Kernels of Practice for SEL: Low-Cost, Low-Burden Strategies

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This brief is part of a series commissioned by the Wallace Foundation that draws upon <u>Navigating Social and Emotional Learning from the Inside Out</u>, a resource developed by our team to analyze widely-used SEL programs and provide comprehensive details, transparent information, and cross-program analyses about the various in-school and out-of-school-time programs that are currently available in US contexts.

INTRODUCTION

Decades of research suggest that preparing children to be caring, ethical, contributing adults requires supporting them to develop social, emotional, and character skills that include focusing and deploying attention; understanding and managing emotions; empathizing with and respecting others; navigating social conflicts effectively; and standing up for principles of justice and fairness.

Throughout history, schools and community centers have served as an important context for building this combination of skills and habits. One common approach has been school and community-based prevention and intervention programs focused on an inter-related set of skills that generally fall under the headings of social and emotional learning (SEL), character education, bullying prevention, conflict resolution, 21st Century/life skills, youth development, and more.[1] Among these approaches, those focused on SEL appear to have the largest and most rigorously evaluated evidence base. For example, SEL programming in the early school years has been shown to improve the culture and climate of schools and classrooms, as well as children's social, emotional, behavioral, and academic outcomes.[2] This work is especially relevant for low-income or at-risk students, as children's social-emotional skills are particularly sensitive to the negative effects of stress and trauma.[3,4,5]

However, a number of barriers undermine efforts to bring SEL programming to scale[6], and these barriers are likely exacerbated in low-income and low-resource contexts:

- **Implementation challenges** (poor fidelity/inability to implement program as designed)

- **Limited local buy-in** (lack of autonomy, relevance, cultural match)

- **Lack of financial, personnel, and structural resources** (high cost of materials, extensive time required for adult training/PD)

- **Poor integration into educational practice** (typically seen as "extra-curricular" or as add-on)

- **Low sustainability** (often not continued or used consistently over time)

There is a pressing need to develop and test less intensive strategies that comprise an array of flexible and differentiated social, emotional, and behavioral supports, particularly for children exposed to poverty-related stressors and adverse experiences. These strategies can be designed to be adaptable to individual, classroom, and school-specific needs and easy to implement outside the context of a comprehensive program, while still achieving meaningful outcomes.

WHAT ARE KERNELS?

The interest in smaller scale approaches is not unique to the task of building social and emotional skills. Over the last 10-15 years, there has been a growing movement in the prevention and intervention sciences directed toward identifying *evidence-based prevention kernels*.[7,8,9]

We conceptualize kernels as low-cost, targeted strategies which, in our view, would represent the essential "active ingredients" in the more comprehensive programs we know to be effective. By design, kernels target a specific behavior (one that occurs many times or few per day) and can be taught quickly. As a result, kernels are hypothesized to be both (a) more potent, and (b) more feasible to implement than comprehensive programs, potentially increasing initial uptake, impact, and sustainability over time.

As summarized in the table below, example kernels relevant to the work of SEL include deep nasal breathing for calming down, or using hand signals in the classroom to indicate a change in activities or to send a message to the group.[10]

Table 1. Example Kernels Relevant to SEL

SEL Domain	Kernel	Description	Behaviors Affected
Managing emotions and behavior	Turtle technique for calming down	Using a turtle metaphor, child holds self, breaths through nose, and engages in verbal or sub-verbal self-coaching to calm down	Reduces arousal and aggression against peers or adults
Cognitive flexibility, attention, understanding social cues	Non-verbal transition cues	Visual, kinesthetic, and/or auditory cues to signal a need to shift attention or tasks in a specific, patterned way	Reduces dawdling, increases time on task and engaged learning, gives more time for instruction
Prosocial behavior, conflict resolution	Peer-to-peer written praise	Children write praise for peers on pad, wall display, or photo album (and/or read them aloud)	Social competence, academic achievement, violence, aggression, physical health, and vandalism

Kernels have been shown to be effective for a range of outcomes tied to academic achievement and social adjustment, including classroom behavior, discipline, self-control, and the ability to manage emotions effectively. Kernels are compelling because they do not have to be tied to a specific comprehensive curriculum (in fact they appear in many evidence-based curricula) and because they are typically low-cost and relatively simple to use. Schools (or other entities) can choose kernels or sets of kernels based on local needs, thereby reducing the cost and logistical burdens of more comprehensive interventions, and increasing the likelihood that the strategies become integrated into the standard practices of the setting in a sustained manner. The heuristic below illustrates the key components of a kernel of practice and how kernels can be used across settings to effect change.

