



Programmes to Practices

Identifying effective, evidence-based social and emotional learning strategies for teachers and schools:

Evidence review

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Introduction

Background to the project

The purpose of this report is two-fold: first, to provide an authoritative and critical overview of the current evidence regarding what is currently known about effective social and emotional learning (SEL) and in doing so, second, to examine common strategies and practices typically deployed in evidence-based SEL programmes in detail. The ultimate goal of this report is to identify “essential ingredients” (Aber, Brown, Jones, Berg, & Torrente, 2011, p. 218) within SEL provision to help inform effective strategies for teachers and other school staff.

Over the last decade, there has been increasing attention on the importance social and emotional learning has on child development, with implications across learning, building and maintaining relationships, and early support for mental health and wellbeing. There is now a consensus that schools are a central nexus through which SEL skills are developed and taught (Greenberg et al., 2003). Recent years have seen an international proliferation in the availability of SEL programmes for use within school communities, with policy directives designed to promote the broad use of SEL and related competences as part of a national agenda in education (Department of Health, 2015). A significant actor in the education landscape, the Educational Endowment Foundation (EEF), recently expanded their commissions to include a raft of work designed to inform and evaluative practice-based efforts in this broad arena (Education Endowment Foundation, 2018).

At face value, there is evidence to support the use of SEL as a means through which to improve a range of positive outcomes for children and young people. An increasing number of meta-analytic (e.g. Corcoran, Cheung, Kim, & Xie, 2018; Durlak, Weissberg, Dymicki, Taylor, & Schellinger, 2011; Sklad, Diekstra, De Ritter, Ben, & Gravesteyn, 2012; Taylor, Oberle, Durlak, & Weissberg, 2017; Wigelsworth et al., 2016) and other aggregative-type reviews (Barry, Clarke, & Dowling, 2017; Cefai, Bartolo, Cavioni, & Downes, 2018; Clarke, Morreale, Field, Hussein, & Barry, 2015; Weare & Nind, 2011) have linked improvements in SEL with a range of favourable outcomes. These include (but are not limited to) improvements in self-perception and positive behaviour, reductions in emotional distress and conduct problems, school engagement, and academic attainment. These factors have also been linked to long-term outcomes such as financial stability in adulthood, and reductions in adult antisocial and criminal behaviour (see Clarke et al., 2015; Gutman & Schoon, 2013).

However, the field is not without its criticisms. SEL has been described as a ‘fad’ and critiqued as being used as a tool for pursuing government agendas rather than what is best for children (Ecclestone & Rawdin, 2016). There are still significant questions within the research literature as to the precise nature of the often-claimed, long-term economic and societal benefits of SEL (Belfield et al., 2015). There is still significant debate as to whether these associations are causal, with a paucity of robust evidence to support some of the more substantive claims.

In relation to the deployment of SEL programmes within school settings, there has been a significant variation in terms of both the quality of evaluations and the level of scrutiny between programmes, with some displaying significant histories of positive effects (e.g. Promoting Alternative Thinking Strategies) and others having next-to-nothing in terms of summative and/or independent evaluation. Even where programmes have a comparatively rigorous evidence base, there remains a failure in some evaluation studies to address the

real-world complexities associated with programme implementation. For instance, how do implementers best identify what approaches are considered similar or distinct from existing practice? How do they maximise the fit of an intervention within individual needs and context? Such barriers can prevent the successful implementation of SEL, leading to potentially sub-optimal models of deployment (Durlak & DuPre, 2008).

A further complexity is the understanding of SEL within the English evaluation context. Recent years have seen a rising trend by which ‘evidence-based’ SEL programmes (i.e. programmes with substantive histories of positive effects in other countries or contexts) have failed to demonstrate positive effects when trialled within English schools. One suggested hypothesis for this is the relative size and rigour of the English trials in relation to the average quality of their international antecedents, although alternative explanations have also been put forward, such as difficulties with cultural transferability (see Wigelsworth et al., 2016). Currently, the evidence base is not sufficiently developed to test ideas further.

Finally, recent work has begun to expand out beyond the use of ‘simple’ outcome trials of discrete SEL programme implementation, and now examines a wider spectrum of SEL practice, from the broad environments surrounding SEL intervention, to the core features making up individual activities within programmes. For instance, recent work considers the value of the wider school context as a background for SEL implementation (Cefai et al., 2018), and there is an evolving examination into the nature of SEL as ‘components of practice’, rather than viewing discrete SEL programmes as a single unit of analysis. This includes identifying overall common features of successful programmes, e.g. successful programmes tend to be Sequenced, Active, Focused and Explicit (SAFE) – discussed later in the report (Durlak et al., 2011). Recent and novel approaches have begun to identify common or ‘critical’ elements of practices **within** programmes that form the core of effective SEL practice (Jones et al., 2017). A continuation of this work is discussed later in this report. Although this evidence base currently fails to demonstrate the same level of rigour offered in terms of experimental outcome-based studies (in part due to the difficulties in capturing such data as well as it’s comparatively recent development), these approaches offer potential new insights into achieving effective SEL.

In summary, evidence suggests that SEL is important, that it can be taught effectively, but that positive outcomes are dependent on a number of factors we are as yet to fully understand. Thus, the purpose of the current study was to identify the areas of greatest promise in informing schools’ practice in relation to SEL.

Aim and Objectives

The Education Endowment Foundation and Early Intervention Foundation co-commissioned the University of Manchester to conduct the following work:

a) A review of the current state of evidence in relation to SEL interventions for primary¹ schools, with specific reference to:

- i) classroom activities
- ii) school-level processes and practices
- iii) differential gains produced through (i) & (ii) above among different population subgroups (e.g. children from disadvantaged backgrounds)

b) An in-depth examination of a focal list of evidence-based SEL programmes, in order to identify common strategies and practices typically deployed in evidence-based SEL with specific reference to common structural, instructional and practice elements. These activities are intended to inform actionable recommendations for practice that can be incorporated into EEF guidance.

Defining Social and Emotional Learning

Thought to have been coined in the United States during the early 1990's by the Collaborative for Academic, Social and Emotional Learning (CASEL), SEL has been used as an umbrella term for a number of concepts, including; non-cognitive development, character education, 21st century skills, and trauma-informed learning, among others.

SEL is the process by which children and young people develop and learn a broad range of social, emotional, and behavioural skills;

“The process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (<http://casel.org>)

CASEL's model of SEL (which has served as a 'rally point' for literature and programmes seeking to define SEL) proposes five core competencies, each of which are accompanied with specific exemplar skills. These are introduced below:

Figure 1. SEL 5 core competencies as defined by CASEL

¹ SEL is a process across the developmental lifespan, although there is a clear agreement that early intervention is by far the most effective mode of intervention (see 'the logic of SEL' later in the report). Although SEL interventions are available across all school years, the focus of this report is in the primary years of education (Years 1 – 6) only. Primary school represents the earliest time at which all school children receive mandatory education in a systematic and universal manner (i.e. within schools and classrooms) (McClelland et al., 2017).



Self-awareness: The ability to evaluate, recognise and understand thoughts and emotions and the effects they have on behaviour. This includes skills such as being able to accurately perceive one's own emotional state. Specific skills include: identifying emotions; accurate self-perception; recognising strengths; self-confidence and self-efficacy.

Self-management: The ability to regulate one's own emotions and behaviours appropriately to fit the context of a situation. This includes impulse control (e.g. waiting and taking turns), stress management, self-discipline, and goal setting. Specific skills include: impulse control; stress management; self-discipline; self-motivation; goal-setting and organisational skills.

Social Awareness: The recognition and understanding of the perspectives and emotions of others. This includes being empathic to the experiences of others, being able to see and understand the perspectives of others, and the tolerance and acceptance of cultural and background diversity. Specific skills include: perspective-taking; empathy; appreciating diversity and respect for others.

Relationship Skills: Being able to establish and maintain healthy relationships by using appropriate inter-personal skills such as active listening, communicating effectively and engaging in team work. Specific skills include: communication; social-engagement; relationship-building and teamwork.

Responsible Decision Making: This domain concerns the ability to make constructive choices about personal behaviour and social interactions based on social norms, safety and ethical behaviour. This includes skills such as conflict resolution. Specific skills include: identifying problems; analysing situations; solving problems; evaluating; reflecting and ethical responsibility.

Method

Overview of approach

In order to address the aims and objectives of the study (as outlined above), a sequential, two-step approach was taken, combining both desk-based and primary data generation elements. First, a ‘review of reviews’ (see ‘evidence review’ below) was conducted in order to collate and synthesise key summaries from the current evidence base. This literature was interrogated by the research team in order to produce a broad summary as to the general quality of evidence underpinning SEL, identify gaps and inconsistencies in research, and to identify possible conditions for effective practice. An additional purpose of the review was to help identify a focal list of evidence-based programmes required for the second part of the study, which was to examine individual programme content, in order to derive common effective practices -a process known as ‘distillation & matching’ (Chorpita, Daleiden, & Weisz, 2005)-. This exercise involved examining both the practice (e.g. specific skills learned as part of a given intervention) and instructional elements (e.g. methods of delivery used by the implementer) of the identified programmes. Further details on both steps are provided below.

Evidence Review

Given there is no shortage of systematic reviews and meta-analyses of the SEL evidence base (see for example Corcoran et al., 2018; Durlak et al., 2011; Sklad, Diekstra, Ritter, & Ben, 2012; Wigelsworth et al., 2016), the evidence review did not focus on *primary research studies*. Instead, following Weare and Nind's (2011) example in school-based mental health promotion a “review of reviews” was undertaken to identify a corpus of evidence underpinning SEL theory and practice in specific relation to the aims and objectives of the study, i.e.

- i) classroom activities
- ii) school-level processes and practices
- iii) differential gains produced through (i) and (ii) among different population subgroups (e.g. children from disadvantaged backgrounds)

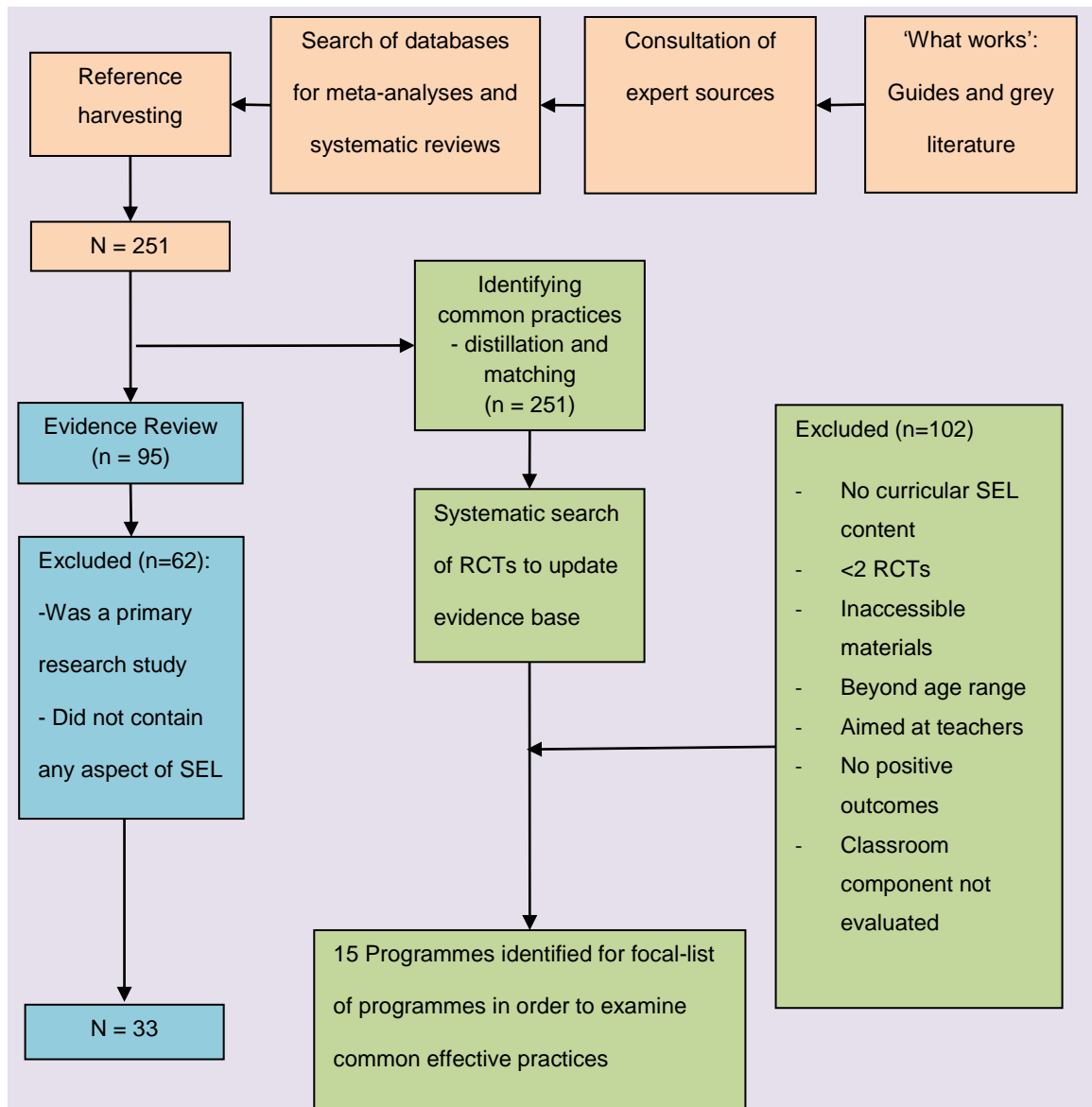
Reviews selected for inclusion were those explicitly focused on SEL (e.g. Durlak et al., 2011) and those with a broader focus that potentially included SEL, e.g. school-based mental health interventions; Paulus, Ohmann & Popow, (2016). Further, a few focused on a particular aspect of SEL (e.g. interventions to promote *self-regulation*; (Pandey et al., 2018). Reviews were sought from peer-reviewed academic journals in addition to relevant grey literature (e.g. Grant et al., 2017). Various “what works” guides underpinned by evidence reviews were also consulted (e.g. CASEL, 2013). In sum, the SEL evidence review comprised the components shown in figure 2.

Figure 2. Components of the SEL evidence review.



Our first port of call in the generation of the evidence base was consultation of expert sources to devise a list of systematic reviews and meta-analyses. This was then built upon through database (PsychINFO and Google Scholar) searches. Additionally, websites of relevant organisations, (e.g CASEL, Child Trends, The Wallace Foundation) were hand-searched to identify pertinent documents. The reference lists of each identified study were utilised for reference harvesting, this served the purpose of identifying more recent studies and presenting further articles with references lists to consider. This formed a robustly iterative process for identifying relevant sources. The results of this process (including sourcing literature for the subsequent distillation and matching exercise, discussed later) are summarised in figure 3.

Figure 3. Flow diagram of sources for a) evidence review and b) identification of focal list of SEL programmes



Rigour and quality

A summary of identified sources is included in table 1. Identified texts were appraised and subject to summary scoring in order to assess the overall strength of the evidence base (table 2). Scoring criteria was adapted from Weare and Nind (2011) with contributions by the EEF and EIF. Score was awarded on the basis of the source meeting the following criteria: a) whether the review provided a focused research question, b) whether reviews had explicitly stated inclusion and/or exclusion criteria, c) whether reviews presented a transparent and appropriate search strategy and data analysis plan, d) whether reviews had also assessed the quality of included literature and, e) whether results were presented to allow a quantitative and inferential assessment of impact.

Scores were used to inform the conclusions arising from the evidence review, by which sources judged to be of high quality were used to first inform key conclusions arising (NB: No formal cut-off was used, as different rating criteria were appropriate for different circumstances (e.g. quantitative assessment of impact is not always possible / belies a qualitative understanding of the literature). Sources with low scores were used only in instances whereby higher quality evidence was unavailable. Where evidence is drawn directly from the evidence review, scores (as per table 2) are presented in order to make clear the relative weight of evidence underpinning subsequent conclusions. The evidence review was not restricted to the inclusion of only meta-evidence as per the search strategy described in the preceding section, as additional sources were used in instances whereby empirical evidence is not suitable (e.g. 'the logic of SEL' – see below) and/or where additional support or context could be included.

