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# **CASEL/NoVo Collaborating Districts Initiative:**

## **2014 Cross-District Outcome Evaluation Report**

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## Executive Summary

This report presents findings about the implementation of the Collaborating Districts Initiative (CDI) as of the end of June 2014. The CDI is a complex eight-district demonstration project designed to learn about as well and show how and to what end school districts can make social and emotional learning (SEL) an essential part of every student's education. Three districts entered the initiative in 2011 (Cohort 1) and five more entered in 2012 (Cohort 2). All districts began with a selection visit and a roughly eight-month planning phase before starting their first implementation year.

The American Institutes for Research (AIR) is evaluating this initiative, and this report (along with a related implementation report) is a summative report of our first three years of work evaluating the initiative. The goals of AIR's work were and are to evaluate (1) implementation of activities described in the CDI district theory of action as it relates to the implementation of systemic SEL; (2) district outcomes, including systemwide climate, commitment to SEL, and clarity of roles and responsibilities for SEL; (3) school implementation and school climate; and (4) student outcomes, including students' academic performance, attendance, and suspensions, as well as social and emotional competence. The evaluation design was developed around a theory of action that CASEL developed in 2011–12, and the first three years of work enabled AIR to develop and refine (in collaboration with CASEL) instruments to measure implementation and social and emotional competence and to see whether our designs that were aligned to the theory of action would hold as both districts and CASEL evolved their practice. We found that although our districtwide design works, our attempt to add additional rigor by contrasting outcomes in schools on which the district SEL leadership focused with non-focus schools may have been weakened by the effects of districtwide activities which included board, superintendent, and chief academic officer leadership; integration of and/or alignment SEL into and with other district initiatives; embedding SEL into staff development and other human resource activities, and the natural movement of students and teachers across schools.

*I've just been interviewing and doing the end of year eval for some of our chiefs and some of our principals and to hear them talk about the way in which they've been changing their school culture and the impact that social emotional learning has had directly in the classroom that allows for teachers to teach, you know something good is happening and that the impact is much stronger than I probably would have anticipated....This is core and fundamental to the work that we're doing. The partnership helps to sustain the effort too. I think sometimes you get incredibly lonely trying to do it, but you know that there are other armies of believers out there who are doing and engaged in this work, so no. As long as I'm in the seat we're going to be here for the long haul.*  
—A district superintendent, 2014

AIR administered study measures in collaboration with the districts each spring (the period from January to May each year, as appropriate to the measure) and visited each district late each spring (May to June) to interview the staff about activities and progress. The measures that were the focus of the outcome report are the district rubric and a staff survey that measures school-level implementation of SEL activities; school climate measures, achievement, attendance, discipline, dropout, and graduation, and teacher and student reports of social and emotional competence. After these data were analyzed, we examined our findings in the light of our implementation report, the qualitative interviews we conducted with 91 district and school staff members, as well as our understanding of similar SEL and complex school reform initiatives.

In the implementation report, we reported that findings for the CDI were consistently positive, and were improving over time. In this outcomes report, we found some positive results. School climate, which is the school outcome of interest in the CASEL theory of action, has continued to show gains in the two districts with stable climate measures,<sup>1</sup> and although measured

*I think we're at a point now where we do see SEL as something, and again it's probably still a little more vision than it is the heart of implementation, it's what we do, it's who we are, it's like in our DNA and that's what we think about. This is what we want for all kids, it's based around the five principles of SEL for decision making and being self disciplined and empathetic towards others and understanding how to manage their own emotions. We're seeing the benefits of that. We're seeing the outcomes and results in our different schools that have been implementing. We see some schools that have not and where we can really ramp up and support them in some way and I think just as we continue the evolution of implementation of SEL, when I look at schools that have turned the school around, it's really by using the principles that are part of SEL and I think this is going to give them another way, approach to do it whereas before it was a hit and miss. I think this will give you a better framework for us to work from. I think that comes from common vocabulary. So I think I see it also, which is also another benefit, in when the board even asked me about this particular position and they said what are you going to do or this is what we want, there was true alignment with that.*

—A district superintendent, 2014

improvement in students' social and emotional competence showed a mixed picture overall, four out of six measured districts (Anchorage, Austin, Chicago, and Nashville) showed consistent improvement in skills for students in Grade 3. Most analyses by demographic subgroups showed no changes in SEL skills over time. Achievement improved consistently across subjects and years in three out of four districts measured, and superintendents and chief academic officers reported that the focus on SEL was contributing both to teacher quality and students' ability to demonstrate the academic behaviors demanded by deeper learning and the Common Core State Standards. Findings for attendance were mixed, but discipline outcomes were generally more positive during the CDI implementation period than in the years before the planning phase, and superintendents perceived that SEL was contributing to reductions in

<sup>1</sup> Both Anchorage and Cleveland showed gains in school climate, but we cannot attribute these gains to the CDI specifically.

exclusionary discipline. These findings are not surprising for the second and third year of implementation of a complex districtwide initiative, but underscore the importance of execution at a district, school, and ultimately classroom level.

Classroom and school implementation matter. When we examined how student outcomes related to implementation, we found that for two out of three districts where we could do these analyses, implementation was significantly related to student outcomes. Districtwide capacity building also matters, and capacity depends upon the motivation of all stakeholders, strategic drivers, general capacity to implement and improvement, and SEL-specific capacities. Our quantitative findings are limited by less-than ideal response rates, the nature of self-report instruments, and gaps in the data available to us. Our qualitative interviews suggest that districts sustained, deepened and broadened their commitment to SEL over the course of their participation in the CDI. Participation in the CDI as well as district-initiated activities have enhanced the readiness of the districts and their schools to implement and sustain SEL. More staff and stakeholders know about it and want it, and SEL has been embedded as a pillar in strategic plans. Further, SEL is increasingly being aligned with other districtwide activities with which it was under-aligned during the first years of the CDI. These activities include professional development, human resources, implementation of the Common Core State Standards, college and career readiness programs, and attempts to elevate achievement of particular groups of students, approaches to restorative practice, PBIS, RTI, family engagement, and teacher and administrator social and emotional learning.

## Introduction

Social and emotional learning (SEL) is the process through which children learn the skills to handle themselves, their relationships, and their work effectively and ethically. These skills include recognizing and managing emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively. They are the skills that allow children to calm themselves when angry, make friends, resolve conflicts respectfully, and make ethical and safe choices (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2012).

School districts are increasingly recognizing the value of addressing SEL as an essential part of education for all students. School-based SEL programs (1) enhance students' social and emotional skills and classroom behavior; (2) improve attachment and attitudes toward school; (3) decrease rates of violence and aggression, disciplinary referrals, and substance use; and (4) improve academic performance (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

To advance knowledge of how school districts can make SEL an integral part of every students' education, CASEL and the NoVo Foundation launched the Collaborating Districts Initiative (CDI). The CDI is aimed at building capacity in eight large school districts to implement SEL in all schools, for all students. At the same time, CASEL hopes to leverage lessons learned in these collaborating districts to strengthen the research base and to use the CDI to develop and refine practical tools that will promote the effective implementation and assessment of SEL in other districts.

The initiative formally began in November 2010 with a cohort of three districts; five additional districts were selected to join the CDI in December 2011. Each district received an initial grant of \$125,000 from NoVo for a six-month planning phase. Planning phase activities included building an SEL team and planning internally and in collaboration with CASEL; conducting a needs and resource assessment; traveling to observe SEL in other districts; attending conferences on SEL practices and research; and purchasing SEL-related materials, curricula, and assessment tools. The outcome of the planning phase was a district SEL implementation plan and NoVo implementation grants of up to \$250,000 per year. Cohort 1 districts began their CDI planning in February 2011 and their implementation in the 2011–12 school year; Cohort 2 districts began planning in February 2012 and began implementation in the 2012–13 school year. As long as each district makes sufficient progress, implementation support will continue for three years.

Through the CDI, CASEL and NoVo offer the following to participating districts:

- **District systems development consultation.** Each collaborating district works closely with a pair of consultants: a senior systems development advisor with experience facilitating systemic change in large school districts and an SEL content specialist. These consultant teams are well versed in current research and policy relevant to district reform. The consultants also function as coaches to those directly responsible for the implementation of SEL in each district. Each consultant provides about 45 days of consultation to each district per year, and most have face-to-face visits monthly.
- **Staff development consultation.** Consistent with each district's plan, CASEL provides workshops (e.g., orientation to SEL theory, research, and practice) and assistance in

developing coherent, sustainable staff development plans for school leaders and personnel. All districts received consultation on staff development consistent with their plans.

