation (related to Neuroticism) and Open-mindedness (associated with Openness to experience). The fact that the 'Big-5' traits are well established and operationalised, in contrast to other approaches for classifying 'non-cognitive' traits, means that empirical evidence regarding their malleability and influence on future life are easier to study.

Research appears to find strong stability in personality across adulthood. For example, a person who is relatively extrovert when younger is still likely to be relatively extroverted in later life (Terracciano et al, 2006; Hampson & Goldberg, 2006). However, personality does not appear to be 'fixed' and there is some evidence that a range of developmental changes in personality occur into adulthood and later in life. For example, Donnellian & Lucas (2008) investigating a large sample, tracked from ages 16-80 years-old, from the UK and Germany, found that extraversion and openness were typically negatively associated with age, along with neuroticism for the UK sample, whereas traits like agreeableness and conscientiousness were positively associated with age.

Overall, it appears that personality can change over time – e.g., people become typically more conscientiousness as they get older (Roberts & Mroczek, 2008) and personality can be influenced by significant life events such as marital separation, major financial problems, or the death of a spouse or child (Stillman & Velamuri, 2020) – however, adult personality characteristics do not appear particularly malleable over relatively short periods of time or most one-off events.

Evidence that younger children's personality plays an important role in their development is surprisingly limited, and there is an on-going debate regarding how predictive and stable these traits are in early childhood (Abrahams et al, 2019). Part of the uncertainty is related to methodological problems with the measurement of personality. For example, studies investigating the personality of younger children have tended to use adult ratings of the child's personality, which may be influenced by that adult's own personality (Measelle et al, 2005). Whilst, in their 5-year longitudinal study, Measelle et al, (2005) found that children's self-report ratings of some 'Big-5' personality traits appeared to increasingly converge with adult ratings across the ages of 5-7 years old, other studies have questioned the reliability of childhood measures. For example, Hampson & Goldberg (2006) found that the test-retest reliability of personality ratings appeared much lower in childhood than those measures across adulthood. As children get older, it appears that personality characteristics are typically considered more stable.

Another question is the malleability of personality traits. Evidence suggests that significant, long-lasting childhood experiences appear more likely to influence personality development. For example, Fletcher & Schurer (2017) tracked a large, representative sample of young people from the US and found that experiences of parental maltreatment were associated with higher levels of neuroticism (low emotional stability), and lower conscientiousness and openness to experience. In addition, parental neglect appeared to reduce levels of conscientiousness and openness to experience. Elkins et al., (2017) agree that some significant long-term events appeared to influence personality (e.g., long-term health problems or a family member going to prison) but argue that most individuals do not change their scores on personality assessments in a statistically reliable way during adolescence and young adulthood and do not respond to most, common one-off events related to family or health. This may imply that personality traits in adolescence are not particularly malleable over the short term.

The influence of schools on the development of personality is uncertain. There is some evidence that schools have a general influence on personality traits. For example, Dahmann & Anger (2014) conducted a natural

experiment examining the influence of school reform in Germany which reduced the length of school for academic-track (Gymnasium) pupils from 9 to 8 years in some states but not others. The study found that shortening high school caused pupils on average to be more extroverted and less emotionally stable. However, there was considerable variance within their findings, including differences in outcomes for pupils in East and West Germany, and stronger personality changes following the reform for male pupils and pupils from disrupted families. For the latter groups, the reduction in schooling appeared associated with pupils becoming more agreeable and more extroverted, respectively. The results suggest an apparent deterioration of some non-cognitive skills and the improvement of others, which led the authors to warn of potentially substantial sources of hidden costs and benefits – a fact that potentially highlights the ethical issues for schools seeking to influence such aspects of development. Whilst they conclude that schools play an important role in shaping adolescents' personality traits, it is worth noting that only more academically accomplished pupils typically enter the Gymnasium track aiming to attend university, and some evidence suggests that high achievement within schools may itself influence traits like conscientiousness through the pupil's perception of their ability and academic motivation (Pagani et al., 2021).

An important aspect of interest and research is the degree to which personality traits predict future life outcomes like job performance or wages. Overall, there appear to be well-established associations between personality and factors like income and job performance, however these appear relatively modest. For example, examining correlations between specific personality traits and job performance in a meta-analysis by Barrick & Mount (1991), the strongest example was conscientiousness which provided a general predictor of success in different groups of professions, however the correlation was still relatively small ($\rho = 0.20$ to 0.23).

A systematic review by Cabus et al., (2021) found that agreeableness and neuroticism had a negative association with higher earnings. However, this review found a positive relationship with conscientiousness and openness. Again, the influence of these traits was relatively small, and the review authors note that this positive impact is only observed to a limited extent compared to the level of returns observed for 'cognitive' skills. In a recent study examining the impact of personality traits on wages in Australia, Germany and the UK, Collischon (2020) found comparable relationships across all three countries. Perhaps worryingly, in the context of the influence schools might seek to have on personality development, in all three countries, agreeableness has a statistically significant *negative* impact on wages. Other traits, like extraversion and openness to experience did not appear to have associations with wages. There were some cultural variations between the three countries, for example neuroticism was negatively correlated with wages in Germany and the UK but appeared to have no effect in Australia. Interestingly, both high and low degrees of conscientiousness appeared related to a wage penalty in the UK.

The Collischon (2020) study also found gender differences in the associations between personality and wages – for example, neuroticism appeared to have greater negative influence on women's wages compared to men's, and risk-taking had a positive relationship with wages, but only for men within the study. The Cabus et al., (2021) review also found some gender differences in outcomes, for example that older and female participants seemed to benefit more from programmes targeted at developing non-cognitive skills than younger participants and men.

These findings imply potentially significant ethical issues for interventions attempting to influence non-cognitive development. For example, agreeableness might be considered a highly valued trait in the context of school but is associated with lower average wages in later life. It would appear problematic to therefore inculcate agreeable traits within school but the reverse – inculcating lower agreeableness – would also be ethically problematic. In addition, the apparent importance of non-cognitive skills for women may be due to cultural biases and gendered expectations in the workplace, rather than advantages specific to those skills. For

example, the fact that neuroticism has a negative association with women's wages but not for men might reasonably imply the influence of gender stereotypes. Therefore, whilst it might appear beneficial to encourage risk-taking amongst men rather than women or seek to reduce emotional instability amongst women more than men, these may act to merely reinforce unfair gender expectations in the workplace.

A common issue with these correlational studies is that it is not always clear whether differences in personality influence performance in job roles, or whether it is the other way around. For example, Judge & Zapata, (2015) argue that there are situation-trait interactions; specific traits become activated when job situations make demands upon them: e.g., a job which makes demands on the individual to use social skills will activate extrovert traits, compared to one which requires the individual to work long hours on their own. This may also be a factor in the personality development of children within schools. For example, as previously mentioned, Pagani et al., (2021) appear to suggest that it is the experience of high achievement which influences the development of conscientiousness.

Another complication is the influence of genes on the development of personality. For example, Sanchez-Roige et al., (2018) reviewed recent research into the polygenic influences on 'Big-5' traits and found heritability ranging from 31-41%. Whilst the influence of genes on traits as complex as personality is not deterministic – and shouldn't be taken to imply no malleability in these traits – it is possible that changes in personality across school and into adult life might be viewed as interactions between genes and the individual's environment (including significant life events, but also school life) rather than the likely outcome of relatively short-term interventions within schools. Taken together, it is unclear whether schools could or should seek to inculcate specific personality traits through specific interventions or activities with their pupils, or if they should simply provide a range of academic and extra-curricular activities which may influence the activation or development of such traits.

