Examining Teacher Approaches to Implementation of a Classwide SEL Program

Leah J. Hunter[1], James C. DiPerna[1], Susan Crandall Hart[1], Sabina Neugebauer[2], Pui-Wa Lei[1]

[1] Department of Education Psychology, Counseling, and Special Education, The Pennsylvania

State University

[2] College of Education and Human Development, Temple University

Author Note

Leah J. Hunter https://orcid.org/0000-0002-5090-9189

James C. DiPerna http://orcid.org/0000-0002-4663-9286

Susan Crandall Hart https://orcid.org/0000-0003-3762-8232

Sabina Neugebauer https://orcid.org/0000-0002-9498-8966

Pui-Wa Lei https://orcid.org/0000-0002-8179-6623

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Leah J. Hunter is now in the Department of Psychology, University of Pittsburgh

Correspondence concerning this article should be addressed to Leah Hunter, Department of Psychology, University of Pittsburgh, 4105 Sennott Square, 210 South Bouquet Street, Pittsburgh, PA 15260. Email: ljh61@pitt.edu

Abstract

Scale-up of universal social-emotional learning (SEL) programs has become a priority in schools to promote positive social outcomes for all students. Although studies have examined student outcomes associated with school-based SEL when extensive training and support are provided, research on teacher SEL implementation practices under typical conditions has received far less attention. As such, this study examined the first-year universal SEL implementation practices of 41 teachers across 13 schools in three states. School personnel made all decisions regarding approaches to training, support, and program implementation of a manualized program delivered at the classroom level to first and second grade students. Within this authentic context for implementation, variability was observed in selection of skills units, number of lessons taught, and adherence to lesson activities and scripts. Coding of teacher anecdotal reports revealed that perceived student needs, classroom context demands, and school-level factors informed teachers' implementation of the program.

Impact and Implications Statement

Few studies have examined implementation of universal SEL programs under typical conditions in elementary classrooms. The SSIS CIP is a CASEL-SELect program adopted in a number of U.S. schools. Results of the current study suggest that typical implementation of the program may deviate from the intended scope and sequence, which could undermine effectiveness. Thus, schools adopting this or other universal programs should consider how to proactively address competing factors such as curricular demands, time, and classroom needs.

Keywords: Implementation, social-emotional learning, effectiveness, qualitative

Examining Teacher Approaches to Implementation of a Classwide SEL Program

Social-emotional learning (SEL) programs delivered in schools have demonstrated short- and long-term efficacy for promoting positive behavior and reducing risk for future mental health problems for school-age children (Durlak et al., 2011; Taylor et al., 2017). When SEL programs are implemented with the provision of additional supports such as training, coaching, and/or monitoring, efficacy studies have demonstrated larger effects compared to those studies conducted in "real-world" school settings (Wigelsworth et al., 2016). Though an increasing number of schools are adopting universal SEL curricula, implementation support and technical assistance has lagged behind in practice, raising questions about how SEL is being delivered outside of the research context (Bryant et al., 2021). As such, the goal of the current study was to examine teachers' approaches to program delivery (i.e., completion, adherence, quality) and factors influencing their implementation using both quantitative and qualitative data from an effectiveness trial focused on a classroom-based universal SEL program (SSIS SEL Edition Classwide Intervention Program; Elliott & Gresham, 2017) delivered under "typical" school practices (i.e., no researcher guidance and fewer structured supports).

Scaling SEL Programs in Schools

School-based SEL typically targets one or more of five SEL domains (self-awareness, self-management, social awareness, relationship skills, and responsible decision-making) identified by the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020a). Given the prevention focus of SEL, programming is commonly delivered at the universal (Tier 1) level within a multitiered system of support; fewer programs are available at the selected or intensive tiers (DiPerna et al., 2020). Instructional approaches for SEL can include: (a) whole-school initiatives integrated into all aspects of the school day; (b) brief strategies that are

embedded into teachers' existing practices; (c) academic curricula that integrate SEL skills and competencies as part of the instructional approach; and (d) stand-alone curricula focused on direct SEL skill instruction (CASEL, 2019; Elias, 2019). When direct SEL skill curricula are implemented within elementary schools as a universal intervention, the teacher (or another school professional) typically presents manualized lessons focused on discrete social-emotional skills to all students in the classroom. These programs have been found to yield the most benefit for students when lessons use sequenced, active, focused, and explicit instructional strategies and are implemented with high quality (Durlak et al., 2011).

Scaling universal SEL programs to reach diverse U.S. school and child populations is an important emerging goal within SEL research and policy (Elias, 2019). Recent policy efforts have included social-emotional outcomes in school accountability plans (Common Core State Standards Initiative, 2010; Every Student Succeeds Act, 2015), and resources for scaling school-based SEL at the state and district levels (CASEL, 2019; Dusenbury & Weissberg, 2018). There is a growing consensus among educators on the importance of social-emotional skills to the schooling experience (Humphrey, 2013; National Research Council, 2012), and over half of teachers and 60% of principals reported implementing SEL programs or practices in their schools in a large national survey (Hamilton et al., 2019). Implementation of such programs has increased as schools seek resources targeting student mental and relational health due to the COVID-19 pandemic (Bryant et al., 2021; CASEL, 2020b).

Although the importance of SEL is well-documented and scalable programs are emerging, research on the *actual* implementation practices of SEL in school-led initiatives has lagged behind. Implementation supports such as training, PD, coaching, and monitoring have been recommended as important for effective SEL in schools (CASEL, 2019; Durlak & DuPre,

2008). However, in surveys of on-the-ground universal SEL practices, as few as 25% of educators reported having structured, schoolwide plans to support SEL program implementation (DePaoli et al., 2017). To our knowledge, none of the universal SEL programs included in recent reviews have been subjected to *effectiveness trials,* which represent authentic implementation (i.e., programs implemented under routine conditions by typical end users; Institute of Education Sciences, 2017). Given the limited resources that districts typically have at their disposal to support infrastructure for SEL implementation (Levin & Belfield, 2015) as well as increasing expectations for student academic progress and teacher accountability (Leachman et al., 2017), questions remain concerning "real-world" implementation of SEL programs in schools.

