



Understanding the Social and Emotional Learning (SEL) Gap in U.S. High Schools: Do Teacher Mindset and Prior SEL Exposure Predict Receptiveness to SEL Adoption in Secondary Schools?

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Understanding the Social and Emotional Learning (SEL) Gap in U.S. High Schools: Do Teacher
Mindset and Prior SEL Exposure Predict Receptiveness to SEL Adoption in Secondary Schools?

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A Thesis in the Field of Psychology
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Abstract

Decades of research have indicated that social and emotional learning (SEL) programs in schools broaden students' psychological resources and improve their outcomes—from better grades to fewer mental health struggles. Importantly, the focus of this work has largely not been high schools, as the majority of experimental research has centered on earlier grades. Despite this, there is an abundance of data in the fields of psychology, neuroscience, and education that emphasize the importance of SEL competencies during adolescence. Social and emotional skills (e.g., self-regulation) are related to a smoother transition to adulthood, with associated long term positive outcomes that include academic achievement, college matriculation, and higher future earnings. Therefore, the conspicuous absence of high school SEL is notable, and it is unclear why a focus on SEL seems to have bypassed schools serving older teens. One step toward addressing this question is to understand the factors that predict teacher support for SEL, as teacher views are known to heavily influence the beliefs and outcomes of their students. This paper explored what high school teachers think about the benefits of explicit SEL curricula at the high school level, by investigating the relationships between teacher mindsets and SEL exposure (school programs and teacher training) and their attitudes about SEL adoption in high schools, using an anonymous online survey. Teacher mindset was found to be the only statistically significant predictor of SEL receptiveness in this study. Also of note was the overwhelming endorsement of high school SEL expressed by participants, regardless of background or contextual factors (e.g., type of school, years

spent teaching). Based on these findings, it is clear teachers want to see universal, contextually relevant SEL integrated into U.S. high school curricula, and they are open to—even enthusiastic about—professional development in support of it. Understanding how high school teachers view SEL and what they need in order to confidently deliver it (e.g., growth mindset training, personal SEL cultivation, training on how to embed SEL into academics) is an important precursor to asking school systems and classroom teachers to dedicate valuable teaching time to it. This inquiry explored teacher opinions on reported challenges to SEL adoption (e.g., parent buy-in, structure of the high school day) as well. Expected and unexpected findings are reported and directions for future study are discussed.

Dedication

I have a heart-of-gratitude for life events that reminded me how much I love to learn and for my boys—Josh, Coulson, and Beckett—who encouraged me to act on it. This thesis is dedicated to Josh Batchelor, for being a divergent (and “can-do”) thinker since we met in 1991, and for encouraging me to explore ideas unconventionally every day since, and to our children, who with kind hearts and curious minds teach me more than I will ever teach them, and who have tolerated a steady stream of take-out food and missed events on my part in order for me to realize a dream.

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Whether through kismet or dumb luck I found myself in classrooms with instructors and students, many of whom are now friends, who have opened my mind and changed my heart. I have deep and humbling gratitude for Dr. Tracey Tokuhama-Espinosa for asking: “What do you want to know?”. She stuck with me as I answered the question and then showed me how to do the same for others. Dr. Dante Spetter guided my unwieldy curiosity to a manageable place, “think narrow, not small”, she said, because “you can spend your life” answering all of these questions, eventually. Importantly, I want to acknowledge Dr. Stephanie Jones, whose work inspired mine and without whom I would have never learned how to get through an IRB process or successfully survey a group of educators on SEL. Finally, I want to thank my cousin, Corie Talano, for listening, advising, and enduring long brainstorming sessions about how to elicit meaningful responses through this study, and how to get through pandemic-style “home schooling” for middle schoolers (while writing a thesis), with no reward for her time and care.

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Chapter I

Introduction

Teacher beliefs play an integral role in student outcomes (e.g., Bandura, 2001; Collie, 2015; Martinez, 2016). Social and emotional skills and competencies, often described as social and emotional learning (SEL), are also recognized as influential to student outcomes (e.g., Jones & Doolittle, 2017). SEL most frequently takes the form of explicit curricula on and modeling of skills that support emotional regulation, healthy communication, and individual and social awareness (Jones & Doolittle, 2017). Yet, despite the consensus that SEL is beneficial throughout a K-12 education, there is limited adoption in secondary schools. For example, in one survey, while 98% of principals reported that SEL is important, only 25% of respondents said that their own high schools had an SEL curriculum, suggesting a notable underrepresentation for this age group (Bailey et al., 2019; DaPaoli et al., 2017; Williamson et al., 2015).

Given the consensus that SEL is helpful, yet far from consistently available across school districts or age levels, researchers have tried to understand why adoption has been slow and inconsistent. Some explanations highlight challenges with buy-in from teachers (for example, there is reported tension between time spent teaching academics versus soft skills) and limits to program adaptation for developmental and environment-specific relevance (Bailey et al., 2019; Jones & Bouffard, 2012). Educational research has shown that teacher attitudes and beliefs impact their willingness to embrace organizational and curricular changes and they are more likely to support changes, including SEL programs, when they are part of the change design (Brackett et al., 2012; Campbell et al., 2015;

Martinez, 2016). Consequently, improving our understanding of how certain factors may impact attitudes toward SEL may improve the pathways for implementation of such curricula in schools.

The Roots of SEL in Schools

The foundations of SEL as a discrete area of education grew in part out of the study of emotional intelligence (EI) and sought to characterize abilities not explained by traditional measures of IQ (Salovey & Mayer, 1990). Research showing that cognition, emotion, physical wellness, and brain development are closely related led education researchers to SEL as an important component of understanding variations in student success (Immordino-Yang & Damasio, 2007; Miller et al., 2009; Tokuhama-Espinosa, 2014).

The efficacy of SEL, and specifically the ability to positively impact a broad spectrum of academic and other personal measures of success, has been documented as an important component of a child's overall education (e.g., Jennings & Greenberg, 2009; Jones & Doolittle, 2017; National Commission on Social, Emotional and Academic Development, 2019). In some schools, classroom teachers are responsible for SEL, and in others, health counselors and staff may be responsible (Durlak et al., 2012). Data from a range of studies have shown that when classroom teachers dedicate time to SEL, students show academic as well as psychosocial improvements (e.g., Greenberg et al., 2017; Jennings & Greenberg, 2009).

In one study, classroom teachers delivered an intervention that was designed to develop and enhance the link between cognitions and prosocial behavior (Frey et al., 2005). Students (N = 1,253) were randomly assigned to control or treatment classrooms,

and outcomes were measured over a two-year period using student and teacher report, as well as observations. Conflict resolution scenarios were presented requiring group decision making and negotiation strategies in order to determine whether those exposed to the SEL intervention displayed more shared goal orientation and cooperative versus competitive behaviors. Students in the treatment classrooms demonstrated improved behavior and social reasoning, less aggression, and needed less adult intervention. In another study designed to prevent behavioral problems and enhance academics for public elementary students, 119 students were given an SEL curricula at school and followed for two years (Linares et al., 2005). Their outcomes were studied using self- and teacher-report measures of problem-solving skills, self-efficacy, and grades. When compared to students in a nearby control school, the treatment students showed significant improvements over time in math scores, self-efficacy, problem-solving skills, and social-emotional behavior. Medium to large effect sizes were observed (0.42-1.01). A number of studies report similar findings. For example, Durlak and colleagues conducted a meta-analysis of 213 school based universal SEL programs to evaluate, among other things, the hypothesis that SEL programs conducted by classroom teachers would yield significant positive outcomes (2012). Unlike some others who have historically measured individual outcomes in a given study, the authors looked at student outcomes in several categories including “attitudes toward self and others,” “emotional distress,” and “academic performance.” Their findings, which represented 270,034 students across studies, demonstrated that SEL programs conducted by teachers were effective at helping students to acquire and utilize SEL skills (effect size [ES] = 0.62, confidence interval [CI]

= 0.41-0.82). Thus, school is an important and effective environment for SEL delivery (Greenberg et al., 2017; Jones & Bouffard, 2012).

Extending Durlak and colleague's (2012) study, Taylor et al. (2017) conducted a meta-analysis of 82 universal, school based SEL programs from kindergarten through high school. Their results showed that exposure to SEL curricula was inversely related to arrests and other negative outcomes later in life, and benefits were seen across a variety of socio-economic, racial, and locational backgrounds. The meta-analysis was based on research including a sample of 97,406 students from kindergarten through 12th grade. The authors revealed benefits in seven outcome categories including a 12.93% increase in academic performance and reductions in conduct problems, emotional distress, and drug use, with improvement indices of 5.56%, 5.64%, and 5.64%, respectively. Findings were based on school records, self-report and reports from teachers, parents and other observers. Moreover, individual studies cited in the work demonstrated numerous other benefits for students enrolled in schools with an SEL curriculum. One striking longitudinal example tracked the outcomes (e.g., academic achievement, graduation rates, use of special needs services, etc.) of 678 urban high schoolers who were given a first grade SEL classroom intervention designed to improve achievement and reduce aggressive and shy behaviors (early risk factors; Bradshaw et al., 2009). Student outcomes were compared to those in a different parent-school partnership intervention and a control group (three groups in total). The analysis was based on teacher report, academic and behavioral records, high school graduation, and college attendance data. Importantly, 61.9% of the students in the first grade SEL classroom intervention graduated from high school, as compared to 57.3% in the parent-school partnership

program, and 51.3% in the control group. Also of note, 31.5% of the students in the classroom intervention group attended college. This was in comparison to 28.5% of adolescents who had participated in the parent-school partnership group, and 19.4% of control group youths.

SEL in High School

While effective SEL curricula should ideally be implemented in an age-appropriate sequential fashion, and administered simultaneously to academics (Jones & Bouffard, 2012; Yaeger, 2017), a 2018 survey demonstrated that formal SEL interventions are less prevalent as a child progresses through school (25% of high school principals reported school-wide SEL, 41% for elementary schools, and 35% for middle schools; DePaoli et al., 2017). Given that adolescents who lack adequate self-regulation skills and/or struggle with emotion processing are considered at risk, and that research shows that the positive effects of SEL are largest for at-risk kids (Jones & Bouffard, 2012), why do high schools not emphasize SEL in the way that it is emphasized in earlier grades? The structure of the high school day is one possible explanation, because U.S. high school classes are typically taught in 45 to 55-minute blocks, focusing on specific subjects (Jennings & Greenberg, 2009). This is in contrast to elementary school classes in which instructors typically teach a range of subjects and have leeway to determine the amount of time spent on each (Deemer, 2004).

Moreover, many people, including some educators, perhaps believe that by the time a student arrives in high school, foundational SEL should already be in place and school systems may assign the responsibility to the earlier grades. Collie et al. (2015) surveyed two groups of teachers (sample one = 1,267 teachers, sample two = 603

teachers) to better understand factors that impact teacher beliefs, stress, and job satisfaction and found that middle and high school teachers were less comfortable with SEL practice adoption and reported less school-wide support for it. The authors cited the format of the school day and pressures associated with meeting academic standards to prepare kids for higher levels of education as possible systemic barriers. Finally, local and state education policy may also play a role in this disparity. Eklund et al. (2018) conducted a systematic review of state-level SEL standards which revealed little evidence of attention given to high school populations. The authors found that all 50 states require SEL programming in preschool and 11 states require such programming for all or some grades between kindergarten and 12th grade, demonstrating the need for broader SEL standards beyond preschool.

Teacher Beliefs Shape Student Outcomes

It is generally well established that teacher beliefs are influential in determining student outcomes. In an effort to understand the various factors that influence student learning, Hattie (2012) reviewed over 800 meta-analyses involving 52,637 studies and 240 million students. This landmark study identified the top 150 factors that influenced student academic outcomes and revealed that “teachers’ beliefs and commitment are the greatest influences on student achievement over which we can have some control” (p. 25). Jennings and Greenberg (2009) also suggested that the learning framework of students is shaped by their teachers. There are other notable examples from the literature demonstrating the influential relationship between teacher convictions and student beliefs and outcomes, including research showing that teacher views impact everything from student self-efficacy and behavior, to the creation of safe and supportive learning

environments (Martinez, 2016; Wentzel, 2016). Therefore, the commitment of teachers to incorporate SEL elements into practice likely impacts the attitudes about and openness to SEL practices of the students themselves.

The Collie et al. (2015) study, described briefly above, further asserted that teachers are key to successful SEL implementation, specifically. In their study teachers were asked to complete the Teacher SEL Beliefs Scale (Bracket et al., 2012). They found that most of the teachers reported a desire to improve their SEL skills. As the vital link between educator beliefs and student results comes into greater focus, it is increasingly important to better understand the drivers of such beliefs.

What Influences Teachers' SEL Beliefs?