- **Communities of practice.** In October 2011, November 2012, and November 2013, CASEL convened all CDI member districts at a host district site to (1) establish connections and relationships, (2) share learning and problem solving, and (3) provide a support network for district staff. The meetings included visits to schools in host districts to observe SEL practices as well as presentations by district staff on the strengths and challenges of their CDI work. Out of these meetings, informal learning communities between districts (Oakland and Washoe, Austin and Sacramento, Nashville and Chicago) have emerged.
- **Connections to external partners.** NoVo has provided support to developers of social and emotional learning programs to build capacity to support SEL program implementation in CDI and other districts. CASEL has systematically reviewed evidence-based SEL programs and shares information about findings with districts and encourages connections between the districts and SEL providers.
- **Planning and implementation tools.** CASEL supports SEL implementation through the development of conceptual frameworks, training materials, and planning and monitoring templates. Information from CASEL consultant logs indicates that the primary tools in use by the districts to date have been the district rubric; the district strengths inventory; and CASEL research articles, briefs, and videos.
- **Opportunity for grant funding.** NoVo committed to providing each collaborating district with an annual grant of \$250,000 contingent on the district continuing to make progress toward systemic implementation of high-quality SEL. Beyond the first three years, NoVo will provide up to an additional three years of funding at a level commensurate with progress and need. CASEL and consultants also support other fundraising efforts to support SEL in districts.

## Structure of the CDI Intervention

The CDI began with an application and selection process that involved a multiday site visit led by CASEL (site visit teams included an evaluator from AIR, who served as a participant observer). To prepare for this visit, districts reviewed and compiled information about their work related to SEL, and they were asked to begin to articulate their vision for how a systemic focus on SEL would help their district. AIR's interviews have indicated that the process of change started as districts prepared for the site visit and continued as they responded to it. After the visits, CASEL staff prepared reports for each district identifying initial strengths and challenges; these reports were the basis for the districts' grant applications to the NoVo Foundation, which were developed with support from CASEL consultants.

The funded period of the CDI is structured as two phases: a planning phase and an implementation phase. The goal during the *planning phase* was for districts to develop an ambitious yet feasible plan for implementing SEL for three years. Specific activities during the planning phase generally include establishing leadership structures for SEL activities (and hiring as necessary), identifying points of intersection and integrating SEL with other district initiatives,

and developing a professional development plan. During the *implementation phase*, activities focus on training, developing SEL standards, implementing SEL programming, monitoring progress, and communicating about activities and results. In 2014, NoVo announced that it would continue funding each district’s implementation work for an additional three years. Key dates for the districts’ progress in the CDI are shown in Table 1.

**Table 1. Timeline for CDI Implementation for Cohorts 1 and 2**

| District        | Dates of Initial CASEL Visit | Planning Phase Proposal Submitted | Planning Phase Report Submitted | Implementation Phase Year 1 Proposal Submitted | Implementation Phase Begins | Implementation Phase Year 1 Report | Implementation Phase Ends |
|-----------------|------------------------------|-----------------------------------|---------------------------------|--|-----------------------------|------------------------------------|---------------------------|
| <b>Cohort 1</b> |                              |                                   |                                 |  |                             |                                    |                           |
| Anchorage       | November 28–30, 2010         | February 1, 2011                  | August 1, 2011                  | August 15, 2011                                | November 2011               | October 1, 2012                    | October 2017              |
| Austin          | November 10–12, 2010         |                                   |                                 |  |                             |                                    |                           |
| Cleveland       | November 21–23, 2010         |                                   |                                 |  |                             |                                    |                           |
| <b>Cohort 2</b> |                              |                                   |                                 |  |                             |                                    |                           |
| Chicago         | October 17–19, 2011          | February 3, 2012                  | August 15, 2012                 | September 17, 2012                             | November 2012               | Anticipated October 2013           | October 2018              |
| Nashville       | October 23–25, 2011          |                                   |                                 |  |                             |                                    |                           |
| Oakland         | October 3–5, 2011            |                                   |                                 |  |                             |                                    |                           |
| Sacramento      | November 14–16, 2011         |                                   |                                 |  |                             |                                    |                           |
| Washoe County   | November 8–10, 2011          |                                   |                                 |  |                             |                                    |                           |

As CDI grantees, the districts receive technical assistance from CASEL and in turn commit to implementing districtwide systemic SEL as specified in CASEL’s district-level theory of action, which is included in this report as Appendix A. Schools within CDI districts may in turn engage in SEL integration, programming, or both. The theory of action for schoolwide SEL implementation is presented in Appendix B.

## AIR’s Evaluation of the CDI

AIR is evaluating the CDI initiative using a mixed methods approach that employs both quantitative (analysis of data from surveys and educational records) and qualitative (interviews and document review) methods. The goals of this evaluation are to (1) determine whether there are proof points regarding whether and how school districts can build systemic support for SEL; (2) describe the factors and processes associated with the adoption, implementation, and sustainability of SEL policies, programming, and practices in the eight districts; and (3) develop and refine actionable tools (such as surveys and rubrics) and share data that can be used for continuous improvement by the districts, CASEL, NoVo, and, ultimately, other districts.

Two lines of evidence potentially produce proof points. The first focuses on feasibility: With initial support from NoVo and with CASEL’s technical assistance, can districts successfully

implement policies and practices that make SEL an essential part of education? The second involves impact: Does participation in the CDI result in better outcomes for students? Outcomes of interest include students' social and emotional competence, attendance, achievement, suspensions, dropout, and graduation. Based on experience evaluating and doing research on complex systemic initiatives (Aladjem et al., 2006; Borman, Hewes, Overman, & Brown, 2003; Osher, Kelly, Tolani-Brown, Shors, & Chen, 2009), the researchers hypothesized that while it would take six or more years to fully establish proof points, the first three years of implementation would provide rich data on these questions.

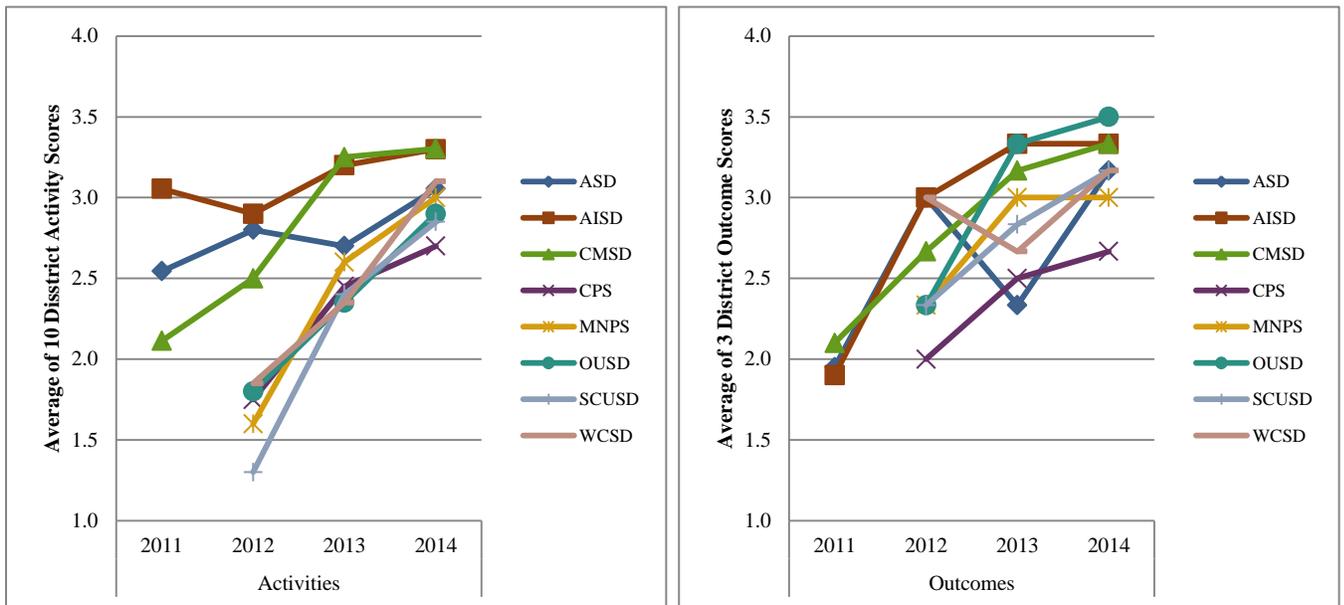
## **Evaluation Questions**

In a separate report, the AIR evaluation team addressed questions related to implementation: What strategies did districts use to introduce a focus on SEL, and how was this focus reflected in schools? The prior report's findings focused on district activities and outcomes,<sup>2</sup> with information based on a series of structured and semistructured interviews and document review. Implementation findings for districts were strongly positive. Figure 1 shows the progress of the CDI districts as measured by a rubric based on the CASEL logic model co-developed by CASEL and AIR. The dominant finding is that districts are progressing both in their enactment and deepening of CDI activities and in their realization of outcomes, and are continuing to achieve higher levels of SEL overall implementation each year; and (2) that this progress includes intentionally integrating and/or aligning SEL into or with other district activities such as academic instruction, student support, discipline, human resources, family engagement, and cultural competence.

