Social and Emotional Learning Technical Report

Research Brief

Student Level Outcomes, 2010–2011 Through 2016–2017

About this report

This report analyzes the influence of Social and Emotional Learning (SEL) on student-level outcomes over time. Using the logic model created in 2016–2017 (Appendix A in the full report; Lamb, 2018), which posits that as a result of strong SEL implementation, students' perceptions of school climate, performance on the State of Texas Assessments for Academic Readiness (STAAR), attendance, and teacher ratings of their students' SEL-related personal development skills (elementary school students only) will increase over time while discipline and reliable integrated trend scores (RITS; middle and high school students only) will decrease over time. Prior evaluation reports published by AISD's Department of Research and Evaluation (DRE) have examined these relationships at the school level (Lamb 2016, 2017) and have found that the degree to which SEL was implemented with fidelity was more strongly related to positive program outcomes than was years of participation in SEL. To conduct similar analyses at the student level is difficult due to student mobility over time (and within a single school year), lack of implementation ratings for the first few years of SEL, and a dramatic change to the implementation rubric in 2016–2017. To approximate the relationship between implementation and outcomes, students' 2014–2015 ratings of school climate, and teachers' 2013–2014 ratings of their students' SEL-related personal development skills (elementary school students only), which are both known to positively relate to high levels of SEL implementation (Lamb 2016, 2017), were used to predict 2017 outcomes, controlling for years of participation in SEL (for an overview of these relationships, see Figure 1). This research brief summarizes results from these analyses. Additionally, this report summarizes findings related to longitudinal student-level analyses based on student ethnicity.

Figure 1. Relationships Between SEL Implementation, Students' Perceptions of Climate, SEL-Related Personal Development Skills, and Outcomes of Interest


Note. The dashed arrow indicates a known relationship that cannot be tested at the student-level. Light arrows indicate known relationships at the school-level, and dark arrows indicate relationships that were tested in this report.

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Did students who participated in SEL for more years experience better outcomes than did their peers who participated in SEL for fewer years?

The percentage change in student-level outcomes (i.e., students' ratings of climate over time, attendance over time, STAAR NCE scores over time) was calculated. Differences in these changes were analyzed based on years of participation in SEL. Results from these analyses found few instances in which students who had participated in SEL for a longer period of time also experienced more positive changes in outcomes of interest (i.e., attendance, school climate, STAAR NCEs) than did their peers who had participated in SEL for fewer years. However, positive results were found when examining Student Climate Survey items believed to relate directly to effective SEL implementation. Specifically, students enrolled in high school in 2016–2017 who participated in SEL for more years experienced significantly greater improvement over time on their ratings of school climate than did their peers who participated in SEL for fewer years (Figure 2). Most notably, high school students' belief that their "Classmates show respect to other students who are different" increased more from 2014–2015 to 2016–2017 for students participating in SEL for more years than for students participating in SEL for fewer years. Too few matched cases were found at the elementary school level to examine student-level school climate outcomes over time.

Figure 2. Perceptions of school climate improved significantly more for high school students participating in SEL for more years than for students participating in SEL for fewer years.
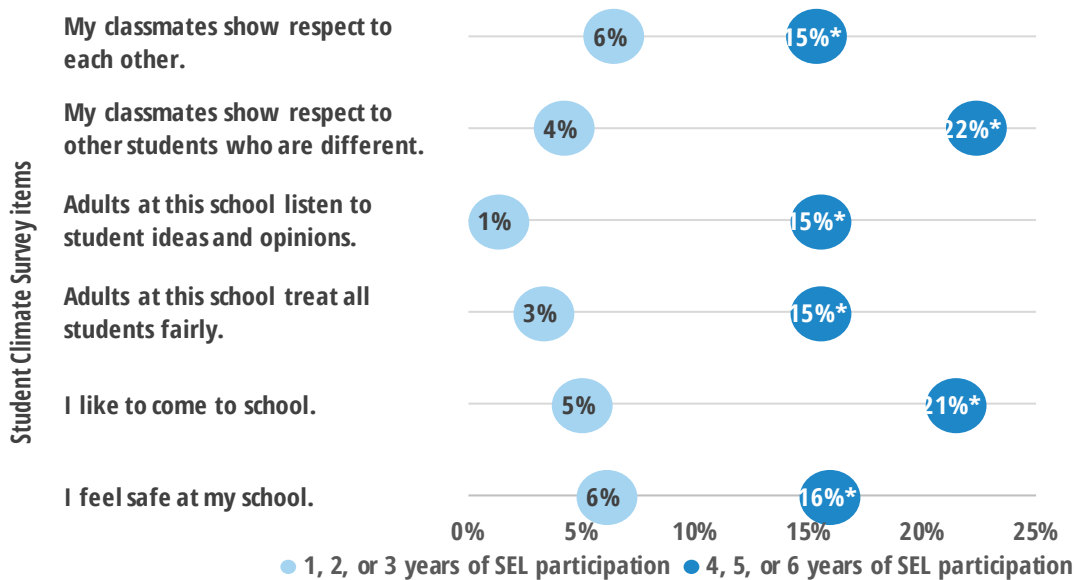
Source. 2014–2015 through 2016–2017 matched student responses to the Student Climate Survey
* Percentages are significantly different from each other within survey item where $p < .05$.

