Research Brief for the Social and Emotional Learning Technical Report:

Student Level Outcomes, 2015–2016

Introduction

This report summarizes analyses of the construct validity (i.e., the degree to which a survey measures what it purports to measure) and predictive validity (i.e., the degree to which responses on a survey relate to outcome measures of interest) of the revised Social and Emotional Learning (SEL) Skills Survey. Specifically, a factor analysis of the SEL Skills Survey, correlations between students' responses on the SEL Skills Survey and their responses on the Austin Independent School District (AISD) Student Climate Survey, and correlations between students' responses to the SEL Skills Survey and outcomes of interest (i.e., student achievement, attendance, chronic absenteeism, discipline) were conducted. Analyses were conducted separately, based on school level (i.e., elementary, middle, and high), and when applicable, student group (i.e., gender, ethnicity, economic disadvantaged status).

What is the SEL Skills Survey?

In 2015–2016, the Collaborative for Academic, Social, and Emotional Learning (CASEL) partnered with Washoe County Independent School District (WCISD) to refine an existing SEL Competency Survey.

Researchers compared similarly worded items assessing students' SEL skills to determine which items best measured CASEL's five SEL competencies (i.e., self-awareness, social awareness, self-management, relationship skills, and responsible decision making), and which items differentiated students with high SEL skills and low SEL skills. Because AISD and WCISD are members of CASEL's Collaborating Districts Initiative (CDI), AISD's Department of Research and Evaluation (DRE) worked closely with both institutions to develop a 20-item measure to better fit AISD's needs. DRE administered the 20-item SEL Skills Survey to students in grades 3 through 11 to determine if elementary school students could accurately self-assess their SEL skills. DRE staff tested the psychometric properties of the revised SEL Skills Survey. Additionally, in collaboration with CASEL, DRE staff identified one to two items for each of the five SEL competencies that best exemplified these skills. Six items were reworded to fit the response scale of the Student Climate Survey (i.e., changing response options from *very easy* to *very difficult* to *a lot of the time* to *sometimes*) and added to that survey. This allowed DRE staff to determine if students' responses to similarly worded items were more reliable with response options anchored on time (i.e., *a lot of the time* to *never*) or response options anchored on degree of difficulty (i.e., *very easy* to *very difficult*).

Which students were included in this analysis?

In 2015–2016, all students in grades 3 through 11 participated in the Student Climate Survey. Additionally, all middle and high school students in grades 6 through11 and elementary school students in grades 3 through 5 at four model SEL schools administering the survey online participated in the SEL Skills Survey.[1] As a result, 4,937 students' responses to the SEL Skills and Student Climate Surveys were matched to their discipline records, attendance records, State of Texas Assessments of Academic Readiness (STAAR) and end of course exams (EOC) exams, and elementary school personal development skills report card ratings (the number of students with responses matched to outcomes were as follows: elementary n = 563, middle n = 1,853, and high n = 2,521).

What was the construct validity of the SEL Skills Survey?

Construct validity refers to whether or not a survey measures what it claims to measure. The construct validity of the SEL Skills Survey was evaluated by conducting a factor analysis; conducting a reliability analysis; correlating students' responses to the SEL Skills Survey with their responses to the Student Climate Survey; and at the elementary school level, correlating teachers' ratings of their personal development skills with students' self-assessments of their SEL skills. Analyses found little support for the construct validity of the SEL Skills Survey (Table 1). Specifically, the factor analysis indicated that the SEL Skills Survey did not measure the five SEL competencies it was designed to measure (i.e., self-awareness, social awareness, self-management, relationship skills, and responsible decision making). Instead, three different factors emerged relating to self-management, intrapersonal skills, and interpersonal skills (see Table 3 in Lamb, 2017). Additionally, results from a reliability analysis found low reliability ratings, particularly

Table 1.
Students' perceptions of their SEL skills were positively related to their ratings of school climate, but were unrelated to most other outcomes.

Level	Construct validity measures			Predictive validity measures			
	Personal development skills	SEL implementation	Student Climate Survey	STAAR: all tests taken	EOC: all tests taken	Attendance	Discipline
ES	✖	✖	🟠	✖	✖	✖	✖
MS	n/a	✖	🟠	✖	✖	✖	⭕
HS	n/a	✖	🟠	✖	✖	✖	✖

Source. **2015–2016 AISD SEL Skills Survey, personal development skills report card ratings, Student Climate Survey, STAAR % passing all tests taken (i.e., reading, math, and science), EOC % passing all tests taken (i.e., Algebra I, Biology I, English I, English II, and US History), attendance, discipline, and SEL school implementation ratings**
⭕significant weak-to-moderate positive relationship; 🟠significant strong positive relationship; ✖ no relationship

[1] Because the revised SEL Skills Survey had not been tested with elementary school students, AISD piloted the SEL Skills Survey at four model elementary schools.