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<sup>2</sup> The district rubric was developed to measure benchmarks toward more fully operationalizing the CDI theory of action for districts. The 10 activities measured are resources and needs, vision, central office expertise, professional development programs, alignment of resources, communications, SEL standards for PK–12, evidence-based programs, integration of SEL with other initiatives, and continuous improvement. Three district outcomes measured were positive climate, stakeholder commitment, and roles and responsibilities for SEL.

**Figure 1. Averaged Rubric Scores Across 10 Activity Items and Three Outcome Items for Each District, 2011–14**



The ultimate goal of the *outcome* evaluation is to determine whether the studied sites individually or collectively qualify as proof points that show incorporation of a strong focus on SEL can improve outcomes for schools and students in large, urban districts. The specific school outcome of interest, according to the CASEL school-level theory of action developed in 2011–12, is positive climate, which was also identified as being of major importance to district leaders across all districts, is also of increasing interest nationally. Evaluation questions addressed in this report are as follows:

- At the school level, to what extent and in what respects is school climate associated with the school-level implementation of the district SEL reform initiatives?
- Student-level questions:
  - Does students’ social and emotional competence change over time? Were changes, if any, related to the degree to which schools implemented SEL activities?
  - Does students’ academic functioning (achievement, attendance, suspensions) improve after the CDI was implemented compared with the period before the initiative began?
  - How do outcomes differ for demographic subgroups of students (gender and racial groups)?

### Evaluation Designs for School and Student Outcomes

AIR has developed the most rigorous possible approach<sup>3</sup> to estimate effects from the CDI for schools and students. We use an *interrupted time series* (ITS) design to examine change in the school and student outcomes specified in our evaluation questions, with the point of interruption

<sup>3</sup> Random assignment of districts or schools was not a feasible approach for this demonstration project because the interventions are not yet well specified, depend on willing principals and school leaders, and are dynamic over time.

as the onset of the NoVo grant implementation (Bloom, 1999; Bloom, 2001; Shadish, Cook, & Campbell, 2002). If we use achievement as an example, an ITS design estimates intervention effects on achievement by examining the trajectory in standardized test scores for a number of annual student cohorts after an intervention is launched and by comparing them with the trend in the scores of cohorts from several years before the reform was initiated (the baseline period). The analytic model projects what student performance *would have been* in the absence of the intervention during a multiyear follow-up period after the program was introduced. The pattern of school performance during the multiyear baseline period is projected into the postintervention period. The difference between the actual and projected school performances provides an estimate of the effect of the intervention. Even with the most rigorous available design in this situation, the ITS design is subject to threats of history, attrition, and changes in instrumentation.

Data that can be included in an ITS design come from measures that have been in place for at least three time points before the initiative began (e.g., student achievement, attendance, behavior, school climate) and stay in place throughout the initiative. In this study, the ideal baseline for Cohort 1 districts would be 2007–08, 2008–09, and 2009–10 because the planning phase began in the 2010–11 school year and implementation began in 2011–12.

When we developed our initial design it appeared that all but one district would be rolling the initiative out by focusing on clusters of schools. In our initial design we tried to take advantage of districts' SEL rollout plans to identify contrasts across schools (that is, CDI schools and comparison schools) within districts. The schools that each district identified as their CDI schools would be “focus” schools, and presumably would be engaged in CDI-specific professional learning opportunities and may have coaching supports or SEL materials made available to them differentially. We planned to contrast these focus schools with other schools to which the districts had not yet rolled out the school-based activities in their implementation plans, and this contrast would shed light on CDI-specific effects. It was also a component of our original design that we would supplement these analyses with models that examine the relationship between implementation measures and outcomes. The logic of this approach arose from the experimental research tradition, in which units that are “assigned” to a “condition” are always analyzed as belonging to that condition, regardless of actual implementation. For this reason, these kinds of analyses are called “intent-to-treat,” since they reflect intended intervention status. The secondary analyses comparing implementation and outcomes are called “treatment on the treated” analyses because they examine our best estimate of “treatment as delivered” instead of just “as assigned.”

As the CDI has unfolded, district, school, and staff activities progressively diluted this planned contrast. The reasons include: (1) a greater focus on integrating SEL implementation with districtwide reform efforts and school improvement efforts (e.g., Common Core State Standards and professional development activities); (2) district leaders visibly and consistently communicating the importance of SEL in their messaging and behavior (e.g., districts defining SEL as a strategic pillar for all learning); (4) districts expanding the purview of the SEL office (e.g., to include restorative practices and diversity initiatives); (5) districts creating universal interventions (e.g., SEL standards or an SEL website); (6) intra-district staff and student mobility; and (6) local school initiatives. Consequently, the school contrasts are unlikely to be a clean test of the CDI. Therefore, although we present the findings for our school contrast analyses in this report, we want to point out the limits of this approach, which was sensible two

years ago, but weakened due to effects of the CDI and related activities which, according to superintendents, has captured the attention and interests of more teachers, more administrators, more parents, and more community members. Consequently during the next year we will refine our design to address the broadening penetration of SEL activities.

## Methods

In this section, we briefly describe the districts that are part of the CDI. We then describe our measures and how they relate to the theory of action for the initiative we are evaluating. We describe our data collection procedures (including response rates for the various surveys that we administered) as well as the de-identified data from student educational records that we gathered from the districts. Our analytic strategy—including its strengths and limitations—are presented in detail, including specifications for our statistical models, in Appendix C.

### Sample: Description of the Eight CDI Districts

The CDI was launched with three school districts that form Cohort 1: Anchorage, Alaska—Anchorage School District (ASD); Austin, Texas—Austin Independent School District (AISD); and Cleveland, Ohio—Cleveland Metropolitan School District (CMSD). These districts were recruited and selected based on their relationships with leaders in the field of SEL and because they already had some activities in place related to developing students' social and emotional capacities. These three districts can be distinguished from Cohort 2 districts in that both the initiative and the evaluation were still in relatively early developmental stages when their work began. Procedures and expectations were not yet well codified.

In late 2011, CASEL began work to establish the CDI Cohort 2 districts. Districts that either responded to an interest survey or were nominated by knowledgeable sources (e.g., CASEL staff or consultants or SEL program providers) were ranked according to how well they demonstrated commitment to high-quality, systemwide implementation of evidence-based SEL approaches. Five districts were selected for site visits in fall 2011: Chicago, Illinois—Chicago Public Schools (CPS); Nashville, Tennessee—Metropolitan Nashville Public Schools (MNPS); Oakland, California—Oakland Unified School District (OUSD); Sacramento, California—Sacramento City Unified School District (SCUSD); and Washoe County, Nevada (Reno/Lake Tahoe area)—Washoe County School District (WCSD). Site visits were completed in November 2011, and all five districts were awarded planning grants in February 2012. These five districts (Cohort 2) submitted implementation proposals to NoVo in September 2012; all were awarded implementation grants.

Although we include results for Cleveland alongside those from other districts in this report, we acknowledge that AIR's relationship with this district is very different from the one we have with the other districts. The lead principal investigator for the AIR evaluation, David Osher, Ph.D., has had a consulting relationship with Cleveland since early 2008, when he led an audit of the district's safety and student support services (Humanware). Because of this prior and continuing relationship, Dr. Osher has a dual role in Cleveland that must be acknowledged in our evaluation work. Since Dr. Osher's involvement in Cleveland deepens his perspective of this work, we treat Cleveland as a research and development site and are conscientious about acknowledging the AIR staff's complex role there. In this report, for readers' convenience, we share results and data from Cleveland together with that from other districts.

The eight districts composing the CDI are all moderate-to-large urban districts (although Washoe County includes some rural areas as well as the city of Reno). Four districts have between 37,000 and 49,000 students (Cleveland, Sacramento, Oakland, and Anchorage, in order from smaller to

larger). The next three districts are larger: Washoe County has 63,000 students, Nashville has 81,000, and Austin has 86,000. Chicago has the most students, with roughly 395,000, but is concentrating most of its school-based CDI work in 30 K–8 and 26 high schools.

A statistical summary of the eight CDI districts for the 2013–14 school year is presented in Appendix D; additional detail about district context, priorities, and SEL implementation approaches is presented in Appendix E. The districts present notable demographic differences. For example, Austin and Cleveland are the only CDI districts to have a majority of students from a single ethnic group (Latino and African-American, respectively). Cleveland has the largest proportion of students with disabilities; Cleveland and Oakland both provide free meals to 100 percent of their students and therefore do not document eligibility for the free or reduced-price lunch program each year. Oakland, Austin, and Sacramento have identified at least a fifth of their students as English language learners. Oakland and Cleveland both have graduation rates below 65 percent; Austin, Sacramento, and Nashville have rates at or above 85 percent (Nashville’s rate is 86.3 percent).