Which student-level factors predicted 2016–2017 outcomes?

STAAR NCE scores. Analyses were conducted to determine which factor (i.e., teachers' 2013–2014 ratings of their students' SEL-related personal development skills and students' 2014–2015 ratings of climate) predicted students' performance on 2016–2017 STAAR math and reading, controlling for length of participation in SEL, and 2014–2015 STAAR performance. Results showed that for students enrolled in elementary school in 2016–2017, receiving high ratings from their teachers for taking responsibility for their own actions in 2013–2014 predicted their 2016–2017 math and reading performance.[1] Additionally, for elementary school students believing that their classmates respected each other in 2014–2015 significantly predicted STAAR reading and math performance in 2016–2017. At the middle school level, believing that their classmates showed respect to each other in 2014–2015 significantly predicted students' 2016–2017 STAAR math performance. Finally, students who received high ratings from their teachers on their ability to take responsibility for their own actions in 2013–2014 also significantly predicted their 2016–2017 STAAR math and reading performance.

Similar analyses were conducted separately based on students' racial group. Results found that for African American and Hispanic elementary school students, 2013–2014 ratings from their teachers of their ability to take responsibility for their own actions significantly predicted their 2016–2017 STAAR math performance. This same result was found for Hispanic and White elementary school students when predicting STAAR reading (Table 1, Appendix B).

Attendance. Next, analyses were conducted to determine which factor(s) related to student climate and SEL-related personal development skills predicted 2016–2017 attendance, controlling for student participation in SEL and 2010–2011 attendance. At the elementary school level, the number of years a student participated in SEL negatively predicted 2016–2017 attendance. This result could be related to attendance generally declining as students progress in school. At the middle school level, however, stating that they liked to come to school in 2014–2015 and taking responsibility for their own actions in 2013–2014 predicted students' attendance in 2016–2017.

Examining the data based on students' racial group found that at the elementary school level, 2014–2015 ratings of "My classmates show respect to each other" negatively predicted Hispanic school students' 2016–2017 attendance. It could be that this negative relationship is due to attendance rates generally declining in the upper grades. However, at the middle school level, for Hispanic students stating that they liked to come to school in 2014–2015 significantly predicted 2016–2017 attendance. Additionally, for White middle school students taking responsibility for their own actions in 2013–2014 and believing that their classmates showed respect to each other in 2014–2015 positively predicted 2016–2017 attendance. Finally, White students enrolled in high school in 2016–2017, stating that they liked to come to school in 2014-2015 positively predicted 2016–2017 attendance (Table 2, Appendix B).

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1 Detailed results, including *p*-values and Beta weights, are included in the full report (Lamb, 2018). STAAR math and reading performance was assessed using NCEs (see sidebar for more information).

Students' SEL-related personal development skills. Elementary school students' ratings of student climate in 2014–2015 were used to predict how their teachers rated them across an average of five SEL-related personal development skills (i.e., takes responsibility for own actions, respects self and others, manages emotions constructively, interacts cooperatively with peers, and interacts cooperatively with adults), controlling for 2013–2014 SEL-related personal development skill ratings and years of SEL participation. Results showed that students believing that adults at their school listened to students' ideas and opinions predicted their average 2016–2017 personal development skill ratings.

Examinations across student racial groups found that for African American and White elementary school students, believing that adults at their school listened to their ideas and opinions in 2014–2015 significantly predicted 2016–2017 personal development skill ratings, controlling for 2013–2014 SEL-related personal development skill ratings and years of SEL participation (see Table 3 in the Appendix).

Conclusion

Taken together, these results corroborate those found at the campus level (Lamb, 2018), highlighting the importance of improving students' perceptions of school climate to address long-term outcomes, such as academic achievement and attendance. Additionally, analyses based on student racial groups found similar results. These results also speak to the importance of SEL specialists' work with school leaders to improve school climate. School leaders can use the results presented in this report to seek out ways to specifically improve how students feel about their school, if they feel respected, and if they like to come to school. Doing so will build a strong foundation not only for improving students' experiences in school but also for lifelong outcomes.