Teacher attitudes about what should be taught in high school are influenced by a range of individual and system-level factors. The present investigation focused on three possible predictors. First, teacher mindset which, according to Canning and colleagues (2019), predicted student academic successes more than race, teaching experience, age, gender, or ethnicity. Given that this individual characteristic appears to have a critical impact on student outcomes, this study investigated whether it is linked to teacher support for dedicated SEL curricula. Second, teacher SEL training was explored, as research has demonstrated that individual teacher commitment to SEL adoption may be affected by SEL training and previous experience; the level of training tends to affect teacher judgements about the value of SEL (e.g., Collie et al., 2015). Finally, school SEL policy (i.e., whether a teacher works in a school that has an existing SEL curriculum) was investigated as a predictor of teacher beliefs. As Jones and Bouffard (2012) explained, schools and classrooms form an ecosystem and when the system does not support SEL it

is hard for educators to make headway, even if they individually support it. Moreover, Jennings and Greenberg (2009) reported that teachers who are “socially and emotionally competent” are more open to and better at teaching these skills to their students, suggesting that training and a school culture that formally supports SEL are important factors in successful implementation.

Educator Mindsets

Mindset refers to a teacher’s beliefs about their students’ individual intellectual abilities as either fixed or malleable (Dweck, 1999, 2006). As outlined by Dweck (2006), a person who holds a growth mindset—or incremental theory of intelligence—maintains the belief that people can grow and improve through effort, and that one’s efforts and processes are more important than the actual outcomes (e.g., a grade on a test). Under this construct, failures and mistakes are seen as opportunities for growth, or indications that a new process is needed. Importantly, regardless of the innate limitations one is born with, a person with a growth mindset believes that there is room to grow and improve (i.e., even if math is hard for me, I can work to improve my skills). In the fixed mindset—or entity theory of intelligence—it is assumed that a student is born with a fixed level of intelligence. For example, with a fixed mindset I may believe that I was born bad at math and may avoid extra effort in this area, which will further diminish my math abilities as I progress through school and concepts get harder (Dweck, 1999). Absent the belief that one can always improve their intelligence, the fixed orientation can lead to more reliance on stereotypes and use of labels to describe individuals (Rissanen et al., 2019). Ostensibly, having a fixed mindset and being reliant on stereotypes might influence an educator’s judgements about SEL. If a teacher believes a student has a fixed set of

limitations, it could perhaps seem pointless to spend extra time to cultivate additional skills. On the other hand, a growth mindset teacher may be more likely to value the development of the whole student so that s/he can reach his or her maximum potential, especially in settings where children's access to non-academic factors that build resilience, for example, are more limited.

Specifically, Seaton (2018) has applied the framework of mindsets to educators and students in an attempt to better understand how belief systems are related and how they influence teacher and student outcomes. She explained that “differing mindsets, or assumptions, that teachers possess about themselves and their students play a significant role in determining their expectations, teaching practices, and how students perceive their own mindset” (p. 43). Using a mixed-methods design, she conducted six teacher-training sessions across two phases. The first phase involved a single session with 37 participants and the second featured five sessions with 17 participants. Teachers were asked to complete the Dweck (1999) Theories of Intelligence Self-form for Adults before and after the intervention, and the results revealed a statistically significant improvement in mindset scores from pre to post assessment (Time 1: mean [M] = 4.63, standard deviation [SD] = 2.22; Time 2: M = 8.5, SD = 1.15, $p < .0001$). The effect size ($d = 0.85$) was higher than Cohen's (1988) established large effect size benchmark ($d = 0.8$). These findings are exciting because they imply that teacher mindset is malleable and can be improved through intervention. The results echo other evidence on mindset theory suggesting that a growth mindset can be developed (Haimovitz & Dweck, 2017). If a teacher's fixed mindset is related to negative SEL beliefs, then perhaps by working to

enhance the mindset of the teacher, attitudes about SEL and other pedagogical innovations would improve as well.

Rissanen et al. (2018) reported that inquiry into teacher mindsets and how these may influence their pedagogical practices is scarce, however. According to the authors, the available information on teacher mindsets is mostly limited to lab-based studies rather than those conducted in real-world settings and involving authentic educational scenarios with large samples of participants. Moreover, their investigation turned up “...no systematic efforts to delineate the core tenets of what could be called a growth mindset pedagogy—pedagogy that is likely to cultivate a growth mindset in students and is associated with the teachers’ own growth mindset” (p. 205). Given the important relationship between teacher views and student learning successes, one might wonder about the influential role that teacher mindsets may have in shaping individual beliefs and in turn, the influences they exert—both implicitly and explicitly—on students.

Furthermore, Brackett et al. (2012) investigated teacher assumptions about SEL and drew an indirect link between growth mindset in teachers and their commitment to SEL curricula. He explained that if a teacher does not believe that a student can improve their SEL abilities, ostensibly displaying a fixed mindset of intelligence, then it is “unlikely that they will buy into SEL efforts at their schools” (p. 231). These findings support further investigation into the relationship between growth mindset and convictions about social and emotional learning curricula.

Formal SEL Training

A second variable deemed worthy of exploration is the role that a teacher’s training may play in shaping their views and attitudes towards SEL. Notably, while most

teachers believe that SEL should be part of teaching, the majority of current teacher training programs in the U.S. fail to adequately prepare educators in SEL (Schonert-Reichl et al., 2015). State et al. (2011) surveyed syllabi for 80 pre-service elementary teacher education programs in the U.S. and found that 53% of them did not cover social, emotional, and behavioral issues in any way and the remaining 47% of programs covered these topics minimally. These findings were echoed by a national study of school principals which found that 70% of principals believed that teachers should teach social and emotional skills at school, but 60% of them pointed to a lack of teacher SEL training as a major barrier to realization of this goal (DePaoli et al., 2017). They reported that less than half (45%) of teachers at their schools were very (or even fairly) well prepared to successfully deliver SEL curricula.

Teachers need SEL teacher training as well as opportunities to develop their personal SEL skills (e.g., Greenberg et al., 2017; Jones & Bouffard, 2012). Research has demonstrated an integral relationship between emotion, cognition, memory, and attention, suggesting that one's emotional state can direct among other things, decision making and the ability to learn (Immordino-Yang & Damasio, 2007). This is true for students and teachers alike. Therefore, teachers who are skilled at navigating their own emotions in the classroom, for example, will have an easier time modeling and teaching the concepts of self-regulation, sound decision making, and prosocial behaviors that are part of SEL (e.g., Jones & Bouffard, 2012). Without opportunities to both cultivate their own SEL and access SEL instructional training, it may be hard for a teacher to embrace such curricula.

School SEL Culture and Infrastructure

The third variable explored is explicit incorporation of SEL into a given teacher's school curriculum. According to the literature, school leadership in support of SEL curricula appears to positively influence teacher perceptions of the value of such programs (Martinez, 2016). Specifically, Martinez (2016) found that a culture that valued SEL and provided training in how to deliver it was central to teacher development, when the stated goal was to provide a well-rounded educational experience. The study utilized an iterative, practitioner-driven methodology and action research (AR) process involving participants in a large urban California school district. Included in the district were 400 children from kindergarten through 6th grade; SEL was specifically incorporated into the curriculum. Between phases of the study, teachers were given the opportunity to reflect on and change their behaviors. The researchers noted that the experience of teaching SEL had a positive impact on teacher opinions about it. Some teachers had initially expressed feelings of tension between the need to teach academic content and SEL. Through the AR process, they shifted from feeling that these categories were "antagonistic" to "complementary". Interestingly, another researcher found that "...the effects of school culture appear especially pervasive in the secondary classroom" (Deemer, 2004, p. 88), which is perhaps due to growing emphasis on goal-orientation and social relationships (with peers and teachers) that develop during the high school years, and seem to have an impact on teachers, not only students. This highlights the influence that an SEL embedded curricula (as part of a broader educational agenda) can have on teacher beliefs.

Finally, Brackett and colleagues conducted a two-part study where phase one explored the attitudes of 935 teachers and ultimately generated three scales to measure

teacher beliefs about SEL implementation, interest in further training in SEL, and perceived school culture (2012). Phase two was a randomized controlled trial designed for a smaller group of the teachers (N = 88) to employ an SEL curricula and gather data to examine the validity of the new scales. Ultimately, the Teacher Belief Scales were created and validated, revealing that when an SEL structure existed at a school and teachers felt that the school culture was supportive of such programming, they were more likely to embrace it. By extension, their research is relevant to a central problem of the current study: Teachers in schools that have an established SEL program are more likely to think positively about SEL, but because there are fewer SEL programs in high schools, the lack of exposure may negatively impact such beliefs.

Significance of the Study and Hypotheses

SEL has been widely studied and the extant body of literature demonstrates positive outcomes across a broad spectrum of benefits, ranging from academic improvements to enhanced career-oriented skill development, when evidenced-based, universal programs are adopted and integrated with fidelity (Jones & Bouffard, 2012). Despite this, there is an apparent gap in the research and application of such curricula in U.S. high schools. While there are many factors that may contribute to this broader phenomenon, understanding the variables that impact teacher attitudes represents an important piece in the larger puzzle. Notably, according to Jennings and Greenberg (2009), a focus on teacher views has for the most part received limited attention in the literature.

As such, this study seeks to contribute to the existing body of SEL literature by attending to this gap, and by revealing insights that may enhance practices that improve

social and emotional well-being within the high school population. With this in mind, three outcomes were hypothesized at the outset of the study:

1. A teacher's growth mindset will be positively related to their attitudes about SEL adoption in high schools.
2. Formal teacher training on SEL will be positively related to teacher attitudes about SEL adoption in high schools.
3. The presence of a universal SEL program at a teacher's place of work will be positively related to teacher attitudes about SEL adoption in high schools.

Chapter II

Method

This study was conducted using an online survey made available to participants for approximately three months and facilitated using Qualtrics. Using G*Power (Version 3.1.9.6; Faul et al., 2020) and Cohen's f^2 for a medium effect size of .15 (Cohen, 1988) with power of 0.95 and an alpha of .05, the target number of participants presented in the research proposal was 75 teachers (full-time U.S. high school teachers). The goal was revised to 200 before the survey launch.

Participants

After receiving approval by the Harvard Committee on the Use of Human Subjects, a survey was distributed to full-time high school teachers in the U.S. (adults). A sample of teachers from across the U.S. was recruited online and via email. Recruitment notes were sent to alumni members of The Harvard Graduate School of Education (HGSE) and included alumni listserv groups for several HGSE programs (e.g., Learning and Teaching and Mind/Brain/Education). Additionally, the primary researcher distributed the link to a network of colleagues, several of whom shared it with their own teacher networks. It was sent to two large educator groups including Montessori and learning sciences communities as well. The survey link was distributed via domain and community-relevant Facebook pages and on psycresearch.org. See Appendix A for the recruitment email. Teachers were asked to share their individual attitudes and beliefs

regarding SEL by completing an anonymous online survey, if they met the inclusion criteria described just below; no identifying information was collected. Inclusion criteria were that participants be current full-time teachers in a U.S. high school. They were asked to share the survey link with colleagues who might be interested as well.

Before the data were reviewed, there were 122 participant responses, of which 87 were utilized in subsequent analysis (see Data Cleaning Protocol). Participants in the sample included educators from the following categories: 48.84% public school, 36.05% private or religious schools, and 15.12% public charter and/or magnet schools. The majority of respondents currently teach core academic courses (76.74%) versus special/elective or other types of counseling services. Also in the slight majority in this sample are teachers who have been teaching for more than eight years (51.72%). This was followed by five-to-eight- year teachers (21.84%) and one-to-three-year teachers (20.69%), with the smallest group of respondents falling into the three-to-five-year range (5.75%). This translates into a sample that is largely made up of educators who have been teaching core academic courses (76.74%) for five or more years (73.56%).

The survey was created and delivered using Qualtrics, hosted by Harvard University. It was designed to protect subjects' privacy and confidentiality; no names or personally identifying information were collected. Participants were given the opportunity to register for a drawing after completing the survey. Information collected through this separate, opt-in process was not linked to the previous questionnaire and responses.

Measures

Teachers were asked to complete a survey that incorporated screening questions, single item measures of SEL exposure and attitudes, and the Theories of Intelligence Scale (Dweck, 1999; Dweck et al., 1995). Participants were told that their involvement in the study will help researchers better understand high school teacher beliefs and attitudes about SEL and provide a voice to such teachers on the subject of SEL.