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at the elementary school level. For example, reliability estimates for both the social awareness and responsible decision making subscales were .49 at the 3rd-grade level. In contrast, reliability estimates of SEL-related items on the Student Climate Survey were at or above .60 (an estimate considered reliable in the field of education, Lamb 2014) across all grade levels, with five of the six SEL-related items loading on the same factor across grade levels. Importantly, correlations between students' responses to the SEL Skills Survey and the Student Climate Survey yielded positive results for almost all items across levels. Not a single item on the SEL Skills Survey was unrelated to any Student Climate Survey item. Finally, at the elementary school level, teachers' ratings of their students' personal development skills were unrelated to students' self-assessments of their SEL skills. A similar analysis was conducted with teachers' ratings of their students' SEL skills and students' ratings of school climate. Several positive relationships emerged. For instance, students who were happy with the way their classmates treated them also received favorable ratings for "interacts cooperatively with peers," "respects self and others," "takes responsibility for own actions," and "follows directions in all areas." Also of note, students who believed that they tried hard to do their best work received favorable ratings for "follows directions in all areas" and "responsible for completing and returning homework." Lastly, students who felt that they got along with their classmates received favorable ratings for "respects self and others," "takes responsibility for own actions," and "follows directions in all areas." For more details, please read the full report.

What was the predictive validity of the SEL Skills Survey?

Predictive validity refers to the degree to which performance on a measure relates to expected performance on an outcome. The predictive validity of the SEL Skills Survey was assessed by correlating students' responses with their 2015–2016 Student Climate Survey responses, STAAR/EOC performance, attendance, and discipline data. Regardless of school level, students' perceptions of their SEL skills were highly correlated with their responses to items on the Student Climate Survey, particularly between similarly worded items. Students' responses to the SEL Skills Survey were somewhat correlated with outcomes of interest, with more favorable responses found at the middle and high school levels (no significant relationships were documented at the elementary school level). At the middle school level, students who found it easier to respect their peers' opinions and think through making a decision had few discipline incidents in 2015–2016. Similarly, at the high school level, students who found it easy to say no to a friend who wanted them to break the rules had few discipline incidents in 2015–2016. Analyses were also conducted to determine if relationships varied based on students' demographic information (i.e., ethnicity, gender, level of economic disadvantage). For example, Hispanic middle school students with positive ratings of several SEL Skills had few disciplinary infractions. At the high school level, African American students who could easily identify their emotions and get through something difficult also performed well on their EOC English I. Detailed results are presented in the full report.

A parallel set of analyses was conducted with students' response to the Student Climate Survey and outcomes of interest. Elementary school students who believed few students at their school were bullied passed more STAAR

exams than did students who believed many students at their school were bullied. Similarly, Hispanic and economically disadvantaged elementary school students who believed few students at their school were bullied performed better on STAAR reading and math than did students who believed many students at their school were bullied. Additionally, economically disadvantaged middle school students who believed that adults listened to students' ideas and opinions performed well on STAAR reading, felt safe at school, and had few disciplinary incidents. At the high school level, students who passed the EOC Algebra I also felt their teachers believed they could do well in school, had fun learning in their classes, and believed their teachers expected them to think hard about reading. Additionally, African American students who felt safe at their school performed well on EOC Algebra I and EOC English I, and had few disciplinary infractions. Detailed results are presented in the full report.

Although students' responses on both surveys were related to outcomes, students' perceptions of school climate were more strongly and consistently related to outcomes than were their perceptions of SEL skills.

Conclusions

Results presented in this report help build the case for combining the items from the SEL Skills Survey with the Student Climate Survey. Importantly, all SEL skills correlated with items on the Student Climate Survey, regardless of school level. This suggests that all constructs measured on the SEL Skills Survey are covered in some way by the Student Climate Survey. Based on the reliability analysis of the SEL Skills Survey, it appears that elementary school students responded better to response options related to time than to ease. Therefore, the six items included on the Student Climate Survey in 2015–2016 will remain on AISD's Student Climate Survey as a method for measuring students' SEL skill acquisition in future years. Future reports will include an examination of an SEL skills index, and a closer look at relationships between students' personal development skills report card ratings and outcomes of interest. Additionally, DRE staff and SEL program staff are in the process of developing student-led data summits that will bring students' voices into conversations regarding ways to improve school climate and culture.

References

Lamb, L. M. (2014). *Technical documentation for the AISD Student Climate Survey, Spring 2014* (DRE publication No.13.41RBc). Austin, TX: Austin Independent School District.

Lamb, L. M. (2017). *Social and Emotional Learning technical report: Student level outcomes, 2015–2016* (DRE publication No. 16.16). Austin, TX: Austin Independent School District.

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