Appendix A – SEL Logic Model

Strategic priorities	Inputs	Short-term outputs (3 years)	Long-term outcomes (4+ years)
1) Strengthen AISD's culture by embracing the principles of Social and Emotional Learning district-wide (from the board room to the classroom and into the community). 2) Develop the social and emotional knowledge and competencies of all district staff to create the environments that optimize teaching and learning. 3) Leverage the implementation of Social and Emotional Learning to advance AISD's commitment to cultural proficiency, inclusiveness, and equity. 4) Develop an innovative, integrated system of social, emotional, and mental health support for students that includes and extends beyond SEL 5) Contribute to the national evidence base for Social and Emotional Learning, and continue to advance AISD's reputation as a national leader of this work.	**Explicit SEL instruction** • Invest two SEL facilitators for each school and provide a monetary stipend to each SEL facilitator. • SEL specialists move work to support a campus-based leadership approach rather than a one-on-one individual teacher approach • Direct support and training of school staff in School Connect and Second Step (now available online) **Model SEL schools** • Design and implement a rigorous application process that requires schools to use data to identify growth goals to deepen SEL practices and report on progress • Identify SEL seed schools piloting the revised model school application **Integration of SEL, MTSS and Student Health** • Establish joint professional learning opportunities (TBRI, restorative practice, mindfulness) • Implement shared framework (Bruce Perry's Neurosequential Model for Education, NME) • Establish regular communication between departments on how best to support high priority schools • Establish regular use of eCST to house student/staff support data **SEL 2.0** • Share signature practices with administrators and school staff • Regular and ongoing presentation of SEL 2.0 priorities • Update website and materials to reflect SEL 2.0 • Align SEL implementation rubric, SEL activity log, and evaluation plan to reflect SEL 2.0 **Prekindergarten (PreK)-2nd grade suspension ban** • Pilot and train all PreK-2 teachers and counselors in alternate methods to address discipline (i.e., TBRI, restorative practices, mindfulness) • Create TBRI coordinator • Create a tiered system of support for highest risk students **SEL professional pathway for teachers (PPfT)** • Develop in-depth training for 150 teachers per 2-year cohort for an SEL micro-credential (and stipend)	**Explicit SEL instruction** • Improved program fidelity on SEL implementation (*Explicit SEL instruction and Coordination of SEL climate and pedagogy*) • 100% of ES and MS will engage in direct SEL instruction via Second Step • 100% of high schools will regularly provide opportunities for students to apply and use SEL language and skills in the classroom (PBL, service learning) **Model SEL schools** • Support up to 30% of schools/level to become a Model SEL school • Increase equitable representation of AISD among model schools • Use data to identify best SEL practices from Seed schools • Improved program fidelity on SEL implementation rubric (*Empowering campus leadership and coordination with climate and pedagogy*) **Integration of SEL, MTSS and Student Health** • Improved staff ratings of climate (TELL) • Improved teacher retention • Improved coordination of school-level plans and interventions (ECS) • Increased proficiency among teachers in trauma-informed practices (ECS) • Increased capacity to provide ongoing supports to students, staff, and families • Increased staff satisfaction with integrated support provided by SEL, MTSS, and Student Health (ECS) **SEL 2.0** • Improved program fidelity on SEL implementation rubric • Establish best practices of SEL specialists and facilitators using the implementation rubric and activity log **(PreK)-2nd grade suspension ban** • Create RITS for PreK-2 students • Improve student ratings of student engagement (SCS) • Improved student personal development skill report card ratings • Improved staff retention in PreK-2 campuses • Increased use of alternative methods to address discipline (ECS; TELL) **SEL PPfT micro-credential** • Improved program fidelity on SEL implementation rubric • Improved staff perceptions of SEL skills and school climate (TELL) • Improved teacher retention • Increase in school staff offering SEL trainings	**Explicit SEL instruction** • Improved program fidelity across all strands of the SEL implementation rubric • Students and staff are included in developing and disseminating SEL instruction • AISD students demonstrate growth in AISD's targeted SEL skill areas (SCS; personal development skill report card ratings) **Model SEL schools** • Improved ratings on school climate on SCS and TELL in SEL Seed Campuses • Improved staff satisfaction (TELL) and retention in SEL Seed Campuses • Improved student outcomes in SEL Seed Schools (academic performance, attendance, disciplinary referrals) • Seed schools share best practices (and data sources) with other AISD schools **Integration of SEL, MTSS and Student Health** • Improved school culture/climate district-wide • Improved integrated systems to monitor health for all students (e.g., mental health, physical health, and SE health) • Improved student outcomes district-wide: (academic performance, attendance, disciplinary referrals) **SEL 2.0** • Improved program fidelity on SEL implementation rubric district-wide • Schools will meet campus SEL goals established on SEL implementation rubric • Improved staff ratings of SEL skills district-wide **SEL PPfT micro-credential** • Improved program fidelity on SEL implementation rubric district-wide • Improved PPfT ratings district-wide • Improved staff perceptions of SEL skills and school climate (TELL) district-wide • Improved teacher retention district-wide

Vision: All students belong to a welcoming and affirming learning environment that cultivates academic, social, and emotional learning and enables them to internalize the competencies and dispositions to thrive in life.