Implementation Science Considerations for Scaling SEL

Implementation science focuses on understanding the translation of evidence-based practices in real-world settings (Glasgow et al., 2003; Nilsen, 2015). One key question in scaling universal SEL programs concerns which factors contribute to the variability with which even highly structured, manualized programs are implemented in schools (Durlak & DuPre, 2008). Proctor and colleagues (2011) argued that implementation outcomes should be evaluated alongside treatment outcomes when moving from efficacy (highly controlled) to effectiveness (real world) studies. Specifically, they identified implementation fidelity as an indicator of the success of an intervention when implemented by typical end users under routine conditions. When comparing an original evidence-based intervention to the disseminated and implemented version, they described three aspects of fidelity to be assessed: (a) adherence, or the extent to which intervention components are delivered as intended or described in the manual; (b) program completion (dosage), or how much of a program was delivered; and (c) quality, or how well the program was delivered (Proctor et al., 2011).

Multiple implementation science frameworks aim to identify factors that facilitate or inhibit implementation outcomes such as fidelity. These "determinant frameworks" (Nilsen, 2020) often conceptualize influences from a social-ecological perspective (Bronfenbrenner & Morris, 1998), in which factors at multiple levels (intervention, individual, school, community) can influence implementation outcomes in interactive ways (e.g., Durlak & DuPre, 2008; Sanetti & Kratochowill, 2009). Intervention-related factors such as lack of compatibility with the classroom have been identified by teachers as a barrier to their implementation efforts (Long et al., 2016), while teacher-related factors such as self-efficacy, attitudes, and well-being have been linked to implementation outcomes in empirical studies of universal SEL interventions (Domitrovich et al., 2015, 2019; Ransford et al., 2009). School and community implementation factors can include training, consultation, administrator support, climate, resources, and policies (Domitrovich et al., 2008; Han & Weiss, 2005). While variation in implementation factors and practices may be expected within schools, examination of these potential influences can help researchers and practitioners understand why, how, and to what degree an SEL intervention is implemented in schools.

While traditional efficacy studies may serve as an opportunity to understand implementation influences and outcomes when schools are provided training, coaching, and/or PD support by research teams, effectiveness trials in education aim to understand the scaling of an intervention given the resources and context of a typical school (Wigelsworth et al., 2017). In this way, information garnered from effectiveness trials may better represent expected conditions, practices, and outcomes as interventions proceed through the implementation phases towards sustainability/maintenance periods (Han & Weiss, 2005). For example, a survey of over 1,200 teachers indicated that the amount of implementation support provided in schools was

inadequate to sustain high-quality student interventions (broadly defined), and approximately

90% of teachers expressed a desire for more assistance in addressing implementation barriers

(Long et al., 2016). As less is known about scaling universal SEL programs, especially under

typical conditions in schools, the current study attempted to provide some initial insight

regarding this gap in SEL program implementation research.

SSIS-CIP Effectiveness Trial

The current study focuses on teachers' implementation of the SSIS SEL Edition

Classwide Intervention Program (SSIS SEL CIP; S. N. Elliott & Gresham, 2017), a social skills

curriculum typically delivered universally to all students in a classroom by their teacher. The

program targets social and classroom behaviors identified by a nationally representative sample

of teachers as important to school success. The SSIS SEL CIP was developed for easy

implementation without extensive formal training. It features a teacher manual with scripted,

short, free-standing lesson plans for 10 core and 13 advanced units (3 lessons per unit requiring

about 25 minutes each) supplemented with online resources (e.g., digital lesson content, video

clips, role play cards, etc.). Lessons follow a standard Tell, Show, Do, Practice, Monitor

Progress, and Generalize format. The program is intended for off-the-shelf delivery by teachers

of all education and experience levels as the manual provides detailed implementation guidelines

and progress monitoring resources in addition to lesson scripts (S. N. Elliott & Gresham, 2017).

Table 1 shows a breakdown of the SSIS SEL CIP units aligned with CASEL domains,

according to the program authors (S. N. Elliott & Gresham, 2017). An efficacy trial featuring the

initial edition of the SSIS-CIP (S. N. Elliott & Gresham, 2007) demonstrated that the program

yielded positive effects for students' social and learning-related behavior (DiPerna et al., 2015,

2016, 2018) at an average cost of about $19 per student (Hunter et al., 2018). Teachers generally

found the curriculum relevant, feasible, and effective (Wollersheim Shervey et al., 2017), and some added benefit was revealed when students received the program across successive elementary grades (Hunter et al., 2021). Given that the program is time-efficient and commercially available, it represent a practical option for schools seeking to implement a universal SEL program at the classroom level.

The Current Study

The goal of this exploratory study was to gain insight regarding teacher implementation of a universal SEL program under routine school conditions. As identified in implementation science literature (e.g., Proctor et al., 2011), we assessed aspects of implementation fidelity as indicators of the translation of an evidence-based program into real-world practice. Specifically, we measured program completion, adherence, and quality of delivery via teacher report and independent observer ratings. In addition, given that variation in practices among teachers and schools may be expected (Domitrovich et al., 2008), teachers also responded to open-ended questions about factors potentially impacting their approach. Completed within the context of a larger effectiveness trial evaluating teacher and student outcomes for the SSIS SEL CIP, which was modeled after a previous efficacy trial in the primary grades (DiPerna et al., 2015, 2016, 2018), the current study focused on two primary research aims. Aim 1 explored the variability of program implementation across all first- and second-grade classrooms randomly assigned to the treatment condition. To address this aim, we conducted descriptive analyses of program completion, adherence, and quality of delivery. Aim 2 focused on identifying potential factors that may have contributed to implementation variability across classrooms. To address this second aim, we utilized an exploratory qualitative design (Blair, 2015; R. Elliott & Timulak,

2021) aimed at developing understanding of an understudied concept – teachers' authentic

program implementation methods.

Method

Participants

Participants included 41 first- and second-grade teachers who were randomized to the

implementation condition of an effectiveness trial evaluating the SSIS SEL CIP program (S. N.

Elliott & Gresham, 2017) when implemented *under routine conditions*. First-grade teachers' (N

= 19) total years of experience ranged from 1 to 35 years ($M = 17$; $SD = 11$); second-grade

teachers ($N = 22$) had similar experience ($M = 12$; $SD = 8$; range = 1-29). Two first-grade

teachers and four second-grade teachers reported having experience with a published SEL

program previously, but no teachers had previous experience with the SSIS SEL CIP. See Table

2 for complete teacher demographic information.