Table 1. Summary of identified sources

Author (year)	Review Type	Number of studies included	Aim	SEL components covered	Age range	Level	Evidence of differentiation	Clinical samples	Countries included
Adi et al., (2007)	Systematic Review	31	To support the development of NICE guidance on promoting the mental wellbeing of children in primary education.	Mental wellbeing (resilience, confidence, good social relationships)	Primary school (4-11 years)	Whole school/universal approaches & targeted	No	No	USA, Canada & Germany
Barry, Clarke & Dowling, (2017)	Literature Review/Case Study	N/A	To provide a critical perspective on the international evidence on promoting young people's social and emotional well-beings in schools.	Social and emotional wellbeing	School-aged young people	Universal	No	No	Not specified
Barry & Dowling, (2015)	Systematic Review	26	To synthesize findings of evidence reviews of the effectiveness of psychosocial skills development programmes for children and young people.	All components	4-25 years	Parenting, pre-school, school and community-based programmes	Age, gender, ethnicity, socio-economic background and level of vulnerability	Yes	USA, Asia, Europe
CASEL (2013)	Systematic Review (SElect guide)	23 programmes	To provide a systematic framework for evaluating the quality of classroom-based SEL programmes.	All components	Pre-school and elementary school aged children	Universal SEL programmes	No	No	Not specified
Catalano et al., (2004)	Systematic Review	77	To summarize the evaluations of youth development programmes	Social competence, self-efficacy,	6-20 years	Community, family and school	No	No	USA

				prosocial behaviour					
Cefai et al., (2018)	Systematic Review	13	To make recommendations on the basis of international research, EU policy and current practices in Member States for the integration of SEL education as a core component of curricula across the EU.	All components	Primary to secondary school	Universal school-based social and emotional education	No	No	Europe, US and other. Particular focus on European countries.
Clarke et al., (2015)	Systematic Review	94	To determine the evidence on the effectiveness of SEL programmes available in the UK.	All components	4-20 years	In school and out-of-school interventions, universal and/or indicated.	Yes	No	Europe, US,
Corcoran et al., (2018)	Systematic review & meta- analysis	40	To examine the effects of school-based SEL interventions on reading, mathematics and science achievement.	All components	Preschool to grade 12	School-based SEL programmes	Socioeconomic status	No	Not specified
Das, et al., (2016)	Meta-Systematic review	38	To examine interventions for adolescent mental health	Self-regulation (CBT)	15-24 years	School-based	No	Yes	Not specified
Dray et al., (2017)	Systematic Review & Meta- Analysis	57	To examine the effect of universal, school-based resilience-focused interventions on mental	Social Skills	5-18 years	Universal school-based curriculum	Gender	No	16 countries, largest number conducted in

			health problems in children and adolescents						Australia (n=18) and United States (n=14).
Durlak et al., (2011)	Meta-analysis	213	To examine the impact of school based universal interventions for enhancing SEL	All components	Kindergarten to high school	Universal school-based programme	No	No	Not specified
Farahmand et al., (2010)	Meta-analysis	23	To examine the effectiveness of school-based mental health and behavioural programmes for low-income, urban youth.	Emotional or social functioning	First grade to high school	School-based universal and selected interventions	Low income, urban, ethnicity,	No	USA
Franklin et al., (2017)	Systematic Review & Meta-Analysis	24	Effectiveness of psychosocial interventions, delivered by teachers, on internalising and externalising outcomes.	Social Skills	Elementary, middle and high school participants with a mean age of 11.35 years.	School-based interventions delivered by teachers.	Age, gender and race.	No	Not specified
Garrard & Lipsey (2007)	Meta-analysis	36	To examine the impact of conflict resolution education programmes on anti-social behaviour	Relationship skills	Kindergarten to 12 th grade	Universal programme delivery	Age	No	USA
Goldberg et al., (2018)	Meta-analysis	45	To determine the effectiveness of SEL interventions adopting a whole-school approach	All components	N/A	Whole	No	No	
Grant et al., (2017)	Review of evidence –	60 (programme	To summarise the existing evidence for SEL	All components	Elementary – high school	Not specified	No	No	Not specified

	summaries	s)	interventions						
Gutman & Schoon, (2013)	Literature Review	Not specified	To summarise the existing evidence on how non-cognitive skills can be defined and measured and the role of interventions that aim to improve non-cognitive skills	Self-perception, motivation, perseverance, self-control, social competencies, resilience and coping	School-age children and adolescents (not post-secondary)	Universal and selected school-based, community-based and outdoors interventions	No	Yes	Not specified
Horowitz and Garber, (2006)	Meta-analysis	30	To assess the efficacy of studies aimed at preventing depressive symptoms in children and adolescents.	Problem-solving, social skills and, stress-management, emotion-focused coping	4-15 years	School-based interventions delivered by teachers.	Sex and Age.	Yes	Not specified
January et al., (2011)	Meta-analysis	28	To assess the effectiveness of classroom-wide interventions for the improvement of social skills	Social Skills	Preschool to senior high school	Class-wide school-based interventions	Socioeconomic status	No	Not specified
Korpershoek et al., (2016)	Meta-analysis	54	To assess which classroom management strategies and programmes enhanced students' academic, behavioural, social-emotional and motivational outcomes in primary education.	All components	Primary school	Teacher focused interventions, teacher-student relationship interventions, students' behaviour focused	Sex, Age, Socioeconomic status and student behaviour (e.g. regular or behaviour problems)	No	United States and Other.

						interventions and students' social-emotional development focused interventions			
Maggin & Johnson (2014)	Meta-analysis	17	To evaluate the overall effectiveness of the research underpinning the FRIENDS programme	Self-regulation	Kindergarten to 12 th grade	Class based (teacher and external implementer)	Risk status	Pre-clinical ('at risk')	International
O'Conner et al., (2017)	Systematic Review of reviews	83	To examine SEL programmes in terms of implementation strategies and state and district policies, teacher and classroom strategies and the outcomes among different student populations and settings.	All components	3-8 years	School-based SEL or related constructs programmes.	Socioeconomic status, sex, race/ethnic minorities, English learner students, students in urban schools, students in rural schools.	No	USA
Oliver, Webby and Reschly, (2011)	Systematic Review	24	To examine the effects of teachers' universal classroom management practices in reducing disruptive, aggressive, and inappropriate behaviours.	No specific component covered	K-12	Universal classroom practices	No	No	USA, the Netherlands
Pandey et al., (2018)	Systematic Review and Meta-analysis	49	To examine the effectiveness of universal self-regulation based interventions to improve	Self-regulation	0 to 19 years	Curriculum, physical activity based, mindfulness/yo	Age and socioeconomic status	No	United States, Canada, Australia,

			self-regulation and affect health and social outcomes in children and adolescents			ga, family-based			Switzerland, United Kingdom, Italy, Belgium, Spain, China, Chile and Ireland
Paulus, Ohmann & Popow., (2016)	Systematic Review	39	To improve knowledge about school-based interventions, to specify effective programmes and discuss prerequisites of the implementation process	Emotional and behavioural problems	2-17 years	Universal, selective and indicated	No	Yes	USA, Australia, Europe, UK, and Puerto Rico
Payton et al., (2008)	Systematic Review (3 Reviews)	180 (Universal) 80 (Indicated) 57 (Afterschool) 317 Total	To summarise the primary findings and implications of three large-scale reviews of research evaluating the impact of SEL programmes for school children.	All components	Kindergarten to 8 th grade	Universal, indicated and after-school SEL interventions	No	No	US and Other
Rones & Hoagwood, (2000)	Systematic Review	47	To provide a review of the evidence base for mental health services delivered in schools.	Emotional, behavioural and social functioning.	Children and adolescents	Universal, selected and indicated prevention	No	No	Not specified
Sancassiani et al., (2015)	Systematic Review	22	To describe the main features and to establish the effectiveness of universal school-based	Social and emotional skills	0-17 years	Universal school-based interventions (with focus on	No	No	USA, Europe, Australia, Canada,

			RCTs for children and youth.			whole-school approach)			Mexico, South Africa, Hong Kong, Taiwan and Thailand
Sklad et al., (2012)	Meta-analysis	75	To examine whether teaching SEL to foster social-emotional development can help schools extend their role beyond the transfer of knowledge.	All components	Primary and Secondary school with an average age of 10.5 years.	Universal school-based programmes	No	No	North America, Europe, Canada and Other
Taylor et al., (2017)	Meta-analysis	82	To examine follow-up effects of SEL programmes	All components	Kindergarten to highschool	Universal school-based programmes	Race, SES, school location	No	United States vs. international
The Center for Health and Health Care in Schools., (2014)	Annotated bibliography, Systematic Review	12	To identify recent empirical studies and reviews linking behavioural health promotion and prevention interventions with student academic outcomes.	All components	N/A	Evaluation or report on a universal school-based behavioural health intervention or mental health promotion or prevention programme	No	No	United States
Weare & Nind, (2011)	Systematic Review of reviews	52	To clarify the evidence-base for mental health promotion and problem prevention within schools	All components	4-19 years	Universal, targeted, indicated, school-based	No	No	USA, UK, the Netherlands, Germany,

						and class-room based interventions.			Canada, Australia, New Zealand, Norway, Belgium (geographical location of the reviews)
White (2017)	Systematic Review	50	To examine the effectiveness of health and wellbeing interventions in a school setting to potentially reduce inequalities in educational outcomes.	All components	School-aged children and/or young people	School-based interventions	No	No	UK and Ireland
Wigelsworth et al., (2016)	Meta-analysis	89	To examine the potential effects of trial stage, developer involvement and international transferability on universal social and emotional learning programme outcomes.	All components	4-18yrs	Universal school-based programmes delivered on school premises during school hours.	No	No	Not specified

Table 2. Assessment of the quality of evidence

Authors (year)	Clearly focused question?	Only control trials (RCTs/CCTs) included?	Transparency-appropriate search strategy and substantial meta-analysis/data synthesis?	Quality of studies assessed (using a quality assessment tool such as Weare and Nind, 2011) and used to guide results?	Results presented to allow quantitative and inferential assessment of impact?	Summary of quality markers
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Adi et al., (2007)	Yes	Yes	Yes	Yes	Yes	*****
Barry, Clarke & Dowling., (2017)	Yes	No. Review of current practice and pupil and professional feedback and opinion on practice.	No. It states where the sources were found e.g. existing programmes used in schools but not the strategy used to identify them.	No	No	*
Barry & Dowling, (2015)	Yes	No	Yes	No	No	**
CASEL (2013)	Yes	No	No. It states that current successful SEL programs are used but not how they are identified.	No	No	*
Catalano et al., (2004)	Yes	Yes	Yes	No	Yes	****
Cefai et al., (2018)	Yes	No. Policy documents (incl. EU and international) and international literature included	Yes	Yes	No	***

Clarke et al., (2015)	Yes	No	Yes	No	No	**
Corcoran et al., (2018)	Yes	No	Yes	No	Yes	***
Das, et al., (2016)	Yes	No	Yes	No	Yes	***
Dray et al. (2017)	Yes	Yes	Yes	No	Yes	****
Durlak et al., (2011)	Yes	Yes	Yes	Yes	Yes	*****
Farahmand et al., (2010)	Yes	No	Yes	No	Yes	***
Franklin et al., (2017)	Yes	Yes	Yes	No	Yes	****

Goldberg et al., (2008)	Yes	No	Yes	Yes. Quality Assessment Tool for Quantitative Studies used.	Yes	****
Grant et al., (2017)	No	No	No	No	No	
Gutman & Schoon, (2013)	Yes	No	Yes	No	Yes. Effect sizes from meta-analysis and experimental studies- not from original research	***
Horowitz and Garber., (2006)	Yes	Yes	Yes	Yes	No	****
January et al., (2011)	Yes	No	Yes	Yes	Yes	****
Korpershoek et al., (2016)	Yes	No	Yes	Yes	Yes	****

Maggin & Johnson (2014)	Yes	Yes	Yes	No	Yes	****
O'Conner et al., (2017)	Yes	No	No. Researchers note that it did not meet the aims of the research to do an exhaustive search of literature	No*	No. Narrative results only	*
Oliver, Wehby and Reschly, (2011)	Yes	No	Yes	No. It states quality and reliability was screened but does not state screening criteria	Yes	***
Pandey et al., (2018)	Yes	Yes	Yes	Yes. Quality assessment was conducted using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies	No	****
Paulus, Ohmann & Popow., (2016)	Yes	No	Yes	No	No	**
Payton et al., (2008)	Yes	Yes	Yes	No	Yes	****

Rones & Hoagwood, (2000)	Yes	No	Yes	No	No	**
Sancassiani et al., (2015)	Yes	Yes	Yes	No	No, descriptive only	***
Sklad et al., (2012)	Yes	No	Yes	Yes	Yes	****
Taylor et al., (2017)	Yes	Yes	Yes	No	Yes	****
The Center for Health and Health Care in Schools, (2014)	Yes	No	No	No	No	*
Weare & Nind (2011)	Yes	No	Yes	Yes	No. Results presented quantitatively-focused on transferability	***

White (2017)	Yes	No	Yes	No	No	**
Wigelsworth et al., (2016)	Yes	No	Yes	No	Yes	***

Common effective practices (distillation and matching)

As discussed above, the second aim of the study was to examine, in detail, individual programme content in order to derive common effective practices. To do so, the review team first identified a focal list of evidence-based programmes for subsequent distillation and matching.

Identifying programmes

Reference harvesting produced a list of primary studies evaluating school-based SEL (or related components) programmes within the past 20 years (n=251). Details of identified studies were recorded in an excel file. From that list, RCTs were identified and an initial list of evidence-based programmes was produced. To capture the most recent RCTs published (2015 onwards), and/or those beyond the scope of reviews covered, a systematic search of relevant databases (EMBASE, ERIC, MEDLINE, PsychINFO, Prevention Science and Google Scholar) was undertaken.

For all systematic searches, the following search terms were used²:

Social and emotional OR social OR emotion* OR wellbeing OR mental health
 AND
 Programme* OR Promotion OR Initiative OR pupil OR student * elementary* school OR Curriculum.

The systematic search identified additional RCTs that then informed the refinement of the focal list of evidence-based SEL programmes.

Programmes eligible for inclusion met the following criteria: (a) targeted at least one SEL domain, as defined by CASEL (see introduction); (b) universally implemented (i.e. delivered to all pupils, irrespective of individual needs); (c) delivered during school hours, on school premises; (d) delivered to elementary students (aged 4-12 years); (e) evaluated in at least 2 RCTs, which produced a positive effect (e.g. showed significant findings consistent with an improvement in SEL based outcomes).

All studies had to be published within the past 20 years. Programmes which had been evaluated in RCTs, but for which the RCTs had not targeted the classroom component of the programme, were excluded. An example of this exclusion criterion is "Incredible Years". Additionally, programmes which had been evaluated in terms of SEL outcomes (e.g. the effect of the programme on self-management) but the curricular content did not include SEL, such as the Good Behaviour Game, were excluded. A total of 15 programmes were identified, these are enumerated in table 3 below:

Table 3. Programmes identified as matching research criteria

FRIENDS (FUNfriends and Friendsforlife)
I Can Problem Solve (ICPS)
INSIGHTS into children's temperament

² See appendix 1 for database specific search terms

KiVa Anti-bullying
Positive Action (PA)
Promoting Alternative Thinking Strategies (PATHS)
Roots of Empathy (RoE)
Second Step (SS)
Social Skills Improvement System (SSIS)
Steps to Respect (StR)
Tools for Getting Along (TFGA)
Tools of the Mind (TotM)
Zippy's Friends (ZF)
Linking Interests of Families and Teachers (LIFT)
Playworks.(PW)

Full details of the focal list of programmes is shown in appendix 2.

Programme materials (i.e. teacher/facilitator manuals and accompanying curricular components) were sought primarily from CASEL's programme library. Otherwise, programme materials were acquired from associated contacts. Materials for two of the 15 programmes were unobtainable for coding: LIFT and Playworks. Repeated enquires to the programme developers in the case of Playworks did not receive a response. Although initially positive, a copy of LIFT was not obtainable from the programme developer. The programmes were not available for purchase for in the UK. Given the volume of content subsequently obtained from the remaining 13 programmes, LIFT and Playworks were omitted from the analysis as any 'surface level' coding of details derived from evaluation studies and/or other publicly available were not directly comparable with the level of detail sourced from the remaining focal-list of programmes.