Whilst the construct of the 'Big-5' is arguably the most well-defined and is extensively used within psychology, they represent a range of traits which might not capture the full range of responses we anticipated the interviews would generate (for example, despite many aspects of non-academic outcomes being encompassed by the Big-5 (Abrahams et al., 2019) it was unclear how some examples, for instance 'volunteering opportunities' would necessarily fit within that framework). Therefore, we rejected this framework as an approach for operationalising the criteria used in our analysis. In addition, we were also concerned that the definitions of these factors might not be well known amongst educators, or that the term 'personality traits' might have associations with genetic influences and perceived limitations in malleability. Therefore, we decided to avoid these terms within our interview protocols.

Contemporary social-psychological approaches

The concept of 'growth mindset' is arguably the best known example of attempts to apply social-psychological approaches to education. In her best-selling book, Dweck (2006) makes a compelling case that one of the barriers to opportunities afforded by education is the mindset pupils possess. Drawing on a considerable body of evidence supporting the view that implicit theories of intellect can undermine or improve pupil motivation in school (Dweck, 2006; Dweck & Master, 2012; Dweck & Yeager, 2019), the theory suggests that pupils' beliefs in whether their intelligence or ability is 'fixed' or open to 'grow' and improve over time influences investment of effort when pupils encounter challenges. For example, if a pupil believes that no amount of effort will improve their performance, they may direct their efforts in trying not to look 'stupid', however where a pupil believes their intelligence or ability can improve over time, they may more readily engage with challenging and difficult work. Over time, these differences in beliefs about intelligence may act to influence the progress pupils make in school and their academic outcomes. Supporting this view are a range of

experimental studies which sought to influence pupils' mindsets and found a corresponding academic improvement (e.g., Yeager et al., 2019).

Mindset research has run into some difficulty where other researchers have failed to replicate some of the key findings. Li & Bates, (2019) conducted a series of replication studies with school-aged children. For example, in one of the replication studies, pupils were provided with differential feedback based on findings that praising intelligence (e.g., 'You must be smart …') related to a 'fixed mindset' whereas praise based on effort (e.g., 'You must have worked hard …') which has been proposed to encourage a growth mindset. However, across all three attempts to replicate a 'growth mindset' effect, the researchers found little support: praise for intelligence didn't appear to reduce cognitive performance, children's mindsets appeared to have no relationship to their school grades or to their improvement of grades across the year. In the UK context, Skipper & Douglas (2012) attempted to test the influence of different forms of praise on school children aged 9–11 as participants and university students. Participants were randomly allocated to three conditions. In two, they were given objective performance feedback ('You got 5 out of 5 correct'), followed by either person (e.g., 'You are clever'), or process (e.g., 'You found a good way to do it') praise. In the third condition, participants only received the objective feedback with no verbal praise. Their study found differences between the feedback conditions when pupils started to fail at a given task. Initially, pupils appeared to respond better to process rather than person praise, but after a second failure the positive effects of process praise appeared to contribute little more than objective performance feedback.

In addition, the positive experimental findings have proven difficult to apply effectively within a school context. Successful experimental interventions targeted at changing pupils' attributions have involved encouraging pupils to perceive the brain as 'like a muscle' and involve short, targeted and subtle procedures to influence pupils' attributions (Yeager & Walton, 2011). However, whilst brief exercises to target pupils' attributions appear to have had success, the challenges inherent in applying this at scale in order to benefit large numbers of pupils across an education system are not trivial (Yeager & Walton, 2011; Yeager et al., 2013). One concern is that as schools attempt to exploit mindset manipulations, they scale up the superficial features of the intervention and fail to retain the subtle psychological experience which causes it to work. Indeed, Yeager & Walton (2011) note that even where the essential components are reproduced with care, small changes in the delivery of the intervention can lead to it being ineffective.

One example of this from the UK context comes from an evaluation by the Education Endowment Foundation (EEF) into the 'Changing Mindsets' programme (Foliano et al., 2019). The 'Changing Mindsets' programme, developed and delivered by Portsmouth University, aimed to improve attainment outcomes at the end of primary school through a number of workshops with Year 6 pupils teaching them about the malleability of their intelligence. Beginning with a short professional development course for teachers, the sessions with pupils involved weekly contact over a period of eight weeks. Teachers were encouraged to support the intervention in the ways in which they provided feedback and supported with digital classroom resources. However, the evaluation conducted by Foliano et al., (2019) found that pupils who received the intervention made no additional progress in KS2 literacy nor numeracy and that there was no significant impact on four non-cognitive skills (intrinsic value, self-efficacy, test anxiety, and self-regulation) compared to the control group. One previous finding of 'growth mindset' research is that it may act to offset some of the disadvantages associated with growing up in poverty (Claro et al., 2016), however the EEF evaluation found that pupils eligible for free school meals involved in the study also made no additional progress.

Whilst the concept of 'growth mindset' has received widespread attention within schools, and many took up approaches intended to capitalise on these social-psychological findings (Foliano et al., 2019) there appears to be little secure evidence that it has been successfully applied in a way that has had impact on pupil outcomes.

Furthermore, Carol Dweck herself has been critical of the ways in which some schools have tried to approach these sorts of interventions and highlighted potential risks associated with an enthusiastic promotion of a 'growth mindset' (Dweck, 2015). For example, Dweck (2015) argues that some educators appear to conflate the concept of 'growth mindset' with the idea of developing 'self-esteem': "It's the fear that the mindset concepts, which grew up to counter the failed self-esteem movement, will be used to perpetuate that movement." (para. 6), or that some use the idea of a 'fixed mindset' as a justification for why some pupils are not learning, or conflating the idea of a 'growth mindset' with that of being a right-thinking person (ignoring the fact that we all have a 'fixed mindset' related to some aspects of our lives).

The psychological constructs of 'growth' and 'fixed' mindsets have reasonably clear operational definitions, certainly in comparison to other approaches towards non-cognitive skills. However, this specificity means they only relate to narrow aspect of non-academic outcomes. For example, it isn't clear how skills like cooperation, empathy or relationship skills might relate to the construct. In addition, it was felt that some educators might have negative associations with the term 'growth mindset' due to well-publicised criticism regarding implementation (e.g., Dweck, 2015) and negative evaluations of interventions (Foliano et al., 2019). Therefore, we decided not to use these terms to operationalise the criteria for our analysis or use them within our interview protocols.

Social and emotional learning (SEL)

The impact of social and emotional skills on pupil achievement and life chances might be considered a consensus amongst researchers. For example, the EEF guidance report (van Poortvliet et al., 2019) suggests that there is extensive evidence associating childhood social and emotional skills with improved outcomes at school and in later life, in relation to physical and mental health, school readiness and academic achievement, crime, employment and income.