Demographic and Qualifying Questions

Participants were asked whether they currently teach high school within the U.S. If a teacher answered “no” then they were thanked for taking the time to begin the survey and the survey closed (they met exclusion criteria). Teachers who answered “yes” were asked to provide the zip code within which their school (place of work) is located, along with other demographic information about their role and school (e.g., type of school, subject taught, years of teaching experience, two true or false statements about their understanding of the relationship between cognition and emotion in learning). Furthermore, the questionnaire included the following measures (Appendix B includes the full survey tool):

Theories of Intelligence Scale (Dweck, 1999; Dweck et al., 1995)

This 8-item measure assesses whether respondents demonstrate a fixed or growth mindset. Participants were asked to answer a series of questions with the following instructions:

This questionnaire has been designed to investigate ideas about intelligence. There are no right or wrong answers. We are interested in

your ideas. Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements by writing the number that corresponds to your opinion in the space next to each statement. (Dweck, 1999, p. 175)

Answers were recorded using a Likert scale (1 = strongly agree; 2 = agree; 3 = mostly agree; 4 = mostly disagree; 5 = disagree; 6 = strongly disagree). Featured questions included “You have a certain amount of intelligence, and you can’t really do much to change it”, “You can change your basic intelligence level considerably”, and “No matter who you are, you can significantly change your intelligence level.”

Item-level data were used to categorize teachers as having either a growth, developing/neutral, or fixed mindset. The mean across the eight items was tallied (the incremental theory questions were reverse scored; Blackwell et al., 2007). For the purpose of this study, a score of one and two represent an entity or fixed mindset, a three or four constitutes a neutral or developing mindset, and a five or six represents an incremental or growth mindset, consistent with Dweck and colleagues’ literature on mindsets. This was changed from the original proposal to include three mindset groups, rather than two. In past research the measure has demonstrated strong psychometric properties. Dweck et al. (1995) reported the internal reliability of the measure to be 0.98, with Levy and Dweck (1998) demonstrating a range of 0.93-0.95. The test re-test reliability was 0.82 after one week and 0.71 after four weeks (Levy & Dweck, 1998).

SEL-Specific Questions

Respondents were asked to answer a series of questions about their training in, experience with, and attitudes toward SEL, such as:

- Have you received formal teacher training in SEL? Note: This may include pre-service, in-service, and professional development. This does not include informal extracurricular exploration that you have done on your own, featuring online videos, books, or other such materials.
 - No, I have not had any formal SEL training.
 - Yes, I have had some amount of formal SEL training.
- In total, approximately how much formal SEL teacher training have you received?
- In your view, SEL curricula belongs in which levels of a child’s school education (select one or more school stages or “does not belong”).
- Using the dropdown boxes, please indicate whether each statement is true or false.
 - I intentionally incorporate SEL elements into my high school class (regardless of any school/district directive).
 - I feel adequately prepared to include SEL concepts in my high school classroom.
- Is there a formal/explicit SEL program in the high school where you currently teach?
- It is important for high school teachers to incorporate SEL into high school instructional time (agree/disagree).
- What are the primary challenges to high school SEL teacher adoption (please drag the bar to indicate whether you think each item [below] is a challenge or not, with 0 being no challenge, and 10 being a very large challenge)?

- Using the dropdown menu, please indicate whether you believe that each of the [following] statements is true or false in the context of high school education.
- On a scale of 1-10, please slide the bar below to rate your own social and emotional skills with 1 being not effective and 10 being very effective.
- I would like to experience more high school specific SEL teacher training (agree/disagree).

Responses to nine of the questions, the answers to which directly indicated a positive or negative impression of SEL in high schools, were used to create an SEL attitudes score, with a zero being the lowest possible score and nine being the highest possible score. A score of nine indicates the most positive endorsement of high school SEL for the purposes of this study. Responses were grouped into low (1-3), medium (4-6), and high (7-9) categories in an effort to quantify the level of positive SEL attitudes a given teacher demonstrated. Results were considered using both a continuous variable and the leveled categories as well.

Procedure

The procedure for this study was executed through three mechanisms: data collection, data scoring protocol, and data cleaning protocol.

Data Collection

Data were collected using Qualtrics, provided by Harvard University. Prior to beginning the survey, all participants were given statements about human-subjects

protection, confidentiality, and privacy (see Appendices A and B). The data were stored in Qualtrics and then transferred to IBM SPSS for further analysis.

As referenced above, participants were recruited through email distribution to HGSE alumni list serves. To incentivize participation, educators were given the opportunity to be entered into a drawing for one of two \$100 Amazon.com gift cards. They were also provided with the primary researcher's contact information for questions to be answered and/or to request an electronic copy of the study upon completion.

The recruitment email (see Appendix A) included a call-to-action to click on the survey link and the request to share the link with other colleagues. Those who chose to click were directed to the Qualtrics-hosted survey and provided with the following instructions and information:

A graduate student working with The EASEL Lab at the Harvard Graduate School of Education would like to invite full-time U.S. high school teachers to participate in a brief survey (approximately 10 minutes or less). We are interested in your attitudes about social and emotional learning (SEL) in the high school classroom. We hope to learn more about the types of SEL programs that are being used in high school settings, and what high school teachers think about them. This study will give a voice to high school teachers on the subject of SEL. We hope that the information learned through this study will enable us to better support teachers and students, through programmatic and curricular improvements that are based on teacher experiences and beliefs.

This survey is confidential and optional and your answers will be kept anonymous to the research team. No contact or identifying information will be collected until you have completed the survey, at which time, you may elect to provide an email address for entry into a raffle. Your email address will not link to your responses or identify you in any way. A few survey questions provide spaces for you to clarify or offer open-ended responses. Please note that in order to maintain the anonymity of your survey responses, we ask that you do not use any protected or identifiable information in responding to these questions (e.g., the name of a specific student or school). You may skip any questions that you do not want to answer or decide not to participate at any time. Information collected from this survey may be used for educational and research purposes.

After completing the questionnaire, you will be directed to a separate form where you may choose to provide your email address to be entered in a drawing for one of two \$100 Amazon.com gift certificates. This information will not be linked to your survey responses or shared with outside parties and will be solely used for the purpose of distributing gift cards. Gifts cards will be sent out within three months of survey administration.

Should you have any questions or be interested in receiving the findings of the study, please email danielle_batchelor@g.harvard.edu.

By clicking the arrow to go to the next page, I agree to take part in this survey.

Please print or save a copy of this consent for your records.

Data Scoring Protocol

The independent variables for this study are mindset (growth, developing/neutral, fixed), training (yes, no), and SEL curriculum (no program, some SEL, or universal program). The dependent variable is represented by an SEL attitudes score calculated as indicated above, by Qualtrics, and was based on responses to certain questions in the survey. Teachers were categorized based on the scoring of the mindset scale as having either a growth, developing/neutral, or fixed mindset, and as having low, medium, or high levels of positive attitudes on SEL curricula in high schools, as calculated by the attitudes score (see Measures for details). All other questions and responses were demographic or exploratory and did not require scoring (e.g., course taught, beliefs about the challenges to SEL adoption in high schools).

Data Cleaning Protocol

A second researcher was recruited to repeat the download process independently in order to ensure that the data were accurately cleaned and transferred from Qualtrics to

SPSS. Descriptive statistics were examined to check for missing or out of range data, prior to testing the study hypotheses. Specifically, of the 122 original survey responses those that were less than 70% complete were removed from the data set ($N = 18$), as were response sets that were started by teachers who indicated that they are not full-time teachers ($N=17$). The remaining sample consists of 87 full-time high school educators from around the U.S.

Chapter III

Results

Data collected from the teacher survey were entered into SPSS directly from Qualtrics. Out of 122 total responses 87 were used and the remaining 35 responses were eliminated in the data-cleaning process, as described above. Consistent with the inclusion parameters for this study, all respondents reported being full-time high school teachers in the U.S. As shown in Table 2, based on the attitude score for each participant, the teachers in the sample demonstrated a predominantly positive attitude toward SEL curricula in high schools ($M = 7.70$, $SD = 2.27$). In addition, the largest number of participants were in the growth-oriented mindset category ($N=40$). The majority of teachers indicated some level of SEL training ($M = 1.72$, $SD = 0.45$) and school SEL programming ($M = 1.68$, $SD = 0.60$). Of note, as presented in Table 1, teachers from regular public schools made up the largest group (48.84%) and most respondents reported that they teach a core academic course (76.74%).

Descriptive Features of Independent and Dependent Variables

Table 2, which includes descriptive statistics for each key factor in the study is also displayed. The largest group was scored as having a growth mindset (46.51%), followed by those with a developing/neutral mindset (44.19%), and teachers with a fixed mindset (9.3%). Only six participants (6.90%) indicated that their place of work [school]

offers an integrated and universal SEL program and 27.59% said they have not experienced any SEL teacher training.

Table 1

Demographic Analysis

Variable	Percent	Total
School Type		
Regular public	48.84%	42
Public charter	8.14%	7
Private or religious	36.05%	31
Magnet or optional public	6.98%	6
Type of Class Primarily Taught		
Core academic course (e.g., math, science, language arts)	74.74%	66
Special or elective subject (e.g., music, photography)	16.28%	11
Other (e.g., college counseling, mental health counseling)	6.98%	6
Years Teaching		
1-3 years	20.69%	18
3-5 years	5.75%	5
5-8 years	21.84%	19
More than 8 years	51.72%	45

Descriptive Features of Teacher SEL Training, Experience, and Attitudes

In order to begin to understand what teachers know and believe about SEL in general, two questions were offered about the relationship between cognition and emotion in thinking and as they relate to learning. In response to the statement “There is no cognition without emotion” the majority of participants (N = 62) said the statement is

true (72.09%), indicating that the bulk of participants understand, at least on some level, that cognition and emotion are inextricably linked. When asked whether the statement of “Cognition and emotion are both integral to learning” was true or false, an impressive 84 respondents answered “true” (96.55%), suggesting that most teachers in the sample understand the important relationship between cognitions and emotions to learning. In addition, as shown in Table 3, there was a very high level of support for SEL at all education levels – indicating that SEL belongs in all levels of a child’s education from early childhood through high school, with 96.55% of respondents saying that SEL curricula specifically belongs in high schools, and 0% of teachers responding that “It does not belong at any level.” Furthermore, while there was support at all levels of education, the educational level that received the highest amount of support for inclusion of SEL curricula was high school. Despite this support, more teachers indicated that they do not feel adequately prepared to include these concepts in their high school classrooms (51.72%).

Teachers were asked to rate their own SEL skills on a scale of 1-10, with one being not effective and ten being very effective. Most rated their own SEL abilities favorably ($M = 7.06$, $SD = 1.89$). Participants were also asked to rate the primary challenges to high school SEL on a scale of 0-10, with zero representing no challenge and ten being a very large challenge. As shown in Table 4, teachers rated various time limitations as two of the key impediments to teacher adoption of high school SEL, with teacher pressures to meet accountability measures and curriculum requirements due to time constraints, seen as the largest roadblock ($M = 7.14$). Lack of teacher SEL training ($M = 6.87$) is seen as a major problem, as is the structure of a typical high school day (M

= 6.76). Lack of parent buy-in was rated the least challenging (M = 3.97) but interestingly, the mean range for all of these issues fell between 3.97-7.14, indicating that most teachers see each of these factors as challenging at some level.

Table 2

Descriptive Features: Independent and Dependent Variables

Variable		Percent	Total
Mindset	Growth	46.51%	40
	Developing/neutral	44.19%	38
	Fixed	9.30%	8
Formal SEL Program	No	39.08%	34
	Yes: Siloed /Partial	54.02%	47
	Yes: Universal	6.90%	6
SEL Teacher Training	Yes	72.41%	63
	No	27.59%	24

Study Aims

The primary aim of this study was to address three hypotheses about high school teacher attitudes about SEL. Each question attempted to explore whether each independent variable (teacher mindset, presence of universal SEL, and SEL training) influenced a teacher’s positive attitudes on SEL in high school settings. A series of statistical tests were performed for each combination of independent variable with the dependent variable and is detailed by hypothesis below.

Table 3*Descriptive Features: Teacher SEL Training, Experience, and Attitudes*

Variable	Percent	Total	
“SEL curricula belongs in which levels of a child’s school education”	Early Childhood	95.25%	82
	Elementary	95.40%	83
	Middle	95.25%	82
	High school	96.55%	84
	No level	0	0
“I intentionally incorporate SEL elements into my high school class (regardless of any school/district directive).”	True	85.06%	74
	False	14.94%	13
“I feel adequately prepared to include SEL concepts in my high school classroom.”	True	48.28%	42
	False	51.72%	45
“In total, approximately how much formal SEL teacher training have you received?”	One day or less	22.22%	14
	2-4 days	33.33%	21
	5 days or more	44.44%	28
“It is important for high school teachers to incorporate SEL in classroom instructional time.”	Agree	93.10%	81
	Disagree	6.90%	6

<p>“Social and emotional development should be solely handled by subject experts such as school counselors and those with mental health training, not classroom teachers”</p>	True	8.64%	7
	False	91.36%	74
<p>“Social and emotional development is related to academic achievement”</p>	True	91.36%	74
	False	8.64%	7
<p>“SEL is a current trend in education and it too shall pass, therefore, it is not worth my time to develop SEL teaching practices.”</p>	True	7.41%	6
	False	92.59%	75
<p>“Teachers should model and incorporate SEL throughout the high school day.”</p>	True	90.00%	72
	False	10.00%	8
<p>“A high school teacher’s job is to teach the subject they were hired to deliver (e.g., geometry), not to teach SEL.”</p>	True	16.25%	13
	False	83.75%	67
<p>“SEL is a needed complement to academic learning in high schools.”</p>	True	92.59%	75
	False	7.41%	6
<p>“SEL should be cultivated as a preventative measure to support all children, not just those with mental health or other challenges.”</p>	True	96.30%	78
	False	3.70%	3

“I would like to experience more high school specific SEL teacher training.”