Programme coding

For each identified evidence programme, its full curriculum and any accompanying materials were examined and coded as to identify common elements. This followed a 'distillation and matching model' (DMM) methodology (Chorpita et al., 2005). DMM is a method by which programmes are examined not as single distinct units, but rather as composites of more granular techniques, strategies or practices. Common or frequent practices are collated in order to identify potentially valuable 'core' elements or 'kernels' (Jones et al., 2017) of practice. Following Jones (2017), structural, instructional and practice elements were coded. For multi-year programmes (e.g. repeated or 'spiral' curricula whereby the same or very similar content is delivered in consecutive school years) specific grades were selected for coding (see below) as there was a significant overlap in skills and practices across consecutive grades. A breakdown of grades coded per programme can be seen in table 4 (below):

Table 4. Breakdown of grades coded

Programme	R	1	2	3	4	5	6
FRIENDS	FunFRIENDS	FRIENDS for Life					
ICPS	√ (R-3 version)			√ (intermediate version)			
INSIGHTS	No differentiation of grades						
KiVa				√ (6-9yrs version)		√ (10 – 12yrs)	
PA	-	-	-	-	-	-	√
PATHS	-	√	-	-	√		
RoE	No differentiation of grades – whole programme coded						
SSIS	No differentiation of grades – whole programme coded						
SS	-	-	-	-	√	-	-
StR	-	-	-	-		√	-
TFGA	All Grades						
ToTM	R						
ZF	No differentiation of grades – whole programme coded						

R = Reception, hyphens indicate grade available but not coded

For each programme, common structural elements were syntethised (e.g. duration and frequency of lessons) ahead of a more detailed examination of programme content itself, specifically instruction and practice elements.

Instructional element codes covered the range of approaches deployed to deliver programme content. For instance, '*role play (through dramatization and/or use of puppetry with an adult is either observing or engaging)*'. A full list of instructional element codes is available in appendix 3. Activities received a secondary code if more than one instructional element was used during the activity. For example, '*reading a story or scenario whereby context is given*' followed by a teacher assessing the children's comprehension of the characters emotions (Teacher asking questions to the class, e.g. 'hands up'). Example photographic evidence for each instructional element was collected.

Practice element codes covered the range of SEL skills (as defined by CASEL). Practice element coding was done by each SEL sub domain (see appendix 3), i.e. the various facets of social and emotional competence were treated separately. For instance, self-awareness contained five possibly practice element codes: *identifying emotions, accurate self-perception, recognising strengths, self-confidence and self-efficacy*. A full list of practice element codes is available in appendix 3. In instances where activities were not seen to be SEL related (e.g. a section on academic skills), confirmation of irrelevance was agreed amongst the researchers and the activity omitted from the coding.

Coding was predominantly top-down. A full coding schedule (appendix 3) of instructional elements identified by Jones (2017) and practice elements defined by CASEL were shared and agreed a priori with the Education Endowment Foundation and the Early Intervention Foundation. Emergent elements, i.e. 'new' themes that were not part of the a priori coding schedule, were allowed and coded to allow fuller discussion by the research team upon discovery.

Rigour and quality

All coders were presented with a coding schedule, which included comprehensive definitions of both instructional and practice elements (appendix 3). A trial coding exercise was conducted ahead of the main event, in which programme elements were simultaneously coded between team members and subsequently cross-checked. That exercise accommodated discussion and confirmability, ensuring the appropriate allocation of codes. All coders reached full agreement ahead of the main event. All ambiguities during the coding were discussed and agreed amongst all team members.

Evidence Review

Well-designed and well-implemented social and emotional skills development programmes have been associated with a range of positive personal, social, and health related outcomes, with additional indicators for policy relevant outcomes including (but not limited to) school engagement and academic attainment (Clarke et al., 2015**). However, there are many remaining 'unknowns' in relation to SEL which currently hamper the ability to effectively reproduce positive results across individual settings. In order to progress our understanding of effective SEL provision, there have been calls to examine some of the subtler characteristics underpinning effective intervention (Weare & Nind, 2010).

Accordingly, this section presents a critical, narrative synthesis of the best available international literature relating to SEL (see methods). The section is arranged thematically, with recurrent themes and trends informing the areas for discussion. Where evidence is drawn directly from the evidence review, scores in the form of star ratings (as shown in table 2) are presented in order to make clear the relative weight of evidence underpinning subsequent conclusions.

Specific focus is given to the thematic areas identified in the research questions:

- i) Classroom activities
- ii) School-level processes and practices
- iii) Differential gains produced through (i) and (ii) among different population subgroups (e.g. children from disadvantaged backgrounds)

The logic of SEL

Promotion of strength-based skills within a prevention framework

Before discussing how SEL operates in practice within the education system, it is worth briefly considering the theory and evidence supporting SEL as a construct, highlighting the rationale for why SEL is seen to be an integral part of schooling.

As noted in the introductory chapter, a generally agreed definition of Social and Emotional Learning is provided by CASEL:

“The process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (<http://casel.org>)

There are several elements worth considering within this definition. First is the idea that social and emotional competences are relevant across the life course. SEL is about teaching ‘skills for life’, utilised far beyond the classroom. As such, SEL is often associated with later life outcomes, several extending into adulthood, such as success in the labour market (Heckman & Kautz, 2012), criminal violence, drug use (Durlak, Weissberg, & Pachan, 2010) and especially later mental health difficulties (Greenberg, Domitrovich, & Bumbarger, 2001). There is relatively straightforward evidence showing that SEL can be effective, with a strong body of evidence showing an average effect on immediate outcomes, i.e. positive effects following the implementation of an intervention (Corcoran, Cheung, Kim, & Xie, 2018***; Durlak et al., 2011; Sklad et al., 2012****; Wigelsworth et al., 2016***). However, evidence for long term effects is slightly more complex. A smaller number of trials follow effects far beyond the immediate ‘post-test’ of an intervention (e.g. Wigelsworth et al. 2016***, found as little as 8% of studies had a follow up beyond 18 months). From the evidence available (Taylor et al., 2017) effects are seen to be sustained beyond the intervention period (up to almost four years later). In addition, Taylor et al. (2017) link SEL competences with later outcomes such as use of mental health services and high school graduation, noting the monetary benefit associated with these. Indeed, recent work assessing the economic benefit of SEL demonstrates a ‘return on investment’ well into adult life (Belfield et al., 2015). This is because even a small reduction in the prevalence of later adult-based costs (e.g. mental health treatment or costs associated with criminal behaviour) can ‘offset’ the comparatively small cost of SEL intervention. The immediate (or ‘proximal’) skills directly imparted through SEL (e.g. increased self-awareness) are beneficial within the schooling system, e.g. better behaviour; however they are not the *ultimate* aim of SEL. They are identified as early skills needed to affect individuals later in the life course, and this may be beyond compulsory school age. In this instance, schools should be aware that they themselves might not directly ‘reap’ all the benefits of effective SEL. However, it should be noted that there is little direct causal evidence for these relationships and the true nature of the associations may not be straightforward. For instance, it is possible that emotional self-management leads to higher attainment (the ‘ready to learn’ hypothesis), but it is equally plausible that an opposite association may hold true, e.g. high attainment leads to raised self-respect and sense of control. Or that such skills are mutually determined (Garcia, 2014). Some early data indicates that although the directions of relationships are theoretically consistent (that social and emotional skills predict later behavioural and attainment based outcomes), they are small in

magnitude (effect size), and potentially mediated by other factors (e.g. Panayiotou & Humphrey, 2018; Michael Wigelsworth, Qualter, & Humphrey, 2017).

Second – SEL is universal, i.e. of benefit to all. This is consistent with a prevention and promotion approach (Catalano et al., 2004****), akin to ‘inoculation’. Prevention science is based firmly on the adage ‘an ounce of prevention is worth a pound of cure’, that promoting strength-based skills early on have significant benefits in relation to the costs (e.g. societal, economical and moral) of later ‘treatment’ (e.g. cost of crime and/or mental health difficulties). However, this presents a number of dilemmas. In the first instance, children may not necessarily benefit from direct SEL provision if the wider ecological factors are already in place, i.e. family and community already provide effective SEL provision more generally. On this basis there is an ‘opportunity cost’ if SEL displaces other school activities (e.g. a focus on academic skills). Although evidencing eventual skill development in counterfactual conditions is particularly problematic (Bailey, Duncan, Odgers, & Yu, 2017), this consideration is consistent with the relatively low prevalence of psychopathology among children (Meltzer, 2004). Conversely, in some instances universal provision has been criticised on the basis of being insufficient in regards to dosage or intensity required to adequately address the developmental pathways of those affected, as is the case for the small number of children who may be experiencing nascent difficulties. Responses to this concern have centred around ‘waves of provision’ – an integrated and tiered system of support, which is dependent on intended nature of the outcome and the inclusion criteria for the selected participants (Durlak & Wells, 1997; Weare & Nind, 2010). In this case, the universal provision is augmented with a co-ordinated framework of small groups and then individual one-to-one provision. In the context of SEL, such an approach is arguably not entirely consistent with a universal strengths-based model, as different approaches (e.g. treatment based modalities such as CBT) may be deployed *alongside* universal SEL provision.

The third consideration relates to the skills included under the umbrella of SEL, as there is: a) significant latitude in the interpretation of how these competencies are best addressed, and correspondingly, b) the relative emphasis which should be placed on each competence in SEL practice. These topics are discussed further in the next section.

Specificity of skills (SEL)

In the above section, SEL is clearly situated within a prevention and promotion framework, that is the prevention of (later) negative outcomes (such as mental health difficulties) and the promotion of positive competences (such as good social skills) (Humphrey, 2013). However, within this framework, there is a wide range of concepts and skills that have been associated with and included under the ‘umbrella’ of SEL. This includes (but is not limited to) ideas such as non-cognitive development, emotional intelligence, emotional self-efficacy, moral & character education, 21st century skills, soft skills, emotional wellbeing, mental health, etc. This paints a confusing picture of SEL, tainted with construct identity fallacies. This is because: a) Many of the terms and different names are actually inter-related or even synonymous with one or more of CASEL’s 5 core domains; this is known as the ‘jangle fallacy’. For instance, emotional self-efficacy, emotional literacy, and emotional self-awareness can be argued to be defining the same competence, as each describes the ability to identify one’s own emotional state, despite three different names. b) Some terms bear the same name, but actually describe different constructs; this is known as the ‘jingle fallacy’. For example, the term ‘emotional intelligence’ is not an umbrella term, but is used by different authors to describe different, often divergent, theoretical constructs. c) Terms can be used interchangeably because they are a *consequence* of SEL. For instance, the terms “mental health” and “emotional well-being” are used interchangeably within the literature (Ewles & Simmit, 2003).

This complexity should not be underestimated because it can lead to a misallocation of resource under a prevention and promotion framework which favours intervention in the early antecedents of desired behaviours, rather than necessarily the behaviours themselves. For example, schools should promote emotional wellbeing to protect later mental health, rather than 'treat' manifesting poor mental health, mistaking this to be the 'same thing', as this is 'too far downstream' in a prevention framework. It should be noted that the field still awaits compelling empirical evidence supporting CASEL's 5 core domains directly as a single model.

The consequence of this puzzling array of terminology means there is a significant heterogeneity in SEL provision: under the banner of 'doing SEL', there is a good deal of latitude as to what constitutes SEL provision. For instance, programmes promoted primarily to address anti-bullying by primarily promoting social awareness and empathy skills (with comparatively less attention paid to intra-personal skills such as emotional awareness) fall under the same rubric of self-regulation programmes (see Pandey et al., 2018****), which have little in the way of inter-personal content. This point is discussed further in the next section.

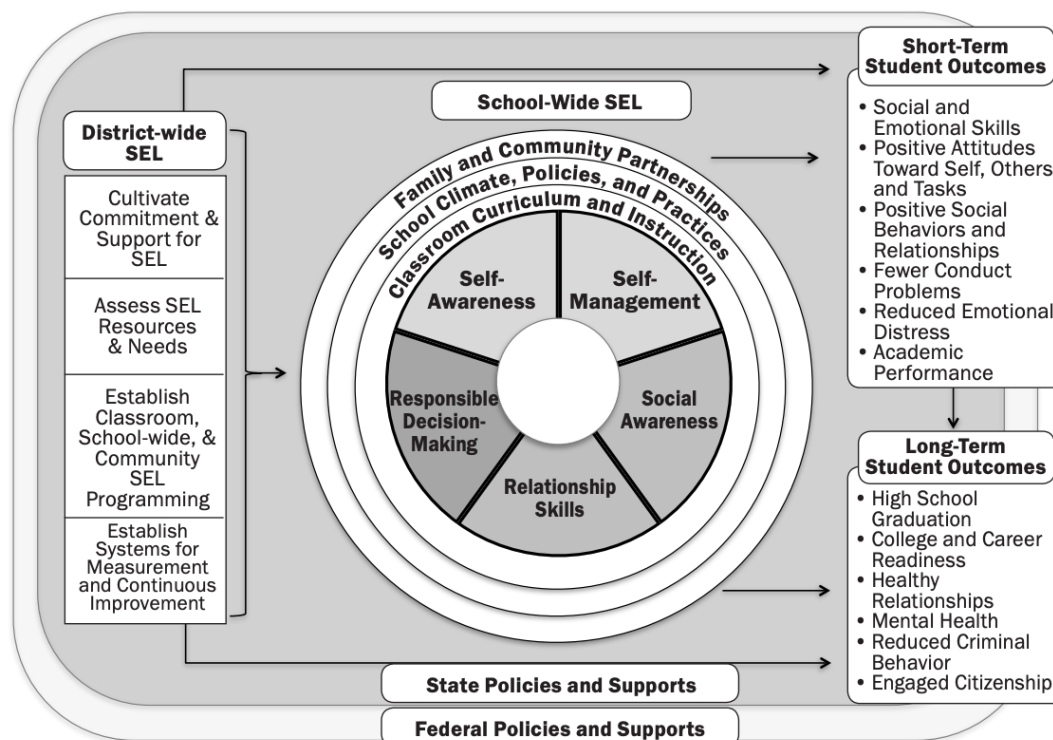
Key summary

SEL is about promoting early skills that help support and protect individuals throughout the life course. School has a central (but not exclusive) role in this process. A wide range of vocabulary can lead to confusions as to what is and is not included within SEL, with implications for its practice.

SEL in Practice

SEL is seen to be embedded in context and the environment of education, through the use of co-ordinated classroom, school, family and community strategies (Durlak, Domitrovich, Weissberg, & Gullotti, 2015). We now turn our attention from theory to the practice of implementing SEL by first explaining how SEL is seen to integrate within educational practices. We then briefly examine literature discussing the evidence for 'School-wide' SEL, before discussing more specific approaches, namely explicit taught curricula. The chapter concludes with examining evidence of differential gains - whether different groups benefit more (or less) from SEL. Figure 4 highlights the various components that make up a comprehensive SEL strategy. These elements are explained in turn:

Figure 4. Expanded conceptual model of SEL. Taken from Greenberg, Domitrovich, Weissberg, & Durlak (2017)



Family and community partnerships: This includes the extension of SEL programming into the home and neighbourhood contexts. For instance, parental briefing can be part of a programme, ensuring a consistency of approach between home and school. Homework activities involving parents feature in some programmes (e.g. FRIENDS) either as an alternative or extension of this. Community elements include extending SEL into after school activities and other community programmes (Fagan, Hawkins, & Shapiro, 2015).

School climate, policies and practices: This includes co-ordinated activities designed to cultivate a 'shared vision' throughout the school in order to promote a positive school climate. This can include, for instance, formulating or adopting a code of conduct that is consistent with social and emotional learning, e.g. emphasising the need for mutual respect as a core goal for the school, adopting fair discipline policies (Oberle & Schonert-Reichl, 2017). Staff training may be involved, including professional development opportunities in the upskilling of

pedagogy consistent with SEL (Schonert-Reichal, Kitil, & Hanson-Peterson, 2016) and the inclusion of support staff in supporting a vision for 'school-wide' SEL (Weissberg et al., 2015).