The evidence-base supporting this consensus has been developing over recent years. For example, Durlak et al (2011) conducted a meta-analysis of 213 school-based, universal social and emotional learning programs involving 270,034 kindergarten through high school pupils. They reported that, compared to controls, SEL participants demonstrated significantly improved social and emotional skills, attitudes, behaviour, and also an 11% gain in academic performance. This may help to explain the strong focus on social and emotional learning already undertaken within schools. For example, van Poortvliet et al. (2019) report a survey of primary schools which identified that 46% said that SEL is their top priority and a further 49% believe it is important alongside a number of other priorities. Additionally, nearly half of schools (48%) say that they are devoting 'much more time' to SEL compared to five years ago, and a further third (36%) 'somewhat more time', citing higher needs among children and families, including children 'struggling to cope'.

Whilst the Durlak et al (2011) meta-analysis concluded that school teaching staff can successfully conduct SEL programs, Jones & Bouffard (2012) argue that SEL programs are rarely integrated into classrooms and schools in ways that are meaningful, sustained, and embedded in the day-to-day interactions of pupils, educators, and school staff. Implementation fidelity and quality are believed to be key factors in the effectiveness of SEL programs, however measuring implementation and evaluating its impact on outcomes have been a component often missing within the literature on SEL programs and other related prevention programs (Jones & Bouffard, 2012). These issues, common across the approaches we examined, are potentially due to the issues previously identified within defining outcomes in such a way that programmes can be meaningfully evaluated.

The focus on social and emotional learning has a strong track record within the English education system. Following pilot versions of a programme introduced into English primary schools in 2003, and an adapted

version for secondary schools following in 2005, 2007 saw the national launch of the secondary social and emotional aspects of learning (SEAL) programme across the English education system. This programme represented a whole-school approach intended to positively influence a range of outcomes, such as increased social and emotional skills, better behaviour and reduced mental health difficulties. The purpose of the programme was to promote the development and application to learning of social and emotional skills that have been classified under the five domains proposed in Goleman's (1995) model of emotional intelligence, summarised below:

Skill	Definition
Empathy	Understanding others' thoughts and feelings and valuing and supporting others. When we can understand, respect, and value other people's beliefs, values, and feelings, we can be more effective in making relationships, working with, and learning from, people from diverse backgrounds.
Motivation	Working towards goals, and being more persistent, resilient and optimistic. When we can set ourselves goals, work out effective strategies for reaching those goals, and respond effectively to setbacks and difficulties, we can approach learning situations in a positive way and maximize our ability to achieve our potential.
Self-awareness	Knowing and valuing myself and understanding how I think and feel. When we can identify and describe our beliefs, values, and feelings, and feel good about ourselves, our strengths and our limitations, we can learn more effectively and engage in positive interactions with others
Self-regulation (Managing feelings)	Managing how we express emotions, coping with and changing difficult and uncomfortable feelings, and increasing and enhancing positive and pleasant feelings. When we have strategies for expressing our feelings in a positive way and for helping us to cope with difficult feelings and feel more positive and comfortable, we can concentrate better, behave more appropriately, make better relationships, and work more cooperatively and productively with those around us.
Social skills	Building and maintaining relationships and solving problems, including interpersonal ones. When we have strategies for forming and maintaining relationships, and for solving problems and conflicts with other people, we have the skills that can help us achieve all of these learning outcomes, for example by reducing negative feelings and distraction while in learning situations, and using our interactions with others as an important way of improving our learning experience.

The programme was widely implemented with as many as 90% of primary schools and 70% of secondary schools introducing at least some elements of the programme by 2007 (Garner, 2013). However, despite this broad uptake and political support, the implementation of SEAL did not always have the intended impact. Wiglesworth et al (2012) used a quantitative, quasi-experimental design with a sample of over 4000 pupils across 41 schools, using a range of measures over a two-year period to examine outcomes such as social and emotional skills, mental health difficulties and pro-social behaviour. The analysis of these data suggested that the SEAL programme had non-significant effects on pupils' social and emotional skills and mental health difficulties, and no significant effect on pupils' pro-social behaviour.

More recently, the EEF conducted a review of available evidence examining social and emotional learning as applied within schools (Wiglesworth et al, 2020). The practice guide based on this review (van Poortvliet et al., 2019) sought to define social and emotional learning through a set of 'core competencies' summarised below:

Core competency	Definition	Associated skills
Self-awareness	The ability to accurately recognise one's own emotions, thoughts and values and how they influence behaviour. The ability to accurately assess one's strengths and limitations with a well-grounded sense of confidence and optimism	Identifying emotions Accurate self-perception Recognising strengths Self-confidence Self-efficacy
Self-management	The ability to successfully regulate one's emotions, thoughts and behaviours in different situations – effectively managing stress, controlling impulses, and motivating oneself. The ability to set and work towards personal and academic goal	Impulse control Stress management Self-discipline Self-motivation Goal setting Organisational skills
Social awareness	The ability to take the perspective of and empathise with others. The ability to understand social and ethical norms for behaviour and to recognise family, school and community resources and supports.	Understanding emotions Empathy/sympathy Appreciating diversity Respect for others
Relationship skills	The ability to establish and maintain healthy relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively and seek and offer help when needed.	Communication Social engagement Relationship building Teamwork
Responsible decision making	The ability to make constructive choices about personal behaviour and social interactions. The realistic evaluation of consequences of various actions and a consideration of the wellbeing of oneself and others	Identifying problems Analysing solutions Solving problems Evaluating Reflecting Ethical responsibility

Whilst the framework adopted in the EEF review of social and emotional learning (van Poortvliet et al., 2019) has many areas in common with the SEAL policy, as with other approaches discussed, social and emotional learning is difficult to define. Different frameworks identify a wide range of 'skills' the approach is intended to support and organise these into different themes, domains or categories. This makes the development of these skills difficult to assess and evaluation of programmes intended to support such development difficult. Primi, et al., (2016, p. 6.) summarise the problem:

"There is no consensus on the number and nature of the constructs needed to represent social-emotional characteristics"

In response to this lack of definitional and conceptual clarity, some researchers have sought to bring the wide variety of SEL constructs within a smaller number of overarching constructs. A prominent example within the field is Jones et al (2021), where a group of researchers at the Harvard Graduate School of Education (HGSE)

drew upon previous work which attempted to generate a coherent taxonomy of social and emotional skills that organises, describes, and sought to connect multiple frameworks across disciplines (see Jones et al, 2019)[10]. The report drew on 33 leading SEL programmes to identify and summarise the key features and attributes of SEL programming for preschool and elementary-age children.

Drawing on the taxonomical work previous conducted, they identified six broad domains of SEL: cognitive, emotion, social, values, perspectives, and identity (Jones et al., 2021, p. 18-19.)