KERNEL OF PRACTICE

OUTER SHELL

GERM

SOIL
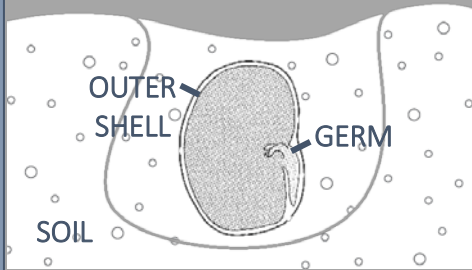
Germ: The core part of a kernel that must be in place for success.

Outer shell/wrapper: The aspects of implementation that are flexible (e.g., a wall reminder, or reading a book with a character who uses self talk), allowing for tailoring and personalization.

Soil: The type of environment necessary for the kernel to succeed. Will it be effective in any setting (like a dandelion), or does it need other promotive factors to be in place (like an orchid)?
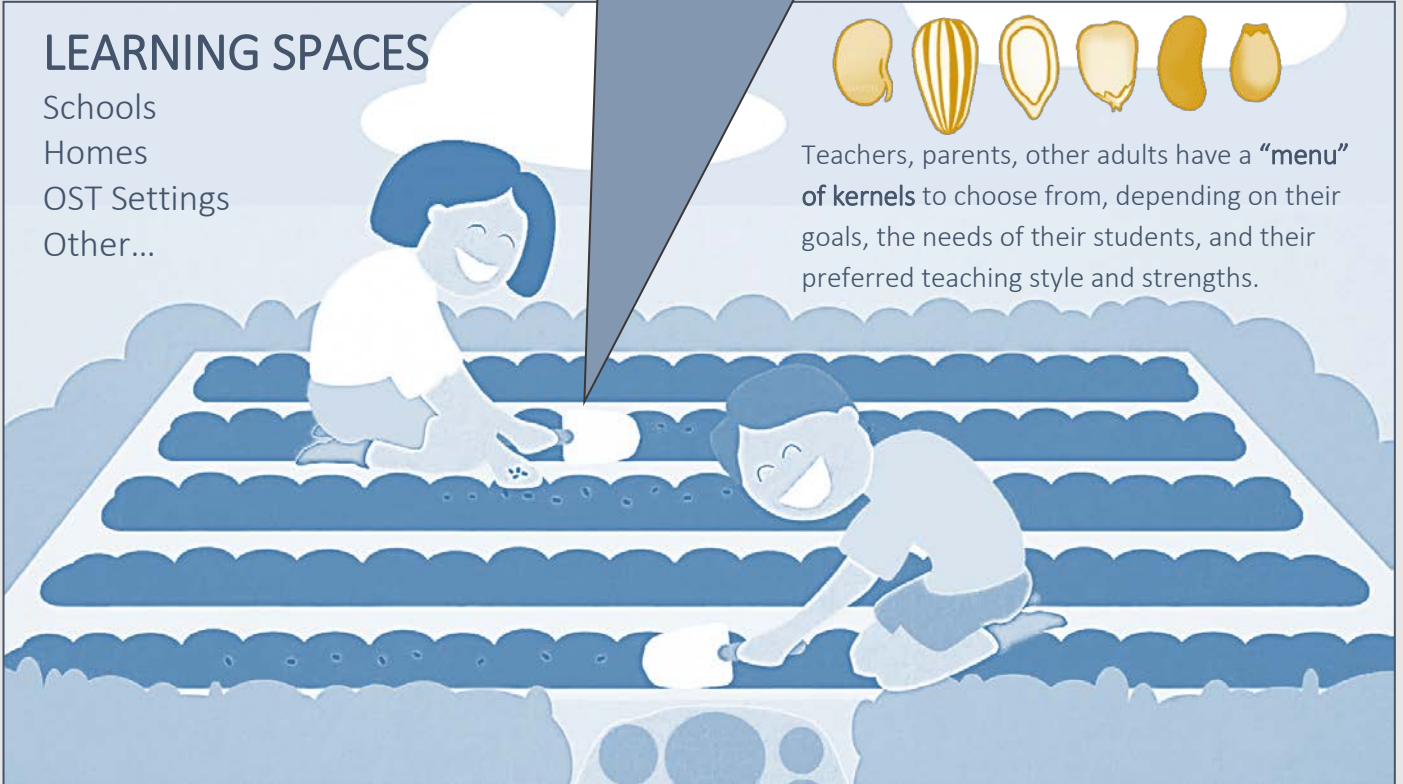
Weather: The supports needed to begin and sustain growth and use.