Teachers were from 13 schools across three socio-economically and geographically

diverse regions of the United States; five schools were midwestern remote rural schools, five

were midwestern schools located in a large suburb, and three schools were located in the south

(one each in a large city, midsize city, and large suburb). Six of the participating schools had a

majority White student population, four had a majority Black student population, and three had a

majority Hispanic/Latinx student population. In three schools, the participating primary grade

classrooms were comprised of 20% or more English language learners on average. Twelve of the

13 schools were designated Title 1 schools; in those schools, at least one-third of students

qualified for free or reduced-priced lunch. At over half of the schools, more than 75% of the

student population qualified (National Center for Education Statistics, 2019).

Effectiveness Trial

Recruitment efforts for the effectiveness trial focused on districts that were actively considering adoption of universal SEL classroom programs at the elementary level. After approval from the Institutional Review Board, recruitment of prospective sites occurred through project-specific social media (website, Facebook page) explaining the project, posts to professional listservs for school psychologists, and other communications via professional networks. After a district or school expressed initial interest, the lead investigators engaged in individual communications to answer questions or concerns prior to enrollment in the project.

Data collection took place during the 2018-19 school year. All first and second-grade teachers in the participating elementary schools were invited to participate in the project. After receiving teacher consent for participation in the trial, we also sought active parental consent and student assent. Although all students in treatment classrooms participated in the SSIS SEL CIP lessons as part of their regular school day, parental consent and child assent were required for students to participate in the data collection aspect of the effectiveness trial. Randomization occurred at the school-level (rather than the classroom-level) so teachers within the same grade could collaborate on planning for implementation if that was their preference. Specifically, schools were randomized to first-grade or second-grade implementation (with the other grade becoming part of the "business as usual" waitlist control condition).

Data for this study were collected in two ways. First, teachers completed a weekly online questionnaire to report their implementation practices during that week. They also completed online questionnaires at the end of the school year to report on their implementation practices. Teachers were compensated for their time spent completing these forms. Second, research staff were trained to complete independent real-time observations of the SSIS SEL CIP lessons. Most observers had bachelor's or master's degrees and experience in education and/or data collection.

They completed a 2-hour training on intervention observation procedures with opportunities for practice. Lesson observations were scheduled by research staff in accordance with teachers' daily teaching schedule with the goal of observing each teacher approximately once every other week. In total, 274 observations were completed by research staff, and 40 (15%) were completed by paired observers to assess interrater reliability. An average of 4.9 core lessons were observed per teacher (range = 2-7), while fewer advanced lessons were observed ($M = 0.53$; range = 0-4); as such, results for core and advanced lessons are presented separately.

SSIS SEL CIP Program Implementation

Teachers implemented the program from approximately January - May. Program materials, including a teacher manual, were provided to participating teachers prior to the implementation period. In addition, the research team provided participating teachers with a brief (one-page) "Frequently Asked Questions" overview document, which indicated that most teachers chose to implement one unit (3 lessons) per week in previous studies of the SSIS CIP. However, consistent with the goals for an effectiveness trial, no formal training or PD was provided by research staff to participating teachers. In addition, the research team did not advise schools or teachers about when to schedule their lessons or how to deliver them. The team also did not intervene to change teachers' preferred approach to implementation in any way. Schools selected their own model for program roll-out within the grade randomized to the intervention condition. These models most often consisted of individual teachers reviewing program materials and preparing their own implementation schedule, though a few schools offered formal PD sessions. Weekly surveys of implementing teachers indicated that, on average, they spent approximately 38 minutes each week preparing for lesson delivery and approximately 26 minutes of classroom time delivering each lesson.

Measures

Program Fidelity

      Program Completion. *Lesson completion* and *unit completion* were assessed via teacher self-report. Teachers completed weekly brief online questionnaires about their implementation of the SSIS SEL CIP and indicated the units/lessons taught during that week. Average number of lessons completed within the core units (30 possible lessons) and advanced units (39 possible lessons) were calculated based on weekly questionnaire responses. Averages for complete core units delivered (i.e., all 3 lessons taught within a single unit; 10 units possible) and complete advanced units delivered (13 possible) were also calculated from the weekly questionnaires.

      Adherence. Two aspects of adherence were measured by in-person observation: *lesson activity adherence* and *verbal adherence* to the lesson plan. Observers rated teachers' *lesson activity adherence* by tracking whether or not teachers completed specific steps outlined in the lesson plan using yes/no ratings (e.g., "*Did the teacher...introduce the skill by asking questions about it?*"). The number of steps in each section varied depending on the lesson. The proportion of steps completed was calculated by lesson section (Tell, Show/Do, Practice/Monitor Progress/Generalize) as well as overall. For paired lesson observations, interrater reliability for adherence was 91% across all classrooms.

      Observers also coded teachers' *verbal adherence* to lesson scripts by rating the approximate percentage of adherence to the written text on a scale of 1 (*0-20%*) to 5 (*81-100%*). The question read, "*For the [XX] section of the lesson, please rate the teacher's adherence (approximate percentage of the text stated as written) to the verbal script in the curriculum guide.*" This question was asked for three sections of the lesson (Tell, Show/Do, Practice/Monitor Progress/Generalize); average scores were calculated within sections and

overall. Interrater reliability for verbal adherence during paired observations was good (ICC

range .77 to .90, average ICC .83; Portney & Watkins, 2000).

Lesson Delivery Quality. To assess the overall quality of lesson delivery, research staff

responded to five questions at the end of each lesson observation. Questions asked observers to

assess five domains: level of preparedness, interest/enthusiasm, responsiveness to student

questions/need, clarity of presenting key concepts, and skill in facilitating planned activities.

Ratings were on a scale of 1 (*very low*) to 5 (*very high*). Scores were averaged across all

observations to create composites for each of the five areas (preparedness, enthusiasm,

responsiveness, clarity, and skill) for each classroom, as well as a total score. Interrater reliability

for quality of lesson delivery items was acceptable (ICC = .55 - .88; average ICC = .71).

Qualitative Coding: Factors Influencing Implementation

Qualitative data describing teachers' experiences during the implementation period were

collected via open-ended questions on the weekly and end-of-year online questionnaires.