Domain	Key skills / dimensions				
Cognitive	Attentional control	Inhibitory control	Working memory / Planning skills	Cognitive flexibility	Critical thinking
Emotion	Emotional knowledge and expression	Emotional and behavioural regulation	Empathy / Perspective taking		
Social	Understanding social cues	Conflict resolution / Social problem solving	Prosocial / Cooperative behaviour		
Values	Ethical values	Performance values	Civic values	Intellectual values	
Perspectives	Optimism	Gratitude	Openness	Enthusiasm / Zest	
Identity	Self-knowledge	Purpose	Self-efficacy / Growth Mindset	Self-esteem	

These domains are described in more detail below:

Category	Description
Cognitive	Involves basic cognitive skills required to manage and direct one's behaviour toward the attainment of a goal. It includes skills and competencies related to executive function, self-regulation, decision-making, and problem-solving. They identify 5 cognitive skills which they argue are related to outcomes for children and young people: attention control, inhibitory control, working memory and planning skills, cognitive flexibility, and critical thinking
Emotional	Involves skills and competencies that help children recognise, express, and control their emotions as well as understand and empathize with others. Skills in this domain allow children to recognize how different situations make them feel, process and address those feelings in healthy and prosocial ways, and consequently gain control over their behavioural responses in emotionally-charged situations. They identify 3 emotional skills which they argue are related to outcomes: emotional knowledge and expression, emotional and behavioural regulation, and empathy/perspective taking
Social Domain	Involves skills which support children and youth to accurately interpret other people's behaviour, effectively navigate social situations, and interact positively with peers and adults. Skills in this domain are required to work collaboratively, solve social problems, build positive relationships, and coexist peacefully with others. They identify 3 social skills they argue are related to outcomes: understanding social cues, conflict resolution/social problem solving, and prosocial/cooperative behaviour.

[10] See also: EASEL LAB (ND). Explore SEL. Harvard University. [online] http://exploresel.gse.harvard.edu/

	In addition, they identified 3 further broad domains which they argue are related to the 'belief ecologies' (sets of belief, values, attitudes, mindsets, and motivations, that influence how children and young people views and understands themselves and the world around them. They act as 'ecologies' in the sense that they act as an internal guide that drives and directs a person's behaviour and actions based on the knowledge, skills, and dispositions they have, and influence the ability to develop and deploy the skills included in the cognitive, social, and emotion domains, but also how a person ultimately decides to use those skills.
Values	A set of values, skills/competencies, habits, and character strengths that support children to be prosocial and productive members of a particular community. For example, caring about and acting upon a concern for justice, fairness, and the welfare of others; or the importance of participating in community life and serving the common good. They organise this domain into 4 dimensions: ethical values, performance values, civic values, and intellectual values
Perspectives	Involves how children and youth view and approach the world, how they see themselves and others, and their own circumstances, and influences how they interpret and approach challenges. Drawing across literature on mindfulness, cognitive behavioural therapy, character education, and positive psychology, they identify 4 perspectives: gratitude, optimism, openness, and enthusiasm/zest
Identity	Involves how children understand and perceive themselves and their abilities, such as their knowledge and beliefs about who they are and their ability to learn and grow. Drawing across literature on youth development, mindfulness, and self-efficacy/growth mindset, they identify 4 areas within this domain; self-knowledge, purpose, self-efficacy/growth mindset, and self-esteem

The Wiglesworth et al (2020) review found that whilst the overall effect appeared to be positive (on average, 4 months' additional progress in academic outcomes over the course of an academic year) the security of the evidence was rated 'very low'. Reasons for this concern over the quality of evidence included the fact that a large percentage of the studies were only evaluated by organisations commercially involved with the approach rather than independently evaluated. Like the Smithers et al (2018) review, they also found that only short-term outcomes were typically examined in these studies and that there was a large amount of unexplained variation between the results. The Wiglesworth et al (2020) review notes that this unexplained variation (or heterogeneity) reduces the certainty in the results as they were unable to test how differences in context, methodology or approach influences the impact. They also noted that evaluations conducted by organisations connected with the approach – for example, commercial providers – typically reported larger impacts, which may influence the overall impact. The review found little consensus as to the empirical findings regarding differential impact on identified subgroups (low income, ethnic minority status, SEN, and or 'at risk' status for mental health difficulties).

The EEF guidance report for primary schools (van Poortvliet et al., 2019) draws on the review by Wiglesworth et al (2020) and the findings of Durlak et al (2011) to recommend that effective programs were those that incorporated four elements represented by the acronym SAFE:

1. sequenced activities that led in a coordinated and connected way to skills,
2. active forms of learning,
3. focused on developing one or more social skills, and
4. explicit about targeting specific skills.

These elements arguably represent the best available evidence regarding effective implementation of programmes within schools intended to support development of non-academic skills. However, the extent to which schools currently implement SEL in relation to these elements, particularly within secondary schools, is less understood.

Whilst the research findings related to the benefits associated with SEL programmes are broadly positive, there are still questions regarding definition of these skills, the security of the evidence-base and whether implementation within schools is typically effective. Our research cannot examine these first two questions; however, our interviews would be able to examine the ways in which schools have interpreted and implemented the development of social and emotional skills within their context. Therefore, we decided to adopt the EEF guidance for implementation of SEL as an operationalised set of criteria for the analysis of the interviews.

However, we were aware that the term 'social and emotional learning' may hold strong associations which might influence the responses we received within interviews. For example, the term might be associated with primary phase teaching and less strongly associated within secondary schools. In addition, many secondary educators may have experienced SEAL when it was rolled out as national policy in 2007 and be aware of the negative evaluations of that policy, which might have influenced responses in interviews. Therefore, whilst adopting the implementation recommendations as a framework for the analysis of the interview data, we decided to avoid this term in our interview protocol.

Non-cognitive skills

Like many other approaches we reviewed, the term 'non-cognitive skills' runs into challenges around both definition and conceptual clarity. For example, in their systematic review of the influence of non-cognitive skills on academic, psychological, social, cognitive and health outcomes, Smithers et al., (2018) note a large increase in the number of publications since the beginning of the 21st century related to the influence of non-cognitive skills, also variously referred to as 'character skills' or 'soft skills', involving a very large range of often overlapping concepts and terms such as academic motivation, responsibility and persistence, temperament, sociability and behaviour problems, locus of control and self-esteem, attention and socio-emotional skills, executive functions (such as inhibitory control or attention), personality traits such as self-esteem, perseverance, motivation, self-control, and conscientiousness.

However, despite questions regarding the definition of these traits, some research suggests that non-cognitive skills may act to influence a range of educational and employment outcomes, especially for children from lower socioeconomic (SES) backgrounds. For example, Liu (2019) used an innovative statistical modelling technique to analyse data from the Early Childhood Longitudinal Study to examine whether the influence of family socioeconomic status was moderated by children's non-cognitive skills in early childhood and early adolescence. The study found that higher non-cognitive skills appeared to reduce the influence of family SES's effects on achievement and that these moderation effects were significant during both early childhood and early adolescence.

On the other hand, other researchers have found less clear-cut influence on later life chances. For example, Smithers et al., (2018) conducted a systematic review examining the short-term and long-term influence of non-cognitive skills. Whilst they found evidence supporting a role for non-cognitive skills related to shorter-term outcomes such as better academic achievement, there was less support for longer-term outcomes such as employment. The researchers noted a couple of important issues within their results which led them to be cautious regarding their conclusions. For example, they indicated that there was considerable variation in the reported results, suggesting that a null effect of non-cognitive skill interventions could not be ruled out. They

also warned that the findings reviewed in the study may have been influenced by publication bias (a practice whereby positive results are more readily published in academic journals than negative or null results), further limiting the confidence that non-cognitive skills genuinely have the positive influence on important longer-term outcomes.