LEARNING SPACES

Schools
Homes
OST Settings
Other…

Teachers, parents, other adults have a **"menu" of kernels** to choose from, depending on their goals, the needs of their students, and their preferred teaching style and strengths.

BENEFITS FOR SEL & EDUCATION

A Customizable Approach to SEL

Significant attention is frequently placed on the development and testing of comprehensive and often highly-structured programs, but far fewer researchers and program developers have to date prioritized the need for adapting and tailoring resources to maximize feasibility, sustainability, and impact in the long-run. Yet research has consistently demonstrated the relationship between effective program implementation and the adaptability and compatibility of those programs. Programs are more likely to succeed when they can be personalized and adapted to fit local needs and when they are in alignment with the existing mission, goals, and practices of a school or district.[11]

Unfortunately, the large majority of evidence-based SEL interventions do not provide flexibility and sometimes view program adaptation as undermining fidelity and impact. Given the often prescribed manner of traditional approaches teachers infrequently have the freedom to select the strategies that best fit the needs of their students (i.e., learning style, skill level, interest, etc.). In contrast, kernels can provide a tailored, flexible approach that enables providers to select only those strategies or activities that best fit the needs and goals of their specific students, thereby increasing efficacy, buy-in, and promoting sustainability. In addition, kernels do not have to be tied to a specific curriculum, reducing the cost and logistical burdens that can undermine traditional, more comprehensive approaches to SEL.

A Way to Expand and Align SEL Efforts Across Settings

Kernels can be designed to help practitioners align their SEL efforts across multiple contexts. Unlike traditional comprehensive programs that frequently situate key program activities and lessons in a discrete block of time, kernels are intentionally designed to be easy-to-use and applicable across school contexts (e.g., hallways, recess, etc.) as well as in home, afterschool, and early learning settings. Kernels are easy to adapt based on individual, cultural, and other contextual needs, making them well suited for use in a broad range of contexts and populations. This approach enables educators and parents to identify, adopt, and utilize strategies that have the potential to

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EMOTION REGULATION:
A PROTOTYPE

To test the pilot process, our team used the following process to identify 5 kernels for *Emotion Regulation*, one of the common SEL domains identified in our analysis.

436
original strategies

Step 1 – From our data, we identified 436 strategies that addressed emotion regulation directly.

Step 2 – These 436 strategies were then coded for their focus, mode of instruction, and description.

Step 3 – We then used this information to determine if each strategy met the criteria for a kernel (i.e., low-cost, brief, easy to use, and not tied to a specific curriculum). For example, strategies that required significant preparation or complex materials were eliminated. After this step, 212 qualifying strategies remained.

212
qualifying strategies

Step 4 – These 212 strategies were then sorted by focus in order to identify five major kernels: deep breathing, positive self-talk, step-by-step procedures, yoga and exercise, and "toolboxes" of strategies.

5
kernels

Step 5 – The kernel below is an example of one emotion regulation kernel that emerged from our analysis and might appear in a teaching guide.