Agree	83.95%	68
Disagree	16.05%	13

Table 4

Primary Challenges to High School SEL Teacher Adoption

Challenges	Mean	Std. Deviation	Total
Not enough time due to structure of typical day (e.g., length of class periods, rotating schedules)	6.76	2.68	78
Not enough time due to teacher pressures (e.g., accountability measures, curriculum requirements)	7.14	2.84	79
Lack of school or district support	4.49	2.78	70
Lack of teacher SEL training	6.87	2.44	77
Lack of parent buy-in	3.97	2.60	62
The SEL materials are not age-appropriate for high schoolers	4.41	3.29	63
Confusion between SEL and mental health education	5.15	2.95	73
SEL materials are not culturally and ethnically diverse or inclusive	5.20	3.12	64

Hypothesis One

It was predicted that a growth mindset would be related to positive teacher attitudes on SEL in high schools (note descriptive features of Hypothesis One variables are presented in Table 5). This was tested using both a continuous dependent variable (attitude raw score of 1-9) and an ordinal version (three categories of attitudes). A statistically significant difference in SEL attitude scores and the different types of mindsets was revealed in both cases by a Kruskal-Wallis H test ($\chi^2(2) = 6.85, p = .033$ and $\chi^2(2) = 6.12, p = .047$), see Table 6. The distributions for the attitude scores as inspected visually using a box plot format (see Figures 1 and 2), were not similar for the mindset groups, and there was a statistically significant difference in SEL Attitudes between the growth mindset and developing/neutral mindset groups in both cases as well ($p = .027$ and $p = .043$).

Table 5

Hypothesis One: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Attitudes Continuous	86	7.69	2.29	1.00	9.00
Mindset Types	86	2.37*	.65	1.00	3.00
Attitudes Groups	86	2.71	.66	1.00	3.00

Hypothesis Two

The second aim of the study sought to identify whether teacher training in SEL would impact teacher beliefs on the subject. There is a relationship between teacher beliefs and training, but it is not statistically significant, and the strength of the relationship was hard to discern in this sample. A one-way ANOVA and a nonparametric test (Kruskal-Wallis H Test) were performed. The attitudes score was input both as a continuous variable (score of 1-9) as well as an ordinal variable (3 groups) and a similar result was obtained with each method. Means for the continuous and ordinal variable types for teacher training are listed in Table 7 and although they were not statistically significant, they demonstrate that the majority of participants have favorable attitudes on high school SEL, regardless of whether they have already received training or not. Table 8 features the crosstab analysis of attitudes as a continuous variable across no training and some SEL training.

Participants were asked whether they had received any SEL formal training in the past and those who said yes were then asked what amount of training they had experienced (see Table 9 for descriptive statistics). Tests were run to investigate whether the amount of SEL training had a statistically significant association with the SEL attitudes scores of respondents. Training amounts were broken into three groups (one day or less, two to four days, five days or more). Results were explored using both the continuous and ordinal variable versions of the attitude scores. The group sizes were inconsistent (one day or less = 13, two to four days = 21, five+ days = 28). A range of tests including one-way ANOVA and non-parametric tests were non-significant in all

cases. The amount of SEL training does not appear to be associated with the attitudes of the teachers who participated in the study (see Figures 3 and 4).

Table 6

Hypothesis One: Pairwise Comparisons, Mindset and Attitudes Scores

Sample 1 – Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
Developing/neutral-fixed – continuous	8.06	8.49	.95	.34	1.00
Developing/neutral-fixed – group	6.69	6.41	1.04	.296	.889
Developing/neutral-growth – continuous	-12.9	4.94	-2.61	.009	.027
Developing/neutral-growth – group	-9.16	3.73	-2.45	.014	.043
Fixed-growth – Continuous	-4.84	8.45	-.57	.57	1.00
Fixed-growth – Group	-2.46	6.38	-.39	.700	1.00

Figure 1

Boxplot, Mindset Groups by Attitude Continuous Score

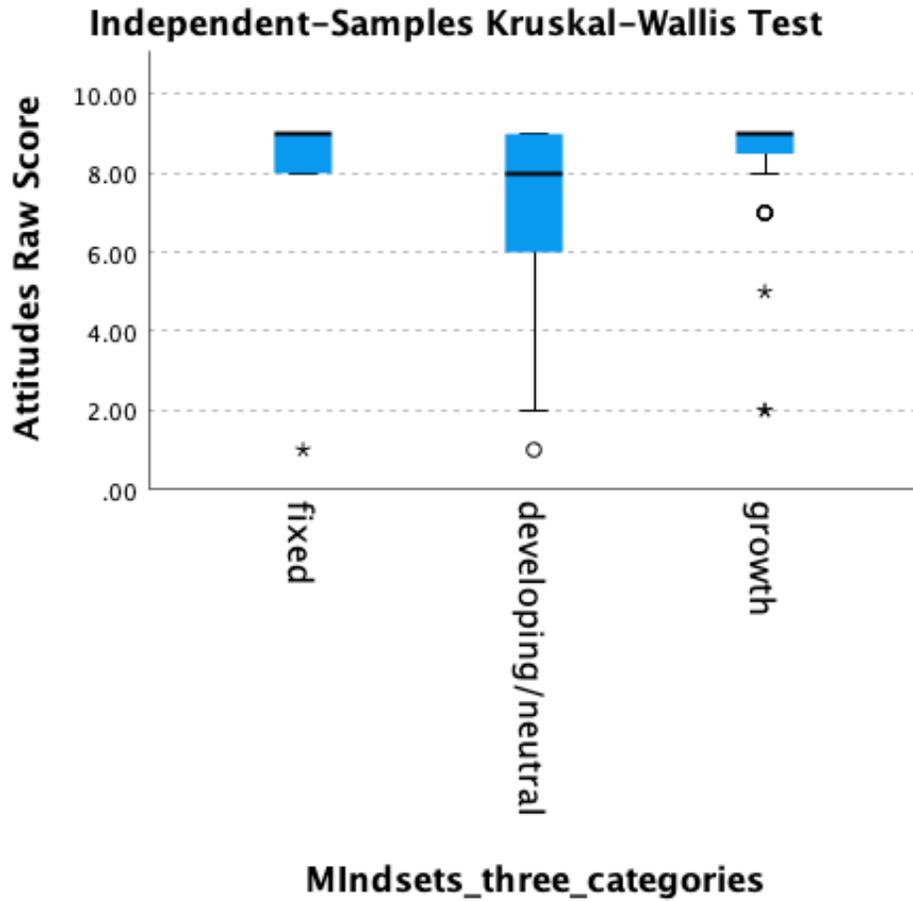


Table 7

Hypothesis Two: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
No Training	24	7.46	2.45	1.00	9.00
Yes Training	62	7.77	2.24	1.00	9.00

Figure 2

Boxplot, Mindset Groups by Attitudes Group Score

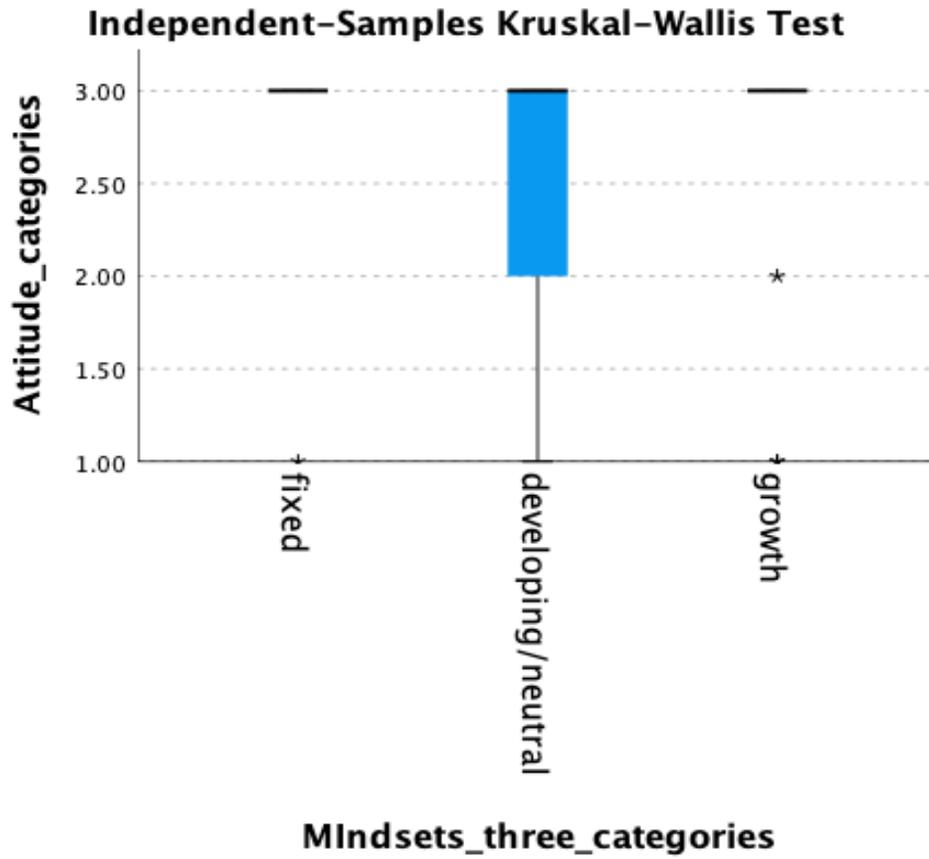


Table 8

Hypothesis Two: Crosstab Analysis of Continuous Attitudes Variable

	1.00	2.00	3.00	5.00	6.00	7.00	8.00	9.00	Total
No Training	1	2	0	0	2	3	3	13	24
Some Training	1	4	2	2	1	5	7	40	62
Total	2	6	2	2	3	8	10	53	86

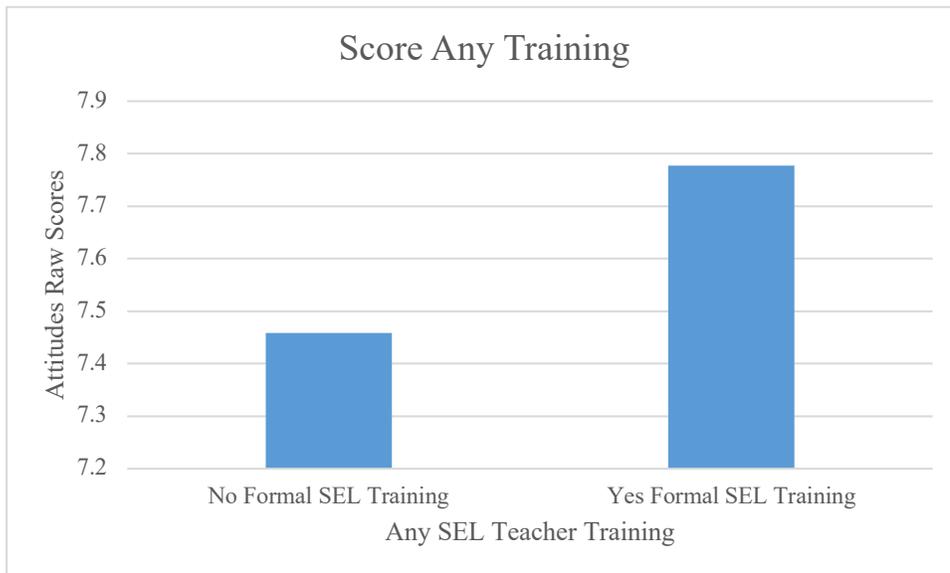
Table 9

Descriptive Statistics: Effect of Amount of SEL Training on Attitudes

	N	Minimum	Maximum	Mean	Std. Deviation
Attitudes Continuous	86	1.00	9.00	7.69	2.29
Amount of SEL Training	62	1	3	2.24	.783
Attitudes by Groups	86	1.00	3.00	2.71	.666
Amount of SEL Training	62	1	3	2.24	.783

Figure 3

Means Graph, Mean Attitudes Scores/Any Training



Hypothesis Three

The third aim of the study was to determine whether having an SEL program at a teacher's school was associated with their beliefs, and specifically hypothesized that the presence of a universal SEL program would predict positive attitudes on high school SEL (see Table 10 for descriptive statistics). While the majority of participants indicated that lack of school or district support was a challenge to adoption of such curricula ($M = 4.41$), and 92.94% of teachers said that it is important for high school teachers to incorporate SEL in classroom instructional time, as shown in Table 11 and Figure 5, there was not a statistically significant relationship between positive attitudes and the presence of a universal program. A Kruskal-Wallis H test, $\chi^2(2) = .582$ $p = .748$, did not show a significant difference in attitudes across the groups (no program, yes: some SEL, yes: universal SEL). The group sizes for the SEL program types were not homogenous. Universal SEL was relatively rare with approximately 7% of participants answered that they have universal SEL at their place of work [school].

