Kernels of Practice for Social Emotional Learning in Afterschool Settings

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A.   SIGNIFICANCE

A1. Project Summary

The Harvard Graduate School of Education (HGSE), in partnership with Abt Associates and 21st Century Community Learning Centers in Nebraska, is pleased to submit an Education Innovation and Research (EIR) early-phase proposal, "Kernels of Practice for Social Emotional Learning in Afterschool Settings." SEL Kernels are a set of activities and routines designed to support children's social, emotional, and academic development. SEL Kernels are an innovative alternative to existing SEL programs, which are often expensive, rigid, and difficult to implement as intended. In contrast, SEL Kernels are low-cost, easy to use, and adaptable to different age groups, settings, and student needs. This project will address two urgent challenges: (1) increasing need for high-quality social, emotional, behavioral, and academic supports, due to school closures and ongoing turbulence caused by the COVID-19 pandemic; and (2) recent opposition to the implementation of SEL curricula in Nebraska public schools, which limits children's access to key social and emotional supports. Concerns about academic recovery and social-emotional wellbeing are especially acute for low-income and marginalized students, as the negative consequences of the pandemic (e.g., increased housing and food insecurity, stress, isolation, loss of learning time, loss of life) have impacted low-income and marginalized families more than their affluent peers [1, 2, 3]. The removal of school-based SEL programs will therefore have a disproportionate effect on the learning and wellbeing of Nebraska's most vulnerable students. This project will promote more equitable outcomes among young students in Nebraska by providing high-quality SEL training, materials, and supports to low-income communities via afterschool programs. Afterschool settings in Nebraska are a logical and viable setting for SEL intervention, particularly when schools are no longer an option.

The project will be conducted with 21st Century Community Learning Centers (CCLCs) across the state of Nebraska (see letter of support, Appendix C). CCLCs are funded by the US Department of Education to support out-of-school time (OST) programming, including afterschool and summer programs, particularly for students who attend high-poverty and low-performing schools. During the 2020-2021 school year, 150 CCLC sites served Nebraska public schools in both rural and urban communities across the state. Over 13,000 students attend Nebraska CCLCs, with approximately 82% in Grades K-6, 74% receiving free/reduced lunch, 53% identified as racially/ethnically diverse, 11% with special education verification (e.g., IEPs), and 13% English language learners [4]. This project builds on an ongoing partnership between the EASEL Lab at HGSE and Nebraska CCLCs in which we have been pilot testing a small set of SEL Kernels for use in summer programs. If funded, we will: (a) partner with CCLC staff to adapt SEL Kernels for afterschool settings; (b) implement and evaluate SEL Kernels in 90 CCLC sites across Nebraska; and (c) make ready a final set of materials for broader distribution. Across the four years of this project, we expect to serve a total of 8,000 children across the state, which represents two-thirds of the total population of afterschool students in Nebraska.

A2. EIR Program Priorities

This proposal addresses Absolute Priority **AP1** "Demonstrates a Rationale" and Absolute Priority **AP4** "Meeting Student Social, Emotional, and Academic Needs." Specifically, SEL Kernels meet the needs of underserved students in Nebraska by promoting the development of skills tied to academic achievement and positive life outcomes, including executive function, self-regulation, emotion knowledge, and social problem-solving. Furthermore, SEL Kernels training and implementation supports will improve afterschool staff capacity to manage and respond to stress, engage in effective and scalable teaching practices, and to adapt SEL strategies

to the needs of individual students and contexts. In addition, our project addresses Competitive Preference Priority **CPP1** "Promoting Equity" and Competitive Preference Priority **CPP2** "Addressing the Impact of COVID-19." Our project addresses **CPP1** in the following ways: (a) SEL Kernels were co-developed with educators from diverse communities across the US and intentionally designed to be inclusive with regard to race, ethnicity, culture, language, and disability status; and (b) many Kernels were specifically designed to promote equity and culturally-responsive teaching, for example strategies that guide teachers to reflect on their own biases and engage in more equitable teaching practices. Our project addresses **CPP2** by responding to the twin challenges of disrupted teaching and learning and exposure to high levels of stress and trauma caused by the pandemic. SEL Kernels do this by establishing structures and routines that provide predictability and safety, support positive relationships and engagement with learning, and promote a positive learning environment; and by incorporating trauma-informed practices and staff training. SEL Kernels are especially important for young children in Nebraska who were most impacted by the social exclusion and school closures of the past year: students in poverty, students of color, students with special needs, and immigrant students.

A3. A Promising New Strategy: SEL Kernels in Afterschool Settings

Traditional approaches to SEL take the form of comprehensive, scripted programs implemented during the school day that often include pre-packaged curricula and structured, sequential lessons. Unfortunately, the costs and training required for these programs tend to be high, and they do not provide teachers the opportunity to integrate SEL meaningfully throughout the day, or the flexibility to select strategies that best fit the needs of their students (e.g., learning style, skill level, interest) and to address real-world challenges as they arise. A number of additional barriers – such as limited time and resources, lack of local buy-in, lack of relevance or

cultural match, and poor integration into everyday practice – undermine efforts to bring comprehensive SEL programming to scale [5, 6]. These barriers are often exacerbated in low-resource contexts. There is a pressing need to develop and test low-cost, flexible strategies that are adaptable to individual and setting-specific needs and easy to implement outside the context of a comprehensive program, while still achieving meaningful outcomes for children.