Responses were then grouped into thematic codes using an emergent coding process within an

exploratory qualitative design (Blair, 2015; R. Elliott & Timulak, 2021). Exploratory descriptive

qualitative designs are appropriate when little is known about a topic of inquiry (R. Elliott &

Timulak, 2005). Three open-ended questions from the weekly survey and six open-ended

questions from the end-of-year implementation questionnaire were designed to elicit responses

about teachers' implementation choices and factors potentially influencing their program

delivery (Figure 1). Responses from these questions were compiled and coded following

recommendations for establishing coding reliability from Creswell and Plano Clark (2011) and

Campbell et al. (2013). First, the lead author read all responses several times and then clustered

quotes into broad thematic categories that represented (a) individual teacher motivations, (b)

school supports, and (c) other factors influencing implementation, resulting in an initial

codebook. Then, the responses and codebook were reviewed with a graduate student for

consensus, discrepancies were discussed, and smaller codes were clustered into larger themes

within the three categories. Three smaller subthemes emerged under individual teacher

motivations (*meeting student needs*, *showing priority for other academic subjects*, and *time

pressure*). The "other factors" code was renamed "unplanned disruptions" for clarity. Responses

then were re-coded using the revised codebook, with 10% of responses (4 teachers)

independently coded by the second coder as suggested by Campbell et al. (2013). Initial

intercoder agreement was 83% and rose to 94% after negotiated agreement, which is appropriate

for responses to open-ended questions (Campbell et al., 2013; Krippendorf, 2004).

Analysis

To evaluate Aim 1, we examined SSIS SEL CIP program completion across the full

sample of teachers. We considered fidelity of implementation between Grades 1 and 2 teachers

for program completion (lessons and full units), lesson activity adherence (Tell, Show/Do and

Practice activities), and verbal adherence to lesson scripts. We also assessed teachers'

completion of each unit, overall and by individual unit topic. In addition, we examined

observations of teachers' lesson delivery quality in terms of preparedness, enthusiasm,

responsiveness, clarity, and skill facilitating lesson components. To explore Aim 2, we identified

teacher-reported factors potentially influencing program implementation using the coded

qualitative data. Across the aims, we identified differences between Grades 1 and 2 teachers in

the results given grade-level differences observed for this program in previous reports (e.g.,

DiPerna et al., 2015; Wollersheim Shervey et al., 2017).

Results

Program Completion

        SSIS SEL CIP program completion was defined by how many lessons and instructional

units were taught (Table 3). As a group, teachers taught an average of 23 lessons (of 30 possible)

within the core units. They taught far fewer advanced lessons ($M = 3$) with significant variation

among teachers ($SD = 5$). Across both core and advanced lessons, teachers reported an average

of 1-2 lessons completed per week. Two teachers at each grade level reported completing all 30

lessons from the core units, and approximately 45% of teachers (Grade 1 $N = 8$; Grade 2 $N = 10$)

from both grades completed at least 8 of the 10 core units. As shown in Table 3, second-grade

teachers reported completing more lessons from the core units than first grade teachers. Second-

grade teachers also reported delivering more units in their entirety (i.e., taught all 3 lessons) than

first-grade teachers.

        We also examined partial unit completion (either 1 or 2 lessons) based on teachers'

weekly self-report. Table 4 shows completion rates across units for both grade levels. Overall

patterns of unit completion were similar across grade levels, with most teachers completing full

units for the core lessons and either partial or no units in the advanced lessons. Teachers

appeared to have implemented the core units as the basis of the program and supplemented with

advanced units, time permitting (more detail provided through qualitative analysis). Second-

grade teachers completed more core units overall and were more likely to partially teach

advanced units. Examining individual unit topics, teachers in both grades showed notably lower

rates of completion for Unit 4 (*Pay Attention to Your Work*). In first grade, fewer lessons were

taught from Unit 7 (*Get Along with Others*) and Unit 8 (*Stay Calm with Others*). Within

advanced units, Unit 21 (*Make Compromises*) was more popular in first grade.

We also noted patterns of completion relative to the five CASEL SEL domains targeted by individual units (self-awareness; self-management; social awareness; relationship skills; responsible decision making). As shown in Table 4, teachers in both grades appeared to complete more lessons within units targeting self-management (e.g., *Listen to Others*, *Follow the Rules*, *Pay Attention to Your Work*). However, these units were all part of the core program, so it may be that teachers followed the units as they appeared within the Program Guide rather than selecting certain units by skill or CASEL domain.

Adherence

Observations indicated that teachers in both grades completed more activities from the Tell section of the lessons compared to Show/Do and Practice/Monitor Progress/Generalize activities; however, first-grade teachers completed more activities across sections on average (Table 5). Second-grade teachers demonstrated greater variation in the amount of activities completed across lessons. Examining teachers' verbal adherence to the lesson scripts, first-grade teachers were more likely to utilize the scripts as specified in the lesson plans (Table 5), but adherence varied by lesson component. In both grades, teachers were more likely to adhere to scripts during the Tell section of the lessons compared to Show/Do or Practice activities.

Quality of Lesson Delivery

Observers indicated that teachers across both grade levels demonstrated similar levels of preparedness and enthusiasm when implementing the SSIS CIP SEL. Variation was highest for "clarity of key concepts" and "skillful facilitation of lesson activities." In both grades, observers assigned the lowest ratings to teachers' skillful facilitation of activities, though ratings were still in the *high* to *very high* range.

Teacher-Reported Factors Influencing Program Implementation

To address the second research aim, we examined teachers' open-ended responses to questions regarding factors affecting program delivery. Sixteen first-grade teachers (84% of Grade 1 sample) and 16 second-grade teachers (72% of Grade 2 sample) described specific factors that influenced their implementation.[1] Table 6 shows the percentage of teachers who provided responses reflecting each theme. About half of teachers in each grade level who responded to the open-ended questions reported that the needs of their students informed their choices for program delivery. Teachers also described creating new materials (e.g., visual aids), adding supplemental elements (e.g., YouTube videos, books), or altering the format of practice activities to keep students engaged. One first-grade teacher reported changing the visuals within presentation materials: "The slides were changed to be more appealing to my learners. The presentation seemed a bit boring, and it needed to be spruced up to get the attention of [first] graders." Sometimes, teachers changed lesson content by adding their own examples or making scenarios more relevant to their class (e.g., "For the practice portion, I did not use your role play cards. I created two scenarios relevant to my specific class and situations that occur."). Most commonly, teachers altered the Practice activities, such as role plays, with the goal of making them more accessible (e.g., "The role playing cards may have been too advanced for my students so we read and role played as a class."). One teacher reported that lessons were translated into Spanish, as she taught a bilingual classroom.