Figure 4

Means Graph, Attitude Scores/Amount of Training



Table 10

Hypothesis Three: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
No	33	7.48	2.43	1.00	9.00
Yes – partial	47	7.83	2.17	1.00	9.00
Yes – universal	6	7.67	2.81	2.00	9.00

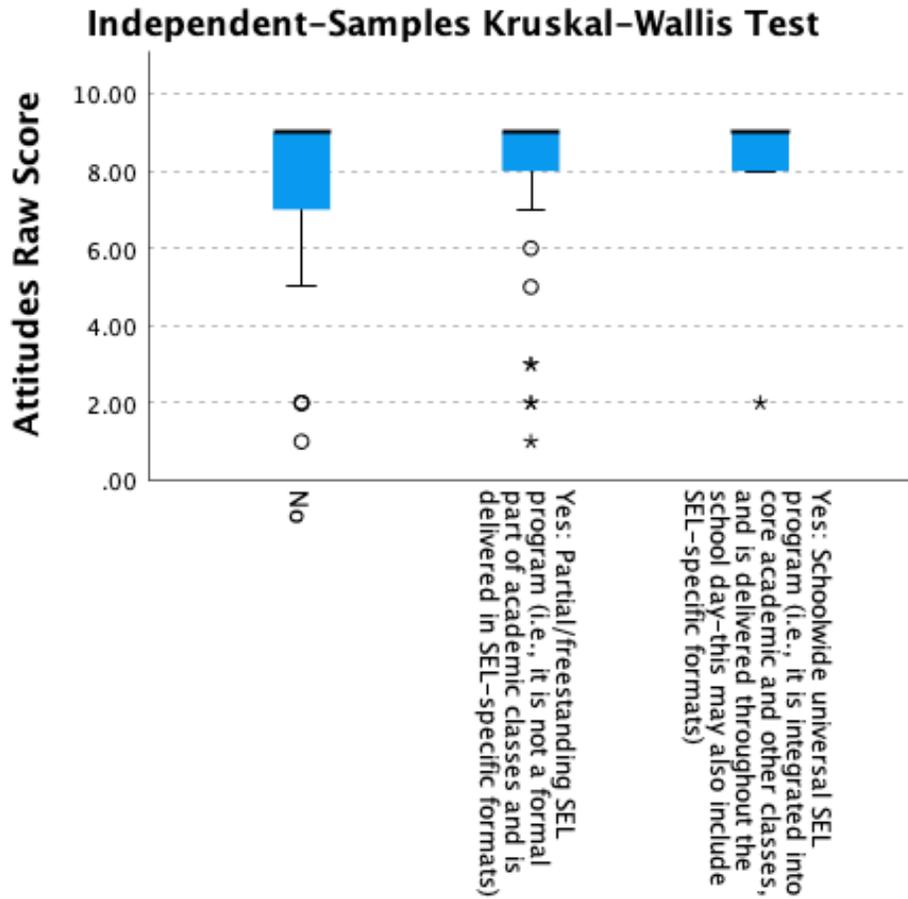
Table 11*Hypothesis Three: Multiple Comparisons, Programs/Attitudes Scores*

Is there a formal/explicit program?		Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
No	Yes: partial	-.345	.52	.789	-1.6	.91
	Yes: universal	-.182	1.03	.983	-2.63	2.27
Yes: Partial	No	.345	.525	.789	-.909	1.6
	Yes: universal	.163	1.00	.986	-2.223	2.26
Yes: Universal	No	.182	1.03	.983	-2.27	2.63
	Yes: partial	8.45	1.00	.986	-2.56	2.23

Note. Table 11 illustrates the results of a Tukey HSD test of multiple comparisons revealing non-significant findings related to hypothesis three.

Figure 5

Boxplot, Distribution and Group Size of SEL Program Type



Other Quantitative Findings

While not included in the hypotheses for the study, additional exploratory questions included whether there is a relationship between other demographic groups within the sample and teacher attitudes, including the amount of time a teacher indicated that they have been teaching (one to three, three to five, five to eight, more than 8 years), their type of school (regular public, public charter, private or religious, magnet or

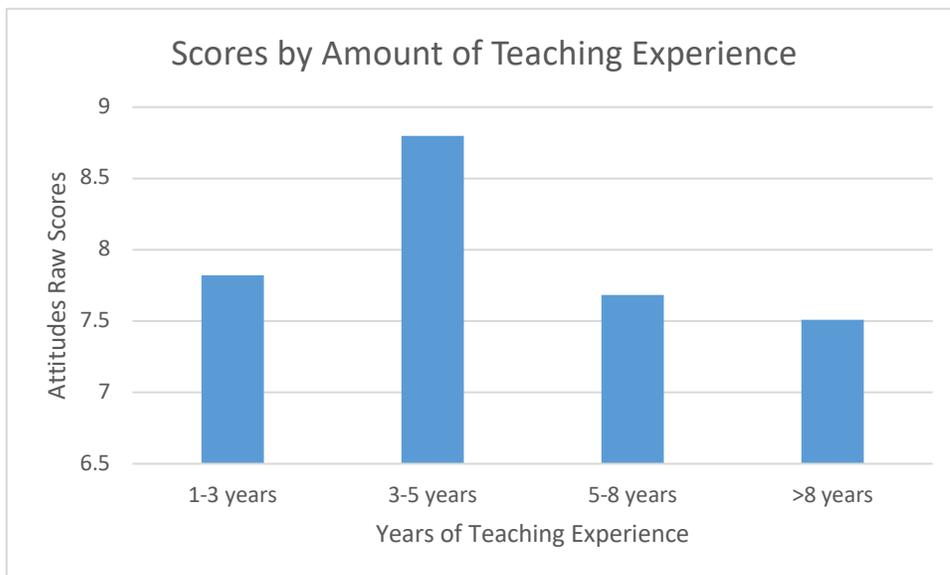
optional public), and the category of subject they teach (core academic subject, special/elective, other). A summary of results for each of these variables is included.

Amount of Time Teaching

One-way ANOVA and Kruskal-Wallis tests were run to see if the amount of teaching experience a teacher had would influence their attitudes on SEL and the relationship was found to be non-significant in all cases (e.g., for the ANOVA output: $p = .688$ for continuous attitudes variable, $p = .683$ for attitude categories). A graph of the means is displayed in Figure 6.

Figure 6

Means Graph, Teaching Experience

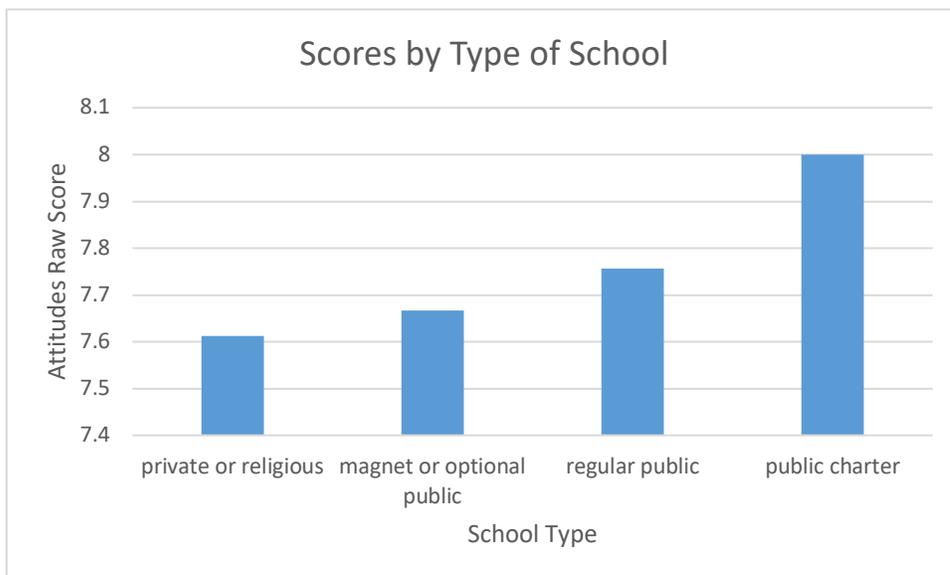


Type of School

Likewise, the type of school in which participants work was not related to their attitudes on SEL in high schools. The same tests were conducted as indicated for years of teaching service above. All tests resulted in non-significant findings (e.g., for the ANOVA output: $p = .981$ for continuous attitudes variable, $p = .996$ for attitude categories). Figure 7 displays a graph of the means.

Figure 7

Means Graph, Type of School



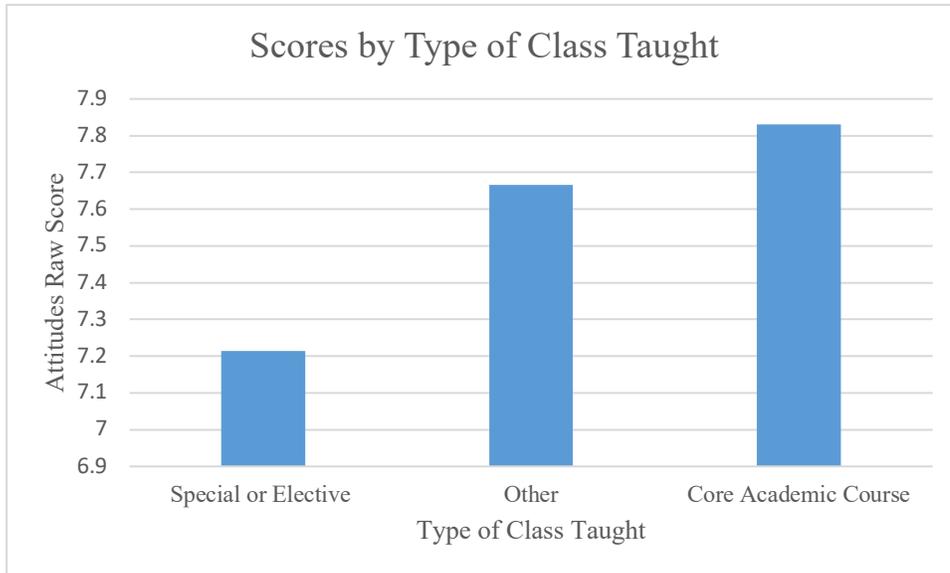
Type of Course Taught

As with the years of service and type of school, the type of course taught did not predict positive SEL attitudes for this sample. The same tests were conducted, and all resulted in non-significant findings (e.g., for the ANOVA output: $p = .662$ for continuous

attitudes variable, $p = .874$ for attitude categories). Figure 8 provides a graph of the means for this variable.

Figure 8

Means Graph, Type of Class Taught



Qualitative Results

Teachers were given the opportunity to include a qualitative response to the question “Is there anything else you would like to share with the researchers related to your beliefs about social and emotional learning in U.S. high schools?” Some participants ($N = 27$) included anecdotal information, opinions, and beliefs about their experience with SEL. Responses to this question are included in full in Appendix D and explored further in the discussion contained in Chapter IV below.

Chapter IV

Discussion

Adolescence is an important time for brain development and related social, emotional, and academic growth (e.g., Barrasso-Catanzaro & Eslinger, 2016). Students make decisions during this time that can have far-reaching implications for their post-high school adult lives. Learners who are disadvantaged or who face a larger number of risk factors are particularly vulnerable (e.g., Jones & Kahn, 2018). SEL serves as a protective factor and provides a framework for skill cultivation that can support healthy growth and behaviors and offsets some risk factors, both in and out of school (Immordino-Yang & Damasio, 2007; Jones & Bouffard, 2012; Weissberg & Cascarino, 2013). Furthermore, social and emotional competencies are cited as some of the most important—but often missing—skills sought by organizations when hiring young-adults in a range of professional fields (National Commission on Social, Emotional and Academic Development, 2019; OECD, 2019). Yet despite these vital reasons for age-appropriate, universal high school SEL, programs are scarce (DePaoli, 2017). To understand some of the factors that prevent universal SEL from being incorporated in most U.S. high schools, and given the influential role that teacher mindsets and beliefs have on student outcomes (Brackett, 2012; Canning et al., 2019; Hattie, 2012; Jennings & Greenberg, 2009), this study investigated high school teacher beliefs about SEL. It was predicted that attitudes about high school SEL would be positively correlated with each

of the three independent variables in the study, namely growth mindset, formal SEL training, and a universal SEL programs.