Furthermore, the recent rejection of school-based SEL programs in Nebraska and other states has made it difficult (or impossible) to implement SEL in some school contexts. Our project addresses these challenges by adapting a low-cost, flexible, strategy-based approach called SEL Kernels **(AP4)** and implementing them in an afterschool context with particular attention to culturally-responsive and trauma-informed practice **(CPP1, CPP2)**. The COVID-19 pandemic revealed and deepened profound disparities in children's access to high quality learning opportunities, as well as critical social and emotional supports [7, 8] **(CPP1)**. Educators and health professionals are reporting increased problems in children's social, emotional, behavioral, and mental health as a consequence of school closures and pandemic-related stress and trauma **(CPP2)**. Thus, social emotional supports are both at risk and more important than ever. Afterschool settings provide a much-needed context for offering these supports in ways that are tied to, but not directly in, schools.

Out-of-school-time (OST) and afterschool[1] settings are unique places to cultivate SEL skills in children. Approximately 8 million K-12 youth are currently enrolled in afterschool programs across the US. These settings are ideal for promoting SEL as they provide opportunities for students to develop positive relationships with adult mentors, try new things in a supportive environment, and develop a sense of confidence and competence [9, 10]. OST staff

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[1] Note, from this point onward the terms out-of-school time (OST) and afterschool are used interchangeably.

are often closer in age and from the same communities as participating students, which can help children see them as more credible sources of information and wisdom than their teachers [11]. Furthermore, OST leaders are more likely than school leaders to describe SEL as central to their mission and focus [11, 12]. Despite this natural fit, there is little research on the impact of OST programs on SEL outcomes, and there are few SEL programs designed explicitly for OST settings [13]. More research and programmatic options are needed to effectively promote SEL in afterschool contexts. Despite their large role in children's lives, afterschool programs are understudied and provided with insufficient resources, most notably training for staff. In a survey of more than 800 CCLC staff in Nebraska, staff reported feeling prepared across most areas of their work (e.g., working with colleagues, providing homework help), but they requested more training in the areas of social emotional learning and creating engaging programming [14].

SEL Kernels are routines or strategies that are used by effective programs to build specific SEL skills **(AP1, AP4)**. Kernels are organized into five broad categories: Brain Power (executive function), Feelings Power (emotion-related knowledge and skills), People Power (social skills), Attitude Power (mindsets such as self-efficacy and growth mindset), and Citizen Power (citizenship and responsible decision making). Described as the "active ingredients" in more traditional, comprehensive programs [15, 16], SEL Kernels were identified through a content analysis of evidence-based SEL programs. We identified common strategies, activities, and routines used across a variety of effective SEL programs, and simplified them to their core components. Printed on colorful, handheld cards with clear instructions and teaching tips, SEL Kernels are designed to be low-cost, easy-to-use, and adaptable to different contexts or needs [6, 17, 18]. Unlike more comprehensive and time-intensive programs, SEL Kernels can be taught and used quickly, can be used with diverse age groups and across a wide array of settings (such

as home, school, or afterschool), and enable adults to select the strategies that best fit the needs and goals of their students which fosters equitable access and delivery **(CPP1)**. As a result, Kernels are hypothesized to be more potent and more feasible to implement than comprehensive programs, potentially increasing uptake, impact, and sustainability over time.

Evidence To-Date. Over the past 10 years, our team has been developing and testing a kernels prototype called Brain Games. Brain Games are quick and fun games designed to build children's executive function (e.g., working memory, response inhibition, cognitive flexibility, and attention control) as well as broader self-regulation, communication, and social skills. Brain Games were originally part of a comprehensive SEL program called SECURe [19, 20], and initial studies found them to be the activity most frequently and widely used by teachers [21]. In response to these findings, we adapted Brain Games to be a stand-alone strategy that can be used flexibly by teachers based on their choice, preference, and needs. In a pilot study in a high-risk, urban public school district, 80% of teachers reported playing 1-2 games per day. With no extensive training or specific designated SEL time, teachers found Brain Games easy to adapt and integrate into their daily practice and described them as helpful in facilitating relationship building, student leadership, and positive school culture through the use of consistent language and routines throughout the day and across contexts [21]. A recent RCT of Brain Games in 36 PreK-4th grade classrooms across six low-income schools found that students exposed to Brain Games showed improvements in attention, prosocial behavior, and global executive functions, as well as a decrease in impulsivity [21, 22]. The effect sizes in this study, largely driven by PreK-2nd grade students, were similar to, and in some cases greater than, the effect sizes in some comprehensive SEL programs [23]. Building on the positive findings for Brain Games, our team developed a set of SEL Kernels to target a wider range of social and emotional skills, and have

been piloting them in school and OST settings. In a pilot study of SEL Kernels with low-income PreK-8th students attending an annual summer program, staff reported high usage (average 2-3 kernels per day) and high rates of perceived effectiveness (average 8 on a scale from 1-10), and reported they could successfully implement Kernels in just 7-11 minutes on average [24, 25]. In a recent quasi-experimental study of SEL Kernels in eight elementary schools in Canada, Kernels use coincided with improvements in executive function and self-regulation skills, prosocial behavior, student-teacher relationships, and a reduction in disciplinary events [26]. These findings demonstrate that SEL Kernels are a promising new strategy that builds on existing evidence-based programs to provide a more flexible, targeted, and feasible approach to improving student outcomes. Since the start of the pandemic, our team has developed adaptations for virtual learning, as well as new strategies and routines to help students cope with school closures and other disruptions caused by COVID-19, and added specific trauma-informed practices and staff training. These Kernels are particularly relevant for children in Nebraska and elsewhere who have been most impacted by the pandemic **(CPP2)**.