Time constraints motivated program delivery choices for teachers in both grade levels. Teachers reported feeling strained to complete lessons within the allotted time, and they either condensed or modified the lesson as a result. One teacher reported, "Depending on time

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[1] The remaining teachers ($N = 9$) did not respond to the question, and there were no statistically significant differences on relevant baseline characteristics or implementation outcomes between teachers who described factors and those who did not.

constraints, I may alternate role play and whole group discussion." More second grade (44%)

than first grade (19%) teachers indicated that SEL lessons were less of a priority than other

academic subjects, which in turn affected at least one teacher's ability to complete lessons:

"There were days when I had to table the lesson because my students were not complete[d] with

a previous lesson from another subject." When asked about their reasons for not teaching

advanced units after finishing the core units, several teachers described a need to "catch up" on

other aspects of the curriculum (e.g., "I wish but I have a hard time finding a time to do a

[program] lesson without sacrificing other instructional time. I won't continue."). One teacher's

comment showed how SEL lessons were prioritized over some other activities or academic

subjects: "I did not want to get behind in Reading or Math. Therefore, I gave up iPad time on

Wednesdays and computer lab time on Mondays/Fridays. I also gave up a few science and social

lessons to fit in the 3 [SEL] lessons."

Teachers also identified several school support factors contributing to their program

implementation. Several reported that their administration supported implementation by helping

create materials, providing PD/coaching, or offering flexibility with instructional schedules (e.g.,

"The principals allowed me to do the…lessons in place of teacher-generated morning meeting

lessons."). One teacher described how she felt supported in implementation: "My principal and

our instructional coach checked in with me from time-to-time to ask how it was going and how

much time it was taking, so if I had felt that I needed help, I know they would have been there

for me." Others indicated that their administrators gave directives about the lessons but did not

offer additional support ("Our schedule is given to us, and it was difficult to find a time to fit in

the lessons."). Less often, teachers met as a grade-level team to discuss implementation. One

teacher integrated the advanced unit content with an existing school-wide positive behavior

program: "I don't think I am going to follow the order of the lessons in the manual. This month, for example, our school's skill is 'compromising.' So, I think I am going to try to do the compromising lesson first." This may explain the more frequent rate of completion of Unit 21 (*Make Compromises*) in first grade. Finally, a number of teachers identified unplanned disruptions that influenced their implementation such as problems with technology, school closures due to weather, and/or scheduling conflicts.

Discussion

Understanding the effectiveness of SEL programs delivered across diverse school contexts requires a thorough examination of implementation practices (Durlak, 2015; Rojas-Andrade & Bahamondes, 2019). This study examined implementation of a universal classwide SEL curriculum that features explicit skills instruction. Thirteen elementary schools participated as part of a larger effectiveness trial in which they had considerable flexibility in their implementation decision making. Results provide insight regarding a complex picture of teachers' approaches to universal SEL implementation based on the number of lessons and units selected and taught (i.e., completion), the degree to which activities and scripts were implemented as written (i.e., adherence), and the quality of instructional delivery. Coded qualitative teacher responses provide possible explanations for program uptake and shed light on factors potentially influencing teachers' motivations and implementation decisions.

Program Completion: Amount and Topics

To address the first research aim, we examined rates of program completion within core and advanced units of the SSIS SEL CIP. Of the 41 teachers in the sample, only four reported completing all lessons in the core units; and slightly less than half of the teachers completed at least 80% of core units. This result differs from a previous efficacy study of the SSIS SEL CIP in

which there generally was full completion of the core units when teachers were expected to teach

all units and provided with periodic feedback if they fell too far behind schedule (DiPerna et al.,

2015, 2016, 2018). Teachers in the current study described that they were supported locally

within their school to varying degrees, which may have impacted their program completion. For

example, some schools offered formal training and lesson observations with feedback, while

other teachers had time allotted in their daily schedule to support implementation. Many,

however, reported receiving no formal support (86%). In addition, several teachers experienced

unplanned disruptions that, together with varying levels of support, may have impacted their

ability to complete the program. Zhang and colleagues (2021) similarly found that school-level

allocation for professional development and collaboration was associated with both treatment

fidelity and resulting student outcomes of a universal school-based intervention.

We also examined teachers' choices related to completion of certain unit topics and SEL

competencies. Although teachers could complete any unit in any order, the majority appeared to

follow the core units sequentially and completed them as time permitted, rather than based on

individual unit content. This result is consistent with findings from a previous social validity

study of the original SSIS-CIP (Wollersheim Shervey et al., 2017) in which the *relevance and

sequence* of the 10 core units were among the most highly rated aspects of the program. A few

teachers described completing advanced unit lessons based on their content, such as choosing

specific units to address certain student behaviors or integrating lessons within other school-wide

positive behavior programming. Both of these approaches have been recommended to enhance

the effects of SEL (Bradshaw et al., 2014; CASEL, 2019), and integrating SEL with school-wide

positive behavior plans has been supported in a previous quasi-experimental study (Cook et al.,

2015). However, perhaps because the advanced units tend to focus on more developmentally

sophisticated social skills, very few of the primary-grade teachers chose to cover them in the current study.

Lesson Adherence and Delivery Quality

The SSIS SEL CIP lessons follow a sequence of didactic instruction (Tell); teacher modeling and class discussion (Show/Do); and role plays, student self-assessments, and discussions about generalization (Practice/Monitor Progress/Generalize). Lesson observations by independent observers revealed that teachers in both grades implemented more activities in the didactic Tell section relative to the Show/Do or Practice/Monitor Progress/Generalize activities; they were also more likely to follow the verbal scripts of the Tell section. This result is not surprising as the SSIS SEL CIP manual encourages teacher customization of the practice activities and examples. Teachers also described skipping or condensing certain lesson components to better fit their schedules, possibly explaining completion of fewer Show/Do and Practice/Monitor Progress/Generalize activities. For example, one teacher reported that she would sometimes alternate between group discussion and role play activities, depending on the lesson. Given that the success of SEL initiatives is predicated on repeated opportunities for practice and skills generalization (McClelland et al., 2017; Wanless & Domitrovich, 2015), the extent to which these adaptations increased student responsiveness or, conversely, left out core mechanisms of change (i.e., evidence-based prevention "kernels"; S. M. Jones et al., 2017) is an important topic for future research.