General Discussion

Perhaps the biggest single takeaway from the study is that high school teachers feel that high school SEL is important—participants expressed an overwhelming desire to see SEL taught in high schools, specifically. The majority of participants said they believe that “SEL should be prioritized at all levels” and should not be limited to the earlier grades (e.g., preschool, elementary, middle school). Among this sample, 96.6% indicated that it belongs specifically in high schools and 84% signaled that they intentionally incorporate SEL concepts into their high school class, regardless of any school or district directive. Likewise, 93.1% said they agree that “it is important for high school teachers to incorporate SEL in classroom instructional time.” High school teachers in this study want to see SEL “seamlessly integrated into daily lessons” and one person described an ideal process of “scaffolding...layering [SEL lessons] on each day,” which is consistent with literature indicating that ordered, age-appropriate, and universally integrated SEL promises the greatest benefits to student learners (Jones & Bouffard, 2012).

Moreover, 90% of teachers reported that they believe that teachers should model and incorporate SEL concepts throughout the school day, and 92.5% touted SEL as a needed complement to academic learning in high schools. Somewhat encouraging was the indication by 96.3% of participants that SEL should be cultivated as a preventative measure to support ALL children, not merely those with mental health issues or other challenges. This perhaps demonstrates that educators believe these types of competencies

are important protective-factors and are not only necessary as methods of addressing student risk-factors; this supports wider-spread policy change to serve many types of children.

Relatedly, a quick review of recent publications demonstrated that few high-school specific SEL studies have been conducted since this project began, underscoring the importance of further research in this area. This is particularly meaningful in light of the fact that educators and social scientists alike seem to be craving SEL exposure and ways of integrating curricula for this age group. One exception to the dearth of new research on high school SEL is an ongoing experiment in Dallas, Texas, where school leadership decided to make universal SEL a priority at one high school (Prothero, 2020). They did not purchase an “SEL program,” but instead formed a committee including teachers to create SEL lessons. They invited student involvement as well. The group acknowledged the importance of the age-appropriate design and the need to gain student buy-in and to provide experiential learning: “because teenagers are dealing with a combustible mix of issues” (p. 1) and the high-school years typically do not see an emphasis on SEL. These are competencies that employers do not want to teach to on the job, a fact that, in part, helped justify the program to the broader school and district administrators. The team worked to incorporate cultural and site-specific environmental factors and sought to design a truly universal program, features upon which the educators in our study seem to place a high-level of importance as well.

Teachers Prefer Universal SEL Designs

Additionally, and consistent with the initial findings of the Dallas experiment, the primary researcher of the current study found that teachers want universal SEL programs

at their schools, though holistic designs were scant amongst the schools represented as reported by participants. Only 6.9% of educators reported that they enjoy school wide curricula that is integrated into core academic and other classes and is delivered seamlessly throughout the high school day. One person commented: “I often wonder if part of the barrier to teaching from an SEL informed pedagogy stems from the fact that it is mostly referred to as an "other" thing to teach, not just good, research based, developmentally appropriate teaching, as it should be and actually is.” Several respondents echoed this sentiment suggesting that there is perhaps an artificial barrier placed between what are thought of as “academic” versus “non-cognitive” skills and how to teach them, which tends to create silos. Ostensibly, the silos limit the effective cultivation of SEL in high school classes. Teachers expressed challenges with how to create seamless programs that are high school relevant with one teacher noting:

I think the biggest barrier to SEL at the [high school] level is the belief that it is an independent subject area or a box to be checked, rather than what it is: An approach that should inform our pedagogy and a vehicle by which we deliver our content. It is neither a magic bullet nor a 'free pass' as many I've worked with seem to believe. It is another tool for responsive, effective teaching.

This type of feedback was consistently repeated in the open answer question responses, for example: “SEL is just as, if not more, important to long-term learning than academic learning. In fact, one of the mistakes in the current educational climate is pulling them apart. This is a false dichotomy.” Another related theme that emerged about the stand-alone SEL approach specified that this siloed format often seems artificial and strips the teacher’s ability to deliver “just in time” lessons that are relevant to real life or the subject being taught; it impedes the experiential learning, the ability to draw a personal connection to the material.

Teachers Need More Than Exposure

The broad endorsement for high school embedded, *universal* SEL, was somewhat unexpected, particularly given some of the previously reported literature that placed great importance on a teacher's prior exposure to SEL as impacting their beliefs on it (e.g., Brackett et al., 2012). This sample showed broad support, regardless of exposure, and indicated a desire to include SEL in pedagogy (whether they were already doing so or not). For the purposes of this study, the concept of SEL exposure was captured by two independent variables, namely (a) having had teacher SEL training; and/or (b) working at a school with a universal SEL program in place. Neither of these variables were revealed as having a statistically significant impact on participants' SEL attitudes, though they both are nonetheless positively related to and indeed play a role in attitude formation. Put simply, while there was wide support for SEL in high school settings, it was difficult to identify which drivers played the largest roles. Perhaps the growing awareness of SEL's benefits among educators across the U.S. has impacted teacher attitudes, regardless of their direct exposure and training. Moreover, the lack of preservice SEL teacher training and universally integrated programs delivered at the high school level, as seen in the existing body of literature on the subject, does not appear to have negatively impacted educator beliefs about the importance of such curricula being delivered to later adolescents. As one participant said, "I believe I teach young people, not a subject." This may be an important take-away from the current inquiry.

With regard to teacher training, while neither the experience of having had any training nor the amount of SEL training served as statistically significant predictors of SEL attitudes, the majority of educators in our study indicated that they had received

some amount of SEL training (72.4%) and rated teacher training as a notable challenge to SEL adoption (6.87/10). Importantly, 84% showed a desire to receive more training for teaching SEL in high schools. This suggests that most high school teachers are open to professional development in this area; they buy-in to the importance of explicitly incorporating it into their own classrooms. Interestingly, this is contradictory to Canning and colleagues' work that demonstrated a relationship between the *amount* of SEL training and their openness towards it (2015).

Anecdotally, respondents commented that they do not know how to practically incorporate SEL into their actual classes (e.g., physics class), and it is hard to know what good SEL should look like. They seem to understand that “teachers are the engine that drives SEL programs and practices in schools and classrooms” (Schonert-Reichl, 2017, p. 138), and yet they want more support in order to effectively deliver on this promise (Stickle et al., 2019). These qualitative findings are consistent with previous research by Brackett and colleagues indicating that teachers are more likely to embrace SEL when there is a school climate that places value on their efforts in this area (2012). Furthermore, Stickle and colleagues (2019) found that teachers struggle when school leadership places an emphasis on apparently contradictory priorities and does not support them by providing “comprehensive professional learning on SEL” (p. 44). Relatedly, one teacher said:

I teach in the Humanities and I believe one of my jobs is to make my students better HUMAN BEINGS...there's a lot of talk and push to incorporate SEL but we're given no real concrete examples of what that looks like in a [high school] setting.

The findings in this area invite speculation as to what type of training might be most beneficial to educators who work with older adolescents. Some participants, for

example, expressed a desire for culturally and race-relevant training to better serve their student communities. They indicated that materials may not always be age-appropriate or culturally and ethnically diverse/inclusive (4.41/10 and 5.2/10, respectively). Another teacher explained that SEL enhances special education classrooms, demonstrating yet another group that stands to benefit from teacher training in this sphere.

The current study offered insights into some structural challenges to successful SEL implementation. For example, participants reported that confusion between SEL and mental health education presents a roadblock to high school implementation (5.15/10), an issue which might be addressed through more targeted, contextual training. Additionally, learning how to use and model SEL is not the same as teaching SEL, and both are shown in the literature to impact outcomes (e.g., Jennings & Greenberg, 2009). Some teachers may benefit not only from lessons designed to help them integrate SEL into their curricula, but also from development of their own SEL techniques (Schonert-Reichl, 2017). Taken together, this suggests that further granularity is needed when assessing teacher SEL training and their attitudes on receiving this sort of professional development in order to honor the variability of need, and better understand the type of training that would be most beneficial for the individual.

Likewise, having an explicit/formal SEL program—free standing or universal—at one's school was not a statistically significant predictor of positive attitudes to high school SEL. This was unexpected since historically researchers have found that SEL exposure influences teacher attitudes and therefore, it was anticipated that having a program on campus would have a meaningful impact on attitudes (e.g., Brackett et al., 2012; Martinez, 2016). Of note, while very few participants reported a universal SEL

program (6.9%), 54% said they work with a partial or freestanding one, leaving only 39.1% with no explicit SEL of any kind at their school. Although slightly more than 60% of respondents have been exposed through some explicit in-house SEL curriculum, the relationship was not statistically significant. Consequently, the extent and nature of the relationship between these two factors was not revealed.

Another possible reason for this outcome may be due to school climate (Brackett et al., 2012). It is possible that the personality of a given school ecosystem has a greater impact on teacher attitudes than does the presence of an SEL program. In this context, school climate may be defined as the “norms, values, and expectations that support people feeling socially, emotionally, and physically safe” that blend to create a unique school character (Cohen et al., 2009, p. 182). Yang and colleagues (2020) explained that Cohen et al.’s idea had “two key dimensions,” one having to do with social support and interactions, and relationships of teachers, staff, and students, and another, which is related to school safety and the social expectations and order of school happenings, including how rules are established and upheld (p.50). By extension, a school climate that supports SEL might positively influence a teacher’s beliefs and willingness to experiment in their own high school classroom. Schonert-Reichl (2017) described “the learning context” as one of three key dimensions that affect SEL adoption and delivery (p.138). School climate arguably creates the foundations for the learning context, and it is possible that the associated nuances which synthesize to create a given school’s climate—including the level of psychological safety—ultimately impact teacher SEL beliefs. Interestingly, in the aforementioned Dallas high school experiment, the district introduced CASEL’s five core competences to all of the adults involved (e.g., teachers,

administrators, counselors) first. They spent a year with the material before beginning to teach the concepts to students, thereby establishing a school climate that was buoyed by and grounded in SEL training for the educators (Prothero, 2020). Participants in the current inquiry shared similar views: “The administration itself must demonstrate priority for SEL education in terms of training and accountability. It doesn't happen accidentally...”; and:

It has been my experience that many administrators like to reference the importance of incorporating SEL into the high school curriculum and community, but rarely put significant resources (such as time and training) into it. It has also been my experience that SEL is more important than academic subjects in preparing students for life after high school...

Mindset Matters

It was anticipated that a teacher’s growth mindset would be positively related to their SEL attitudes and this was the only independent variable that was a statistically significant predictor of attitudes in this study. Teachers with a growth mindset tend to believe that effort and process matter and that students have the fundamental ability, through hard work and practice, to improve their intelligences (Dweck, 1999). Building upon this idea, teachers who have a growth-oriented mindset would therefore be more likely to believe that skills such as social and emotional ones, might also be improved through student effort and by extension, these teachers might demonstrate greater receptiveness to high school SEL, a subject that was not historically part of core academic curricula and one that requires new skills and attitudes in order to share it in the classroom. We know that educator mindsets are associated with their students’ outcomes in the subjects in which they teach (e.g., Canning et al., 2019). Ostensibly, this should apply to SEL. One of the objectives of this study was to establish the extent and nature of

the relationship between educator mindsets and their corresponding SEL attitude scores, and the promising results highlight the need to extend this idea in order to see if there is an actual impact in student outcomes as well.

The majority of participants in this study signaled a growth or developing growth mindset in the quantitative aspect of the study (i.e., Dweck's measure, 1999) as well as qualitatively through their comments. For example, one participant said “[I] would love to be involved with piloting any SEL programs or training as it comes along. As we do not have formal programming in SEL at my school, I am always willing to learn.” This finding is particularly promising in as much as it indicates that educators with growth (and developing growth) mindsets buy-into future adoption of high school SEL in a theoretical sense. After all, a growth mindset, like the model of intelligence it adheres to, is malleable (Seaton, 2018). It can be improved upon, and it heavily influences what teachers believe—not only about their students—but also about their own self-efficacy and enjoyment in the classroom (Canning et al., 2019; Richardson et al., 2020; Zeeb et al., 2020). This concept warrants more extensive testing using wider and larger samples in order to verify this relationship and ultimately design environments that support the cultivation of growth mindsets, in addition to SEL in high school settings.