B. PROJECT DESIGN

B1. Conceptual Framework

Research demonstrates that students learn more and classrooms are more effective when children and youth have the skills to identify and manage emotions, focus their attention, successfully navigate relationships with peers and adults, develop a positive self-concept, and problem solve effectively [27-30]. Over the past two decades, a growing body of evidence from experimental studies [31-33] and several meta-analyses [23, 34-36] show that high-quality SEL programs impact students' academic achievement and school-related behavior. SEL programs are tied to improvements in behavioral and mental health outcomes, as well as teacher-reported

grades and standardized test scores [37-41], and to later life outcomes including college entry and completion, better health, and reduced criminal behavior [42-44]. In addition to improving student outcomes, SEL interventions can lead to setting-level changes tied to a range of important learning experiences, including safer and better-functioning learning environments characterized by supportive culture and climate, positive relationships, effective classroom management, and reduced behavioral problems [45-53]. High-quality SEL programming is also associated with reduced teacher stress and burnout [54, 55] and improvements in school liking and student attendance [23, 31, 40]. Interest in SEL is high among educators [56-58], and concerns about children's social emotional development, mental health, and wellbeing have increased significantly during the COVID-19 pandemic [2, 59]. SEL is especially relevant for low-income or at-risk students, because children's social and emotional skills are sensitive to the negative effects of stress and trauma [60-65]. Importantly, research indicates that SEL programs can buffer children from some of the negative effects of adversity, and some studies find that SEL programs have their largest impacts among students who face the greatest number of risks or who start school behind their peers academically or behaviorally [24, 31, 40, 66]. Thus, high-quality SEL programming is an effective way to improve key outcomes for high-need students.

Evaluation research demonstrates that effective implementation is also necessary to achieve intended program impacts [67-69]. Among SEL programs, higher dosage, fidelity, participant responsiveness, and implementation quality are associated with better student outcomes [69-71]. Unfortunately, implementation challenges are common in high-need settings, where the resources to train and support staff are limited and SEL implementation quality is often low. In this project, we will support high-quality implementation by monitoring implementation and providing targeted supports (e.g., weekly SMS messages and reminders,

demo videos, tips to improve practice) to address implementation challenges in real time. We will draw on behavioral insights methods to design and test supports that have been shown to reduce or eliminate specific barriers to implementation [72, 73]. Figure 1 depicts the SEL Kernels theory of action and hypothesized links to outcomes (see Appendix G: Logic Model).

B2. Meeting the Needs of Students in Nebraska

SEL has become somewhat controversial in Nebraska public schools, as it has in many states, and in some cases long-standing SEL programming such as Second Step has been removed. In the face of these decisions, and with the ongoing disruption and stress of the pandemic experienced acutely by Nebraska's youngest school-age children, social and emotional supports are at risk and yet more important than ever. It is worth noting that children entering grades K-2 in the 2022-2023 school year were 3 and 4 years old at the start of the pandemic; many attended preschool and/or Kindergarten virtually for over a year, and therefore missed a key window for the introduction to school and its social, behavioral, and instructional routines [74]. In Nebraska, afterschool settings offer a critical context for providing SEL supports in ways that are connected to schools, even if not directly implemented by school staff. Statewide, there are 150 CCLCs that are co-located and operated by public schools. Nebraska CCLCs have a diverse workforce. In 2019-2020, 62% of staff were age 30 or younger and a majority of these were enrolled in college or other post-secondary education [14]. For education majors, the Nebraska CCLCs provide a training ground for learning how to teach and build relationships with students of diverse ages, backgrounds, and abilities. Partnerships between CCLC programs and postsecondary institutions across the state are mutually beneficial for both K-12 students and college students, as these young adults gain knowledge and skills for their future teaching careers. Consequently, SEL Kernels will provide key social, emotional, and academic support to

Nebraska's most vulnerable students impacted by COVID-19, while also building capacity among the emerging workforce for the Nebraska K-12 school system.

B3. Goals, Objectives, and Outcomes

The project will accomplish four primary goals: (1) develop, pilot, and refine SEL Kernels for OST settings, resulting in a flexible array of strategies to build social and emotional competencies **(AP4)** with an emphasis on those that promote equity **(CPP1)** and address challenges and trauma associated with the COVID-19 pandemic **(CPP2)**; (2) design implementation systems and supports for continuous improvement among OST staff, including access and use of relevant monitoring data, behavioral nudges via SMS messaging and short demo videos, and other resources made available through an online platform; (3) implement SEL Kernels with students in Grades K-2 in 45 Nebraska (NE) CCLCs in Study Year 1 plus an additional 45 NE CCLCs in Study Year 2, resulting in improved social, emotional, behavioral, and achievement-related outcomes for K-2 students across a total of 90 sites; and (4) finalize SEL Kernels and disseminate materials and lessons learned, ensuring that project materials and study results can be accessed and used beyond the project period. Across the four years of the project, we will serve a total of 8,000 students in Nebraska. Table 1 outlines the specific objectives, outcomes, and performance measures associated with each of the project goals.