1
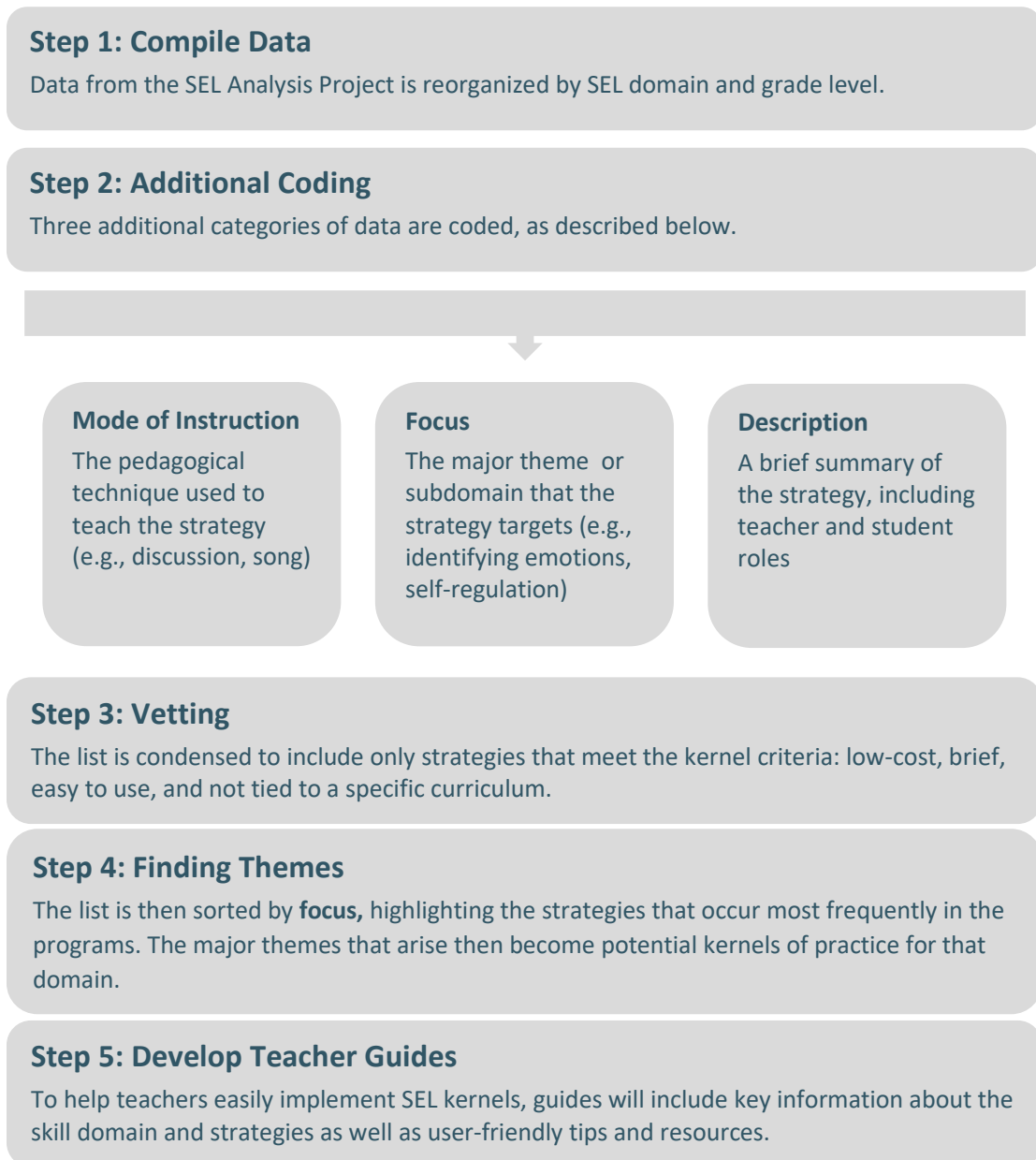**guide**

EXAMPLE KERNEL

Belly Breathing – Have students place their hands on their belly. Practice taking slow, deep breaths that cause the belly to expand. Model what it looks like to use belly breathing: act angry and then take slow, deep breaths. Allow students to see you becoming more relaxed and calm. Practice belly breathing throughout the day, particularly during transitions.

build students' social and emotional skills in a cohesive and complementary way across settings, thereby maximizing exposure and impact. By leveraging technology, kernels could be made widely accessible and easy to use, providing an affordable and scalable approach to SEL.