## **Evaluation Measures**

The measures and the data collection plan are shown in Table 2; greater detail about all of the measures, including the variables yielded by each, is presented in Appendix F. The measures themselves are presented in the companion Measures Appendix. The major elements in the CDI district-level theory of action are shown in the left column of Table 2; the right column lists the measures that align with each component of the theory of action. Although the CDI primarily operates at the district level, the theory of action specifies that districts will provide training and support at the school level for SEL integration and implementation; these school activities are hypothesized to influence student outcomes. Although the CASEL theory of action, as it has developed and been elaborated, includes attention to classroom-level implementation, the evaluation as designed cannot at this time represent the classroom level substantially given the extremely large number of schools involved in the study.

**Table 2. Measures at Each Level of the CASEL Theory of Action**

| Levels of the CDI (Specified in the Theory of Action) | Measures Aligned to Each Level  |
|---|---|
| CASEL CDI (inputs)                                    | <ul style="list-style-type: none"> <li>▪ CASEL reports and consultant logs</li> <li>▪ Notes from quarterly consultant meetings</li> <li>▪ Interviews with CASEL consultants and staff</li> </ul>  |
| Districts   | <ul style="list-style-type: none"> <li>▪ Stakeholder interviews</li> <li>▪ Document review</li> <li>▪ Rubric and benchmarks (scores assigned based on analysis of interviews and documents)</li> <li>▪ Staff SEL survey: items measuring district staff attitudes</li> </ul>  |
| Schools   | <ul style="list-style-type: none"> <li>▪ Staff SEL survey: measures of school implementation and positive climate</li> <li>▪ School climate surveys (from extant district data)</li> </ul>  |
| Students  | <ul style="list-style-type: none"> <li>▪ Achievement, attendance, discipline, dropout, graduation (from extant district data)</li> <li>▪ Social and emotional competence:               <ul style="list-style-type: none"> <li>• Teacher report for Grade 3</li> <li>• Student self-report for Grades 7 and 10</li> </ul> </li> </ul> |

**Measuring CDI: School Implementation and School and Student Outcomes**

AIR collects data from multiple sources in conducting its evaluation of CDI. For this outcomes report, we are focusing on our measures of school implementation, school outcome (school climate) and student outcomes.

**Staff SEL Survey**

To measure implementation of SEL activities at the school level, we administered a survey to those school-based and central office staff whose professional roles related to instruction or student support. The content of the survey was revised in 2012–13 to map more closely onto the school theory of action released by CASEL in 2012 (Appendix B). The items on the survey were designed to cover the range of potential activity areas in which schools may work to develop SEL, as well as relevant district-, classroom-, and teacher-level factors that may influence schoolwide SEL implementation. In addition, the theory of action specified one school-level outcome area, school climate and culture, which also was included on the instrument.

The 10 constructs, their relation to the CDI School Guide domain, and sample items from each, are shown in Table 3. Appendix G contains details of how low, medium, and high cut points were established for this instrument. To produce a coherent, single score for implementation analysis, we averaged scores from the six constructs that map onto School Guide scales. In that way, the overall implementation score reflected how well the elements of the school theory of action were evidenced in their building.

**Table 3. Staff SEL Survey Constructs and Sample Items**

| School Guide Domain     | Staff SEL Survey Construct   | Sample Items  |
|-------------------------|--|---|
| Shared vision           | Change management (10 items)—combines vision, needs, and resources   | <ul style="list-style-type: none"> <li>▪ My school has developed a vision for academic, social, and emotional learning.</li> <li>▪ My school is looking carefully at what practices, programs, and policies we have that promote SEL.</li> </ul>                |
| Resources and needs     |  |   |
| Professional learning   | Professional development (6 items)   | <ul style="list-style-type: none"> <li>▪ I have received PD on how to integrate social and emotional skill instruction with academic instruction.</li> <li>▪ I have received feedback or guidance on my use of these practices that I learned in PD.</li> </ul> |
|                         | Teacher practices (9 items)—teacher behaviors related to SEL but not specific to evidence-based programming  | <ul style="list-style-type: none"> <li>▪ To what extent have you made changes to your practices as a result of participation in professional learning opportunities?</li> <li>▪ To what extent do you use project-based learning in your classroom?</li> </ul>  |
| Evidence-based programs | Classroom-based practices (5 items)—related to evidence-based programming; only asked of teachers who report that there is an SEL program in use at their school | <ul style="list-style-type: none"> <li>▪ I have enough time to implement the SEL approach at my school.</li> <li>▪ I have received coaching support to implement the SEL approach at my school.</li> </ul>  |
| Integration             | Schoolwide integration (5 items)   | <ul style="list-style-type: none"> <li>▪ There are schoolwide strategies that reinforce students’ social and emotional skills outside the classroom.</li> <li>▪ This district has SEL standards for students.</li> </ul>  |
| Continuous improvement  | Continuous improvement (4 items)   | <ul style="list-style-type: none"> <li>▪ Data are collected regularly on school climate.</li> <li>▪ My school has made data-based changes to practice on students’ social and emotional skills.</li> </ul>  |

| School Guide Domain                                      | Staff SEL Survey Construct  | Sample Items  |
|--|---|---|
| Related constructs, not included in implementation score | Teacher attitudes (7 items)—awareness of and commitment to the theory of action             | <ul style="list-style-type: none"> <li>▪ How important is it to you to support SEL in a time of budgetary cutbacks?</li> <li>▪ I feel confident in my ability to implement the SEL program that has been adopted at my grade level.</li> </ul>  |
|  | Staff climate and culture (3 items)—relates to the school-level outcome of positive climate | <ul style="list-style-type: none"> <li>▪ The adults in this school interact with one another in a way that models social and emotional competence.</li> <li>▪ The adults in this school interact with students in a way that supports students' social and emotional skills.</li> <li>▪ The culture at my school supports SEL.</li> </ul> |
|  | Leadership (4 items)—reflects school leadership for SEL                                     | <ul style="list-style-type: none"> <li>▪ My principal models social and emotional competence in the way that he or she deals with students and faculty on an everyday basis.</li> <li>▪ The adults in this school are expected to actively promote students' social and emotional development.</li> </ul>                                 |
|  | District support for SEL (4 items)—measures district factors related to school SEL          | <ul style="list-style-type: none"> <li>▪ My school district often emphasizes SEL in communications I receive.</li> <li>▪ The culture in the district supports the development of students' social and emotional skills.</li> </ul>  |

### Measuring CDI Outcomes

For the CDI evaluation, we developed measures to assess the proximal hypothesized outcome of social and emotional programming—student social and emotional competence, which is conceptualized by CASEL as having five dimensions: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. There are two important goals of the measurement development process: (1) to produce valid and reliable measures, and (2) to produce measures that districts could continue using themselves after the grant period ends.

To minimize the data collection burden for districts, the evaluation team identified three target grades (3, 7, and 10) in which SEL would be measured. We chose these grades largely because there would be one at each level: elementary school, middle school, and high school. We chose Grade 3 because it would have achievement scores, and Grade 10 because it was after the ninth-grade transition year but before large numbers of students drop out. Grade 7 was intermediate between the two. For Grade 3, all teachers with Grade 3 students were asked to provide ratings of the core competences for seven systematically selected students in the classroom. For Grades 7 and 10, all enrolled students were asked to complete a self-report instrument.

**Teacher Ratings of Third Graders' Social and Emotional Skills.** Working from a teacher-rating instrument developed by CASEL's SEL Assessment Work Group, which was used in a

study of SEL in Cleveland (Faria, Kendziora, Brown, & Osher, 2013), AIR and CASEL adapted a 20-item rating scale for teachers to rate their students’ social and emotional skills.

Each of the five SEL competencies was measured by four items:

- Self-awareness (e.g., Understands his or her own strengths or weaknesses)
- Self-management (e.g., Accepts when things do not go his or her way)
- Social awareness (e.g., Responds with empathy to others who are upset)
- Relationship skills (e.g., Works well with others)
- Responsible decision making (e.g., Takes responsibility for his or her own actions)

**Students’ Self-Report of Social and Emotional Competence.** In collaboration with CASEL, AIR developed student self-report measures of social and emotional skills based on items from prior surveys. The same five SEL skills covered on the teacher rating instrument also were measured using self-report:

- Self-awareness (six items, e.g., I understand my moods and feelings)
- Self-management (seven items, e.g., I try hard to do well in school)
- Social awareness (six items, e.g., I listen carefully to what other students say to me)
- Relationship skills (six items, e.g., I am able to work well with others)
- Responsible decision making (five items, e.g., I take responsibility for my mistakes)

Psychometric properties of these scales were adequate for analysis.