Table 1. Goals, Objectives, Outcomes, and Performance Measures

Objective	Outcome	Performance Measure(s)
Goal 1: Develop, pilot, and refine SEL Kernels for OST settings		
1. Conduct landscape research to inform the selection and design of SEL Kernels for OST settings.	A set of draft Kernels selected to meet the needs of K-2 students in NE CCLCs.	Surveys and interviews with OST staff, and observations from site visits to NE CCLCs.
2. Create initial prototypes, pilot with OST staff, and apply behavioral insights to	A set of refined Kernels that are designed to address implementation barriers and	Surveys and observational data collected during design workshops, rapid-cycle

test core assumptions and refine materials.	maximize relevance and uptake within OST settings.	prototyping, and piloting of materials in NE CCLCs.
Goal 2: Design systems and supports for continuous improvement among OST staff, resulting in high-quality implementation of SEL Kernels at participating sites		
3. Apply behavioral insights to design and test a set of implementation supports for SEL Kernels in OST settings.	An online platform with resources to support staff understanding and use of SEL Kernels (demo videos, SMS messaging, rewards system, tailored suggestions, etc.).	Surveys and observational data collected during design workshops, prototyping, and piloting in NE CCLCs.
4. Provide ongoing support for OST staff implementation in Study Years 1-2.	All participating OST staff access and use supports, and report increased understanding and use of Kernels intervention.	Monitoring data collected by project management team, and OST staff surveys; website analytics.
Goal 3: Implement SEL Kernels with K-2 students in 90 Nebraska CCLCs over a two-year study period, resulting in improved student, staff, and site outcomes		
5. Recruit 90 NE CCLCs.	Signed letters of agreement with 90 NE CCLCs.	Operations data collected by project management team.
6. Provide SEL Kernels training and booster to staff in 45 sites in Study Year 1, and 45 sites in Study Year 2.	All participating OST staff complete a survey after the initial training and again after the mid-year booster.	Monitoring data collected by project management team; OST staff surveys.
7. Implement SEL Kernels in 45 sites in Study Year 1, and 90 sites in Study Year 2.	All participating OST staff complete weekly implementation logs.	Monitoring data collected by project management team; implementation logs.
8. Monitor SEL Kernels delivery in Study Years 1-2.	All participating OST staff implement Kernels with fidelity and report positive perceptions of Kernels use, efficacy, and value.	Monitoring data collected by project management team; implementation logs; website analytics.
Goal 4: Finalize SEL Kernels and disseminate project materials and lessons learned		
9. Revise and finalize SEL Kernels materials based on implementation research.	A final set of materials, training, and implementation supports that are available via online open-access platform.	Monitoring data collected by project management team; website analytics.
10. Disseminate project findings and lessons learned.	A set of reports and academic papers, conference presentations, and practice-oriented papers and briefs.	Monitoring data collected by project management team.

B4. Dissemination of Results

The existing partnership between EASEL and Nebraska CCLCs, and the multi-phase, iterative design will facilitate the dissemination of results throughout the project. At the end of each project year, EASEL will produce an annual report describing progress, milestones, and findings from formative research. These reports will be shared with Nebraska partners and will enable regular discussions of project findings and ongoing dissemination of lessons learned. In addition, Nebraska schools will be paying attention to the findings of the study to determine possibilities for integration in school settings in the future. At the end of the project, a final set of all SEL Kernels materials, staff training, and implementation supports will be made available through an online open-access platform, to enable use of SEL Kernels beyond the project period. EASEL and Nebraska partners will work together to share project findings and disseminate online resources to OST sites around the country, through the national network of 21st Century Community Learning Centers and other professional networks. Last year, the national network of CCLCs served over 1.8 million students, focused in high-need communities [75].

C.   MANAGEMENT PLAN AND RESOURCES

The project partners have many years of experience leading large-scale, multi-year, multi-site projects that involve developing, implementing, and testing interventions with creativity, fidelity, and rigor. This section describes the activities and processes that will ensure our success, and provides information about the organizational capacity and resources of our partnership.

C1. Timeline, Milestones, and Team Responsible

Below we present details of the project timeline, key milestones, and teams responsible for accomplishing all tasks. This section is organized around each of the four project goals. Note, the first six months (January – June 2023) is a planning period in which EASEL will set up

project infrastructure including staffing and hiring, refining project plans, securing contracts, etc. Appendix J includes a visual Timeline (Figure 2) and table of milestones and dates (Table 2).

Goal 1: Develop, Pilot, and Refine SEL Kernels for OST Settings. Appendix J, Table 2 shows the process and timeline to develop SEL Kernels for OST Settings. The first steps are to identify specific needs of K-2 students and key opportunities for integration of SEL strategies within afterschool contexts. In Summer 2023, EASEL will conduct landscape research through a series of phone interviews and online surveys to staff and leaders at NE CCLCs. EASEL will analyze these data to inform the initial selection of existing Kernels from our database that meet K-2 student and staff needs and the adaptation or creation of new Kernels. EASEL will make a 3-week site visit to a small number of NE CCLCs, to conduct observations and recruit a group of "core afterschool staff" who will participate in workshops and piloting throughout the project design phase. EASEL and NE partners will work together to present the opportunity to OST staff. To accomplish Goal 1, we will recruit 6 afterschool staff in each of 4 sites (24 staff total) who will receive stipends for their role throughout the design phase. During Fall-Winter 2023, intervention materials will be continually revised, based on observations and staff feedback. In Spring 2024, the refined materials will be piloted in afterschool settings and EASEL will gather additional feedback through staff surveys. In Summer 2024, final revisions will be made to the content and design of SEL Kernels, and materials will be printed for use in the upcoming study. The final set of SEL Kernels will reflect the afterschool learning environment, with emphasis on equitable and trauma-informed practices and strategies that are responsive to COVID-related challenges, stressors, and operational needs **(CPP1, CPP2)** (e.g., addressing challenging behaviors, effects of social isolation, mental health and wellbeing).