The high variability might be partially explained by Cabus et al., (2021) whose analysis suggested that non-cognitive skills may have both positive and negative influences on later life outcomes. In their meta-analysis examining the returns to non-cognitive skills based on studies conducted over 10 years, they were able to extract over 300 estimates linking earning to non-cognitive skills. However, as discussed in an earlier section of this review, the results of the meta-analysis pointed to great variation in the estimated direction and significance of the influence of non-cognitive skills. Overall, they observed that conscientiousness and openness were two traits associated with higher earnings, but they found that other traits, which might reasonably be perceived as beneficial 'non-cognitive' skills, like agreeableness, were associated with receiving lower earnings.

In a UK context, Morris et al., (2018) conducted a longitudinal study to examine the extent to which non-cognitive skills predict a range of socioeconomic outcomes including educational attainment and employment. Using data from a UK cohort, the study examined the consistency of non-cognitive skills over a 17-year period throughout childhood and their associations with educational outcomes. They found an association between non-cognitive skills and educational outcomes where skills were observed in mid to late childhood, representing an influence approximately one third as large as the influence of cognitive factors like IQ. However, whilst they found that a few non-cognitive skills, like behaviour and communication skills, appeared to show consistency over time, this was not the case for many others. Morris et al., (2018) suggest this indicates that there is a 'high noise to signal ratio' for many non-cognitive skills and that caution should be applied in the use of non-cognitive measures as indicators of underlying skills during early childhood.

This uncertain link between non-cognitive skills and later outcomes was also reflected in a review for the EEF. Gutman & Schoon (2013) found signs of promise that non-cognitive skills were potentially linked to positive outcomes for young people. However, whilst acknowledging a growing interest in this topic, they argued that the causal relationship between non-cognitive skills and later outcomes was not well established. As a consequence of this lack of causal empirical evidence, they suggested that little was known about how far it is possible to develop a young person's non-cognitive skills through intervention, or whether such changes lead to improved outcomes, especially in the long-term, e.g., employment.

One issue is the diversity in the construct of 'non-cognitive skills', which represents a significant challenge for both researchers and educators keen to apply evidence-based practice to improve the life chances of pupils. Duckworth & Yeager (2015) note that whilst reliable and predictive performance tasks to assess academic aptitude and academic achievement have been available for well over a century, parallel measures for attributes other than cognitive ability have not followed suit.

Furthermore, Duckworth & Yeager (2015) argue that the proposed distinction between cognitive and non-cognitive skills is misleading and psychologically inaccurate. For example, they cite examples of improving self-control which involve cognitive strategies (e.g., recasting potential temptations in less alluring terms) and point out that exercising self-control relies on executive function, a suite of cognitive processes which includes working memory. They point out that even the term 'non-cognitive skills' is somewhat oxymoronic:

"Arguably too broad to be useful, this terminology also seems to imply that there are features of human behavior that are devoid of cognition. On the contrary, every facet of psychological

functioning, from perception to personality, is inherently "cognitive" insofar as processing of information is involved. For example, self-control, a canonical "non-cognitive" attribute, depends crucially on how temptations are represented in the mind." (p. 2-3).

In their systematic review, Smithers et al., (2018) acknowledge that there is no clear conceptual dichotomy separating these examples of 'non-cognitive skills' from those skills considered to be 'cognitive'. Abrahams et al., (2019) suggest that the prefix "social-emotional" should be preferred over "non-cognitive" because the skills referred to are often blends of cognitive and non-cognitive factors.

Despite this lack of conceptual clarity or clear definition, 'non-cognitive skills' have been the target of many interventions, most often aimed at young children from disadvantaged backgrounds. Whilst acknowledging the apparent 'oxymoron' of the term highlighted by researchers like Duckworth & Yaeger (2015), the phrase 'non-cognitive skills' avoids some of the issues related to some of the other terms used to describe non-academic outcomes. Unlike 'character education', it might be regarded as not possessing political or moral connotations, it has not been subject to the same level of criticism as '21st Century skills' or associated with historical approaches which have been negatively evaluated (for example, conflating 'social and emotional learning' and SEAL). It is also a term that educators within later phases of education are likely to be more familiar with than terms like 'whole child development' and avoids potential association with genetic influences and the implied lack of malleability often associated with the concept of personality traits. Whilst some of the related psychological constructs discussed might be more recognisable, they may also come with negative associations related to issues of implementation (e.g., growth mindset).

Therefore, whilst we decided that the analysis of approaches used to support non-academic outcomes might be best operationalised utilising the work of the EEF report on Social and Emotional Skills, for the purposes of this research we adopted the term 'non-cognitive skills' within the interview protocols used to collect these data.

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Annex 2: Non-cognitive skills development & exclusions

This study was commissioned to examine work on non-cognitive skills as part of a wider focus on how schools can reduce preventable exclusions. Schools in this study were sampled because of data that suggested they had inclusive school environments, usually this included lower than average levels of exclusions. This section draws together some observations of how schools viewed non-cognitive skills development in this context.

Approach to exclusions

All of the case study schools were committed to preventing exclusions and wanted their schools to offer better outcomes to those at risk. The sample included two schools who only rarely had behaviour that could lead to exclusion, whilst the remainder of the sample had more frequent experience of dealing with exclusions. This commitment didn't mean that these schools did not exclude at all. Whilst one school said it did not make exclusions, others were willing to make temporary exclusions if they felt that this would help prevent a permanent exclusion, and all recognised that permanent exclusion was a regrettable necessity when all other options were exhausted. Amongst the approaches used by these schools to avoid exclusions were managed moves, reduced timetables and access to alternative support within the school, as well as extensive internal and external pastoral support plans.

Interestingly, several schools mentioned that they were seeing an increase in challenging behaviour after the Covid-19 pandemic and were concerned that they would have to begin making more exclusions than they would have done previously.

Non-cognitive skills and exclusions

All schools in this study gave broad support to the idea that developing non-cognitive skills acted as a preventative factor against exclusion, in particular when they were used to improve problematic behaviour. Self-regulation was observed supporting better behaviour, and in the view of some teachers it helped children stay in the classroom. Another school who worked with individual students to examine the causes of their behaviour also felt this helped them change severe behaviour that would otherwise risk exclusion.

Discussions with schools also highlighted shared areas of practice between non-cognitive skills and work to prevent exclusions. However, whilst the same structures were in use, there appeared to be a change in focus when children's behaviour reached the point where there was a risk of permanent exclusion. It moved from a skill development model to one more focused on prevention and management of acute behaviour.

The clearest example of this are behaviour policies and approaches. Several of the schools in this sample used firm behaviour policies that provided clear expectations as well as clear sanctions and opportunities for improvement when those expectations were not met. However, all these schools referenced an alternative form of behaviour management that came into play when students showed persistently poor behaviour. This provision would have more flexibility and often responded to children on their own terms, taking into account their context and allowing for a more flexible response to their behaviour. Whilst the nature of the support at this stage might be different, it was often delivered through the same structure as non-cognitive skills, in particular the one-to-one support provided by pastoral leaders, and specialists, and through accessing varied school environments.

Whilst there are crossovers with the practices used by schools to develop non-cognitive skills and to prevent exclusions, this shift in how they are used suggests that non-cognitive skills are strongest in a preventative role. By the time behaviour has escalated the approaches used by schools need to focus on a different

dynamic that may focus more on preventing worsening behaviour. In this context, whole-school embedded approaches that we have seen in these case studies would appear to be a good choice for making the most of their preventative potential.