HOW CAN WE DEVELOP KERNELS?

As part of an in-depth analysis of 25 leading evidence-based SEL programs, our team constructed an extensive database of the strategies and activities used by leading programs to target specific SEL skills. Using the pilot process illustrated below, we have begun to comb our data for common denominators of SEL practice across programs. Ultimately, we plan to generate a "menu" of kernels that includes materials and guidance for implementation.

Figure 1. Pilot Process for Identifying Kernels

Step 1: Compile Data
Data from the SEL Analysis Project is reorganized by SEL domain and grade level.

Step 2: Additional Coding
Three additional categories of data are coded, as described below.

Mode of Instruction
The pedagogical technique used to teach the strategy (e.g., discussion, song)

Focus
The major theme or subdomain that the strategy targets (e.g., identifying emotions, self-regulation)

Description
A brief summary of the strategy, including teacher and student roles

Step 3: Vetting
The list is condensed to include only strategies that meet the kernel criteria: low-cost, brief, easy to use, and not tied to a specific curriculum.

Step 4: Finding Themes
The list is then sorted by **focus,** highlighting the strategies that occur most frequently in the programs. The major themes that arise then become potential kernels of practice for that domain.

Step 5: Develop Teacher Guides
To help teachers easily implement SEL kernels, guides will include key information about the skill domain and strategies as well as user-friendly tips and resources.

In addition to developing a set of grade-differentiated guides for school settings, this process could be used to develop guides for additional grade ranges and related domains (e.g., character, mindset). Additional guides could also be created for families or out-of-school time organizations. In this way, kernels provide a flexible and cohesive approach to SEL across contexts.

This could be used to map a potential developmental trajectory of SEL skills. Because the strategies are divided by grade level, patterns may arise that allow teachers to scaffold SEL instruction. As students get older, teachers can utilize increasingly complex strategies that build on the existing skills that they have learned. Understanding this trajectory could be incredibly useful as educators seek to integrate SEL into everyday practices and curricula across grade levels.

ACKNOWLEDGEMENTS

NOTES

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[10] Embry & Biglan, 2008

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THE FULL REPORT:

Navigating Social and Emotional Learning from the Inside Out

Looking Inside and Across 25 Leading SEL Programs

Commissioned by the Wallace Foundation and prepared by researchers at the EASEL Lab at the Harvard Graduate School of Education, _Navigating Social and Emotional Learning from the Inside Out_ is an in-depth guide to 25 evidence-based programs—aimed at elementary schools and OST providers—offers information about curricular content and programmatic features that practitioners can use to make informed choices about their SEL programs. The first of its kind, the guide allows practitioners to compare curricula and methods across top SEL programs. It also explains how programs can be adapted from schools to out-of-school-time settings, such as afterschool and summer programs.

Building upon existing tools in the field, the guide offers a practical, consumer-oriented resource that provides profiles of each program, including the specific skills targeted and instructional methods used. Some programs, for example, are designed to help students regulate their behavior, while others are aimed at developing certain mindsets or character traits.

About the EASEL Lab

The Ecological Approaches to Social Emotional Learning (EASEL) Laboratory, led by Dr. Stephanie Jones of the Harvard Graduate School of Education, explores the effects of high-quality social-emotional interventions on the development and achievement of children, youth, teachers, parents, and communities. Our projects aim to advance the field of social and emotional learning through research, practice, and policy. The EASEL Lab also affects change through its translational projects, which work to strengthen the links between the growing body of evidence supporting high-quality SEL and the creation and application of education policy and practice more generally.

About the Wallace Foundation

**The Wallace Foundation's** mission is to foster improvements in learning and enrichment for disadvantaged children and the vitality of the arts for everyone. Our approach to accomplishing our mission emerges from the idea that foundations have a unique but often untapped capacity to develop evidence and experiences that can help advance an entire field. Wallace currently has initiatives in seven areas: afterschool, arts education, building audiences for the arts, social and emotional learning, expanded learning, school leadership and summer learning.

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