Goal 2: Design systems and supports for continuous improvement among OST staff, ***resulting in high-quality implementation of SEL Kernels at participating sites.*** Appendix J, Table 2 shows the process and timeline for designing supports for continuous improvement. To accomplish Goal 2, EASEL will work across the full project period to systematically improve SEL Kernels implementation among afterschool staff. EASEL will use design workshops, prototyping, surveys, and observations to introduce different types of supports and to gather data on their effectiveness. Support types may include: SMS messaging to provide staff with reminders to try a new Kernel or tips for implementation, demo videos for specific activities, a system for earning badges or other rewards for setting and accomplishing goals, monitoring tools that ask staff to identify SEL classroom challenges and provide tailored recommendations for Kernels targeted to those challenges, and emails with SEL teaching tips and Kernels-related resources. EASEL will use SEL instructional tools developed in other OST partnerships to collect data and provide tailored support to individual teachers. The implementation supports will be revised throughout the project period based on monitoring data, observations, and staff feedback. Throughout both years of the study (Fall 2024 – Spring 2026) EASEL will monitor afterschool staff members' access and use of the online supports, alongside staff reports of their understanding and use of SEL Kernels via weekly implementation logs and surveys.

Goal 3: Implement SEL Kernels with K-2 students in 90 Nebraska CCLCs over a two- ***year study period, resulting in improved student, staff, and site outcomes.*** Appendix J, Table 2 shows the process and timeline for implementing Kernels in NE CCLCs. In Summer 2023, Abt Associates, the independent evaluator, in coordination with EASEL, will secure approval from Harvard's Institutional Review Board for the two-year implementation and evaluation studies. EASEL and Nebraska partners will collaborate to present the project to afterschool site leaders

across the state and will secure letters of participation from 90 sites. In early Fall 2024, EASEL will deliver SEL Kernels training and accompanying materials to K-2 afterschool staff in the 45 Nebraska CCLCs that have been randomized to the treatment condition, and staff will complete a post-training survey. In Winter 2025, EASEL will deliver a mid-year booster and afterschool staff will complete a post-booster survey. Throughout Year 1 of the study (Fall 2024 – Spring 2025), staff will implement SEL Kernels and complete weekly implementation logs, and EASEL will collect and monitor the implementation data. The same procedures will be used in Year 2 of the study, with EASEL delivering SEL Kernels training and booster to K-2 staff at the 45 additional sites (control/delayed treatment sites), for a total of 90 implementing sites in the 2025-2026 school year. (Please see Project Timeline in Appendix J for a visual representation.)

In both years, the SEL Kernels training will be delivered during a week-long visit to Nebraska, which will include the following components: (a) meeting with afterschool site leaders to provide an overview of the Kernels theory of change and how leaders can support implementation; and (b) half-day training to introduce afterschool staff to the Kernels materials and implementation supports, demonstrate core strategies, and provide opportunities for staff to practice Kernels in small-groups. Multiple trainings will be conducted over the week to cover all participating sites (e.g., in multiple regions of the state). These trips will be conducted by two EASEL staff (Kernels Lead Developer and Lead Trainer) with the support of five research assistants, who will help to facilitate break-out groups, lead demonstrations of Kernels activities, and collect staff surveys at the end of the training session. In both years, the mid-year booster will also be delivered during a week-long visit to Nebraska, which will include the following components: (a) meeting with site leaders to discuss mid-year perceptions of Kernels use, value, and efficacy; (b) booster training with staff focused on best practices for implementation, making

adaptations to Kernels, and trauma-sensitive SEL strategies; and (c) observations by trained researchers in 25% of participating afterschool sites, in order to collect additional monitoring and implementation data. The booster trip will be conducted by the EASEL training team. Five trained research assistants will observe SEL Kernels implementation, complete a fidelity checklist, and provide feedback to afterschool staff and site leaders.

Goal 4: Finalize SEL Kernels and disseminate project materials and lessons learned. Appendix J, Table 2 shows the timeline to finalize Kernels and disseminate project results. EASEL will create annual reports for Nebraska partners describing progress, milestones, and findings from formative research. In Summer 2026, EASEL will analyze implementation data from across the study years, in order to revise and finalize SEL Kernels materials for broader dissemination based on findings and teacher feedback. In Fall 2026, a final set of all intervention materials, staff training, and implementation supports will be made available through an online open-access platform, to enable ongoing use of SEL Kernels beyond the project period. The SEL Kernels website will host additional resources such as project results, conference papers, and publications. EASEL and Nebraska partners will work together to share project findings and disseminate online resources to OST sites around the country, through the national network of 21st Century Community Learning Centers and other professional networks. Finally, we will present our findings in academic and practitioner conferences and, such as SRCD, SPR, AERA, and the CASEL Learning Exchange. EASEL and Abt partners will publish our findings and lessons learned in academic journals and practice-oriented papers and briefs.