Annex 3: Case study method

Case study selection

Primary school long list

Analysis of primary schools used data from the Department for Education's National Pupil Database. The sample identified 228 schools as in the top 10% of all schools nationally for contextual value added from Foundation State to Key Stage 2 in each of the last three years and had below average rates of absence and exclusion in 2019.

The outcome measure used in a Contextual Value Added (CVA) calculation is average scaled score in reading, maths and GPS tests. The maths score was double-weighted to ensure an even balance between literacy and numeracy.

The analysis controlled for the following pupil-level factors in the calculation:

- Attainment at Early Years Foundation stage
- Gender
- Month of birth
- FSM history
- Ethnic background
- IDACI decile of home postcode
- Year 2 SEN status (i.e. SEN status at the end of the previous Key Stage)
- Mobility
- Year of first registration for pupils whose first language is other than English
- Junior school flag
- Mean prior attainment at EYFSP of the school cohort

Secondary school long list

Analysis of secondary schools used data from the Department for Education's National Pupil Database.

Identifying secondary schools also drew on two broad areas of school outcomes: i) academic performance and ii) inclusivity.

i) Academic performance based on a single measure: Contextualised Attainment 8 (A8 controlled for other factors, such as pupil background, prior attainment, month of birth, amongst others)

ii) Inclusivity, made up of several measures:

- % disadvantaged pupils compared with % in the local area
- % pupils with EHCP/SEN statement compared with % in the local area
- % pupils with EAL compared with % enrolled in school in local area
- % pupils leaving school between Years 9-10, or 10-11
- Exclusion rates (Perm and Fixed term for both all pupils and vulnerable pupils)
- Absence rates (Persistent and overall for both all pupils and vulnerable pupils)

Analysis on inclusion used data for the most recent year available at the time, which was 2018/19. Academic performance is based on a three year average so goes back to 2016/17.

Each of these areas was transformed into a score between 0-1 (1 being a high score), then combined into an 'Index score' and based on this individual school were ranked. The top 100 ranked schools formed the long list of schools for recruitment.

Recruitment

Recruitment was carried out between March - September 2021. Ambition Institute contacted all schools on the long list by email with a description of the study, why schools had been selected and the option to take part. Where the organisation held existing relationships with the schools in question, they were contacted by the person they knew, and otherwise were sent by team members to the head or generic schools address.

This resulted in nine schools who agreed to take part in initial interviews.

Scoping interviews

Scoping Interviews were carried out between March - October 2021. The researcher carried out in-depth telephone interviews with a leader at each of the nine schools that agreed to take part in the study. This interview sought to gain an overview of the schools, its context, and the extent to which it was working on the development of children's non-cognitive skills. Where there was relevant, background documentation this was requested but in the majority of cases this was limited to publicly available documents such as the behaviour policy.

Following these scoping interviews, seven schools agreed to continue to become full case studies. Of the schools who didn't continue, one was not considered as appropriate for a case study, and another did not respond to further requests to participate in the case study research.

Interviews

Case study research took place between April 2021 - January 2022. The case study research was designed based on the initial findings of the scoping interviews and aimed to explore the approaches identified in greater depth and from a range of perspectives. With the schools' agreement and support, the research identified between 3-5 relevant members of staff, typically including senior leaders and classroom staff, who were interviewed in order to gain more detail on the approach used in the school and additional perspectives. The question areas for different interviewees are summarised below in Table 2. These areas draw on the EEF's 'Explore, Deliver, Review, Sustain' model of implementation (Sharples et al., 2019). These areas were written up into semi-structured topic guides, used to guide the interviews. Questions were asked responsively and not all interviewees were asked the same questions, in the same level of detail.

An information sheet and consent form was circulated to all participants. Consent was gained from each interviewee in writing or verbally prior to beginning the interviews. Interviews were recorded for later transcription.

Table 2. In-depth interview questions areas.

Non-cognitive skills strategy and direction	Exec Head / Trust CEO	Heads and SLT	Classroom staff / Specialist delivery staff
Role and strategy for non cognitive skills			
How do they define non cognitive skills	x	x	
How do schools characterise their activities when approaching non cognitive skills development?	x	x	
What contextual factors shape the activities and approach to non cognitive skills?	x	x	
To what extent are activities coordinated/interdependent and why?	x	x	
Implementing the strategy			
How are activities prioritised and selected?	x	x	
How are activities resourced and how are resourcing issues decided?	x	x	
How are staff introduced / trained / supported to work in a way that supports the strategy for non cognitive skills?	x	x	
How does the senior team monitor implementation and the outcomes of the non cognitive skills strategy, and what decisions to they take based on this?	x	x	
How does the governing board provide oversight and challenge to non cognitive skills strategy?	x	x	
Perceived impact, learning and context			
What impact does the strategy have, and what could be improved?	x	x	
What are the biggest challenges in developing pupils' non-cognitive skills?	x	x	
What contextual factors have been important in the success of the school in shaping non cognitive skills?	x	x	
What, if any, role does pupil voice have in strategy and delivery of non cognitive skills development?	x	x	
Detail of individual activities and approaches	**Exec Head / Trust CEO**	**Heads and SLT**	**Classroom staff / Specialist delivery staff**
What is the activity/approach?			
Which children receive or participate in the activity? (whole school v targetted to specific children)		x	x
When and where does the activity happen? certain age groups, at home v in school, classroom time v break time, discrete topic or within curriculum, through pastoral work		x	x
What skills or abilities does the activity aim to develop and how? (probe - active ingredients)		x	x
What is the 'theory of change' behind the activity? (how does the activity lead to longer term benefits for children - probing any mediating factors)		x	x
How has this activity been selected and implemented in the school?			

How and why was this activity selected, and has it been adapted to school context? (use of evidence base, tight v loose)		x	x
How was the activity rolled-out initially? (planning, building a shared understanding, training and skills, support, securing resources (time and £)		x	x
How was the activity initially delivered? (bedding-in time, sharing learning/providing expert support/input) What challenges were there?		x	x
How is the activity monitored and adapted over time? (inc maintaining active ingredients)		x	x
how is it built into business as usual (any follow up implementation, staff management), and why		x	x
How does the school perceive the impact of this activity?			
What difference does this activity make to a) individual pupils, b) the school as a whole?		x	x
How does it make that difference, and how do you know?		x	x
What are the negative effects or downsides of this activity?		x	x
Could the activity be improved?		x	x
Learning and context			
What have schools learnt from offering this activity?		x	x
What has been the most challenging part of offering this activity?		x	x
What contextual factors have been important in the success of this activity?		x	x