Classroom, curriculum and instruction: One of the most prevalent SEL approaches involves deliberate and explicit instruction of lessons, designed to teach social and emotional skills. This can be augmented with embedding SEL instruction to other content areas (e.g. English, arts, or social studies) and for teachers and school staff to model appropriate social and emotional skills (e.g. emotional regulation, clear communication of feelings).

School wide/ Multi-component: An important note is that although various elements of SEL provision are explained separately, they are expected to work together in tandem. Integrated strategies or programmes that traverse more than one element, such as a whole school behaviour strategy and corresponding taught curriculum, are known as a 'multi-component' approach (Adi et al., 2007****). More holistically, the term 'whole school approach' has been used to describe the co-ordination of activities in which SEL practice is continually and consistently embedded into the school across school years and contexts, e.g. in class, during break, home-school relations, etc. (Goldberg et al., 2018).

As a final caveat, much of the literature surrounding SEL derives from the USA, with adoption of ideas and practices by other countries. Accordingly, there is not, as yet, a comparable framework for SEL implementation in the English context. Discussion of district, state and federal supports of SEL are not directly translatable in the current context and are omitted in further discussion. In consideration of evidence highlighted in this report, many of the programmes identified for discussion have been developed and researched in the US, potentially limiting their applicability within UK populations (given a corresponding relative lack of robust UK trial data – see below).

School-wide SEL

Evidence, for 'whole-school' approaches are mixed. Adi et al., (2007)**** presents comparatively favourable evidence for multi-component programmes, which include significant teacher training and development and support for parenting, in comparison to 'curriculum only' based approaches. This is particularly true for mental-health based outcomes, as an additional review by Das and colleagues (2016)*** noted that community-based approaches (e.g. activities occurring outside of the 'school day' such as extra-curricular clubs) were positively associated with behavioural changes including self-confidence and self-esteem (alongside school-based approaches). However, this finding is not unanimous, with several other reviews failing to show impact of whole school approaches on outcomes more closely aligned with core SEL skills (Catalano et al., 2004****; Durlak et al., 2011****; Greenberg et al., 2001; Wilson & Lipsey, 2007). This is particularly true within the English context by which the Social and Emotional Aspects of Learning (SEAL) programme, developed as a whole school framework to specifically support the social and emotional skill development of English school pupils, failed to generate positive effects (Wigelsworth, Humphrey, & Lendrum, 2012). Very recent and comparatively robust data from a meta-analysis of whole school approaches (Goldberg et al., 2018****) shows that although, on average, such programmes do produce positive effects, the average effect size ($d = 0.22$) for improvements in social and emotional skills is at least half in comparison to prior meta-analyses (Corcoran, Cheung, Kim, & Xie, 2017***; Durlak et al., 2011****; Sklad et al., 2012****; Wigelsworth et al., 2016**) that do not differentiate by whole-school components,

e.g. programmes that are heavily orientated towards or exclusively made up from class-based taught curricula.

A current limitation in research examining whole-school approaches is the difficulty in capturing differences in which components are/ are not implemented and the complexity of how various components might interact. For instance, staff training is identified as an element of multi-component implementation, but it can take several different forms, which can have implications for potential success as a component of a whole-school approach. In a review of implementation literature (Samdal & Rowling, 2013), teacher training is classified as a function of implementation by ensuring 'readiness for change', e.g. teachers recognise and agree the perceived needs for the programme as well as the procedures and process for achieving this goal (Wolf, 1978). This is more closely aligned to other implementation factors such as senior leadership support and organisational support to allow space and time for implementation, etc. This is distinct from specific skills-based training in relation to a teacher's programme knowledge and/or sense of self-efficacy in implementing SEL. Self-efficacy is underpinned by knowledge, understanding and perceived competence, which has also been shown as a factor in promoting achievement of outcome. Indeed, there is evidence to suggest that, for some interventions, greater effects are achieved when the programme is delivered by external facilitators compared with teachers (Stallard, 2010). This is hypothesised to be because external facilitators are able to demonstrate higher degrees of knowledge and efficacy within a given intervention. Therefore staff training may be an effective element of whole school approaches, depending on its purpose and goals, but research is yet to sufficiently disambiguate and explore these factors in greater detail. A similar argument exists for other multi-component elements such as parental involvement. It is currently not clear to what extent parental involvement should be the continuation of a school ethos within the home environment vs. the upskilling of parents' efficacy and/or knowledge base in order to best affect positive change.

Recent literature has highlighted that a better understanding of additional components is a priority for future research (Durlak et al., 2011****; Wigelsworth et al., 2016***), as noted previously, the term 'whole school' is not sufficiently disambiguated. This remains a paucity of evidence regarding the usefulness and importance of specific multi-component elements in the field, as in comparison to evaluations of curricula-based components (see below) comprehensive evaluations of whole school approaches to SEL are comparatively rare (Barry et al., 2017). There is a methodological barrier to further insight into this area, since whole school approaches are methodologically more complex to evaluate as they do not easily fit within traditional experimental study designs which do not account for multiple levels of change.

Key summary

Multi-component elements of SEL are theorised to be an integral element of effective, long term SEL implementation. Such is the case of parental and community engagement, 'promoting a shared vision' through whole school activities, and/or teacher training. There is mixed evidence as to the effectiveness of multi component elements. As empirical data is lacking, the specifics about how such elements can be effective are not well known.

Classroom, curriculum and instruction

Evaluation of specific curriculum packages arguably dominate a significant part of the SEL landscape, for example conclusions as to the overall effectiveness of SEL is (mostly) drawn from aggregated pupil data stemming from several large-scale, robust and recent meta-analyses (e.g. Corcoran, Cheung, Kim, & Xie, 2017***; Durlak et al., 2011*****; Sklad et al., 2012****; Wigelsworth et al., 2016***). Effect sizes drawn from these analysis show effect sizes between 0.21 – 0.70, demonstrating that, on average, programmes can be effective in promoting SEL skills.

Commonly, it can be generally agreed that SEL intervention (as a minimum) is identified by an explicit curriculum, almost exclusively presented in the form of a manual, typically with a teacher's handbook and accompanying stimulus materials for use with a whole class. There is typically a lesson structure (indicating a sequenced and regular progression through the programme material), with guidance to teachers (varying from broad guidance to heavily scripted) delivering SEL content within explicit curriculum time. The curriculum is likely to include any number of pedagogical elements such as role play, cognitive modelling, self-talk, storytelling, written work sheets, teacher instruction, multi-media stimulus (e.g. videos) dependent on the specific programme. SEL activities may or may not be accompanied with additional activities pertaining to generalisation outside of the 'SEL lesson', and 'cross-linking' to 'whole-school' or multi-component elements (discussed above) (Pandey et al., 2018****).

However, the above description begins to reflect a principal critique of the evidence underpinning the success of SEL, that of *heterogeneity*. It is evident in the above description of what *typically* constitutes an SEL programme, that there is potential for a great deal of variation in the specifics of how SEL can be designed and delivered. For instance, there is variation in the length and intensity of programme, focus or relative importance of a particular sub-domain of SEL, age-range of programme, etc.

Conclusions drawn from meta-analytical techniques are compromised by heterogeneity, as the singular premise of meta-analyses is to compare 'like with like'. There have been some attempts to identify a small number of critical differences that clearly delineate the SEL literature. For instance, Durlak and colleagues (2011)***** denote programmes fulfilling 'SAFE' (Sequenced Active, Focused and Explicit) criteria are comparatively more effective than those not able to fulfil these criteria (see 'conditions for effective SEL' below) and Wigelsworth et al. (2016)*** consider (amongst other things) the cultural transferability of programmes (e.g. being implemented outside their country of origin). However, it is extremely difficult to account for multiple variations between units of analysis with compromised results, an issue which is acknowledged by the meta-analyses themselves.

In deciding whether SEL programming is a good fit for the climate and context of a given school, it is worth considering some of the specific aims and approaches used across different SEL programmes. As a reminder, SEL is a broad 'umbrella' term, which encompasses several different processes through which an individual can acquire and effectively apply SEL skills. Accordingly, there is an assumption that for any given SEL programme attention is paid to each element denoted in CASEL's 5 core domains as a part of the instructional processes; however, this is not always the case (McClelland, Tominey, Schmitt, & Duncan, 2017). Some programmes included under an SEL heading are very specific in their intended outcomes, focusing in some cases on a single element of CASEL's 5 core domains.

For instance, some programmes focus heavily on self-regulation strategies as a means of demonstrating effective SEL outcomes. A review of self-regulation programmes (Pandey et al., 2018****, pooled effect size of 0.42 for self-regulation skills) demonstrates that a range of SEL relevant *outcomes* can be achieved in programmes focusing on self-regulation, for example improvements in social skills, conduct and behaviour, and attainment. However, this is exclusively focused on pupils developing cognitive self-regulation. In this instance, better relationships are a *product* of self-regulation strategies, rather than part of the process itself, when compared to programmes favouring cognitive regulation (e.g. FRIENDS) which have relatively far more self-contained activities focusing on self-regulation (e.g. 'bubble breathing' is a kinaesthetic exercise for controlling physical symptoms of anxiety).

In contrast, other SEL programmes favour social learning theory as a model for improving SEL skills, typically through presenting contextually grounded examples of social situations for children to interpret and respond to. For instance, the PATHS programme and ICPS contain significant volumes of stimulus material for reflection and discussion. Pretend play and social modelling (e.g. explicit role play of social situations) is another example of a model of SEL instruction that is deployed to a lesser or greater extent across individual programmes. It is important to note that although individual programmes may be identifiable as favouring or relying on particular modes of learning, they are on the whole not mutually exclusive. Such is the case of ICPS which is exclusively based on social theories of learning. This makes it extremely difficult to assess their relative efficacy in promoting 1 or more of CASEL's 5 core domains. This calls into question 'optimal' dosage and content for SEL instruction as there is implication that a substantive curriculum paying equal attention to CASEL's 5 core domains may not be necessary.

Increasingly, mental health programmes are included within an SEL framework (Rones & Hoagwood, 2000**), some of which offer complimentary approaches, modes or methods that require specialist knowledge (e.g. CBT). Teachers therefore may not be optimally equipped to deliver the intervention, as meta-analytic evidence suggests although teachers may be able deliver universal programmes for targeting mental health, effects are typically small. For instance, Franklin et al., (2017****) found small significant reductions in students' internalizing outcomes (e.g. worry) ($d = .13$) and no statistical significant effect for externalizing outcomes (e.g. behaviour). This is consistent with evidence from FRIENDS, which is a universal 10-week intervention based on Cognitive Behavioural Therapy (CBT) designed to address and prevent worry, anxiety and depression. A recent trial showed higher effects when FRIENDS was delivered by external health professionals as opposed to teachers (Skryabina, Taylor, & Stallard, 2016).

Key summary

SEL curriculum provision is generally seen as effective and there is an agreement about what broadly constitutes a curriculum package. However, individual packages can significantly differ in relation to their focus and aim, with implications for how and to what extent CASEL's 5 core domains (and their related subdomains) are delivered. There is more to understand about how CASEL's 5 core competencies relate to one another; however, meta-analytic approaches are not necessarily well suited for investigating these variations.

Differential gains produced amongst different population subgroups

The outcomes of social and emotional learning for student sub-populations are perhaps best described as mixed. Meta-analyses have typically not examined sub-group effects in any extensive or rigorous manner (Domitrovich, Durlak, Staley, & Weissberg, 2017), and there are both theoretical and practical reasons for this apparent lack of attention. As discussed above, SEL is situated within a prevention and promotion framework. Accordingly, SEL seeks to reduce the prevalence of *later* difficulties through universal prevention. As the majority of evaluation studies examine immediate post-test outcomes (only 8% of studies examined by Wigelsworth et al., 2016*** followed up on outcomes beyond 18 months), differential effects cannot be detected. There is a clear call in this field for the use of robust, longitudinal work which follows recipients of SEL into a later course of life. Although there is some literature supporting differential effects over this time period, there is little conclusive evidence in this regard. Turning attention to immediate outcome data, as studies are already typically powered to detect universal effects, there is not always sufficient power in order to allow rigorous testing of subgroups. Lack of reporting in individual studies means meta-analytic approaches can be similarly impaired (Corcoran et al., 2017***).

There are reasons to suggest why there may be differential response to intervention. The 'Matthew effect' or the accumulated advantages hypothesis (Walberg & Tsai, 1983) postulates that children starting 'strong' are likely to benefit more from intervention because they are more capable of building on initial skills. These children are typically those who are able to draw upon the wider SEL ecology, e.g. support from families and communities. The Matthew effect has long been notable in other areas of education (specifically reading as noted by Stanovich, 1986). Conversely, the compensatory hypothesis (McClelland et al., 2017) suggests that children without optimal access to resources and/or are subject to risk factors (such as low social economic status) known to relate to social, emotional, behavioural, and academic problems are likely to benefit more from SEL intervention (Evans & English, 2002), as they have more room for improvement. There is conclusive evidence that exposure to multiple poverty-related risks increases the odds that students who are socioeconomically disadvantaged will demonstrate less social and emotional competence, lower executive functioning skills, and more behaviour problems (Webster-Stratton & Reid, 2008). Whether this translates to differential uptake of intervention however, is less certain. Accordingly, where subgroups have been examined, these have typically been in relation to 'at risk' populations likely to experience these conditions, namely low-income populations, those with ethnic minority status and those identified with special educational and/or additional needs. These studies are examined below.

Social economic status: For studies that consider the possible moderating effects of economic status, findings suggest overall that that SEL programmes are as effective for students in low income families, compared to those in middle-to high income brackets (Adi et al., 2007****; Clarke et al., 2015**; Corcoran et al., 2017***; Margaret, 2015; Sklad et al., 2012****), as studies typically do not find any differential impact of SEL programmes for students with low SES. This conclusion would tentatively be in support of the compensatory hypothesis (barring more robust examination), as although there is strong evidence to suggest those individuals experiencing low SES, have effectively compensated by demonstrating equivalent results at post-test. However, several studies note the comparatively small number of studies explicitly examining SES, limiting conclusions drawn (Corcoran et al., 2017***). Indeed, SES information was missing from a third of studies examined by Durlak et al., (2011)****, leading to calls for additional work in this area. This is particularly true for the UK and Ireland, where few studies have examined the effects of SES in relation to SEL programming in detail (White, 2017**).

Ethnic minority status: Evidence on SEL interventions with racial/ethnic minority students is mixed, though trends appear to indicate little distinct difference in programme effects. Farahmand and colleagues (2010)^{***} did not find a significant effect of race/ethnicity in their review of school-based mental health programmes. Although Franklin and colleagues (2017)^{****} report that improvements in externalising behaviour were significantly positively associated with the proportion of Caucasian students in the sample, the associated effect size was extremely small ($b = 0.002$)

At a country level, Wigelsworth and colleagues (2016)^{***} demonstrated a significant drop in effectiveness across a range of outcomes when programmes are implemented outside of the country of origin. Although extant literature provides some suggestion that this may be a result of implementation difficulties (Emshoff, 2008; Ferrer-Wreder, Sundell, & Mansoor, 2012; Resnicow, Soler, Braithwaite, Ahluwalia, & Butler, 2000), it does acknowledge that there are cultural differences in relation to SEL. Ethnic minority students may behave in ways that are specific to their own social and cultural background and that these behaviours may not match the norm of the mainstream culture (Farahmand et al., 2010^{***}).