## Survey Administration

In this section, we describe the approach to the administration of each survey.

### Staff SEL Survey

A response rate summary for the 2013–14 school year is presented in Table 4. AIR administered the full staff survey to all schools in Anchorage, Cleveland, Chicago and Nashville; Austin and Washoe County administered a subset of items to all schools, and Sacramento administered a staff survey independently to its focus schools. Data for Oakland were not available from WestEd at the time of this report. In 2012–13, the average response rate for the staff survey across districts was 51.8 percent; in 2013–14 it was 51.9 percent. This year, we also report the percentage of respondents who completed at least one item about SEL; that average response rate across districts was 49.4 percent.

**Table 4. 2014 Response Rates for the Staff Survey of SEL Implementation**

| District        | # Items  | <i>n</i> | ≥ 1 item | %   | ≥ 1 SEL item | %   |
|-----------------|----------|----------|----------|-----|--------------|-----|
| Anchorage       | AIR full | 3,647    | 1,574    | 43% | 1,533        | 42% |
| Austin—teachers | District | 3,626    | 1,385    | 38% | N/A          |     |

| District                         | # Items                   | <i>n</i>                         | ≥ 1 item      | %          | ≥ 1 SEL item | %   |
|----------------------------------|---------------------------|----------------------------------|---------------|------------|--------------|-----|
| Austin—administrators            | survey, 20 items          | 118                              | 61            | 52%        | N/A          |     |
| Austin—nonteaching professionals |                           | 576                              | 297           | 52%        | N/A          |     |
| Cleveland                        | AIR full                  | 3,269                            | 2,011         | 62%        | 1,749        | 54% |
| Chicago                          | AIR full                  | 1,740                            | 895           | 51%        | 883          | 51% |
| Nashville                        | AIR full                  | 6,257                            | 3,267         | 52%        | 3,208        | 51% |
| Oakland                          |                           | N/A                              |               |            |              |     |
| Sacramento                       | 57                        | 20 SEL schools; <i>N</i> unknown | 154           | N/A        | N/A          |     |
| Washoe County                    | District survey, 18 items | 5,959                            | 3,677         | 62%        | 3,543        | 59% |
| <b>Overall</b>                   |                           | <b>25,192</b>                    | <b>13,167</b> | <b>52%</b> |              |     |

*Note.* The denominators for all districts were the numbers of personnel identified by each district as having a role related to instruction or student support. Austin staff were sampled by role to complete 16 SEL items as part of the district’s Employee Coordinated Survey.

### Teacher Ratings of Students’ Social and Emotional Competence

For the CDI evaluation, we developed measures to assess the most proximal hypothesized outcome of social and emotional programming—student social and emotional competence, which CASEL conceptualizes as having five dimensions: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Two important goals of the measurement development process were to produce valid and reliable measures and to produce measures that districts could continue using themselves after the grant period ends.

To minimize the data collection burden for districts, the evaluation team identified three target grades (3, 7, and 10) in which SEL would be measured. For Grade 3, all teachers with Grade 3 students were asked to provide ratings of the core competences for seven systematically selected students in the classroom. For Grades 7 and 10, all enrolled students were asked to complete a self-report instrument.

Between January and May 2014, third-grade teachers in six districts (all but Anchorage and Sacramento) were asked to complete ratings of social and emotional competence for seven systematically selected students in their classrooms.<sup>4</sup> An administration summary for the teacher ratings, including the numbers of respondents for each district and response rates, is presented in Table 5. In Anchorage, the student version of the School Climate and Connectedness Survey

<sup>4</sup> Teachers whose birthdays were in the first half of the calendar year were asked to rate the first seven students on the alphabetical classroom roster; those with second-half birthdays were asked to rate the last seven students. In Washoe County, the year was divided into thirds, and teachers were asked to rate students 1–7, 8–14, or 15–21 on their rosters.

contains a 16-item SEL scale that maps onto their SEL standards; students in Grades 3 and 4 complete this instrument, so we did not ask teachers in Anchorage to complete ratings.

**Table 5. 2014 Response Rates for Teacher Ratings of Students' Social and Emotional Competence**

| District              | <i>n</i>  | ≥ 1 item    | %          | ≥ 1 SEL item | %          |
|-----------------------|---|-------------|------------|--------------|------------|
| Anchorage             | N/A—we use self-report data at Grade 3 collected by district since 2008 |             |            |              |            |
| Austin                | 389   | 248         | 64%        | 227          | 58%        |
| Cleveland             | 269   | 174         | 65%        | 156          | 58%        |
| Chicago               | 49  | 26          | 53%        | 26           | 53%        |
| Nashville             | 384   | 274         | 71%        | 252          | 66%        |
| Oakland               | 165   | 111         | 67%        | 100          | 61%        |
| Sacramento            | N/A—not administered  |             |            |              |            |
| Washoe County Grade 3 | 217   | 138         | 64%        | 124          | 57%        |
| Washoe County Grade 5 | 177   | 114         | 64%        | 99           | 56%        |
| <b>Overall</b>        | <b>1,650</b>  | <b>1085</b> | <b>66%</b> | <b>984</b>   | <b>60%</b> |

### Student Self-Report of Social and Emotional Competence

For this evaluation, we invited middle and high school age students to provide information about their own social and emotional skills. In two districts (Austin and Chicago), students in Grades 7 and 10 were invited to complete a 30-item online survey at school. In Washoe County, a slightly altered<sup>5</sup> version of these 30 items was administered as part of the district’s Student Climate Survey. In Cleveland, a shorter set of these items was administered as part of the district’s Conditions for Learning Survey. Finally, Anchorage has a 15-item SEL scale as part of the Grades 5–12 School Climate and Connectedness Survey that has been administered districtwide since 2006; AIR did not administer the CDI measure there, preferring to leverage the district’s own data to identify longitudinal trends. An administration summary (numbers of respondents by district and response rates) is presented in Table 6. Student data were either not currently available or not appropriate for longitudinal analysis for Oakland, Nashville, or Sacramento. When possible, we will include analyses of these data in later reports.<sup>6</sup>

<sup>5</sup> At the request of the district’s lawyers, all references to “anger” were removed from the WCSD student survey.

<sup>6</sup> In Oakland, district staff developed and administered their own measure of social and emotional competence; at the time of this report, AIR had not received data that could be used to identify the social and emotional competence items due to missing identifiers in the files. In Nashville, student items were included in the Tennessee Student Climate Survey; however, the state closed the survey for all participating districts as a result of an issue related to family consent. As a result, Nashville was not able to collect any usable student data for the 2013–14 school year. Finally, AIR received Grade 5 climate data from Sacramento, from which AIR identified a single SEL construct; however, the survey items were administered only in 2013–14, so these data cannot be compared to other years and therefore cannot be used for longitudinal analyses.

**Table 6. 2014 Response Rates for Student Self-Reports of Social and Emotional Competence**

| District  | <i>n</i>  | ≥ 1 item      | %          | ≥ 1 SEL item  | %          |
|---|---|---------------|------------|---------------|------------|
| Anchorage* Grades 3–4                           | 7,267   | 5,162         | 71%        | 4,913         | 68%        |
| Anchorage* Grades 5–8                           | 14,310  | 7,821         | 55%        | 7,430         | 52%        |
| Anchorage* Grades 9–12                          | 13,667  | 7,169         | 52%        | 6,956         | 51%        |
| Austin Grade 7                                  | 5,495   | 4,189         | 76%        | 3,180         | 58%        |
| Austin Grade 10                                 | 5,058   | 3,208         | 63%        | 2,689         | 53%        |
| Cleveland Grade 7                               | 2,645   | 2,214         | 84%        | 2,166         | 82%        |
| Cleveland Grade 10                              | 3,105   | 1,830         | 59%        | 1,722         | 55%        |
| Chicago Grade 7                                 | 1,286   | 989           | 77%        | 598           | 47%        |
| Chicago Grade 10                                | 3,512   | 2,384         | 68%        | 1,753         | 50%        |
| Nashville                                       | No data in 2014 because of consent issue for school climate survey on which these items were included |               |            |               |            |
| Oakland   | No data received for 2014   |               |            |               |            |
| Sacramento                                      | New survey given at Grade 5; will be analyzed in 2015   |               |            |               |            |
| Washoe County Grade 7                           | 4,772   | 950           | 20%        | 950           | 20%        |
| Washoe County Grade 9                           | 4,800   | 869           | 18%        | 869           | 18%        |
| <b>Overall (Anchorage only)</b>                 | <b>35,244</b>   | <b>20,152</b> | <b>57%</b> | <b>19,299</b> | <b>55%</b> |
| <b>Overall (All districts except Anchorage)</b> | <b>21,101</b>   | <b>14,814</b> | <b>70%</b> | <b>12,108</b> | <b>57%</b> |

\*Anchorage administers the student-report version of the School Climate and Connectedness Survey, which includes an SEL scale, to all students in Grades 3–12. Because the numbers are so large for Anchorage, we report response rates separately with and without Anchorage.