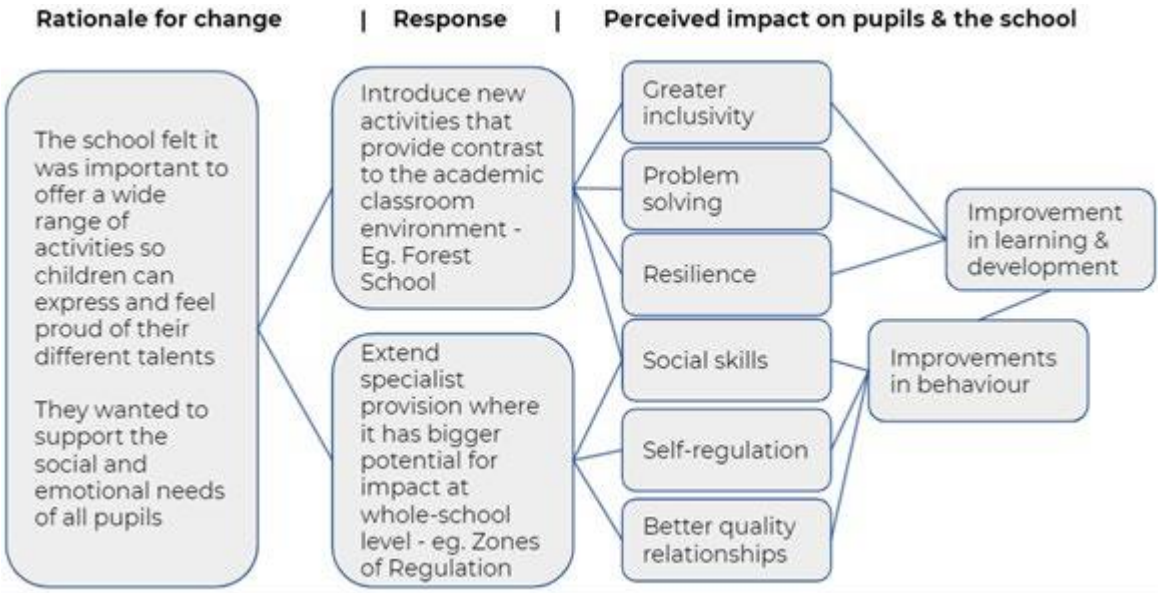
Analysis

The researcher carried out a manual case study analysis of the transcripts of interviews from each of the seven schools which pulled out specific examples of practice, and described them in depth in the seven stand-alone case studies accompanying this report. Schools were asked to review their case studies before publication for accuracy, and any areas of sensitivity were anonymised and included in the thematic report.

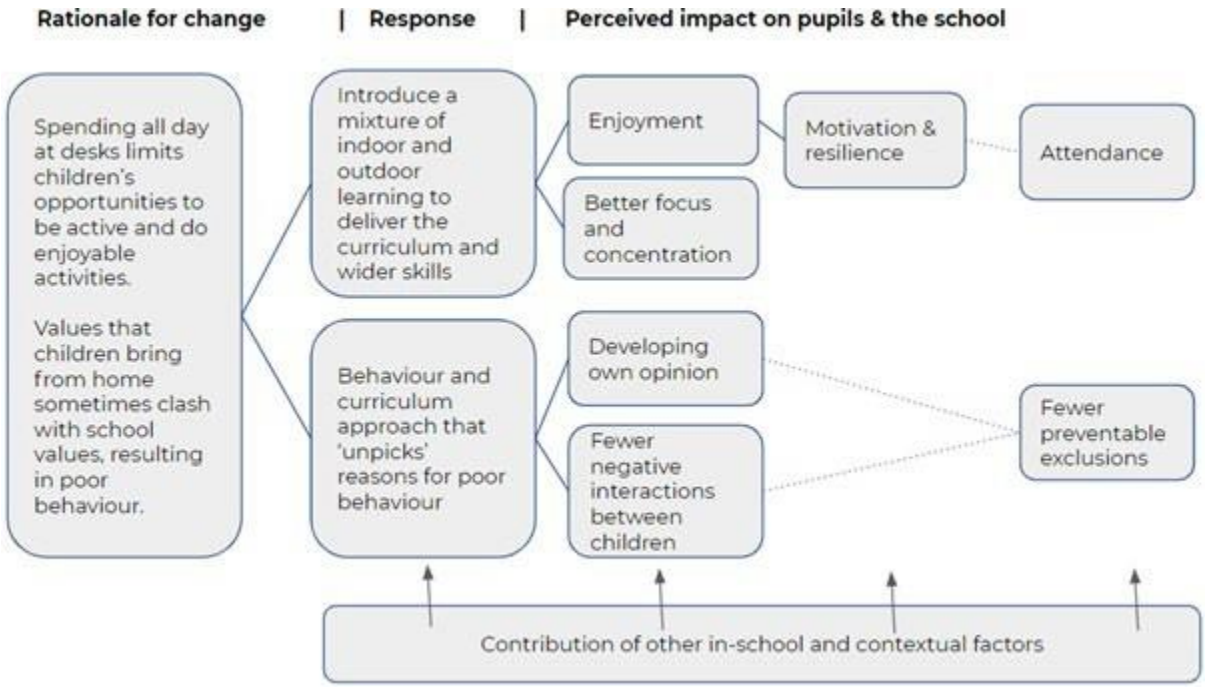
They later carried out a thematic analysis of the case studies summarising similarities and differences between the examples which were reported in the Case Study findings section of this report. This was followed by a further analysis explicitly comparing the practice in schools with the recommendations in the EEF's Social and Emotional Learning guidance.