Special educational and/or additional needs: There is some limited evidence that particular elements of SEL practice are suited to some special educational needs. For instance, conditions such as ADHD are related to difficulties with inhibitory control, for which self-regulation strategies address specifically. Even for children who do meet full diagnostic criteria for conditions such as ADHD, they can still be impaired by high symptom levels (Farone et al., 2015) and therefore are responsive to intervention components based on self-regulation strategies (Pandey et al, 2018^{****}; Moore et al., 2018). Whereas other links might be made in relation to broader categories of SEN (e.g. social skills training for students with social skill difficulties, e.g. ASD) this is most likely in conjunction with integrated levels of support, and is not consistent with a prevention and promotion framework as the only mode of support. Little to no evidence was apparent within this evidence review in relation to other forms of Special Education and Additional Needs that are recognised within the English policy context. A related consideration is individuals experiencing nascent mental health difficulties, as there are strong theoretical reasons (as discussed at the beginning of this section) why SEL approaches may be helpful in addressing and/or preventing further presence of difficulties (Goldman, Stamler, Kleinman, Kerner, & Lewis, 2016). In a meta-analysis examining the effect of the FRIENDS programme, no immediate effect was found for 'high risk' children (those experiencing anxiety at pre-test) in comparison to small effects for those with low levels of anxiety (though these effects were seen to wash out after 12 months) (Maggin & Johnson, 2014). There is a debate within the literature (as exemplified to a response to Maggin & Johnson's conclusions) as to ambiguity of a) what constitutes 'at risk' as different studies presented different criteria and b) the distinction between 'treatment' and 'prevention', e.g. at what point do emergent difficulties become an issue for treatment? This issue is especially complex across the broad range of SEL outcomes as there are no normative values for comparison.

As there is evidence for individual programmes and/or studies demonstrating differential effects for identified sub-groups (e.g. 'at risk' children), differences in results may be due to a complex set of interrelationships between programme design, community factors and/or methodological limitations, e.g. cultural validity of either an intervention and/or measures used (Adi et al, 2007^{****}; Margert, 2015, Barry et al, 2017*). This is consistent with the work of Simmons and colleagues (2018) who note that the barriers to equity are complex. It is not simply a case of identifying categorical 'membership' to a given group, e.g. eligibility for free school meals. For instance, poverty indicators themselves can potentially lead to implicit

biases in school staff, which in turn creates inequities in delivery (Simmons, Brackett, & Adler, 2018).

Key summary

Although SEL programming has been seen to be successfully delivered across a diverse range of contexts (e.g. Payton et al., 2008****), there is 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 complex interrelations between these factors and the wider ecology (e.g. context for delivery) means there is limited evidence available to help meet the needs of different subgroups (Margret, 2015; Barry et al., 2017*).

Conditions for effective SEL

In summary of this chapter, we now turn our attention briefly to an examination of literature discussing recognised conditions for effective practice in SEL delivery. The implementation of programmes is an expansive topic, beyond the scope of this report. However, several identified articles discuss effective conditions specifically within the context of SEL. Key findings emerging are presented below.

A number of review articles (Dusenbury, Calin, Domitrovich, & Weissberg, 2015; Jones et al., 2017; O'Connor, Dyson, Cowdell, & Watson, 2018) reference four core practices identified by Durlak and colleagues (2011****) as moderators for successful outcomes. Programmes identified as utilising these practices were more successful in producing outcomes compared to those who did not utilise these practices (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011****). Referred to through the acronym SAFE, the four identified practices are:

- Sequenced – A set of connected learning activities that teaches social-emotional skills through a coordinated, step-by-step approach
- Active - learning methods such as role-play or behavioural rehearsal with feedback
- Focused - the inclusion of at least one programme component that focuses specifically on the development of social-emotional skills through devoting sufficient instructional time to it on a regular basis
- Explicit - teaching of clearly identified skills with clear and specific learning objectives, as distinguished from a programme goal on general skill enhancement.

In addition, several reviews discuss the importance of teacher training (Cefai et al., 2018***; Clarke et al., 2015**; Durlak et al., 2011****; Sklad et al., 2012****), citing the importance of embedding practices (Cefai et al., 2018***) facilitating a teacher's own competency and sense of efficacy (S. Jones et al., 2017) and/or ensuring sufficient dosage and fidelity (O'Conner, De Feyter, Carr, Luo, & Romm, 2017*). However, as discussed earlier, there remains a lack of empirical evidence supporting the specifics of this principle. There is significant variation across programmes in relation to teacher training, ranging between a mandatory pre-cursor programme itself (e.g. Incredible Years) optional coaching models (e.g. PATHS), self-referent material (e.g. KiVa) and these differing approaches are yet to be directly compared and contrasted in regards to their relative efficacy.

Moving beyond teachers, culture fit and context are also cited as necessary conditions for effective SEL (Cefai et al., 2018***; Clarke et al., 2015**; Sancassiani et al., 2015***). Again, drawing from the theory of SEL at the beginning of this report, this is a recognition that SEL is

situated with a wider context/climate. Merrell & Gueldner (2010) in particular note the importance in aligning SEL provision alongside the perceived needs and capacities of individual schools. This is consistent with additional SEL programming presented across grades and contexts (Durlak et al., 2011****; Jones & Bouffard, 2012). Continuous provision throughout school years allows for developmental continuous activities, ensuring that foundational skills are present in the early years to allow for increasing complexity and expansion of skills in later grades. Whether continuous provision across school years is empirically supported is still open to debate, as some reviews indicate that the age of introduction to SEL intervention may not be crucial (see Weare & Nind, 2011***), with some reviews suggesting that working with older students may be more effective.

We now consider some of the variations in SEL practice across programmes, with specific relation to factors identified in previous reviews, namely; length and intensity, programme focus, programme theory, and 'contamination' of additional content. These elements are discussed below, in reference to interpretation of evidence supporting SEL.

Length and intensity. Almost all SEL programmes utilise regular, explicit, timetabled space, as part of a taught curriculum (see previous chapters). Typically, this takes the form of a one-hour lesson, or two thirty-minute sessions per week. Some programmes offer some variation (e.g. one-and-a-half-hour material, with flexibility about how this is delivered). However, SEL programming in practice inevitable sits within a typical, weekly lesson slot. SEL programmes are seen to vary in their length and intensity, with the 'smallest' programmes offering as little as two sessions with corresponding homework tasks (see Weare & Nind, 2011***). Reviews of evidence find little empirical support for extremely brief interventions; however, some positive effects have been demonstrated in a small number of programmes operating for as little as 8-10 weeks (Adi et al., 2007****; Garrard & Lipsey, 2007; Maggin & Johnson, 2014). For interventions demonstrating positive effects with relatively short windows of time (e.g. 10 weeks), there is an associated specificity in regards to the type of outcome measured. Short-term programmes address relatively specific goals, most typically mental health outcomes such as reduced anxiety and emotional disorders (Adi et al., 2007****; Garrard & Lipsey, 2007). The review by Weare and Nind (2011***) notes that lengthier programmes demonstrate wider ranged outcomes including positive mental health (Green, McGinnity, Melzer, Ford, & Goodman, 2005; Wells, Stewart-Brown, 2003), positive youth behaviour (Catalano et al., 2004****), preventing violence and bullying (Adi et al., 2007****; Farrington & Ttofi, 2009; Scheckner, Rollin, Kaiser-Ulrey, & Wagner, 2002), and anger (Gansle, 2005; Scheckner et al., 2002). Several explanations are apparent for exploring why, for some outcomes, positive results are obtainable through a shorter time span. First, receptivity to treatment is a possible cause, as those 'ready to benefit' from SEL implementation would be the quickest to demonstrate results. Second, specific dosage may offer a partial explanation, as a 'crash course' in exposure may generate quicker effects. However, this is an unlikely scenario given the typicality of SEL curriculum to be part of a school timetable, with most programmes taught for between 30-90 minutes a week. Therefore, if implementing 'limited' SEL, there needs to be a very specific focus as to the short terms skills that are likely to be gained as a result. It is worth noting that limited implementation of SEL is not consistent with the implementation of 'school wide SEL' (see 'SEL in Practice' above). Most SEL programmes (the bulk of the evidence base discussed in this review) operate across the school year. 'Larger' programmes involve 'whole-school' elements (as discussed above), deploying, for instance, whole school assemblies and multiyear SEL content through spiral curriculums (e.g. PATHS). However, overall there is little definitive association between programmes length and magnitude of impact (Blank et al., 2009; Hahn et al., 2007). This suggests that SEL is an ingrained part of curricular practice.

Identifying common practices - distillation and matching

This chapter addresses the results from the second aim of the overall study, namely an in-depth examination of the content contained within the focal list of evidence-based programmes, with the aim of identifying common strategies and practices.

This section begins by reporting on the common structural elements. Results from the distillation and matching are then presented, detailing the following:

- i) Relative balance of SEL content across programmes
- ii) An overview of the most common practice vs. instruction elements
- iii) Analytical summaries detailing the headline-findings arising from the preceding summaries

Summary tables noting key conclusions then complete the chapter.

Common structural elements

Most of the programmes (9/13) were developed in the USA. Two programmes originated from Australia and a programme each from Finland and Ireland.

Although 'whole school' activities were reflected in the promotional elements for several of the identified programmes, this mostly referred to the availability of the curriculum packages across multi years. Either material was noted as suitable for use across grades (e.g. ICPS has a single 'reception to year 3' version) or a 'spiral' curriculum was provided by which lessons were built upon across older year groups (e.g. PATHS). All but one of the programmes were curriculum-based, featuring a heavily prescriptive set of activities for teachers to follow in class. Most activities provided scripts designed to impart knowledge through teacher narration and pupil participation through relatively closed questioning, e.g. who can name the emotion in the story. Worksheets were commonly used across programmes to evidence and support learning (NB: Roots of Empathy was the least structured programme, instead indicating a general guide of activities to be scheduled throughout the school year). All programmes were universally implemented in classroom-based settings.

The contents of seven programmes targeted the full breadth of the K-6 elementary age span (4-12 years). Two of the programmes were split (broadly to represent the KS1/KS2 structuring). Five programmes were split in accordance to age/academic year ranges.

Seven of the programmes were delivered once a week for approximately 1 hour. Six of the programmes were delivered twice a week with a reduced delivery time of approximately 30 minutes per session.

There was a large variance in programme length. Five programmes were delivered across the full academic year. Five programmes were delivered across two academic terms, with programmes specifying academic terms for implementation. Three of the programmes were delivered across one term.

All programmes are advised to be delivered by teachers with exception of the Roots of Empathy programme which should be delivered by a trained instructor. However, FunFriends and Friends for Life also provide opportunities for an external instructor to deliver sessions. A number of programmes provided additional consultancy and support options, though these were optional 'paid extras'.

Variation in practice elements across SEL domains

As discussed in the opening chapter, SEL is comprised of five inter-related core competencies. The distillation and matching (see 'Method') provide a unique opportunity to assess the relative balance and specificity by which each core competency is covered with SEL programming. The overall balance in SEL coverage across all the coded activities across the focal-list of evidence-based programmes is shown in figure 5. As a reminder, coded activities were calculated in proportion to total activity per programme – i.e. assessing proportion of activity overall. This accounts for larger or more focused programmes that may have a disproportionate number of activities.

Figure 5. Balance of SEL coverage across coded activities

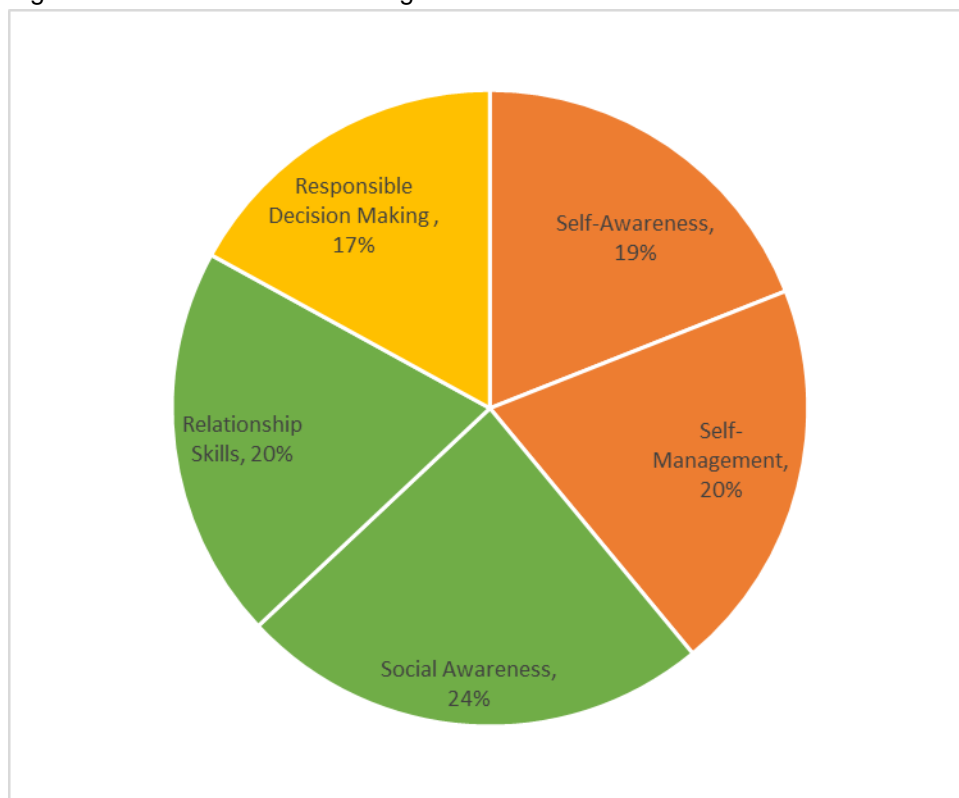


Figure 5 demonstrates a close proximity with the theorised model of SEL, namely that each core competency is broadly (and equally) represented across the SEL programming. However, on closer inspection, there is a considerable imbalance of sub skills *within* each SEL domain, as demonstrated in figure 5 (below).

Figure 6. Balance of SEL subdomain coverage

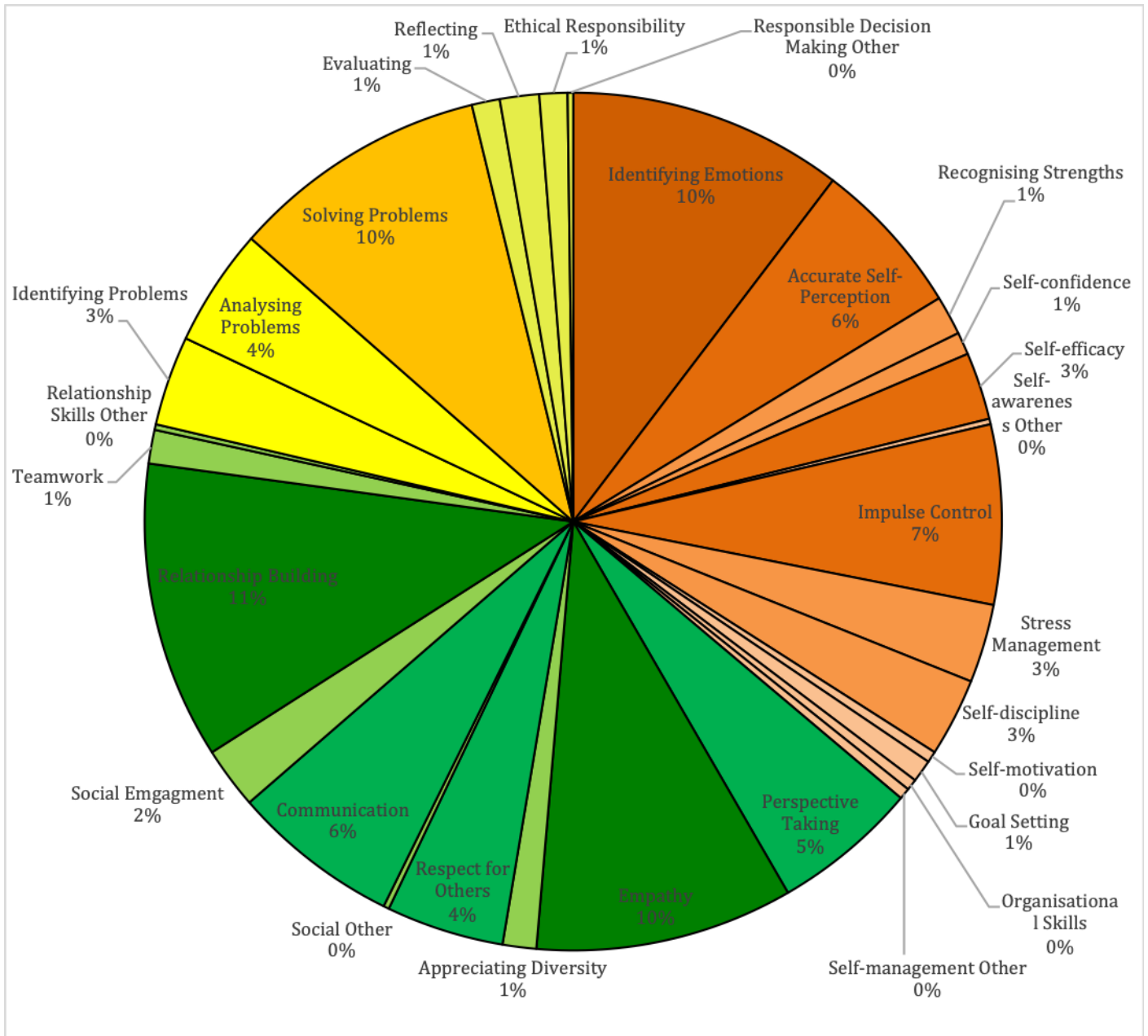


Figure 6 demonstrates that although each of CASEL's 5 core competencies are equally represented, each core competence is heavily dominated by a smaller number of specific sub-skills (also defined by CASEL). For instance, for all the programme activities coded the core competence of relationship skills, most activities focused specifically on **relationship building** and **communication**, with comparatively very little activity focused on team work or social engagement. Similarly, for all the programme activities that focused on developing the core competencies of self-management, these almost exclusively focused on developing **self-discipline**. As the intended purpose of the activity was to identify common practices across SEL programming, further analysis is conducted within each core competency, focusing on sub-skills with $\geq 5\%$ prevalence across programmes, as briefly summarised in table 4 below.