C2. Project Management

Teams and Qualifications. This project requires the collective expertise and effort of experienced partners who share a strong history of collaboration (EASEL Lab, Abt Associates,

Nebraska's 21ˢᵗ CCLC Program). Led by ████████████ of the Harvard Graduate School of Education, the EASEL Lab has an excellent track record of school-based and OST partnerships, including coaching, professional development, the co-creation of programmatic materials, and joint intervention implementation, as evidenced by partnerships with K-12 schools and districts across the US and international settings. An expert in children's social, emotional, and behavioral development with a focus on vulnerable populations, ████ has led numerous large-scale research and evaluation projects tied to social-emotional learning and development, early childhood education and practice, and school violence prevention. Abt Associates is well regarded for its rigorous approach to solving complex challenges and has led numerous high-profile, innovative studies and rigorous impact and implementation evaluations for multiple agencies in the federal government, states, and foundations. Abt staff currently serve as the external evaluators for six Education, Innovation and Research (EIR) early and mid-phase grant evaluations and Abt holds the current contract to provide evaluation technical assistance to all EIR evaluations. The Abt team proposed for this evaluation is well-versed in the What Works Clearinghouse (WWC) evidence standards and all team members are certified WWC reviewers. The evaluation leads, ██████████████████████, offer seasoned leadership and a depth of knowledge about evaluations and the evidence requirements for EIR grant evaluations. The Nebraska team is led by ████████████, Statewide Coordinator of Nebraska CCLCs, and ███ ██████████████ of the University of Nebraska Medical Center (UNMC) Munroe-Meyer Institute. ████████ team is currently and has been the lead evaluation team for Nebraska's 21st CCLC sites for over 10 years. Her team has also been the external evaluator for Nebraska's State Personnel Development Grant (SPDG) focusing on PBIS for the past 7 years. The expertise of the research team, history of successful partnership, and open communication processes will

contribute to the project success and help mitigate any risks that may undermine implementation and evaluation.

Project Structure and Communication. The project structure includes a Project Management Team consisting of ███████ and a full-time Project Director (EASEL), ████████ (NDE/CCLC), ██████████ (UNMC), and ████████████████ (Abt Associates). ████ will provide overall leadership as Principal Investigator (PI) and will be responsible for ensuring progress toward all project goals, objectives, and milestones; and will submit annual and interim project reports to Abt, NDE/CCLC, and UNMC partners. ████ and the Project Director will monitor project costs to ensure the appropriate and efficient use of resources. We will follow the management procedures established in our work together to-date: (1) regular internal team and project meetings, (2) regular management and planning calls that include the PIs and relevant team members, and (3) frequent email communication about deadlines and project plans. These management practices are supported by jointly developed, and detailed project plans that lay out each team's specific tasks and responsibilities against a detailed timeline. These project plans serve as the basis for a set of rolling agendas that guide internal and cross-team meetings and will be used along with the milestones above to reflect on the success of partnership activities and to make any necessary mid-course corrections.

C3. Resources

EASEL has a robust set of resources that are uniquely suited to enable this project, including the following: (1) *Intervention and Curricular Materials*. Over the past ten years, EASEL has worked closely with practitioners and other researchers to develop, implement, and test SEL interventions in multiple contexts (e.g., school, OST, and community settings). These projects span early education through high school, and include training and professional

development for educators as well as families. (2) *Kernels Library and Database of SEL Programs*. As part of a multi-year project to analyze and code widely-used, evidence-based SEL Programs and produce a detailed guide for practitioners, EASEL has access to more than 50 SEL programs, which have been used to build a database for identifying common elements and developing Kernels of Practice (e.g., see [Navigating SEL from the Inside Out](#) and [Kernels of Practice for SEL)](#). (3) *Design and Data Collection Tools*. Working with behavioral insights specialists and human centered designers, we have developed a rigorous user-centered design process to engage stakeholders in the development of SEL materials using observations and interview protocols refined across multiple projects. We have also developed a set of instructional tools that enable educators/staff to easily track their own SEL implementation and challenges, and engage in data-driven decision-making to guide practice.

C4. Dissemination of Findings

EASEL has access to the communications and dissemination resources of HGSE. As a research institution that also trains and collaborates with educators, education leaders, policy-makers, nonprofit organizations, and philanthropists, HGSE provides excellent resources for disseminating our work to a wide array of stakeholders. For example, HGSE has a number of highly visible and successful channels for dissemination, giving it broad and diverse reach. Through its research-to-practice website (*Usable Knowledge*), HGSE communicates directly with a large audience of practitioners at every level of education. The *Usable Knowledge* site has drawn more than 2.5 million unique page views since its launch in September 2014, and is doubling its growth every year. Its newsletter reaches 60K people every month, and its Twitter feed reaches 12.7K people. HGSE can also disseminate news via the *Harvard Ed News*, and its

successful education podcast called the *Harvard EdCast*, which has drawn more than 500,000 listens over the course of its 250 episodes.

D.   EVALUATION PLAN

D1. Research Design and Methods

Methods of evaluation will produce evidence about the project's effectiveness that will meet WWC standards without reservations. Abt Associates will lead an independent evaluation of the effects of SEL Kernels on SEL skills and behavior of students (K-2) attending CCLCs in the state of Nebraska, with the staff in these centers trained to deliver Kernels across the afterschool period (3-5 hours a day). The evaluation will be a one-year cluster RCT in the 2024-25 school year in which the 150 afterschool programs statewide will be recruited and 90 interested programs will be assigned to treatment or control conditions. If there are more than 90 programs interested in participating, we will select 90 that have the highest proportion of high needs students. Once interested programs are identified, for the purposes of randomization they will be placed into blocks based on (a) urbanicity of the district, (b) average 3rd grade achievement of children in feeder schools, (c) proportion of students who, historically, are high needs (eligible for free or reduced-price lunch, minority, English language learners). Within blocks of similar schools, we will randomly assign half to treatment and half to control.