Finally, we examined observations of the quality of teachers' lesson delivery, including ratings of their preparedness, interest/enthusiasm, responsiveness to student questions/needs, clarity of presenting key concepts, and skill in facilitating planned activities. On average, each area was rated as *high* to *very high* for teachers in both grades. Variation was low across teachers

for most skills, though a wider range was observed for *clarity of presenting key concepts* and

skill in facilitating planned activities. Quality has been characterized as the most difficult

component of school-based program implementation given that it involves a deep understanding

of program goals and skillful application of those goals during spontaneous teacher-student

interactions (Domitrovich et al., 2008). Even though teachers may have adapted or omitted

program content more so than in the previous efficacy trial, observers indicated that the quality

of implementation was sufficient overall. High rates of observed lesson delivery quality have

been reported in similar recent studies of classwide SEL (e.g., Green et al., 2021; Humphrey et

al., 2018). However, higher variation for some quality indicators in this study (e.g., clarity of

presentation) could suggest differences in program implementation quality in some classrooms.

Likewise, while we were not able to delineate quality by lesson activity (e.g., didactic instruction

versus practice) because it was measured using a summative rating, differences by lesson

component are possible and warrant future investigation.

Factors Influencing Implementation

Relative to the second research aim, teacher responses about factors influencing their

implementation were coded into thematic categories, which revealed multiple influences on

implementation. In the current study, teachers described that their desire to differentiate learning,

meet student needs, and respond to time pressure, in addition to other factors outside of their

control (e.g., schedule disruptions), impacted their implementation. Interestingly, the open-

response question used to assess teachers' report of implementation influences revealed a theme

of responsiveness to the demands of their classroom context. Similarly, Long et al. (2016) found

that over half of the implementation barriers identified by teachers in their sample were related to

the intervention (e.g., time and resources required, extent adaptable to student needs) and its

compatibility with their existing classroom practices. Future research should continue to explore the impact of factors that may arise from complex interactions between teacher, student, and classroom needs and motivations with a focus on classroom responsiveness and intervention compatibility. These factors and decision-making processes could be important additions to future models of SEL implementation.

Past research also has demonstrated that implementation supports within the school context can influence program delivery (Domitrovich et al., 2008, 2019). In this sample, more first-grade teachers noted school support factors in response to questions regarding implementation barriers and supports. Teachers described general administrative support (e.g., "check ins") or top-down decisions regarding when to teach the program, such as administrators telling teachers when they should teach the lessons. In one district, teachers shared that an instructional coach helped by creating colorful visuals to supplement the lessons and offering suggestions after observing their teaching. Except for several schools within that district, implementation often appeared to be an insular teacher (or sometimes grade-level) task, rather than a school initiative. Indeed, a 2020 State of Teaching survey reported that 55% of teachers felt unsupported in implementing interventions, and 41% reported planning curricular activities on their own (Institute for Arts Integration and STEAM, 2020). Teacher responses in this study provide helpful insights regarding the reality of implementing a classwide skills-based SEL curriculum under typical conditions in schools, which was most often left up to individual teacher discretion and judgement.

Some grade-level differences in implementation outcomes and coded responses were apparent. Most notably, first-grade teachers implemented fewer core lessons and reported more instances of unplanned disruptions (e.g., technology problems, unexpected days off). First-grade

teachers' open-ended responses also detailed school-level supports or administrative directives that may have affected their program completion. Second-grade teachers taught a greater number of lessons but fewer activities within each lesson. As such, it is also possible that first-grade teachers were more concerned with covering a smaller number of skills in-depth, while second-grade teachers preferred to review a larger number of skills with less depth of instruction. Second-grade teachers were also more likely to complete at least some advanced lessons but also shared that they felt pressure to teach the academic curriculum more often. One likely explanation for this is the increased academic expectation for U.S. elementary school students (Bassok et al., 2016) and downward pressure from state testing beginning at third grade (B. D. Jones & Egley, 2004). More research is necessary, however, to study whether these differences exist between first and second grade in other samples and with respect to implementing other classwide SEL programs.

Implications for Scaling School-Based SEL and Future Directions

Teachers in this study implemented a classwide SEL curriculum on their own schedule and under routine conditions in that decisions about training, ongoing coaching, and integration into the larger school context were made locally. While this study focused on one universal SEL program and a sample of 41 teachers, there are several findings that may help inform practice and policy efforts to bring universal SEL programs to scale.

First and foremost, results of the current study suggest that, under typical conditions, there is substantial variability in the way teachers and schools approach implementation of the SSIS CIP SEL. Though perhaps not surprising given the independence that many classroom teachers have when making local instructional decisions within their classrooms – particularly beyond instruction in core academic subject areas – it is noteworthy that only 10% of

implementing teachers completed all of the core units of the program. Beyond variability in lesson and unit completion, teachers also reported making within-lesson changes – some apparently driven by practical constraints and others by an intent to better address student needs. When taken together, these sources of variability likely result in no two teachers implementing the program in the same (or perhaps even very similar) ways, which could result in significant variability in student experiences and outcomes across classrooms even within the same school or district. Thus, identifying the most salient factors contributing to teachers' day-to-day instructional decisions for the SSIS SEL CIP and other universal SEL programs is a critically important direction for future research to ensure such programs realize their intended goal of promoting positive social and emotional development for all students.