## Student Outcomes From Extant Student Record Data

The departments in charge of student educational records (e.g., Research, Assessment, and Evaluation; Information Technology) in each district provided educational record data pertaining to three student outcomes: academic achievement, attendance, and disciplinary referrals.

Three years of prior-to-CDI data were analyzed to establish baseline trends for each district. In this report, our findings cover three years of implementation for Cohort 1 districts (2011–12, 2012–13, and 2013–14) and two years for Cohort 2 (2012–13 and 2013–14).

In Table 7, we list the achievement tests for which we received data from the districts in 2014. The tests varied based on the state’s testing requirements (e.g., the California Standards Test was included in Sacramento and Oakland and the Alaska Standards Based Assessment was included in Anchorage). We report the following categories: elementary English language arts (ELA), elementary mathematics, middle school ELA, middle school mathematics, high school English proficiency examinations, and high school mathematics proficiency examinations.

**Table 7. Academic Achievement Tests Used for Elementary, Middle, and High School Students in Each District**

| District      | Achievement Test for Students in Grades 3–8   | High School Proficiency Test                          |
|---------------|---|---|
| Anchorage     | Alaska Standards Based Assessment (SBA)   | Alaska High School Graduation Qualifying Exam (HSGQE) |
| Austin        | State of Texas Assessments of Academic Readiness (STAAR), starting in 2012; Texas Assessment of Knowledge and Skills (TAKS) | End of Course Exams                                   |
| Cleveland     | Ohio Achievement Assessment (OAA)   | Ohio Graduation Test (OGT)                            |
| Chicago       | Illinois Standards Achievement Test (ISAT)  | Prairie State Achievement Examination                 |
| Nashville     | Tennessee Comprehensive Assessment Program (TCAP)   | End of Course Exams                                   |
| Oakland       | California Standardized Testing and Reporting (STAR)  | California High School Exit Exam (CAHSEE)             |
| Sacramento    | California STAR   | CAHSEE  |
| Washoe County | Nevada Criterion Referenced Tests (CRTs)  | Nevada High School Proficiency Examination            |

AIR also collected district records for student attendance and disciplinary actions (suspensions, expulsions when available). These data elements are comparable across districts and are not defined here.

### **School Contrasts: Comparison of SEL Focus With Non-SEL Focus Schools**

In seven of the CDI districts, school-level SEL programming was rolled out to a subset of schools at a time. The districts chose schools based on a variety of local factors, often including principal willingness. The numbers of schools selected generally were guided by the numbers that the district’s SEL team could support. The selected schools, which we call “focus” schools in this report, were not necessarily intended to be the only schools in the district working on SEL, but the schools so identified by the district were hypothesized to reflect CDI-related efforts.

The nature of the programming varied by district. In some districts, the SEL focus schools were engaged in a schoolwide process to improve social and emotional competence; in some places, schools were implementing evidence-based SEL programs; in others, they were engaged in awareness building and beginning some efforts to improve climate and connection. Some districts had multiple cohorts of school implementers, introducing SEL activities and supports to additional schools each year.

For this report, we present the results of our school contrast analyses, even though we acknowledge the concerns that stakeholders have expressed about the validity of these contrasts. Table 8 lists for each district whether the rollout of the CDI allowed for within-district contrasts.

**Table 8. School-Level Contrasts by District: Focus and Nonfocus Schools**

| District      | Focus  | Nonfocus   | Multiple Cohorts         | Contrast Between Focus and Nonfocus?                          |
|---------------|--|--|--------------------------|---|
| Anchorage     | 30 schools engaged in Implementation and Sustainability Process  | 79 other schools   | No                       | Yes, but some nonfocus schools also implement SEL programming |
| Austin        | 6.5 vertical teams (71 schools) implementing universal evidence-based SEL programs (Second Step in K–8, School Connect in high schools) with coach support | Remaining 4.5 vertical teams (48 schools)  | Yes                      | Yes   |
| Cleveland     | All 63 elementary schools implementing a universal evidence-based SEL program (PATHS)  | No middle or high schools are implementing a universal program (some SEL programming for students at risk) | No                       | No  |
| Chicago       | 26 schools using the CASEL SchoolKit for schoolwide SEL implementation   | 23 former Rock Island and West Side schools  | Yes                      | Yes   |
| Nashville     | 60 elementary schools  | 7 elementary schools, all middle and high schools  | No                       | Yes   |
| Oakland       | 23 schools implementing Caring School Community, 4 with integrated SEL   | 63 other schools   | No (not through 2013–14) | Yes   |
| Sacramento    | 4 schools in Cohort 1, 14 in Cohort 2  | No data  | Yes                      | No  |
| Washoe County | 13 schools that began working on SEL awareness/knowledge in 2012–13; no programs in the analysis period  | 77 regular education schools   | Not through 2013–14      | Yes   |

## Results

In this section, we describe results for school implementation, school outcomes, and student outcomes. We discuss the specific results in this section as they are presented; a general discussion is provided in the next section.

### School Implementation

In this section, we review results from the measures of implementation covered on the staff survey. We acknowledge limitations to our knowledge here because not all schools had sufficient numbers of staff respond, and we do not know whether the most knowledgeable staff responded.

#### Staff SEL Survey

CDI evaluation team members worked with staff from CASEL and district consultants to develop a set of standards for the 10 constructs derived from the survey to delineate levels of implementation: (1) low implementation, (2) medium implementation, or (3) high implementation. These categories were designed to identify schools that were just starting to implement SEL initiatives; schools that were partially, but not fully, implementing SEL initiatives; and schools that were implementing fully. In a process driven by the expertise and experience of CASEL staff and CASEL consultants, cut scores for each of the performance levels were established and were applied to the data. The percentage of schools in the low, medium, and high implementation category for each construct was then calculated.

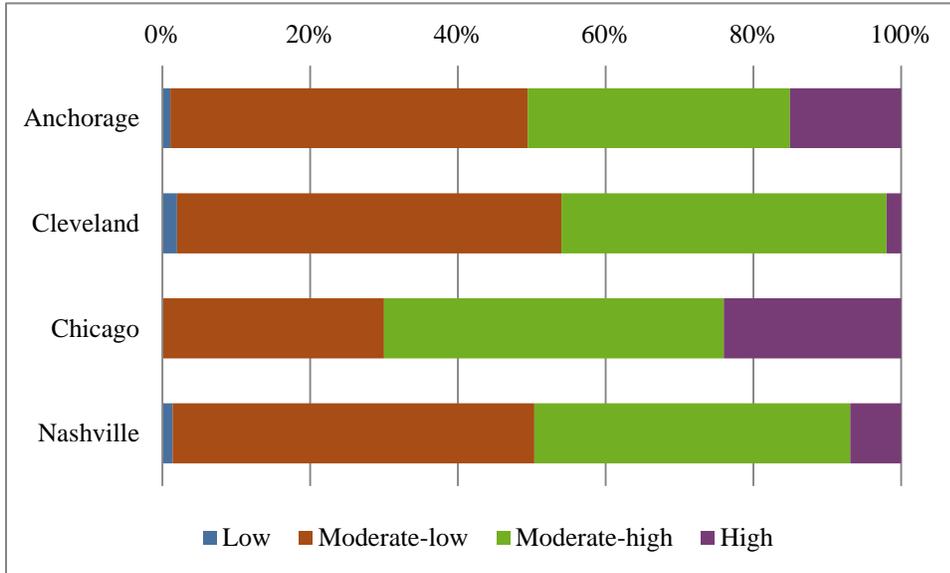
Four districts administered complete versions of the staff survey during 2013–14: Anchorage, Chicago, Cleveland, and Nashville. Across these districts, the majority of schools achieved a moderate rating on the nine implementation activity constructs and one school climate outcome construct measured by this survey. Overall, professional development was the construct on which districts were highest, with 74 percent of schools in Anchorage, 66 percent of schools in Chicago, and 43 percent of schools in Cleveland achieving high ratings. Anchorage and Chicago schools also had relatively large proportions of their staff members rate their schools in the high implementation range for teacher attitudes, schoolwide integration, and classroom practices. The percentage of staff rating their schools in the low-implementation range was very small overall.

In the following sections, we describe each construct measured on the staff survey and present results for the four districts. The constructs are presented in the order in which they appear in the CASEL theory of action for schools, which was updated in 2014. Although we present the data by district, it is important to understand that districts vary in terms of local and state contexts, CDI history, implementation strategies, and types of evidence-based programs that are implemented.