Assignment will take place in the early fall of the school year when the rosters of students in the CCLC programs have been finalized. The state has agreed to add parent consent forms to the registration packets for children entering the programs in the fall of the impact study year, so that consent will be known prior to random assignment. This will help reduce attrition from having to include in the sample children whose parents do not consent after randomization is

conducted. In all programs (treatment and control), the staff will receive support to implement SEL Kernels in the second year (delayed treatment for the control group).

We plan to include in the impact sample all K-2 students in the CCLC programs. Based on enrollment data from the Nebraska Dept of Education, we expect an average of 21 K-2 students per program [4]. For cost and feasibility purposes, we plan to sample 7 K-2 students per program, resulting in an analytic sample of 90 programs and 630 students, evenly distributed across the treatment and control conditions. Preliminary power analyses indicate that this sample will be sufficient to detect effects on student outcomes at the .20 level. For staff outcomes, assuming 2 lead staff per program, the study will be able to detect effects of .30 SD (see details underlying the power analysis in the Technical Appendix J). Recent studies of universal school-based SEL interventions indicate that these minimum detectable effect sizes are reasonable given the student and staff outcomes of interest [23, 76, 77].

The CCLC programs in the control group will deliver their business-as-usual supports for behavior management. Since the programs are likely to be heterogeneous in terms of their approach to behavior management, the study will collect data from the control programs about their SEL-related practices, including any named curricula being used. Programs assigned to the control condition will receive a stipend and will be trained and receive support to implement SEL Kernels in the second year (delayed treatment).

Analytic Strategy. Abt will use a two-level HLM regression model (to account for nesting of students within programs), with randomization blocks and blocks for grade, adjusting for program- and student-level characteristics. The impact estimates for staff instructional practice outcomes will be estimated using a two-level model (staff in blocks) that follows a similar structure to the three-level model for students (see the Technical Appendix J for more

detailed model specifications). In addition to analyses on the impact of SEL Kernels on each staff and student outcome, we will conduct exploratory analyses looking at variation in impacts as a function of student characteristics and staff characteristics and for differences in dosage.

Attrition. We do not expect high attrition of students from CCLC programs in the first school year, when the RCT is being conducted. A 2020-21 report from the Nebraska DOE states that approximately 76% of K-2 students enrolled in the programs are regular attendees, and the number of regular attendees has steadily increased since 2015 [4]. For the RCT in the 2024-25 school year, we will monitor overall and differential attrition and take corrective actions to reduce it. If attrition exceeds WWC standards, the study will only be able to Meet WWC Standards with Reservations, assuming we establish baseline equivalence on the pretest for each outcome. If the baseline difference between the treatment and control students is <.25 SD, we will include the pretest in the analytic models, as required by the WWC Standards with Reservations. If the baseline difference is above .25, we will use propensity score modeling to select a matched comparison group of students and will use the same weights in the impact analyses. Attrition is likely to be higher in the student sample for the impact analyses at the end of the subsequent summer program session. We will follow the same procedure for that analysis.

Exploratory Follow-up Studies. In addition to the one-year RCT, the evaluation will conduct two exploratory studies of longer-term effects of SEL Kernels. The first study will look at outcomes for students who attend their afterschool program in the summer of 2025, to examine what happens to the effects on child outcomes from the first year impact sample focusing on whether they improve after the summer program, stay the same, or decline. The students and programs will retain their same randomization status and the same battery of measures will be administered at the end of the summer session of the afterschool programs. It is

possible that this study will experience high student attrition, since only some children will stay in the program over the summer. In the case of high attrition, we will have collected baseline measures of all the outcomes. We will establish the baseline equivalence of the treatment and control samples on each of the analytic samples for the outcomes, using propensity score matching to achieve equivalence. If there is high attrition, the highest WWC rating that this study can receive is Meets Standards with Reservations.

We will conduct a second exploratory study in which we will examine outcomes for afterschool staff and students at the end of a second year of implementation of SEL Kernels, in Spring 2026. This study will only involve the originally assigned treatment programs--there can be no comparison programs at this point, since all of the programs randomly assigned to control will have the opportunity to be trained on SEL Kernels in this year. This study is intended to address questions about whether there are sustained shifts in the SEL practices of the staff in the afterschool programs, from baseline to the end of the 2nd year of implementation and whether SEL skills improve when students are in a SEL Kernels classroom a second year.

Outcome Measures. The primary student outcomes for the impact study are SEL skills and competencies, which will be measured using a direct assessment, assessor report of the child's behavior during the assessment, and afterschool staff interview. The staff and classroom measures are a combination of observations and staff self-assessments. All of the data on student and staff outcomes will be collected by independent assessors trained and supervised by Abt, with the exception of the CLASS and A-TSRS observation data, which are collected annually by trained observers paid for by the state. Tables 3 and 4 show the measurement battery proposed for the impact evaluation. Additional information about each measure (e.g., detailed description, psychometric properties) is included in Technical Appendix J, Table 6.