Rationale: Because academic learning is inextricably linked to social and emotional learning, students are more likely to realize their full academic potential in teaching and learning environments that are physically and emotionally safe, and that foster a sense of belonging, agency, curiosity, and academic tenacity.

Appendix B

Table 1.
Predicting 2016–2017 STAAR Math and Reading Performance, by Level and Ethnicity.

	Race/ethnicity	My classmates show respect to each other (2014–2015 Student Climate Survey)		Takes responsibility for own actions (2013–2014 teacher report card ratings of students' SEL-related personal development skills)		Years of SEL participation	
		Math	Reading	Math	Reading	Math	Reading
Elementary	African American (*n* = 37)	†	†	✓	†	†	—
	Hispanic (*n* = 303)	†	✓	✓	✓	—	†
	White (*n* = 414)	✓	✓	†	✓	—	†
Secondary	African American (*n* = 21)						
	Hispanic (*n* = 286)	†	†	✓	✓	†	†
	White (*n* = 325)	†	†	†	✓	†	†

Source. 2014–2015 through 2016–2017 matched student responses to the Student Climate Survey; 2013–2014 through 2016–2017 teacher ratings of students' personal development skills, and 2014–2015 through 2016–2017 student performance on STAAR converted to NCE scores.
Note. Student groups with fewer than 30 students were excluded from analyses.
✓indicates a positive significant relationship predicting STAAR performance, $p < .10$; — indicates a significant negative relationship predicting STAAR performance, $p < .01$; † indicates a non-significant relationship predicting STAAR performance; blank cells indicate too few cases for analyses.

Table 2.
Predicting 2016–2017 Attendance, by Level and Ethnicity.

	Race/ethnicity	I like to come to school (2014–2015 Student Climate Survey)	My classmates show respect to each other (2014–2015 Student Climate Survey)	Takes responsibility for own actions (2013–2014 teacher report card ratings of students' SEL-related personal development skills)	Years of SEL participation
Elementary	African American (*n* = 21)				
	Hispanic (*n* = 192)	†	—	†	—
	White (*n* = 51)	†	†	†	†
Middle	African American (*n* = 21)				
	Hispanic (*n* = 276)	✓	†	†	†
	White (*n* = 305)	†	✓	✓	†
High	African American (*n* = 83)	†	†	†	†
	Hispanic (*n* = 921)	†	†	✓	—
	White (*n* = 422)	✓	†	†	†

Source. 2014–2015 through 2016–2017 matched student responses to the Student Climate Survey; 2013–2014 through 2016–2017 teacher ratings of students' personal development skills, and 2010–2011 through 2016–2017 AISD attendance data.
Note. Student groups with fewer than 30 students were excluded from analyses.
✓indicates a positive significant relationship predicting attendance, $p < .10$; — indicates a significant negative relationship predicting attendance, $p < .01$; † indicates a non-significant relationship predicting attendance; blank cells indicate too few cases for analyses. There are fewer elementary school students in this sample because fewer elementary students enrolled in 2016–2017 were enrolled in AISD in 2010–2011.

Appendix B, continued

Table 3.
Predicting Elementary School Students' 2016–2017 SEL-Related Personal Development Skills, by Ethnicity.

	Race/ethnicity	Adults at this school listen to student ideas and opinions (2014–2015 Student Climate Survey)	Years of SEL participation
Elementary	African American (*n* = 36)	✓	†
	Hispanic (*n* = 339)	†	†
	White (*n* = 480)	✓	✓

Source. 2014–2015 through 2016–2017 matched student responses to the Student Climate Survey; 2013–2014 through 2016–2017 teacher ratings of students' personal development skills.

Note. Student groups with fewer than 30 students were excluded from analyses.

✓indicates a positive significant relationship predicting SEL-related personal development skills, p < .10; — indicates a significant negative relationship predicting SEL-related personal development skills, p <.01; † indicates a non-significant relationship predicting SEL-related personal development skills; blank cells indicate too few cases for analyses.

References

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