**Change Management.** The nine items in this construct relate to the development of a school vision for SEL (including participation of diverse stakeholders in the process), conducting a needs and resources assessment, and planning for SEL. This construct is important because implementation is most effective when all major stakeholders from the district and/or school community help to define what SEL means for their students and to develop a vision for how to achieve this based on their own priorities. Needs and resources assessment informs the

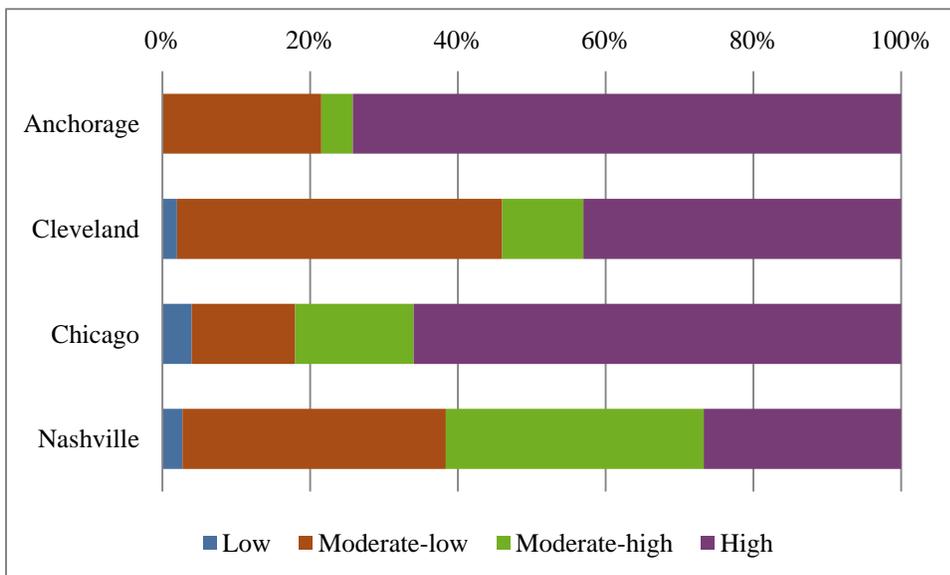
development of specific and measurable goals for SEL. Results for the four districts are shown in Figure 2.

**Figure 2. 2014 Staff SEL Survey Results: Change Management**



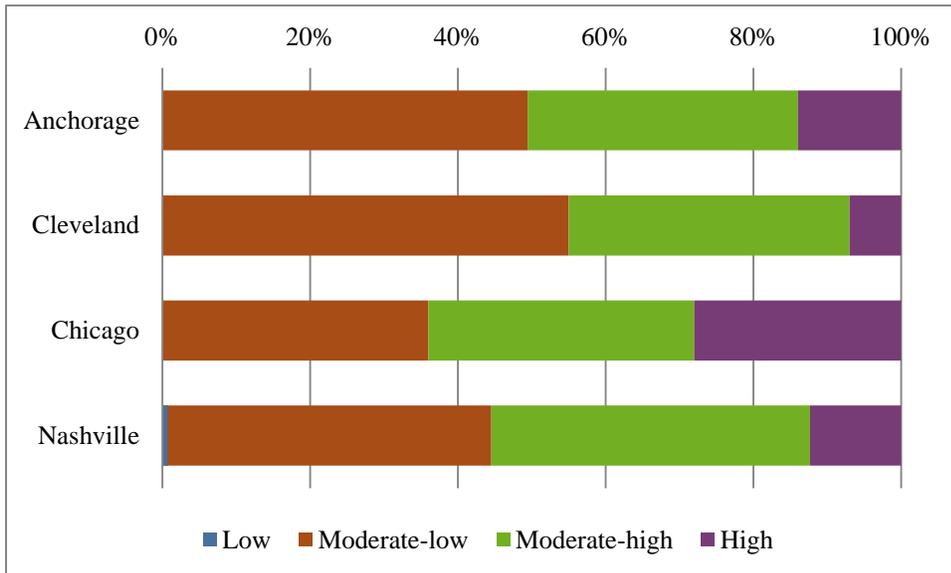
**Professional Development.** The professional development construct includes six items on attending PD related to SEL, receiving feedback on SEL practice, and participating in a community of practice. Collaborative professional learning is critical to a school’s success, and feedback on actual practice can build expertise and commitment. Results for 2014 are shown in Figure 3.

**Figure 3. 2014 Staff SEL Survey Results: Professional Development**



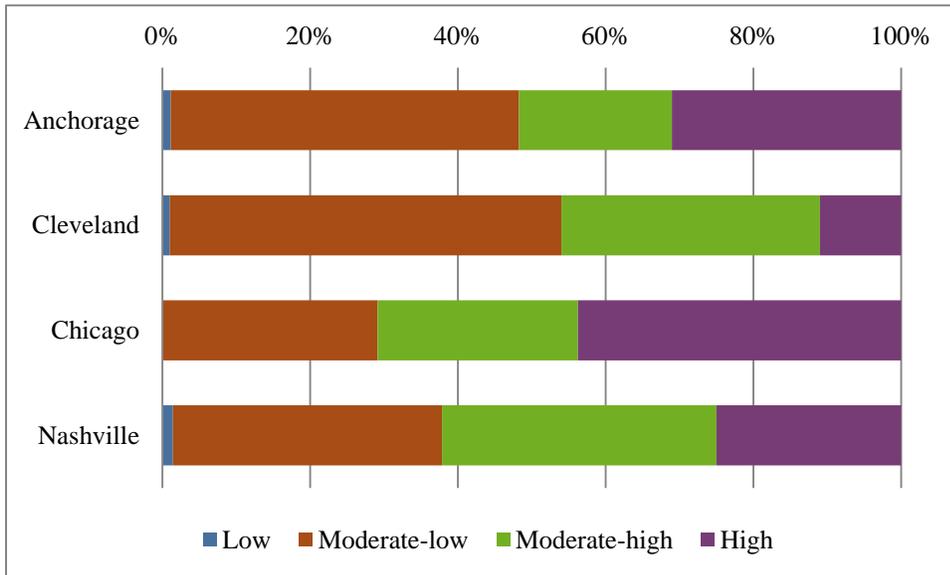
**Teacher Practices.** This construct contains eight items regarding the use of SEL-related practices, such as project-based learning, student-led discussions, and student self-assessment. These practices help create a climate in which SEL can be effectively modeled and taught. Results are shown in Figure 4.

**Figure 4. 2014 Staff SEL Survey Results: Teacher Practices**



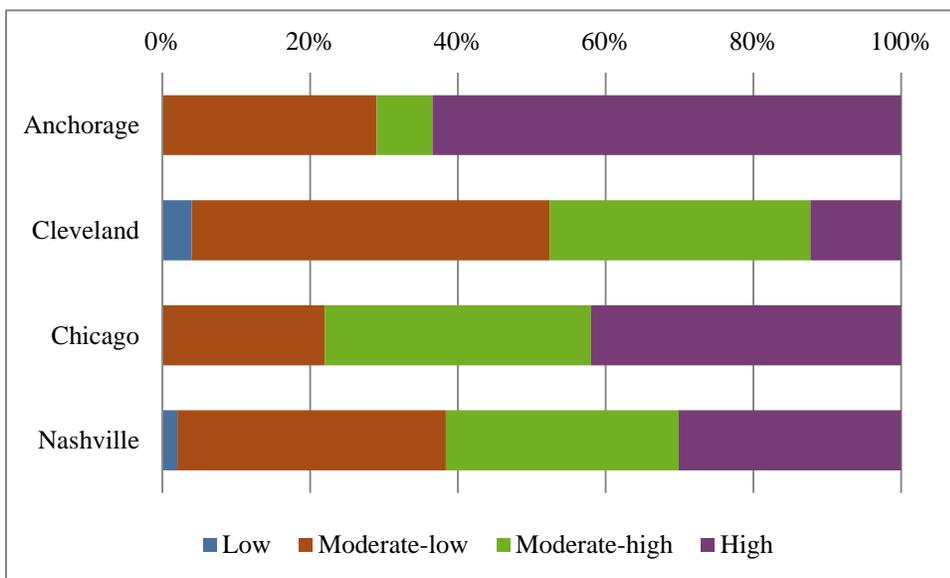
**Classroom-Based Practices.** The five items in this construct pertain to the use of an evidence-based SEL program selected by the school or district. Students who participate in SEL programming that is implemented with quality are likely to demonstrate higher levels of social and emotional skill and prosocial behavior, engage in less aggressive and delinquent behavior, and experience less depression and anxiety compared to students in classrooms implementing usual educational practice (Durlak et al., 2011). Results are shown in Figure 5.