Second, teachers in each grade level described struggling to find the time within their daily schedules to implement the full program. Research has suggested that insufficient planning for implementation leaves the burden on teachers to fit new SEL curricula into already full schedules, or otherwise shorten or adapt the content (S. M. Jones et al., 2017; Martinez, 2016). The SSIS SEL CIP is a manualized program intended for use by teachers without extensive training. Though the program is delivered at the class level, coordinated schoolwide planning efforts have been recommended for such universal programs to ensure high-quality program completion and sustainability (CASEL, 2019; Durlak, 2015). Brief, time-efficient implementation strategies delivered through a tiered support system may be a promising approach to improving intervention adherence and effectiveness (Merle et al., 2022). Still, indicators of lesson delivery quality (e.g., preparedness, responsiveness to student questions) were rated consistently highly, despite variation in training and PD opportunities. Thus, the

extent to which schools' planning, monitoring, and PD influences program implementation

practices and resulting student outcomes is an important area for future research.

Third, some teachers described feeling pressure to ensure that their students were

continuing to make expected academic progress. For example, teachers described needing to

teach the "mandatory" academic curriculum first (before the SSIS SEL CIP lessons) or that they

would shorten the SEL lessons if academic lessons ran long. Even though SEL has become

increasingly valued as an outcome of the educational system and viewed as a public health

priority (DePaoli et al., 2017), these findings suggest that if teachers are expected to deliver

direct SEL instruction, they may need more support in balancing, or integrating, academic and

SEL curricula.

Fourth, results from the current study offer insight into potential variations in universal

SEL program implementation (e.g., lesson completion, adherence to written text, adherence to

lesson components) as well as factors that teachers view as important to the implementation

process (e.g., flexibility of the program to meet student needs, availability of working

technology, etc.). Measurement of school-based program implementation has emerged as an

important area of study. For example, Michie and Johnston (2017) noted that lack of

understanding – and consensus – about how to define and measure implementation variables has

hindered the evaluation of program implementation, Similarly, Sanetti and Collier-Meek (2019)

identified the lack of psychometrically sound tools for measuring implementation. From a

practical measurement perspective, the variables identified in the current study could be

important additions to "fidelity checklists" or other measures typically used by school

psychologists or administrators to evaluate program implementation. Incorporating assessments

of these factors into future studies of different SEL programs would also help to validate their importance.

Finally, teachers reported making program modifications to meet student needs, such as adding or altering examples to better represent students' experiences, making vocabulary changes, or creating additional visuals. The balance of high-fidelity implementation with adaptation for the local school context is an important consideration in current intervention research (Lendrum et al., 2016). Some studies suggest that program modifications are differentially effective based on pre-implementation factors (e.g., teaching experience; Quinn & Kim, 2017), and notably, grounding program content in the lived experiences of students is considered critical for ensuring "culturally revitalizing SEL" (Castro et al., 2004; McCarty & Lee, 2014). Moreover, a recent systematic review found that high-fidelity implementation was associated with the outcomes of school-based mental health programs in only 40% of reviewed studies (Rojas-Andrade & Bahamondes, 2019), raising questions about the contributions of fidelity in the absence of implementation quality. Future studies should target how other implementation indices, especially teachers' choices and pedagogical approaches within program modifications, are related to instructional quality and/or impact student outcomes.

Limitations

Although this study is uniquely situated to offer insights about classwide SEL program delivery at-scale, several limitations should be considered. First, participants of this study included teachers recruited from the first year of the effectiveness trial (which occurred before major disruptions to typical school practices due to the COVID-19 pandemic). While the sample is generally demographically representative of teachers and schools in the U.S., a more robust sample could yield additional insights. Second, the SSIS SEL CIP is a manualized intervention

focused on explicit skill instruction intended to be delivered universally at the classroom level,

so generalization of these findings is most salient to similar programs rather than other SEL

approaches such as school-wide initiatives or embedded practices.

Third, although care was taken to train observers to be unobtrusive in the classroom, it is

possible that teachers' knowledge of the observers' presence changed their lesson delivery in

some way. In addition, although more than 75% of teachers in each grade level responded to

open-ended questions that were coded to create qualitative themes, it is unknown how well these

teachers' experiences and insights generalize to those teachers from the sample who did not offer

any such responses. Finally, a primary advantage of using questionnaires is that they facilitate

fast, easily accessible anonymous responses; however, future research could feature in-person

interviews or focus groups to obtain greater understanding of teachers' SEL instructional

decisions and practices.

Conclusions

A major goal of the larger effectiveness trial from which these data were drawn is to

understand the outcomes associated with the SSIS SEL CIP as delivered in U.S. schools under

typical implementation conditions. Significant variation in teachers' completion rates and

individual choices regarding lesson delivery suggest that coordinated planning efforts and

support for balancing SEL within academic curricula may be necessary to fully implement

similar universal SEL programs as intended across classrooms. Still, observations of teachers

suggested several positive teaching approaches, and teachers described making well-intended

modifications to meet the needs of students in their diverse classrooms. Additional research on

the SSIS SEL CIP and similar universal SEL programs is needed to understand if such typical

implementation practices yield similar short- and long-term positive student outcomes to those

reported in researcher-guided efficacy trials.

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Figure 1

Open-ended Questions from Weekly and Summative Reports

Weekly Implementation Report (distributed each Friday)

1. If you significantly supplemented or modified this lesson, please briefly describe below (*asked for all lessons completed that week*)

2. If you have any feedback or questions about the lessons you taught this week, please briefly describe below.

3. Please share your plans for the rest of the school year with us below.

Summative Implementation Report (distributed at end of school year)

1. Please briefly describe why you taught the lessons on the days/times that you did.

2. Were there any significant events and/or factors that affected (negatively or positively) the implementation of the program this year? … Please briefly describe.

3. Did your school provide any specific support while you were implementing the program lessons? (open-ended)

4. Please briefly provide the primary reason(s) why you chose not to teach all of the lessons from the Core Units.

5. Did you typically modify the lessons in any way when teaching them? … Please briefly describe how you modified the lessons.