Zeeb and colleagues (2020) looked at factors that create “growth mindset cultures in the classroom” (p. 1) and found that the mindset of the teacher influences, both implicitly and explicitly, factors such as teaching style, motivation, the types of activities they select, and the general classroom tone. Notably, they found that a growth mindset is particularly important when teaching a challenging new subject or skill. The study of whether and how a growth-mindset-culture classroom might influence successful SEL

adoption is certainly another interesting area of future exploration inspired by these findings.

Other Challenges to High School SEL

Also worthy of mention are two salient ideas which surfaced from the exploratory portion of the survey and are related to the time and structure of the high school day and the concomitant time demands of teachers. First, teachers reported that not having enough time in their day due to pressures such as accountability measures and curriculum requirements, was a distinct impediment to SEL high school adoption (7.14/10). The literature on teacher stress is vast and draws attention to resulting impacts on burnout, job satisfaction, mindsets, and ultimately student outcomes (e.g., Frondozo et al., 2020; Skaalvik & Skaalvik, 2017; Wacker & Olson, 2019). Similarly, the participants in this study rated the time issues surrounding the structure of a typical high school day (e.g., length of class periods, rotating schedules) as problematic as well (6.76/10). While these factors did not have a statistically significant relationship with SEL attitudes or growth mindset, they are correlated none-the-less, and emerged also in the qualitative responses that were submitted. For example, one participant said that SEL was "...not a good use of highly valuable instructional time" in secondary school. Another explained that teachers are overloaded with too many responsibilities, not enough time for planning, and not enough pay; adding anything more, "even if it is a positive thing," it is simply too much. Still others commented on the demands of having too many students, juggling material for multiple course subjects, and challenges related specifically to the COVID-19 pandemic. There is also a perception that SEL can take time away from subject learning, for example, and some expressed a desire to learn how to incorporate it while still

adhering to an academic syllabus. Interestingly however, only one teacher provided feedback suggesting that SEL should be taught *only* in the lower grades and that kids should be ready for high school from a social and emotional standpoint, when they arrive on campus for 9th grade. Despite what appeared to be a mostly clear-headed view of the challenges, most teachers want to learn and grow in this area.

Limitations and Future Directions

There were inherent limitations to this study, several of which are noted herein. Importantly, the responses—and therefore the results—were based on self-report, which reflect some level of personal bias. For example, a teacher who was well-versed in the virtues of SEL curricula at the outset might have been more interested in sharing their attitudes. Additionally, the investigation relied on the integrity of the participants, as there was no way to verify, for example, that each participant was indeed a full-time high school teacher in the U.S. while also maintaining their anonymity. Furthermore, while participants were encouraged to share the study with colleagues, the method of recruitment used mostly Harvard Graduate School of Education-affiliated email addresses, and the relationship of the primary researcher as a Harvard student, might have influenced the attitudes represented in the findings. Similarly, the teachers in the alumni base are arguably better exposed through their educational credentials than some other groups of educators might be, drawing into question whether the results may be generalized to the broader population of teachers in the U.S. The overall sample size may be a limitation of the findings of this study as well. A larger number of participants could perhaps influence the researcher's understanding of the strength of the relationships studied and the resulting effect sizes.

Another possible constraint of this inquiry is the limited number of independent variables that were reviewed as possible influences on teacher attitudes. There are likely many factors that shape a teacher's convictions about SEL, and it would be prudent for future studies to consider a range of additional variables. This was addressed, in part, through the exploratory questions revealing what educators believe to be some of the important influencers of whether and how SEL is delivered in secondary schools. However, there are other influential actors (e.g., parents, administrators, policy makers) and factors (e.g., risk factors, socio-economic status, racial, cultural) that were not covered in this exploration that likely impact the adoption—or lack thereof—of SEL programs, as reported in the literature (Bailey et al., 2019). SEL curricula needs to be approachable, equitable, and inclusive across a range of different types of diversity in order to maximize the benefit derived through teaching it. For example, one respondent stated that existing SEL programs are often created by and tailored for White teachers and learners, thereby limiting the impact of such programs. Many of these factors were not investigated in this study and should be explored more thoroughly in the high school context. Furthermore, extant longitudinal data is virtually non-existent on SEL—we do not typically follow children as they develop through different ages and stages, nor do we keep track of teachers in their professional development (i.e., as they cultivate SEL) over time (West et al., 2020). This is an obvious limitation of the current study and carefully designed longitudinal work in this area is worthy of future attention by SEL researchers.

Finally, the timing of this prospective study arguably acted as an impediment in several ways due to the realities associated with the COVID-19 pandemic (e.g., Middleton, 2020). Schools in the U.S. closed abruptly in the Spring of 2020 and teachers

and students were forced to quickly adapt to distance learning scenarios, in many cases without a method or an infrastructure to support teaching and learning. By Fall, schools were alternating between distance, hybrid, and in-person learning which required teachers and students to adopt new practices and make ongoing adjustments. The uncertainty and physical distancing regulations have continued to impinge on the mental health and wellbeing of teachers and students alike. This may have impacted the willingness of educators to spend time on a research study and could have further biased the responses of those who did participate.

The findings from this study demonstrate that high school teachers are generally receptive to—and even excited about—cultivating SEL in their classrooms. This enthusiasm, when combined with the well documented benefits of SEL, validates the need for certain future in-depth investigations designed to foster more effective SEL adoption in high schools. Deeper study is warranted in order to better understand the factors that limit SEL acceptance for older adolescents, relating to both structural (e.g., teacher time demands and pressures and the model of the typical high school day) and individual (e.g., teacher stress, burnout, and psychological safety) factors. If more were known about the interaction between teacher time pressures and their individual SEL skills or mindsets, for example, this might inform changes to the structure of the high school day. Stickle and colleagues (2019) investigated how SEL coaching of elementary school teachers might support them in building an SEL “toolbox.” Based on the positive outcomes of that study and considering the SEL enthusiasm among the participants in this study, high school would be a logical setting to test whether an “SEL coaching approach” might help to eliminate some of the challenges that secondary teachers face

when trying to incorporate SEL into their classrooms (e.g., how to blend academics with SEL, what it should look like when well-executed; p. 3). Relatedly, additional study is warranted to identify what “just right” training might look like for individual teachers, in order to deliver appropriate professional development that bolsters contextually relevant SEL. Without a doubt, the findings reported herein make a strong case for a supplementary examination of teacher mindsets and how to eventually use mindset training as a specific part of such a “just right” approach for certain teachers.

Conclusion

Importantly, the truancy of SEL programs in high schools is multifactorial. The solution to addressing this will be as well. This study focused on one primary factor—high school teachers—and found that educators overwhelmingly want to see SEL in secondary schools and are willing to grow in order to help realize this goal. Through training in age appropriate SEL instruction, development of growth mindsets, and a thoughtful re-imagining of what environmentally suitable high school SEL programs can look like, this dream is within reach. In essence, there is merit in universally integrating SEL in U.S. high schools at scale, despite the current absence of such programs. Moreover, a public health crisis surrounding the mental health and wellbeing of high schoolers exists and has been laid bare by the recent pandemic; SEL likely offers an important antidote (Centers for Disease Control, 2016; Hill et al., 2021; Middleton, 2020). SEL enhances school culture and improves student outcomes. When implemented effectively, it can serve as a healing salve as well as a preventative vaccine of sorts, serving to inoculate students against adversity by supplying skills that support resiliency throughout the lifespan. Ongoing studies like this one are imperative for extracting

important take-aways that might ultimately help educators and policy-makers scale SEL programs across U.S. high schools, thereby helping students cultivate the “emotional rudders” that are needed to successfully navigate both in and out of high school and beyond (Immordino-Yang & DaMasio, 2007, p. 3).

Appendix A.

Participant Recruitment Email

A graduate student working with The EASEL Lab at the Harvard Graduate School of Education would like to invite full-time U.S. high school teachers to participate in a brief survey (approximately 10 minutes or less). We are interested in your attitudes about social and emotional learning (SEL) in the high school classroom. We hope to learn more about the types of SEL programs that are being used in high school settings, and what high school teachers think about them.

The survey is confidential and optional, and your answers will be kept anonymous to the research team. No contact or identifying information will be collected until you have completed the survey, at which time, you may elect to provide an email address for entry into a drawing for one of two \$100 Amazon.com gift certificates. Your email address will not be linked back to your responses.

When you click the survey link, you will be provided with additional information about the questionnaire, consent, and details of the drawing.

https://harvard.az1.qualtrics.com/jfe/form/SV_9LCXCDF8G6QzqUI

This study is designed to give a voice to high school teachers on the subject of SEL. We hope that the information learned about teachers' experiences and beliefs will enable programmatic and curricular improvements in support of both teachers and students.

Thank you for your participation!

Appendix B.

Study Survey Tool

A graduate student working with The EASEL Lab at the Harvard Graduate School of Education would like to invite full-time U.S. high school teachers to participate in a brief survey (approximately 10 minutes or less). We are interested in your attitudes about social and emotional learning (SEL) in the high school classroom. We hope to learn more about the types of SEL programs that are being used in high school settings, and what high school teachers think about them. This study will give a voice to high school teachers on the subject of SEL. We hope that the information learned through this study will enable us to better support teachers and students, through programmatic and curricular improvements that are based on teacher experiences and beliefs.

This survey is confidential and optional and your answers will be kept anonymous to the research team. No contact or identifying information will be collected until you have completed the survey, at which time, you may elect to provide an email address for entry into a raffle. Your email address will not link to your responses or identify you in any way. A few survey questions provide spaces for you to clarify or offer open-ended responses. Please note that in order to maintain the anonymity of your survey responses, we ask that you do not use any protected or identifiable information in responding to these questions (e.g., the name of a specific student or school). You may skip any questions that you do not want to answer, or decide not to participate at any time. Information collected from this survey may be used for educational and research purposes.

After completing the questionnaire, you will be directed to a separate form where you may choose to provide your email address to be entered in a drawing for one of two \$100 Amazon.com gift certificates. This information will not be linked to your survey responses or shared with outside parties and will be solely used for the purpose of distributing gift cards. Gifts cards will be sent out within three months of survey administration.

Should you have any questions or be interested in receiving the findings of the study, please email danielle_batchelor@g.harvard.edu.

By clicking the arrow to go to the next page, I agree to take part in this survey.

Please print or save a copy of this consent for your records.

Question 1: Are you a full-time high school teacher in the U.S.?

Question 2: Please enter the 5-digit zip code for your school/place of work.

Question 3: Which of the following best describes your school?

- a. Regular public
- b. Public charter
- c. Private or religious school
- d. Magnet or optional public school

Question 4: What do you primarily teach? Please select one category and specify the class in the field below it.

- a. Core academic course (e.g., math, science, language arts)
- b. Special or elective subject (e.g., music, photography)
- c. Other (e.g., college counseling, mental health counseling)

Question 5: How many years of experience do you have in teaching high school?

- a. 1-3 years
- b. 3-5 years
- c. 5-8 years
- d. More than 8 years

Question 6: Please indicate whether you believe that each of the following sentences is true or false.

- a. "There is no cognition without emotion."
- b. "Cognition and emotion are both integral to learning."

Question 7: This part of the survey has been designed to investigate ideas about intelligence. There are no right or wrong answers. We are interested in your ideas. Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements by selecting the number that corresponds to your opinion (1=strongly agree, 2=agree, 3=mostly agree, 4=mostly disagree, 5=disagree, 6=strongly disagree).

- a. You have a certain amount of intelligence, and you can't really do much to change it.
- b. Your intelligence is something about you that you can't change very much.
- c. No matter who you are, you can significantly change your intelligence level.
- d. To be honest, you can't really change how intelligent you are.
- e. You can always substantially change how intelligent you are.

- f. You can learn new things, but you can't really change your basic intelligence.
- g. No matter how much intelligence you have, you can always change it quite a bit.
- h. You can change your basic intelligence level considerably.

As you answer the remaining survey questions, please use the following definition, described by The Collaborative for Academic, Social, and Emotional Learning (CASEL):

Social and emotional learning (SEL) is an integral part of education and human development, It is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. (n.d.).

CASEL offers five primary SEL competencies to consider: self-awareness, social awareness, self-management, responsible decision making, and relationship skills.

Question 8: In your view, SEL curricula belongs in which levels of a child's school education (select one or more school stages or "does not belong"):

- a. Early Childhood
- b. Elementary
- c. Middle
- d. High School
- e. It does not belong at any level – it is not the responsibility of the school or school system

Question 9: Using the dropdown boxes, please indicate whether each statement is true or false.

- a. I intentionally incorporate SEL elements into my high school class (regardless of any school/district directive).
- b. I feel adequately prepared to include SEL concepts in my high school classroom.