Table 3. Student-Level Measures for Impact Evaluation[2]

Measure	WWC Domain(s)		Construct		Data Collection Method		
	Interpersonal Comp.	Student Behavior	Regulation	Behavior	Direct Assessment	Staff Interview	Assessor Report
AMES	X		X	X	X		
CEFS	X		X	X		X	
TOCA-R	X	X	X	X		X	
PSRA-AR	X	X	X	X			X

Table 4. Staff and Classroom-Level Measures for Impact Evaluation[3]

Measure	WWC Domain	Construct					Data Collection Method	
		Classroom Practices	Classroom Org./Structure	SE Climate and Opps.	CM Self-Efficacy	Kernels Imp.	Classroom Obs.	Staff Survey/Log
CLASS		X	X	X			X	
A-TSRS		X	X	X			X	
TSES	N/A				X			X
KC	N/A					X	X	X

D2. Performance Feedback

Evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes. The evaluation will provide ongoing data on implementation and outcomes to help the project team track progress towards their goals. In terms of the quality and fidelity of implementation of SEL Kernels, the evaluation team, in coordination with EASEL, will create a fidelity measure that will be used to assess implementation in each of the treatment afterschool programs in each of the three impact study time periods: first year of implementation of SEL Kernels (2024-25), implementation of SEL

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[2] AMES = Assessment of Motivation, Effort, and Self-Regulation; CEFS = Classroom Executive Function Survey; TOCA-R = Teacher Observation of Classroom Adaptation-Revised; PSRA-AR = Preschool Self-Regulation Assessment Assessor Report. References for the measures are included in the Technical Appendix J.

[3] CLASS = Classroom Assessment Scoring System; A-TSRS = Adapted Teaching Style Rating Scale; TSES = Teacher Self-Efficacy for classroom management (classroom management subscale from the Teachers' Sense of Efficacy Scale; KC = Kernels Checklist; SE Climate and Opps. = Social and Emotional Climate and Opportunities; CM Self-Efficacy = Classroom Management Self-Efficacy. References are included in the Technical Appendix J.

Kernels in summer 2025, and second year of implementation of SEL Kernels (in the 2025-26 school year). The fidelity data will be reported on an ongoing basis to allow the project team to make mid-course corrections if substantial failures in implementation are shown. For the staff outcomes, the afterschool program staff will be asked to complete a weekly implementation log documenting the SEL Kernels used and how many minutes spent on the activity. This process of collecting data on classroom practices has been used in prior pilot projects with SEL Kernels, using a web-based portal, with a high rate of response from staff. These data will be used to provide feedback to the project team about whether SEL Kernels are being delivered by the afterschool staff as intended and support EASEL in targeted development and dissemination of implementation supports for afterschool staff. For the student outcomes, the evaluation will be able to provide data on student gains at three different timepoints during the grant.

D3. Implementation of Key Components

Evaluation will articulate the key project components, mediators and outcomes, as a well as a measurable threshold for acceptable implementation. Following the expectations of the EIR program, a measure will be created to capture the fidelity of implementation of each of the key components in the logic model. For each component, a set of quantifiable indicators will be identified that together constitute full implementation. Based on a plan for measuring the implementation of the individual indicators, a total score for each key component will be calculated. EASEL and Abt, working together, will establish fidelity thresholds that identify the score for each key component that indicate adequate fidelity of implementation. Table 5 shows each of SEL Kernel's key components, draft indicators that define full implementation of the component, possible data sources to measure the indicators, and a draft threshold that defines adequate fidelity of implementation at the sample level. Abt will collect data on implementation

fidelity for two years of the study period. Annual findings on fidelity will be shared with EASEL at the end of each year to provide periodic feedback on implementation progress and to identify program strengths and weaknesses. Abt will also conduct exploratory analyses to examine the relationship between the implementation fidelity measures and student outcomes. Although these last analyses are not causal, they will provide important information to help explain variation in outcomes across programs using SEL Kernels. The multi-year SEL Kernels evaluation will provide timely knowledge about (1) the impact of SEL Kernels on student and staff SEL outcomes and instructional practices, (2) changes in outcomes after additional SEL Kernels exposure (summer and/or an additional year) for a large number of K-2 students, and (3) how patterns of implementation dosage and fidelity shape outcomes.

Table 5. Logic Model Components and Measurement of Fidelity

Key Component	Indicators	Data Source	Threshold for Fidelity
NE CCLC Afterschool Staff Training	• Start-of-year training • Mid-year booster training	• Start-of-year training rosters • Mid-year booster training rosters	• 80% of afterschool staff participate in start-of-year training • 80% of afterschool staff participate in mid-year booster training
Provide SEL Kernels Implementation Supports	• Digital copies of all SEL Kernels • SEL Kernels illustrative videos • SEL Kernels Data Tools (brief group-level bi-monthly survey on SEL skills, and related SEL Kernels recommendations) • SEL Kernels Weekly Implementation Survey (what kernel did you use, when, how long, and how did it go) • EASEL Lab SEL Resources (articles, webinars, blogs)	• EASEL Lab electronic distribution records • SEL Kernels website analytics including visits overall and by specific supports (e.g., number and frequency of videos watched, data tools completed, resources downloaded)	• 100% of afterschool staff receive digital copies of SEL Kernels (in addition to hard copies distributed at the training) • ~20 illustrative videos created; 4 for each of 5 SEL domains • Links to data tools shared with all staff bi-monthly • Links to implementation survey shared with all afterschool staff weekly • Weekly SMS message reminders and SEL tidbits sent to all afterschool staff • Resources added to site and shared via email listserv bi-monthly • 1 SEL advice and information blog per month