6. Did you create any of your own materials for the lessons? … Please briefly describe what you created and why.

Table 1

SSIS SEL CIP Units Aligned with CASEL Core Competencies

CASEL Core Competency	CIP Unit
Self-Awareness	Ask For Help (C)
	Tell Others About Your Skills (A)
	Be Positive About The Future (A)
Self-Management	Listen To Others (C)
	Follow The Rules (C)
	Pay Attention To Your Work (C)
	Stay Calm With Others (C)
	Express Your Feelings (A)
	Stay Calm When Pushed Or Hit (A)
Social Awareness	Do Nice Things For Others (C)
	Make Others Feel Better (A)
	Stand Up for Others (A)
Relationship Skills	Say Please And Thank You (C)
	Take Turns When You Talk (C)
	Get Along With Others (C)
	Introduce Yourself To Others (A)
	Make Compromises (A)
	Ask Others To Do Things With You (A)
Responsible Decision Making	Do The Right Thing (C)
	Own Your Actions (A)
	Respect Other People's Things (A)
	Do Your Part In A Group (A)
	Listen To Different Ideas (A)

Note. Alignment according to the SSIS-CIP SEL program manual (Elliott & Gresham, 2020). C= "core" lesson; A= "advanced" lesson.

Table 2

Teacher Demographic Characteristics (Percentages) by Grade Level

	Grade 1 (*N*=19)	Grade 2 (*N*=22)
Female	100	82
Race		
White	74	82
Asian	0	5
Black/African American	5	5
Hispanic/Latino	21	0
Other	0	5
English as primary language	79	100
Dual language speakers	21	0
Education		
Bachelor's degree	47	64
Master's degree	47	23
Other degree	5	14
Professional Experience		
General education	53	64
General & special education	16	9
General education & other credential (e.g., reading specialist)	31	27

Table 3

Mean Completed Core and Advanced Lessons and Units by Grade Level

	Grade 1 (*N*=19)			Grade 2 (*N*=22)		
	Mean	*SD*	Range	Mean	*SD*	Range
Core Completion						
Lessons (30 max)	21.74	6.61	7-30	24.60	4.83	12-30
Units (10 max)	5.89	3.30	0-10	7.00	2.29	2-10
Advanced Completion						
Lessons (39 max)	2.21	4.22	0-15	3.55	6.32	0-21
Units (13 max)	0.53	1.31	0-5	0.73	1.83	0-7

Table 4

Unit Completion By Topic and Grade

	Grade 1			Grade 2		
	Completed Unit	Partial Completion	Did Not Teach	Completed Unit	Partial Completion	Did Not Teach
Core Units						
1. Listen to Others (SM)	74%	21%	5%	73%	23%	4%
2. Say Please and Thank You (RS)	63%	27%	10%	82%	13%	5%
3. Follow the Rules (SM)	63%	32%	5%	64%	32%	4%
4. Pay Attention to Your Work (SM)	48%	47%	5%	55%	36%	9%
5. Ask for Help (SeA)	63%	27%	10%	68%	14%	18%
6. Take Turns When You Talk (RS)	58%	26%	16%	68%	23%	9%
7. Get Along With Others (RS)	53%	37%	10%	64%	27%	9%
8. Stay Calm With Others (SeM)	47%	37%	16%	73%	18%	9%
9. Do the Right Thing (RDM)	63%	27%	10%	91%	5%	4%
10. Do Nice Things for Others (SoA)	58%	21%	21%	64%	18%	18%
Advanced Units						
11.Tell Others About Your Skills (SeA)	0%	21%	79%	14%	5%	82%
12. Own Your Actions (RDM)	11%	11%	79%	14%	14%	73%
13. Express Your Feelings (SM)	11%	0%	89%	14%	14%	73%

14. Respect Other People's Things (RDM)	5%	11%	84%	9%	9%	82%
15. Do Your Part in a Group (RDM)	0%	5%	95%	5%	9%	86%
16. Ask Others to Do Things With You (RS)	5%	0%	95%	9%	9%	82%
17. Introduce Yourself to Others (RS)	5%	0%	95%	9%	9%	82%
18. Stay Calm When Pushed or Hit (SM)	0%	0%	100%	0%	5%	95%
19. Stand Up for Others (SoA)	0%	0%	100%	0%	0%	100%
20. Make Others Feel Better (SoA)	0%	0%	100%	0%	0%	100%
21. Make Compromises (RS)	16%	0%	84%	0%	0%	100%
22. Be Positive About the Future (SeA)	0%	0%	100%	0%	0%	100%
23. Listen to Different Ideas (RDM)	0%	0%	100%	0%	0%	100%

Note. SM=self-management; RS=relationship skills; SeA=self-awareness; SeM=self-management; RDM=responsible decision-making; SoA=social awareness.

Table 5

Observed Lesson Completion, Verbal Adherence, and Approach by Grade Level

	Grade 1 (N=19)		Grade 2 (N=22)	
	M	*SD*	*M*	*SD*
Lesson Component Completion				
Tell	86%	11%	83%	20%
Show/Do	71%	21%	67%	28%
Practice	70%	18%	67%	29%
Total	**75%**	**14%**	**72%**	**25%**
Verbal Adherence				
Tell	4.65	.40	4.04	1.12
Show/Do	3.96	.85	3.53	1.28
Practice	3.81	.89	3.43	1.27
Overall	**4.14**	**.62**	**3.67**	**1.20**
Approach to Implementation				
Preparedness	4.04	.69	4.15	.73
Enthusiasm	4.16	.41	4.35	.57
Responsiveness to student questions	4.42	.42	4.50	.53
Clarity of key concepts	4.52	.39	4.37	.90
Skilled facilitation of activities	3.84	.59	3.93	.98
Overall	**4.25**	**.42**	**4.26**	**.68**

Note. Verbal adherence and approaches to implementation represent average score on 5-point scale. Lesson activity completion represents % of activities completed per lesson (y/n questions).

Table 6

Factors Identified by Teachers as Impacting SEL Lesson Implementation

	Grade 1	Grade 2	Examples
Individual teacher motivations			
Meeting student needs	63%	44%	Added visual elements to increase student engagement
			Made examples and/or practice activities relevant to classroom
			Deviated from script to match students' instructional level
Higher priority to teach other subjects	19%	44%	Teaching core instruction before SEL
			Not continuing lessons to catch up on missed curricula
Time pressure	31%	44%	Fit lessons into limited free time
			Condensed or shortened lessons to fit into teaching block
			Skipped or substituted certain lesson activities
School-level factors	44%	38%	Administration provided professional development and/or coaching
			Grade-level teams met to plan implementation schedule
			Top-down (principal) decision-making regarding lesson implementation
Unplanned disruptions	56%	31%	Technology problems
			Schedule changes
			Leave of absence

Note. Percentages calculated using number of teacher respondents ($N = 16$) per grade level for the denominator