Question 10: Have you received formal teacher training in SEL? Note: This may include pre-service, in-service, and professional development. This does not include informal extracurricular exploration that you have done on your own, featuring online videos, books, or other such materials.

- a. No, I have not had any formal SEL training.
- b. Yes, I have had some amount of formal SEL training.

Question 11 (only if “b.” selected on question 10): In total, approximately how much formal SEL teacher training have you received? Note: This may include any format or combination of training type including: Pre-service, in-service, and professional development.

- a. One day or less (approximately 8 hours or less)
- b. 2-4 days (approximately 9-32 hours)
- c. 5 days or more (approximately 33 or more hours)

Question 12: Is there a formal/explicit, school or district sponsored SEL program in the high school where you currently teach?

- a. No
- b. Yes: Partial/freestanding SEL program (i.e., it is not a formal part of academic classes and is delivered in SEL specific formats)
- c. Yes: Schoolwide universal SEL program (i.e., it is integrated into core academic and other classes, and is delivered throughout the school day – this may also include SEL-specific formats)

Question 13: It is important for high school teachers to incorporate SEL in classroom instructional time.

- a. Agree
- b. Disagree

Question 14: What are the primary challenges to high school SEL teacher adoption? Please drag the bar to indicate whether you think each item below is a challenge or not, with 0 being no challenge and 10 being a very large challenge.

- a. Not enough time due to structure of typical day (e.g., length of class periods, rotating schedules)
- b. Not enough time due to teacher pressures (e.g., accountability measures, curriculum requirements)
- c. Lack of school or district support
- d. Lack of teacher SEL training
- e. Lack of parent buy-in
- f. The SEL materials are not age-appropriate for high schoolers
- g. Confusion between SEL and mental health education
- h. SEL materials are not culturally and ethnically diverse or inclusive

Question 15: Using the dropdown box, please indicate whether you believe that each of the following statements is true or false in the context of high school education.

- a. Social and emotional development should be solely handled by subject experts such as school counselors and those with mental health training, not classroom teachers.
- b. Social and emotional development is related to academic achievement.

- c. SEL is a current trend in education and it too shall pass, therefore, it is not worth my time to develop SEL teaching practices.
- d. Teachers should model and incorporate SEL throughout the high school day.
- e. A high school teacher's job is to teach the subject they were hired to deliver (e.g., geometry), not to teach SEL.
- f. SEL is a needed complement to academic learning in high schools.
- g. SEL should be cultivated as a preventative measure to support all children, not just those with mental health or other challenges.

Question 16: On a scale of 1-10, please slide the bar below to rate your own social and emotional skills with 1 being not effective and 10 being very effective.

Question 17: I would like to experience more high school specific SEL teacher training.

- a. Agree
- b. Disagree

Question 18: Is there anything else you would like to share with the researchers related to your beliefs about social and emotional learning in U.S. high schools? Note: Please do not include any identifying information (e.g., student or school names) in your response. Limit = 750 characters.

Question 19: You have completed the survey. Thank you for sharing your beliefs and answering our questions! Please select an option below:

- a. I would like to be entered into a drawing to receive one of two \$100 gift cards from Amazon.com.
- b. I'm done! I do not want to be entered into the drawing.

Appendix C.

SEL Attitudes Scoring

In order to provide each participant with an SEL Attitudes Score, points were assigned to certain answers throughout the survey that indicated a positive impression of SEL curricula adoption in high schools. A total of nine points were possible. The following questions were included in the scoring process which was set-up in Qualtrics prior to the survey launch and calculated there as well:

Question 9: Using the dropdown boxes, please indicate whether each statement is true or false.

- a. I intentionally incorporate SEL elements into my high school class (regardless of any school/district directive). (worth one point, if selected)
- b. I feel adequately prepared to include SEL concepts in my high school classroom. (worth zero points, if selected)

Question 13: It is important for high school teachers to incorporate SEL in classroom instructional time.

- a. Agree (worth one point, if selected)
- b. Disagree (worth zero points, if selected)

Question 15: Using the dropdown box, please indicate whether you believe that each of the following statements is true or false in the context of high school education.

- a. Social and emotional development should be solely handled by subject experts such as school counselors and those with mental health training, not classroom teachers. (one point assigned for answering “false”)
- b. Social and emotional development is related to academic achievement. (one point assigned for answering “true”)
- c. SEL is a current trend in education and it too shall pass, therefore, it is not worth my time to develop SEL teaching practices. (one point assigned for answering “false”)
- d. Teachers should model and incorporate SEL throughout the high school day. (one point assigned for answering “true”)
- e. A high school teacher’s job is to teach the subject they were hired to deliver (e.g., geometry), not to teach SEL. (one point assigned for answering “false”)
- f. SEL is a needed complement to academic learning in high schools. (one point assigned for answering “true”)

- g. SEL should be cultivated as a preventative measure to support all children, not just those with mental health or other challenges. (one point assigned for answering “true”)

Appendix D.

Open-Ended Participant Responses (Unedited)

- 1) “I believe that social and emotional learning should be incorporated into the academic subjects, not taught as a separate subject.”
- 2) “I’ve worked at the HS and MS level and seen SEL addressed responsibly differently in both settings. I’ve also taught in DC and MA at the HS level and seen it accepted and rejected for any number of reasons. I think the biggest barrier to SEL at the HS level is the belief that it is an independent subject area or a box to be checked, rather than what it is: an approach that should inform our pedagogy and a vehicle by which we deliver our content. It is neither a magic bullet nor a ‘free pass’ as many I’ve worked with seem to believe. It is another tool for responsive, effective teaching.”
- 3) “SEL is just as, if not more, important to long-term learning than academic learning. In fact, one of the mistakes in the current educational climate is pulling them apart. This is a false dichotomy. I hope for a day when SEL will be seamlessly integrated with “academic” learning into public school curricula across the country.”
- 4) “I think there needs to be an anti-racist element to SEL. I believe that there are a lot of white educators that are implementing primarily white designed SEL in classrooms with students of diverse backgrounds. I would love to see SEL incorporate more anti-racist development, for example Dena Simmons’ material.”

- 5) “I think the True/False portion is tough. I have had years when I've been asked to incorporate social-emotional strategies and it takes too much time and can be a distraction. Also, sometimes it is viewed as a one-size-fits all approach. Students who didn't care for the school's methodology zoned out or fell asleep, not a good use of highly valuable instructional time.”
- 6) “It has been my experience that many administrators like to reference the importance of incorporating SEL into the high school curriculum and community, but rarely put significant resources (such as time and training) into it; It has also been my experience that SEL is more important than academic subjects in preparing students for life after high school.”
- 7) “One of the problems is that teachers are already so overloaded with taking care of so much. It's one more thing on top of a huge pile of things that have somehow become the responsibilities of the school and classroom teachers. We need to have training, but also we need to have better pay, less teaching responsibility, and more planning time before things like this will work. Adding another responsibility on top of teachers is unfair no matter how great it is in practice.”
- 8) “It feels impossible to adequately do this when we have such a high number of students. I have 26 students x 5 classes, I run a social emotional block with 26 more, and I run a club with 40 students. That means over the course of 2 days, I am responsible for 150-190 students. Further, I teach 3 different courses with only 1 hour a day to prep. I cannot adequately connect with that many students each day. This has been one benefit of hybrid teaching this year: I have half the number

of students in my classroom. I can connect with every single one of them. I know them better than ever. 26 in a class is just too many.”

- 9) “Some schools may adopt a statement, written into goals, but lack district wide teacher/admin/staff training. It's not a check off in a box. PD needs to be provided at every level. I would like to see training in skills, not selling a program and one that is culturally responsive. SEL is Not a replacement for social justice work, but can help facilitate if implemented with discernment.”
- 10) “Any/all PD SEL training I have received has felt like identifying and defining the problem. I am teaching an intro physics class for which a high stakes test is given at the end of the academic year. I don't need help identifying the problem: I need help knowing what to do about it AND still be able to complete the curriculum so that all my students are adequately prepared for the test.”
- 11) “SEL should be prioritized at all levels.”
- 12) “I think that many think SEL activities are seen as juvenile or not at the level for high school students to be meaningful. In part, I agree; many SEL activities floating around are for lower grades. However, I think for high schoolers, it is easy enough to incorporate SEL activities into our schools- both implicitly through our class lessons, and more explicitly through advisory programs.”
- 13) “SEL is a trend but I believe it should be an embedded part of teachers’ pedagogy. I believe I teach young people not a subject. As a 20+ year veteran I have learned effective strategies, but consistently found stand alone programs problematic—the relationships are artificial, not grounded in a common endeavor, there’s no ability to deliver “just in time” relevant lessons.”

- 14) “Some of the questions stipulate, the one about SEL being a trend, and The teachers job..., these questions I think put a contingency on requirements of teachers' responsibility and willingness. This makes them loaded, time and space are always a factor. What is required in my district equals 80 hours a week + between teaching, professional development, documentation, etc not a practical work load. Teachers often are inspired by these ideas, but new ideas require so much support to become adopted and often they are an additional layer, which is what makes them hard to sell, more work is more work. What is being removed in order for the new to be added, this is a technical problem that is forever overlooked. Start with boots on the ground”
- 15) “Would love to be involved with piloting any SEL programs or training as it comes along. As we do not have formal programming in SEL at my school, I am always willing to learn”
- 16) “I feel there is a lack of clarity surrounding SEL in the high school environment. I myself I have never had training specific to SEL and am unsure I would recognize it. I hope to gain more information and training and in the meantime strive to provide a healthy classroom atmosphere.”
- 17) “SEL is a concept that seems most framed, born out of and suited for WEIRD societies. It has been good to see CASEL expanding its direction to counter some of the bias towards individualistic concepts of self, but more might be done in this regard in framing SEL approaches and focus, for instance on developing cultural and institutional "norms" that promote and sustain positive SEL. CASEL is a marvelous resource; nonetheless, "responsible decision making" as a category of

SEL development is a bit of a junk drawer approach to things. This survey too focuses on SEL as a set of "deliverables;" consider the role of a teacher's own needs in terms of Social and Emotional support & their role is sustaining good SEL culture(as well as the teacher.)”

- 18) “I often wonder if part of the barrier to teaching from an SEL informed pedagogy stems from the fact that it is mostly referred to as an "other" thing to teach, not just good, research based, developmentally appropriate teaching, as it should be and actually is.”
- 19) “I feel like my school talks about brining SEL into all our classes (not just our homeroom/SEL Block) but I don't really know how exactly to do that. Sometimes it seems like they just want us to do stuff for our subject that's like SEL conscious and sometimes its like you should dedicate time independent of your subject and I'm just not really sure what to do or how to do it in normal classes. I feel pretty good about what I'm doing in homeroom but I think in gen ed classes it could be much better.”
- 20) “Now, during a global pandemic, is not the time to add one more thing to a teachers plate. We are STRUGGLING to teach in a hybrid systems that was put together on the fly. STRUGGLING to find materials that are effecting for face-to-face as well as remote learners that we are teaching at the same time. We are STRUGGLING emotionally, physically, technologically. We have shifted from full time teachers, to part time teachers, part time counselors, and part time custodians. It is not right to ask us to do just ONE more thing right now.”

- 21) “I would like to see SEL seamlessly integrated into daily lessons. A scaffolding of layering on each day. Building stronger students that are more well equipped after adding SEL into their learning.”
- 22) “I think it is important to recognize that education -- like most government programs and other elitist ideas -- mostly treats the symptoms and not the disease. Social and emotional learning is no different. It's yet another example of in loco parentis. The hard truth is that until more parents care enough about education, and thus teach their children to value education, public education will continue to get worse. In most cities (especially in blue states), people with any sort of means at all send their kids to private schools. Why? Because they are clearly better. Eventually public schools will be for the poor only.”
- 23) “The administration itself must demonstrate priority for SEL education in terms of training and accountability. It doesn't happen accidentally. The best teachers who are doing it, even if they don't know that it is SEL exactly, are doing it because they are attentive to students' needs.”
- 24) “it is particularly important in special education settings”
- 25) “I think the best Way forward is to give teachers the tools to incorporate it into their classroom, or to name the way that they already do. Even weaving in things like group projects, presentations, revisions, grading practices that encourage autonomy, choice, and targeted reflections are ways of doing SEL in the classroom that doesn't take extra time.”
- 26) “I teach in the Humanities and I believe one of my jobs is to make my students better HUMAN BEINGS. I lament the fact that there's a lot of talk and push to

incorporate SEL but we're given no real concrete examples of what that looks like in a HS setting.”

- 27) “I mainly believe they should be developed at the lower grade levels. At the high school level kids should already be ready for the rigor and be able to cope with varying situations that include their peers. Although I do know there are many issues in high school that deal with behavior, but most highschoolers are not open to behavioral change.”

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