Table 5. Subskills $\geq 5\%$ per core competency

Core competency	Identified sub skills
Self-awareness	Identifying emotions
	Accurate self perception
Self-management	Impulse control
	Self discipline
Social awareness	Empathy
	Perspective taking
Relationship skills	Communication
	Relationship building
Responsible decision making	Solving problems

Overview of practice vs instructional elements

The most prevailing practice elements (as per figure 6) are compared to the range of instructional elements across all coded activities. Results are show in table 6.

Table 6. Cross tab of practice vs instructional elements.

	Story/ Scenario followed by teacher questions	Teacher's questions followed by curriculum material	Curriculum material followed by teachers' questions	Didactic instruction (teacher talk)	Discussion based activity	Roleplay- Dramatization/ puppetry	Kinaesthetic activity	Reinforcement / generalisation material
Identifying emotions	10.17%	16.98%	41.18%	13%	9%	7%	7%	15%
Accurate self-perception	10.59%	-	1.96%	3%	9%	4%	5%	7%
Self-efficacy	-	-	-	4%	4%	-	1%	5%
Communication	8.47%	3.77%	1.96%	5%	5%	7%	3%	3%
Social engagement	-	-	-	5%	2%	2%	2%	1%
Relationship building	5.51%	11.32%	-	7%	13%	4%	-	10%
Perspective taking	17.37%	7.55%	19.61%	3%	4%	8%	-	7%
Empathy	11.86%	22.64%	9.80%	14%	8%	11%	2%	5%
Respect for others	5.51%	7.55%	1.96%	3%	6%	2%	1%	1%
Identifying problems	14.81%	-	1.96%	4%	4%	6%	4%	5%
Analysing solutions	-	-	-	6%	5%	9%	4%	4%
Solving problems	4.24%	9.43%	5.88%	12%	8%	17%	6%	7%
Reflecting	-	-	-	-	5%	-	-	1%

Impulse control	-	-	-	2%	-	3%	27%	4%
Stress management	-	-	-	6%	2%	1%	8%	4%
Self-discipline	2.54%	-	5.88%	4%	4%	3%	26%	-

Each practice element is now visited in turn, in relation to its common instructional elements. Contextual examples of activities are interrogated in order to identify and extract the common and active practice or 'ingredient' for each practice element.

Self-awareness

In relation to the 5 core competencies of the SEL framework, the core competence of self-awareness is predominantly addressed through '**identifying emotions**' (10% of all activity) and '**accurate self-perception**' (6%). Little to no activity was recorded for the other sub-skills recognised within CASEL's model, specifically 'recognizing strengths', 'self-confidence' or 'self-efficacy'.

Identifying Emotions

10.7% of the instructional elements informing identifying emotions were based on stories, followed by teacher led questioning regarding themes pertaining to identifying emotions. Stories were typically scenario based, whereby the feelings of the protagonist were open for prescribed teacher led questioning in a structured 'hands up' environment. This provided children a structured environment to relate and recognise the context in which **emotional states** are experienced. For example, defining jealousy and providing the scenario of a sibling receiving a reward and not the other, a relatable circumstance where the emotion may occur. This provides children contextual examples by which they **recognise their own emotional states** in those contexts, enabling children to develop their vocabulary to appropriately communicate reactions and feelings. Closely related to this are explicit examples by which expanding child emotional vocabulary specifically was also recognised as a common element within practices, typically demonstrated through programme material such as pre-specified worksheets. There were variations in disposition of activity instruction, with teachers contextualizing activities with open-ended questions, e.g. "can anyone tell me what the word anxious means?", and the use of worksheets to consolidate the outcome of the discussion (16.98%). However, the principle exercise was more independent, involving a comparatively more directive worksheet with less teacher questioning (41.18%), e.g. providing children with emotional vocabulary to learn-sad, unhappy, miserable, anxious, then applying learnt vocabulary to a sentence-demonstrating contextual knowledge. Worksheets enable the children's knowledge and understanding of the task to be evidenced, assisting assessment. Generalization of **increased emotional vocabulary** was also a recurring feature across a number of instructional elements. These typically took the form of very open-ended academic integration activities, e.g. using emotional vocabulary as part of spelling tests. It was common to note that teachers were facilitated by allowing agency and autonomy in the exercises. For instance, tasks were often part of generalised extension activities following explicit instruction. Having completed an explicit 'feeling faces' exercise, teachers were recommended to look for other examples across different lessons to further promote an increased emotional vocabulary. Frequently generalization activities would involve the integration of the learnt emotional vocabulary into an activity under a different academic discipline. For instance, demonstrating how the emotion of anger has been used positively throughout History to allow social change (e.g. slavery and the right to vote).

Key Conclusion: Structured examples can be provided by teachers (and accompanying stimulus materials) for students to recognise the context behind their own emotional states. Building on this, a key focus is on expanding children's own explicit emotional vocabulary, both through explicit practice as well as integrated into the wider academic curriculum (e.g. feelings-based spelling test).

Accurate self-perception

Developing accurate self-perception was typically pursued through stories, followed by teacher led questioning regarding themes pertaining to accurate self-perception (10.59%). Stories were scenario based, whereby the feelings of the protagonist were opened for prescribed teacher led questioning, e.g. “hands up if you can tell me how the hero feels after saving people from a burning building?”. The degree of teacher involvement was dependent upon the age of the pupils. Pupils of younger ages participated in a more question and answer-based discussion, whereas older pupils participated in a more comprehensive, built upon discussion. Common across ages was the use of scenario based activities providing examples of emotional triggers (such as pushing in the playground, or refusing to take turns), promoting foresight techniques (e.g. ‘what should you do if this occurs’) for emotional trigger and response situations in others. This was expanded upon by identifying strategies to cope with these emotions. As with the recommendations for identifying emotions, **increasing emotional vocabulary** was seen to be important in accurate self-perception as well by providing context to the defined emotion. This allows children to develop the vocabulary to accurately qualify their own emotions and to communicate feelings to others.

Discussion based activities (e.g. circle-time) were used as a platform to address emotional awareness and to share strategies that help deal with extreme emotions (9%) (e.g. closing eyes and counting to 10). These activities were facilitated by open-ended teacher questioning with scope for pupils to elaborate further with their own opinions and experiences. This facilitated **self-reflective questioning** (i.e. ‘what would I have done?’), a metacognitive technique that allows children to **evaluate actions/reactions**, promotes self-reflective questioning, engaging the pupils’ use of private speech. Private speech (Vygotsky & Kozulin, 2012) is an internal dialog that counsel’s communication, provides goal orientated guidance, and provides self-regulation of behaviour. This technique helps children to form an understanding of how others may view them and their actions, providing an outlook for behaviour adaptation and change in future situations. Discussion based activities allow the modelling of age (in)appropriate response through peer experience and perspective. This offers the children a tool-kit of strategies (e.g. a number of ‘go to’ scripts for requesting help, explaining their difficulties, or eliciting further information) to appropriately manage emotions. The principle practices of **development of emotional vocabulary** and **self-reflective questioning to evaluate actions/reactions** of the self or others are consistently the main element of the exercise.

Key Conclusion: Alongside developing emotional an expanded **emotional vocabulary**, teachers can pursue **self -reflective questioning** with children in order form them to evaluate their self-perceptions. This can be done with existing stimulus material and/or and facilitated through discussion (e.g. circle time) dependent on the age of the children.

Self-Management

Analysis indicated that two sub-skills within the core competency were almost exclusively double-coded (i.e. the coder was unable to differentiate between CASEL’s sub-skills), denoted by the very similar percentage occurrence between impulse control (27%) and self-discipline holding (26%). Consequently, both subdomains have been merged and are delivered under the ‘self-discipline subdomain. All other sub-skills within this domain fell below the 5% threshold; ‘stress management’ ‘self-motivation’, ‘goal setting’ and ‘organizational skills’.

Self-Discipline

53% of self-discipline is instructed through kinaesthetic activity, including musical activity, dance or exercise. Within this domain kinaesthetic activities utilise **calming techniques** to manage behaviour and control behavioural impulses (e.g. tantrums and angry outbursts). The activities are aimed at relaxation and re-focusing thoughts that may lead to negative response, enabling children to be more aware of their bodies and recognising the onset of feelings and emotions before they become too intense. Many of the activities utilise proprioception, for example, meditation and mindfulness activities, and encourage children to be aware of their actions and responses so that they match both classroom and personal behavioural goals. Although kinaesthetic covers a broad range of activity the principal purpose with regards to self-discipline is consistently to utilise **calming techniques** with the view to **control behaviour**.

Key Conclusion:

Self-management, specifically self-discipline is taught almost exclusively through the use of **kinaesthetic activities** promoting calming techniques.

Social Awareness

In relation to the 5 core competences of the SEL framework, the core competency of social-awareness is predominantly addressed through '**perspective taking**' (5% of all activity) and '**empathy**' (9%). All other sub-skills within this domain fell below the 5% threshold, i.e. 'social-awareness', 'respect for others' and 'appreciating diversity'.

Perspective Taking

17.37% of this domain is instructed by a story followed by teachers asking the class questions with a 'hands-up' response. Children were given scenarios through stories or vignettes. They were then asked, "what would you do?/how would you feel?" questions. The common purpose across these activities was to promote **self-reflective questioning**; a metacognitive technique that allows children to **see the perspectives of others** and understand the emotions others may feel by visualizing themselves in that circumstance. This sets a self-reflective mental framework when rationalising the actions of others. The use of stories and vignettes allow the child to be cognizant of situations and circumstances they may not have experienced (e.g. being left out of a game), allowing the children to see the perspective of the protagonist and the reasons for their actions.

Perspective taking was also demonstrated through programme material such as pre-specified worksheets. There were variations in disposition of activity instruction- with teachers contextualizing activities with open-ended questions (e.g. "can anyone tell me how the girl might be feeling?") and the worksheet consolidating the outcome of the discussion (7.55%). There was a trend across activities towards self-directed learning, with a heavy emphasis on the use of worksheets, e.g. providing children with written scenarios, the children must then detail the perspectives of the individuals in that scenario with minimal teacher questioning (19.61%). The degree of teacher involvement was dependent upon the age of the pupils. Activities aimed at younger pupils followed a more question and answer-based format, typically directed by the teacher with the worksheet providing a way to document/evidence pupil response. Older pupils participated in a more comprehensive independent worksheet, with open-ended discussion-based questions. Activities aimed at older children looked at the potential conflict of perspectives and emotions between the protagonist and others. For example, encouraging children to reflect upon how both children in a story may feel in a situation where the

protagonist has agreed to loan something to someone in need and now does not want to. Activities aimed at younger children consider individual perspectives i.e. how might the other person feel/ accurate understanding of one's own feelings, with paucity in how perspectives and feelings may interact.

Key Conclusion:

The principle practice of developing cognizant techniques, such as **self-reflective questioning** with the view to identify and relate to the emotions and perspectives of others was consistently the main element of the activities within this sub skill.

Empathy

There was a heavy emphasis on anti-bullying within the context of activities coded as developing empathy. A common practice was to **identify emotions** as opposed to react/act upon the emotions of others, e.g. "how can you tell a person is feeling this way?" Different facets of empathy were identifiable within the material, namely; cognitive, emotional and compassionate. The type of empathy targeted varied between types of instruction and the age the activity is targeted towards.

Cognitive empathy is the ability to recognise another point of view or circumstance. Cognitive empathy was common practice in activities with both combination elements of worksheets and teacher questions. This type of activity was predominantly aimed at the key stage 2 age range, as typically developing children will have passed the formative years of development, are able to better perceive past their own feelings and emotions and, understand those of others. Empathy was instructed through programme material such as pre-specified worksheets. There were variations in disposition of activity instruction. Predominantly, teachers would contextualize activities and empathetic frameworks with open-ended questions (22.64%). Tasks focused upon recognizing the emotions others may feel under varying circumstances. Most activities focused upon **emotional recognition** through non-verbal interaction, i.e. recognizing a persons' situation (e.g. poverty) or understanding body language signifying the emotional well-being of others (e.g. how can you tell if someone is upset, what is their posture like?). A worksheet with open ended questions is then used to document response and evidence understanding. The use of a more directive worksheet (e.g. providing children with **emotional vocabulary** to assign to the given emotions of others) with minimal teacher questioning occurred less frequently (9.80%).

Emotional empathy is the ability to relate and share someone else's emotion. Emotional empathy was achieved through storytelling followed by teacher questions (11.86%) and activities where the teacher narrated an explicit understanding of empathy (14%). Activities fostering emotional empathy were predominantly aimed at younger children (key stage 1 age range). A key mechanism in the development of empathy is providing children with examples of different circumstances and getting the children to put themselves in those circumstances. This way, children are able to internally evaluate and relate to the circumstance without having to experience it themselves. Stories allow children to develop rapport with the protagonist, gain a deeper understanding of their predicament, enabling the children to relate and share the emotion. 14% of the activities within this domain involved teachers explaining what exactly empathy is and how we understand the feelings and needs of others. This included detailed descriptions of what body-language and demeanour may signify. This is done through teacher talk, following a pre-written script or aid provided by the programme.

Compassionate empathy is the use of emotional and cognitive empathy together and was common place in roleplay activities (11%). **Roleplay activities** provide scenarios where children are able to recognise another person's point of view, relate to the emotions but go further by thinking about and modelling appropriate action to help the protagonist feel better and change their situation. Roleplay activities in this subdomain were mainly aimed at upper key-stage 2 children.

Key Conclusion:

There was a recognised need to consider different forms of empathy, necessitating different approaches. Cognitive forms of empathy were supported through **increased emotional vocabulary**, whereas affective forms of empathy required **self-reflective questioning** and **role-play techniques**.

Relationship Skills

In relation to the 5 core competences of the SEL framework, the core competency of relationship skills is predominantly addressed through '**relationship building**' (11% of all activity) and '**communication**' (6%). Little to no activity was recorded for the other sub-skills recognised within CASEL's model, specifically 'social engagement' and 'teamwork'.

Communication

8.47% of activities in this sub-domain were based on stories, followed by teacher led questioning regarding themes pertaining to communication. Stories were scenario based, whereby the protagonist overcame communication barriers and demonstrated the value of communicating views and emotions. The protagonists' predicament and resolve were then opened for prescribed, teacher-led questioning, typically through a traditional 'hands up' environment. This facilitated the recognition of rules of reciprocal communication (e.g. common scripts for investigating and resolving difficulties such as asking to join a playground game already in progress) and the development of appropriate communication technique (e.g. ask for attention and then wait patiently for a response) to help **overcome communication barriers**. The scenario demonstrates the importance of attentive listening, sensitive and clear expression of feelings, and how sensitivity is required when encountering difference. Scenarios provide the children with a relatable emotional barrier to communication, e.g. anger preventing the protagonist from communicating what has made them angry. Strategies to help overcome emotional barriers (e.g. counting to ten before communicating, writing the problem down first, using 'I feel...' statements) are then provided through the medium of the story.