Annex 4: Case study theories of change

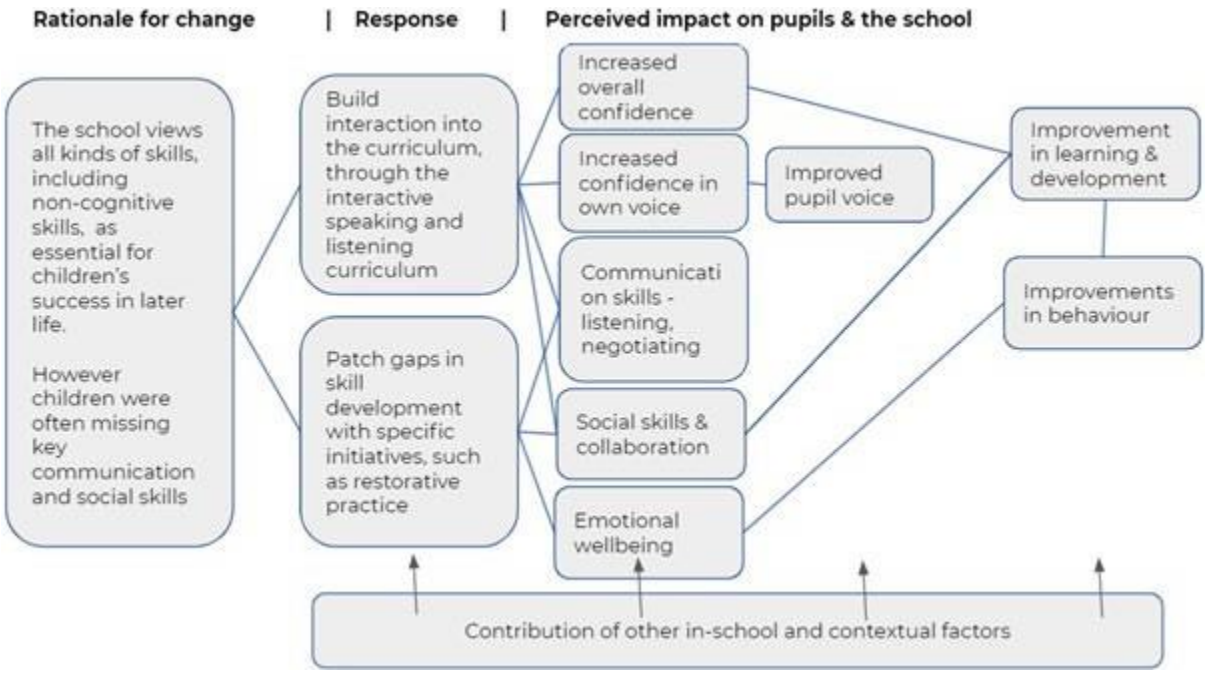
St. Michael's C of E Primary School



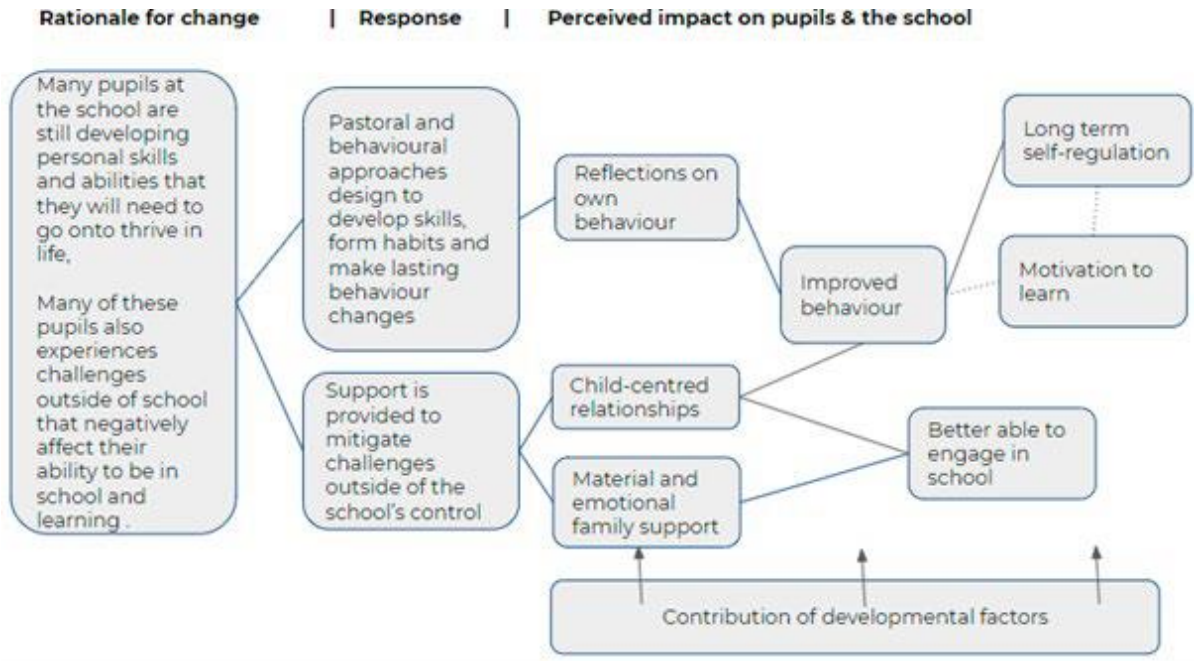
Riverside Primary Academy



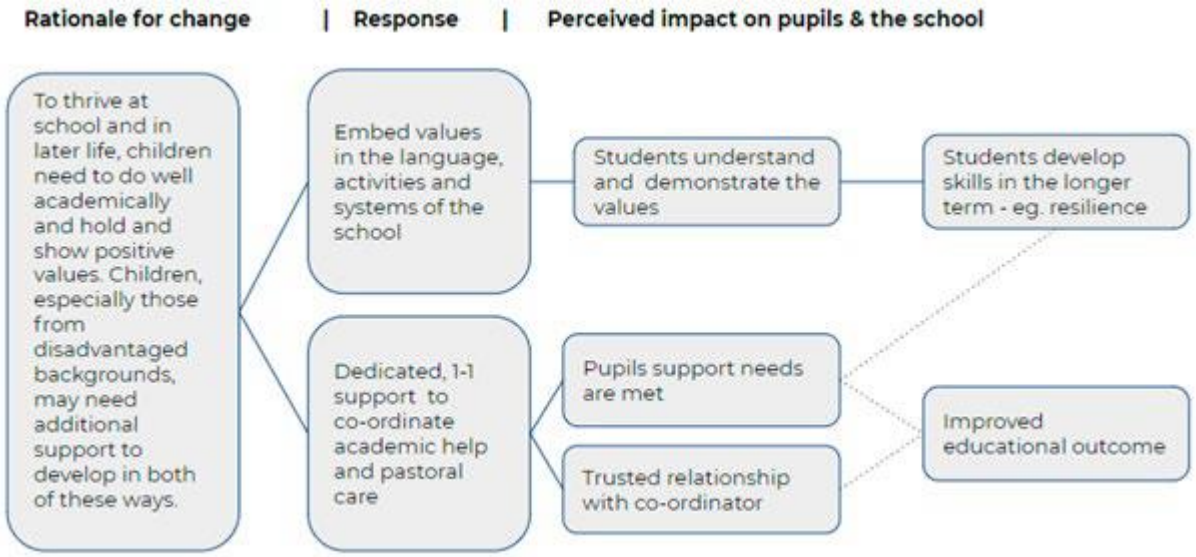
Benedict Biscop Primary school



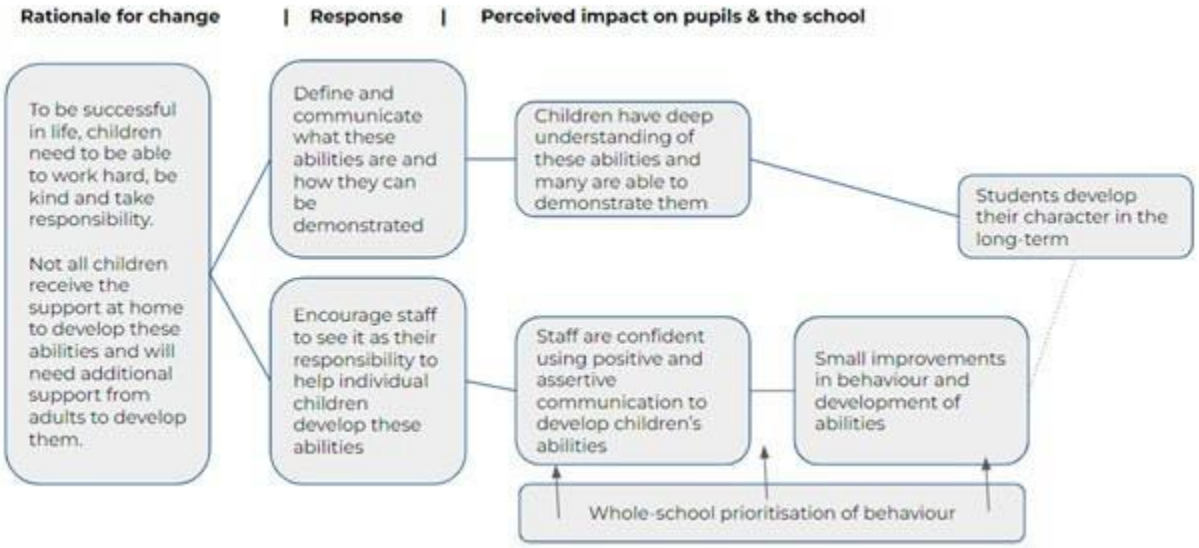
Oasis Academy South Bank



Bristnall Hall Academy



Harris Academy Greenwich



Mossbourne Community Academy