Advantageous communication of feelings and emotions were modelled through roleplay techniques (7%). Teachers provided pupils with common scenarios whereby a barrier to communication may occur. Pupils then modelled appropriate communication techniques for the rest of the class through dramatization. Typically, an emotional or psychological **communication barrier** is focused upon (frustration, anger, embarrassment, confidence), with the children **modelling** different techniques to overcome the barrier for their peers. This supports Piaget's development of **schemas**. Schemas are pre-existing frameworks that help us to organise and interpret information – i.e. an ideal model or reference for how to behave in given situations. In this example, a schema would include pupils being familiar with common scripts for discussing how they feel (e.g. the use of 'I feel...' statements) and how to respond (e.g. to acknowledge someone else's feelings). The principle practice of developing strategy and technique to help to recognise and overcome barriers to successful communication of feelings and emotions was consistently the main element of the exercise.

Key Conclusion: Communication skills are developed through helping children recognise **communication barriers**. This is done through sharing examples (e.g. use of stories) but also through the explicit teaching and **modelling of schemas** – rules and protocol for initiating conversation and sharing thoughts and feelings. This can be done through modelling and role play techniques. Examples include learning how to join in a game or conversation (by noting attention and for the other party to recognise that you have something to say) and/or expressing difficulties to be resolved (e.g. ‘earlier you ignored me on the playground, and I feel upset by this’).

Relationship Building

The activities within the ‘relationship building’ subdomain were predominantly peer/teacher collaboration and interaction. 13% of activities relating to relationship building involved group or class discussion regarding the advantages to making friends and how to end friendships that aren’t mutually satisfying. Discussions allowed pupils to share ideas and strategy but also accommodated deeper empathetic consideration for the thoughts and feelings of others when forming and ending friendships. Discussion of **appropriate behaviour** during the relationship building process and the **acceptance of difference**, whilst acknowledging incompatibility of friendships, are consistent themes across the activities. Activities typically supported relationship building by promoting empathetic, tolerance and acceptance techniques as opposed to promoting individual change to better accommodate friendship. As with activities centred on communication, there was a typical element of **building schemas** by agreeing rules and protocols for effective relationship building, such as the use of social scripts; being able to explain what you do and do not like about playing games with someone else – e.g. ‘can we play a game where I pick some rules?’

The combination elements of teachers asking questions and supportive worksheets form 11.32% of the instruction. Teachers ask the class questions, those are then answered either verbally by the children, followed by completion of the worksheet, or the worksheet is completed simultaneously. The questions and worksheets were commonly designed to identify strategies in promoting friendship across varying situations (e.g. when a new pupil joins a class), consistent with building schemas, ready to be deployed in ‘real life’ situations.

Generalization of friendship formation and cessation was recommended through a number of practices (10%). These took the form of very open-ended academic integration, e.g. research projects whereby pupils work together. These frequently crossed over into other disciplines and were suggestive as opposed to mandatory to the SEL curriculum. The common element was allowing teachers agency and autonomy in this exercise as best suits the context of the individual class.

Key Conclusion:

Relationships skills are built through introducing pupils to different scenarios (written, modelled or through reflective questions) in order to **develop schemas** around appropriate responses. This was supported through 'ad hoc' or teachable moments in the school day where these schemas could be practiced in 'real world' situations.

Responsible Decision Making

In relation to the 5 core competences of the SEL framework, the core competency of 'responsible decision making' is predominantly addressed through '**solving problems**' (9% of all activity). All other sub-skills within this domain fell below the 5% threshold; 'analysing solutions', 'identifying problems' 'evaluating', 'reflecting' and 'ethical responsibility'.

Upon analysis it became apparent that either the 'analysing solutions' or 'identifying problems' subdomains work in tandem with the 'solving problems' subdomain. Activities would more often than not begin with problem identification or analytical strategy and then proceed with problem solving strategy. However, the mechanics and approaches used to instruct each domain differed significantly. The 'identifying problems' and 'analysing solutions' domains focused upon autonomy and the **internal rationalization of a problem**, with the 'solving problems' subdomain focusing on the **appropriate course of action** and **seeking help**.

Identifying Problems

This subdomain is predominantly instructed (14.81%) by stories followed by teacher led questioning. Stories were typically scenario based with the protagonist being presented with a problem. Through teacher led questioning, the children are then asked to identify the protagonist's problem and to recognise the bad decisions that led to the predicament. This domain targets conflict resolution strategy and is predominant in anti-bullying activities. The principle practice was to develop the child's ability to rationalize problems autonomously including the severity of the problem and the implications.

Solving Problems

17% of this subdomain is instructed through roleplay. Through dramatization or puppetry selected children convey varying problems and the different solutions and outcomes to the class. The principle practices of the activity are to model appropriate responses to problems. Bad choices and the consequences are also dramatized.. Children are not explicitly told how to solve the conflict but are encouraged to reach a solution to the conflict themselves by **exploring choices and their consequences**. Different stages to problem solving strategy were provided. Recognizing problems and their severity is the first stage of the process. This is followed by highlighting appropriate/inappropriate methods of communicating problems (e.g. interrupting an adult and shouting out a small problem is inappropriate, whereas expressing urgency and interrupting an adult for a big problem is necessary). Problem solving skills are consistently **modelled**; however, the principle aim is to **allow children to choose solutions** to their own problems, i.e. going through the steps of exploring choice and consequence ('If I take back my toys by snatching, I will have what I want, but will upset my friends. Asking for them back may be a good first step instead').

12% of the problem-solving subdomain is instructed by teacher's explicit explanation and direction on appropriate problem-solving strategy . The medium is 'teacher talk', whereby teachers follow a programme script that explicitly narrates problem solving strategy.

9.43% of problem-solving activities followed a combined instruction of teacher questions and a supporting worksheet. The teacher questions led the activity, initiating the bulk of the content, with the worksheets used as a tool to document pupil response and learning. To a lesser extent (5.88%), more heavily instructed worksheets were used to instruct the pupils with teacher's questions used to gauge pupil performance and to feedback on the activity. The **modelling of behaviour strategy and technique** is consistently the fundamental outcome for the activities within the problem-solving domain.

E.g. a teacher explicitly verbalising problem-solving steps and role-playing the actions for events that would otherwise be addressed internally; for example, evaluating behaviour options such as pushing or taking turns out loud.

Key Conclusion:


A common theme in the development of responsible decision-making is to develop children's rationale decision making processes in order to **explore choices and their consequences**.

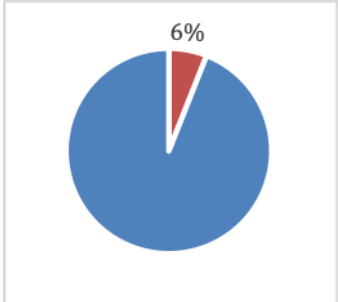
Role play is used to help development of schemas that support effective problem rationalization and assessment.

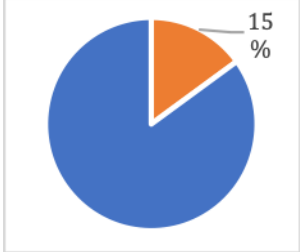
Key Conclusions

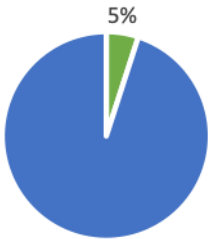
So far, the report has detailed the relationship between the hypothesised 5 core competencies of SEL and how these are typically deployed across SEL programming (specifically in reference to the focal list of select programmes). Both common practice and instructional elements have been identified for each prevalent sub-skill, and the key underlying practice extracted and discussed. This process is summarised in table 6 which links each of CASEL's 5 core domains to the identified prevalent sub-skills and then to a further specified series of sample activities. This table is not intended to provide exhaustive activities or indeed to dictate the only methods for achieving key underlying practices. It serves only to make transparent the casual chain of reasoning which guides the formation of the key conclusions.

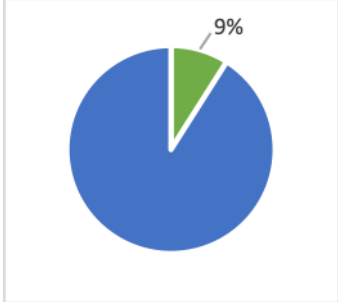
Table 6 taxonomy of evidence-based SEL practices

SEL Domain	SEL Sub-domain	Commonality of component in evidence-based SEL programmes?	Skill	Description	Sample Activity	Exemplar SEL programmes (with indicative study)	Key Stage
Self-awareness	Identifying Emotions		Increase emotional vocabulary	Increasing emotional vocabulary with view to promote emotional recognition and understanding in the self and others.	<p>Activity: The feelings card game. Materials: Cards with different positive and negative situations written upon them (e.g. losing a favourite toy). Procedure: During circle time children chose a situation card and roleplay the different emotions associated with the situation.</p> <p>Activity: Mix and match faces and feelings Duration: 10 minutes Materials: Photographs of faces displaying different emotions; emotion labels; situation labels (e.g. losing a toy). Procedure: Children to</p>	<p>Friends for Life Session: 2</p> <p>Second Step Lesson 1; Activity 4.</p>	<p>No differentiation of key stages.</p> <p>US grade 6.</p>

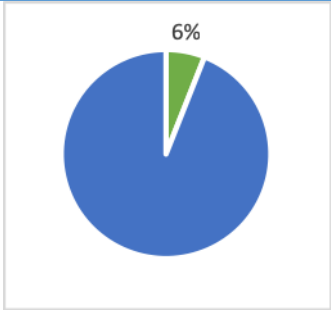
					match the faces to the appropriate emotion and then assign a situation label to the emotion.		
	Accurate Self-perception		<p>Increase emotional vocabulary.</p> <p>Development of self-reflective questioning technique.</p>	<p>Increasing emotional vocabulary and the development of self-reflective questioning techniques to enable accurate analysis of behavior and provide an understanding of how others perceive behavior. Self-reflective questioning helps children to account for their actions, make appropriate behavioral choices and consider how they can adapt</p>	<p>Activity: Story and group reflection Materials: An accessible story whereby the protagonist experiences emotion. Procedure: Read the story to the children then talk about the emotions and behaviour of the protagonist. Ask the children to reflect upon better ways the problem could have been dealt with. Any negative responses (e.g. fighting) should be talked through and alternative positive responses provided. Children can reflect upon and share similar experiences. Children to then rewrite the</p>	<p>Zippys' Friends. Module 1; session 3; activity 1.</p>	<p>No differentiation of key stages.</p>

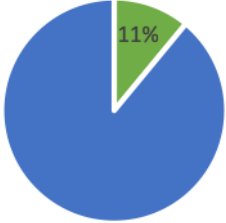
				and change future behavior to benefit goals.	story to show how they would have reacted to the problem.		
Self-management	Self-discipline		Calming techniques to manage behavior.	<p>Kinaesthetic calming techniques help children relax and promote body awareness. Technique is modelled to support physiological symptoms typically experienced when facing challenge or dealing with anger or anxiety.</p>	<p>Activity: The feelings dance Materials: A variety of music with different pace/beat. Procedure: Children to move in time to the rhythm of the music. When the music stops, children should lie on the floor and place their hand on their heart thinking about how fast it is beating and how tired the music made them. Explain how faster music is like anger-faster heart rate, tires you out, less aware of the body. Compare the opposite effects of slower music.</p> <p>Activity: Robots,</p>	<p>Friends for Life Session: 3</p> <p>Friends for Life Session: 3 Activity:4</p>	<p>No differentiation between grades</p> <p>No differentiation between grades</p>

					<p>Towers and Jellyfish. Materials: Music Procedure: Model the physiological signs of feeling relaxed and tense. Whilst the children are dancing to the music shout out an emotion the children can choose to be a jellyfish in response to that emotion- moving around all floppy, a robot- partially tense but still moving or a tower- on tip toes, still and reaching in the air. Ask the children to consider how different parts of their body feels with each movement.</p>		
Social Awareness	Perspective Taking		<p>Developing metacognitive self-reflective questioning techniques (egocentric speech) to rationalise the actions of others.</p>	<p>Accessible scenarios and modelling techniques promote self-reflective questioning, forethought and promote empathetic understanding.</p>	<p>Activity: Considering Perspectives. Duration: Materials: 2-3 pre-prepared scenarios where 2 characters have contrasting perspectives on a situation. These scenarios should be presented from both characters</p>	<p>Second Step Lesson 3; handout 3A.</p>	<p>US Grade 6</p>



					perspectives. A worksheet with a table with 3 rows; feelings, experiences, needs and wants and 2 columns; character A and character B. Procedure: Both perspectives of the scenario should be read, and the table filled out with reference to both characters.		
Empathy		Emotion recognition in others. Increased emotional vocabulary.	<p>Three varying types of empathy were uncovered (cognitive, emotional and compassionate).</p> <p>Cognitive empathy is the ability to recognise and relate to another point of view or circumstance. This is achieved through self-reflective questioning technique (e.g.</p>	<p>Activity: When and how to be an ally. Material: Writing equipment Procedure: Ask children to each write about a situation where they have experienced extreme emotion. Children to swap accounts and write what emotion the other child was feeling.</p>	<p>Second Step Lesson 2; additional practice.</p> <p>Friends for Life Session: 2 Activity:1</p>	<p>US grade 6</p> <p>No differentiation between grades</p>	

				<p>'how would I feel questions?')</p> <p>Emotional empathy looks to expand emotional vocabulary and identify emotions in others. There is no focus upon reaction/action taken to help others.</p> <p>Compassionate empathy is the use of emotional and cognitive empathy together. This involves recognizing another person's point of view and</p>	<p>Activity: Facial recognition task. Duration: 20-30 minutes Materials: Pictures of faces displaying different emotions, coloured pencil crayons, and playdoh. Procedure: Decide as a class an emotional colour 'key'. Using the colour 'key' children should colour all the picture of sad faces one colour, happy faces another, etc. till the children have covered all emotions. Ask the children to then model the faces and emotions with playdoh.</p> <p>Activity: Understanding Feelings Roleplay Materials: Feelings cards. Procedure: Modelling and explaining emotions using body language and facial</p>	<p>(number 5)</p> <p>Friends for Life Session: 2 Activity:3 (following group activity)</p>	<p>No differentiation between grades</p>
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Relationship Skills				thinking about an appropriate solution to help improve/change the situation	expression by allowing children to choose a feeling card. Children should guess the feeling and roleplay a response that can support that emotion in another person.		
	Communication	 <p>A pie chart with a large blue section and a small green section labeled '6%'.</p>	Overcoming barriers	<p>Accurate expression of feelings, needs and opinion is promoted through modelled communication technique and strategy.</p> <p>Actively listening to others and knowing the appropriate people to communicate a problem to.</p>	<p>Activity: Who can I talk to roleplay Procedure: Assign the following characters; family member, friend, teacher, and policeman/doctor. Give a child a problem and ask them to walk over to the appropriate character and roleplay how they would seek help/express opinion.</p> <p>Activity: Communication roleplay Materials: Scenario cards whereby two characters hold conflicting points of view. Procedure: In groups of two, children should choose a scenario.</p>	<p>Paths Unit 1; lesson 7; activity sheet 7B</p> <p>Paths Unit 3; lesson 20; activity; listening thoughtfully roleplay.</p>	<p>UK Year 6</p> <p>UK Year 6</p>

					<p>One child should roleplay the scenario from one point of view and the other child from a contrasting point of view. Portraying the feelings and emotions of both characters. Children should then roleplay appropriate responses and solutions to the problem (e.g. apologising)</p>		
Relationship Building		<p>The development of tolerance, acceptance and an inclusive mindset.</p>	<p>Analogic examples model how people can be different but still be friends/allies. Tolerance and acceptance of incompatibility and difference is promoted, fostering inclusive mindsets whilst encouraging children to be themselves.</p>	<p>Activity: Similarities and Differences Game. Materials: A collection of objects that are categorised as the same, however, all have minor differences (e.g. flowers- vary in colour and shape etc). Procedure: During circle discuss with the children the similarities of the objects (e.g. need water to survive). Then discuss the differences (e.g. colour). Discuss general differences between humans (e.g.</p>	<p>Friends for Life Session: 1 Activity:4 (number 7)</p>	<p>No differentiation of key stages.</p>	

					<p>race, beliefs). Highlight how like the objects we all have fundamental similarities (emphasising feelings) and we all have uniqueness. Consider how we can appreciate the uniqueness of others without changing ourselves. In small groups ask the children to find 3 ways they are similar and 3 ways they are all different.</p> <p>Activity: My Friend Puppet Materials: Puppet outlines, wooden sticks, glue and drawing/colouring equipment. Procedure: Children to make a puppet of one of their friends and introduce the puppet to the class, Children can talk about what is unique about their friend, how they became friends and</p>	<p>Zippy's Friends Module 3; session 1; activity 1.</p>	<p>No differentiation of key stages</p>
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					why they like being friends.		
Responsible Decision Making	Identifying Problems		Autonomy and internal rationalization of a problem.	Development of schemas that support effective problem rationalization and assessment.	Activity: Identifying Barriers to Goals. Materials: Written vignettes detailing a goal and a problem preventing the goal. Procedure: Children should identify the goal, identify the barrier, and identify how the character is feeling.	Tools for Getting Along Lesson 8; activity 8.1	US grade K-6
	Solving Problems		The development of problem solving strategy. Confidence in choosing an appropriate solution to a problem.	Modelling problem solving strategy highlights how there can be multiple solutions to a problem with some being better than others. Considers consequences of bad choices.	Activity: "What Can I Do?" Game. Materials: A3 paper, coloured pens, cards with problems on. Procedure. Children to choose a problem card then draw a spider diagram detailing all viable solutions to the problem. Children should swap spider diagrams with another group and add more solutions to the problem. Activity: What Will	Tools for Getting Along Lesson 10 Tools for Getting Along Lesson 13; activity 13.1	US grade K-6 US grade K-6

					<p>Happen If...? Worksheet Materials: Worksheet with a short vignette presenting an accessible problem. A negative response to the problem, a positive solution to the problem and space for children to fill in their own choice solution should be provided. Procedure: Ask the children to fill out the worksheet in response to the vignette.</p>		
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Appendices

Appendix 1 - Example Systematic Search of a database.

Pyschinfo

1. (((social and emotional) or social or emotion* or wellbeing or mental health) and (programme* or promotion or initiative or pupil or student* elementary* school or curriculum)).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
2. Results: 160403
3. limit 1 to (full text and peer reviewed journal and abstracts and childhood <birth to 12 years> and (100 childhood <birth to age 12 yrs> or 160 preschool age <age 2 to 5 yrs> or 180 school age <age 6 to 12 yrs>) and ("0100 journal" or "0110 peer-reviewed journal") and yr="2015 - Current" and (last year or last 2 years or last 3 years or last 4 years)

Appendix 2– Details of the focal list of evidence-based programmes

Programme	Authors	Programme grade range	Grade range coded	Implementor	Country of origin	Country of implementation	Domains covered	Studies
FRIENDS	Dr Paula Barrett	4-15 years	Full	Teachers	Australia	Australia, Germany, UK, Ireland	SEL - social skills, self-awareness, stress management.	Barrett, Farrell, Ollendick, & Dadds (2006) Barrett, Lock & Farrell (2005) Barrett, Sonderegger, & Xenos (2003) Barrett, Sonderegger, & Sonderegger (2001) Essau, Conradt, Sasagawa, & Ollendick (2012) Lowry-Webster, Barrett, Dadds (2001) Miller, Laye-Gindhu, March, Thordarson (2011) Ruttledge, et al (2016) Stallard, et al (2014) Barrett & Turner (2001) Bernstein, Layne, Egan, & Tennison (2005) Lock & Barrett (2003) Shortt, Barrett & Fox (2001)
I Can Problem Solve (ICPS)	Dr Myrna B. Shure	Preschool - 6th Grade	Full	Teachers and other education practitioners	USA	USA	SEL - perspective taking, problem solving, emotion recognition	Boyle & Hassett-Walker (2008) Kumpfer, Alvarado, Tait & Turner (2002)
INSIGHTS	Dr Sandee McLowry	Kindergarten-Grade 2	Full	Teacher	USA	USA	SEL - classroom management	O'Connor, Cappella, McCormick, & McLowry (2014) Capella, et al (2015) McClowry, Snow, Tamis-LeMonda (2005) McClowry, Snow, Tamis-LeMonda, Rodriguez (2010)

								McCormick, Capella, O'Connor, Hill, McClowry (2016)
KiVa Anti-Bullying	Prof Christina Salmivalli	6-16 years	K6-elementary age range	Teacher	Finland	Finland, Italy, UK (Wales)	Empathy and self-efficacy	Kärnä, et al (2013) Kärnä, et al (2011) Williford, et al (2012) van der Ploeg, Steglich & Veenstra (2016) Nocentini & Menesini (2016) Clarkson, et al (2015)
PATHS		K6-Elementary	Grade 1 Grade 4 Year 6 (UK version)	Teacher	USA	USA, UK/NI Switzerland	SEL - self-control, emotional awareness, interpersonal problem-solving skills	Bierman, Coie, Lochman, McMahon & Pinderhughes (2010) Conduct Problems Prevention Research Group (1999, 2007, 2010) Dodge, et al (2014) Malti, Ribeaud, Eisner (2012) Riggs, Greenberg, Kusche and Pentz (2006) Domitrovich, Cortes & Greenberg (2007) Humphrey, Barlow, Wigelsworth (2016) Schonfeld, et al (2015) Sheard, Ross, Cheung (2013) Berry, Axford, Blower et al (2016) Kam, Greenberg, Kusche (2004)
Positive Action	Dr Carol Gerber Allred	K-8	Grade 6	Teacher	USA	USA	SEL - character development, self-efficacy	Bavarian, et al (2013) Flay, Acock, Vuchinich & Beets (2006) Lewis (2012) Li, et al (2011) Snyder, Vuchinich, Acock, Washburn, Beets & Li (2010) Washburn, et al (2011)
Roots of Empathy	Mary Gordon	K-8	K6-elementary age range	Instructor	USA	UK, Canada, New Zealand, USA, Republic of Ireland,	SEL- Character development, communication, empathy	Santos, Chartier, Whalen, Chateau & Boyd (2011) Connolly, et al (2018)

						Germany, Switzerland, Costa Rica		
Second Step	Kathy Beland	Pre k-8	Grade 4	Teacher	USA	USA, Norway	SEL- Social competence	Taub (2002) Low, Cook, Smolkowski & Buntain-Ricklefs (2015) Neace & Munoz (2012) Holsen, Smith & Frey (2008)
Steps to Respect	Shelly Catron Burke	K6- Elementary	Grades 4/5	Teacher	USA	USA	SEL - Prosocial behaviour	Brown, Jones, LaRusso & Aber (2010) Frey, Hirschstein, Edstrom & Snell (2009) Hirschstein, Van Schoiack, Edstrom, Frey, Snell & MacKenzie (2007) Low, Frey, & Brockham (2010) Low & Van Ryzin (2014)
Tools for Getting Along		Upper elementary	Full	Teacher	USA	USA	SEL- Social problem solving, self-regulation	Daunic, et al (2012) Smith, Daunic, Aydin, Van Loan, Barber & Taylor (2016)
Tools of the Mind	Dr Elenda Bodrova & Dr Deborah Leong	Pre- Kindergarten- Kindergarten	Full	Teacher	USA	USA	SEL- self-recognition, self-regulation	Barnett, Yarosz, Thomas, & Hornbeck (2006) Barnett, et al (2008) Farran, Wilson, Meador, Norvell & Nesbitt (2015) Diamond, Barnett, Thomas & Munro (2007)
Zippy's Friends		5-7 years	Full	Teacher	Ireland	UK, Ireland, Denmark, Lithuania, Norway	SEL - self-regulation	Clarke, Sixsmith, & Barry (2015) Holen, Waaktaar, Lervag, & Ystgaard (2012) Mishara & Ystgaard (2006) Clarke, Bunting & Barry (2014)

Appendix 3 - Code Book

How to use this code book: This codebook is to help ensure an accurate and transparent documentation of the key features and attributes of SEL practices contained within each programme. This document is to be used in conjunction with the Excel record-sheet.

Programme specifics

This should be completed once per programme. This contains the key features of the programme, which can be linked to further information already gathered as part of the wider project.

Instructional elements

School-level activities (first tab on excel sheet): This should be completed for each activity that is designed to take place outside of the classroom (cross-class / whole year / whole school). This can include passive or indirect demonstration of SEL practice (e.g. posters/ staff training) but also direct examples that happen across classes and/or years (e.g. class assembly). Each coded activity should have its own row in the corresponding excel spreadsheet.

For the first time an activity code is used (per programme) please record the details and context of the example (a snapshot of the relevant manual page will be acceptable).

Class-level activities (second tab on excel sheet): this should be completed for each activity that is design to take place inside the classroom. Each coded activity should have its own row in the corresponding excel spreadsheet.

We will complete class-level activities for each school year as identified by the programme manual. For programmes where there is a repetition of material approach across similar / adjacent years (e.g. in cases where 'spiral' material repeats and builds on established themes (i.e. PATHS)) – consider (carefully) the accuracy in copy/paste of entries from earlier years.

You may code a given activity by more than one code if necessary.

For the first time an activity code is used (per programme) please record the details and context of the example (a snapshot of the relevant manual page will be acceptable)

Practice elements

It is likely, (though not necessary) that each instructional element will have one or more associated practice elements e.g. specific skills learned as part of a given intervention. This information can be extracted from the intended learning objectives / session aims.

When coding practice elements, it is important to ensure the relevant code is **explicitly** demonstrated in the material. For instance:

- a) That the particular skills are specifically referred to as part of the instruction (e.g. 'teacher is to explain how they are now sharing their feeling words' (emotional vocabulary))
- b) The activity is explicitly linked to session outcomes associated with practice elements

Further definitions for the practice elements are shown at the end of this document.

We want to build up a demonstrable portfolio of the link between instructional and practice elements, so you should record a representative example per programme (this is dependent on the range of and nature of activities – a snapshot of the relevant manual page is acceptable)

Programme specifics

Name	Name of programme (e.g. Second Step)
Version	Give year noted on materials
Grades	Years covered by programme version
Lesson structure	Overview of total number of units and sessions within a year

Instructional Elements

School-level elements

To be sorted per grade -> activity/ session number

School level activity	
Grade	If relevant
Title	Headline of title activity. IF this activity is re-occurring (e.g. numbered assemblies), any numerical identifier can be included instead.
S1	Passive display material (e.g. posters) for display in school
S2	Access to professional training (e.g. twilight sessions and/or online curriculum) for staff not directly responsible for delivering class curriculum
S3	Access to professional training (e.g. twilight sessions and/or online curriculum) for school teacher responsible for delivering class curriculum
S4	Cross-class curriculum content (e.g. school assembly material)
S5	Associated cross-class activities in supporting school climate not directly related to taught content (e.g. behaviour policy).
S6	Direct family/ parental involvement (e.g. newsletter, open class)
S7	Wider community involvement (e.g. local police attend school)
S8	Cross-class suggestions or tools designed to measure, assess, track or record outcomes (e.g. behaviour screening)
S9	Cross-class advice, support or guidance in adapting or implementing to local context (whole school – note separate code for specific groups)
S10	Differentiated activity for specific groups
S99	Other. If there is difficulty in coding an activity please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.

Class-level elements

Instructional Element Code	Description UNIQUE PART OF THE EXPERIENCE
Grade	Which year the session is for
Session	Specific session being examined
Activity	Specific activity number
C1	Story / scenario whereby context is given
C2	Didactic instruction (e.g. teacher talk) – providing explicit instruction / lesson – Not

	if leading discussion
C2.1	Teacher asking questions of the class (e.g. 'hands up')
C3	Discussion-based activity – e.g. circle-time or similar by which examples are shared
C4	Role play (e.g. through dramatization and/or use of puppetry) – adult is either observing or engaging
C5.1	Writing activity – strategies designed to build student literacy on an SEL theme (e.g. narrative depiction)
C5.2	Drawing activity – SEL themed/ directed drawing activity – child to create own images
C5.3	Other creative output with SEL theme/ focus (e.g. crafts)
C5.4	Curriculum-based material. Handouts/worksheets (e.g., cut out faces, instructional worksheets) not specified.
C12	Teacher questioning
C6.1	Language or vocabulary exercise
C6.2	Kinaesthetic activity, including song or other musical activity
C6.3	Multimedia (passive) e.g. video or audio clip
C7.1	Tools and materials integrated to promote SEL strategies: Visual displays without reference to specific use (e.g. general posters)
C7.2	Tools and materials integrated to promote SEL strategies: Embedded in class environment for ad-hoc use (e.g. problem box, traffic light poster, reward chart)
C7.3	Tools and materials integrated to promote SEL strategies: Embedded in class environment for scheduled use (e.g. pupil of the day chair). Materials/props kept with students; does not refer to worksheets.
C7.4	Curriculum material as stimulus (NB: take snapshot)
C8	Other regularly scheduled event as part of school timetable (e.g. sharing compliments)
C9	Practice & Rehearsal: Using SEL strategies (e.g. stop and count to 10, 'do turtle', 'bubble breathing', etc.)
C10.1	Games relating to SEL skill (e.g. name game, naming feelings)
C10.2	Computer games / handheld apps
C11	Multiple free-choice activities
C20	Reinforcement / generalisation – Provision of extension and/ supplementary activities and/or material beyond programme curriculum – but no specific instructions on how / when / where to implement
C21	Reinforcement / generalisation – Provision of extension and/or supplementary activities and/or material beyond programme curriculum – With directions as to how integrate with wider timetables / other content
C30	Assessment and tracking – Tools or suggestions provided for monitoring, tracking or assessing student outcomes.
D40	Differentiated activity for specific groups
C29	Experiential – Students to feel or experience phenomena under discussion – e.g. generate anxiety.
S99	Other. If there is difficulty in coding an activity please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.

Practice elements

Self-awareness:

<p>The ability to accurately recognise one's own emotions, thoughts and values and how they influence behaviour. The ability to accurately assess one's own strengths and limitations, with a well-grounded sense of confidence, optimism and a 'growth mindset'</p>	
SLF1	Identifying emotions (emotion vocabulary)
SLF2	Accurate self-perception (emotion awareness; knowing trigger points for example)
SLF3	Recognising strengths
SLF4	Self-confidence
SLF5	Self-efficacy
SLFO	Other. If there is difficulty in coding a practice element please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.
<p>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 goals.</p>	
SM1	Impulse control
SM2	Stress management
SM3	Self-discipline
SM4	Self-motivation
SM5	Goal setting
SM6	Organisational skills
SM0	Other. If there is difficulty in coding a practice element please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.
<p>Social (Other) Awareness: The ability to take the perspective of and empathise with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behaviour and to recognise family, school and community resources and supports.</p>	
SOC1	Perspective-taking (vignettes – 'what would you do?')
SOC2	Empathy
SOC3	Appreciating diversity
SOC4	Respect for others (accept difference)
SOCO	Other. If there is difficulty in coding a practice element please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.
<p>Relationship skills: The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. The ability to cooperate with others, resist inappropriate social pressure, negotiate conflict constructively and seek and offer help when needed.</p>	
RS1	Communication (language you are using to communicate)
RS2	Social engagement
RS3	Relationship building
RS4	Teamwork
RSO	Other. If there is difficulty in coding a practice element please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.
<p>Responsible decision-making: The ability to make constructive choices about personal behaviour and social interactions based on ethical standards, safety concerns and social norms. The realistic evaluation of consequences of various actions and a consideration of the wellbeing oneself and others.</p>	
RDM1	Identifying problems
RDM2	Analysing solutions
RDM3	Solving problems

RDM4	Evaluating
RDM5	Reflecting
RDM6	Ethical responsibility (e.g., not lying)
RDMO	Other. If there is difficulty in coding a practice element please record FULL details (e.g. snapshot of activity) for discussion with other reviewers.