**Figure 5. 2014 Staff SEL Survey Results: Classroom-Based Practices**



**Schoolwide Integration.** The five items on this construct measure the degree to which SEL has been integrated into other core educational functions, such as instruction, student support, discipline, and family engagement. Integration helps make SEL relevant and meaningful. It also increases the likelihood that it is characteristic of the everyday behavior of students. Results are shown in Figure 6.

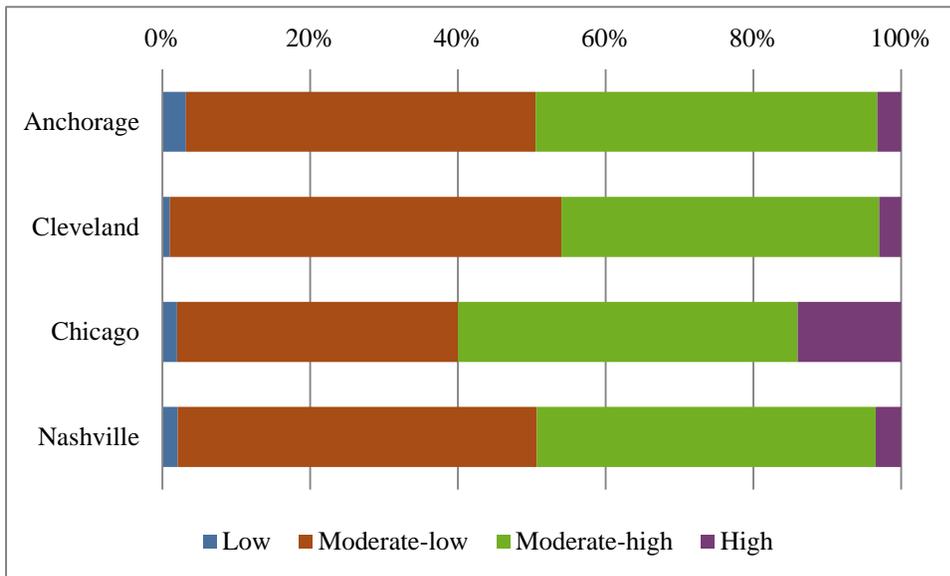
**Figure 6. 2014 Staff SEL Survey Results: Schoolwide Integration**



**Continuous Improvement.** The four items in this construct refer to the collection and use of data related to school climate and student SEL. These activities matter because schools need to

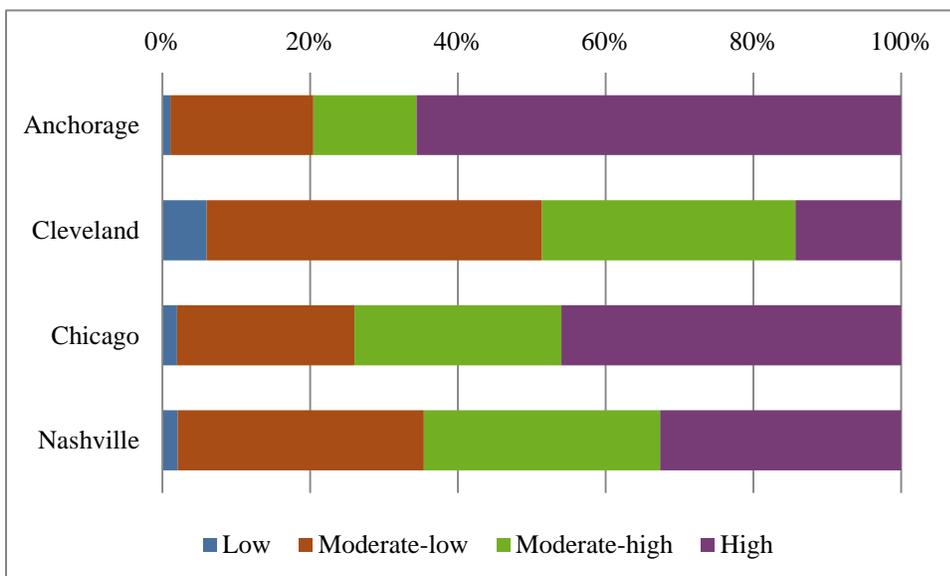
not only know whether improvements are being made on target outcomes, but to connect specific schoolwide SEL practices and strategies to those outcomes and to make adjustments to them when necessary.

**Figure 7. 2014 Staff SEL Survey Results: Continuous Improvement**



**Teacher Attitudes.** The seven items on this construct relate to teacher confidence, commitment, and positive perceptions of SEL. Teacher attitudes are expected to become more positive over time as teachers develop greater experience using SEL strategies. Results are shown in Figure 8.

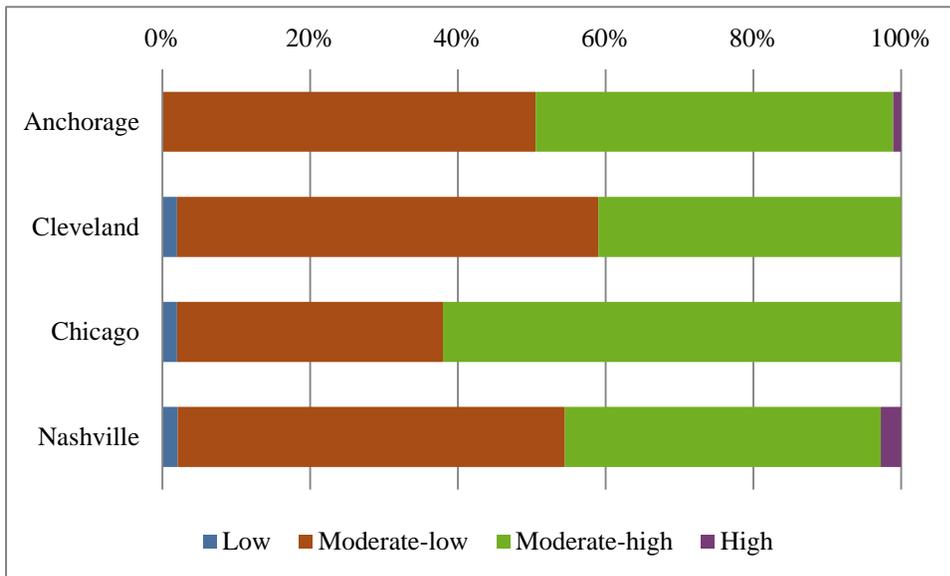
**Figure 8. 2014 Staff SEL Survey Results: Teacher Attitudes**



**Staff Culture.** Three items measure the degree to which SEL is modeled in interactions among staff members and between adults and students, as well as whether the overall school culture

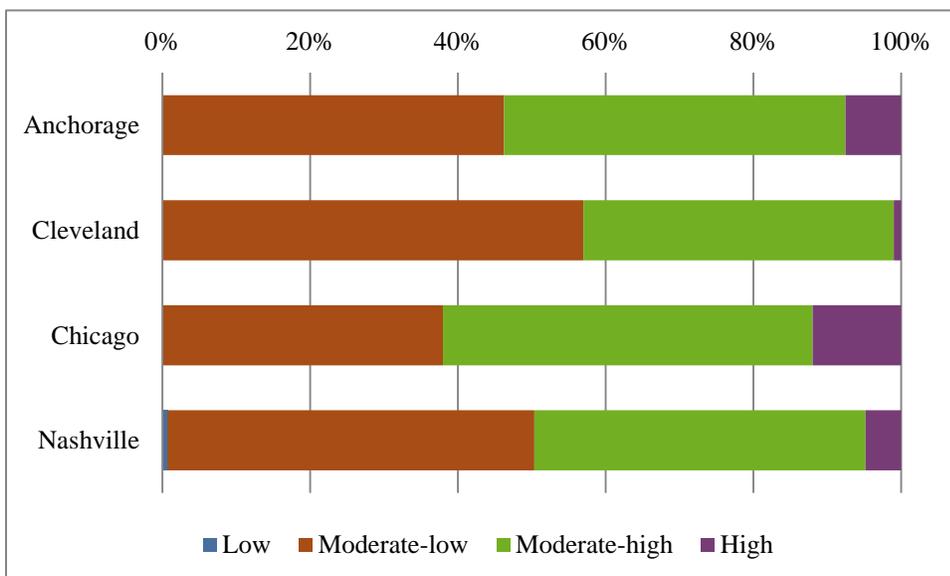
supports SEL. This construct is the only 1 of the 10 measured on the survey that provides some measure of the school outcome of interest for this initiative—school climate. Results are shown in Figure 9.

**Figure 9. 2014 Staff SEL Survey Results: Staff Culture**



**Leadership.** The four items on this construct measure the degree to which the school’s leader(s) model, support, promote, and expect high levels of SEL practice. Principal engagement and support is critical for the success of any schoolwide initiative. Results are shown in Figure 10.

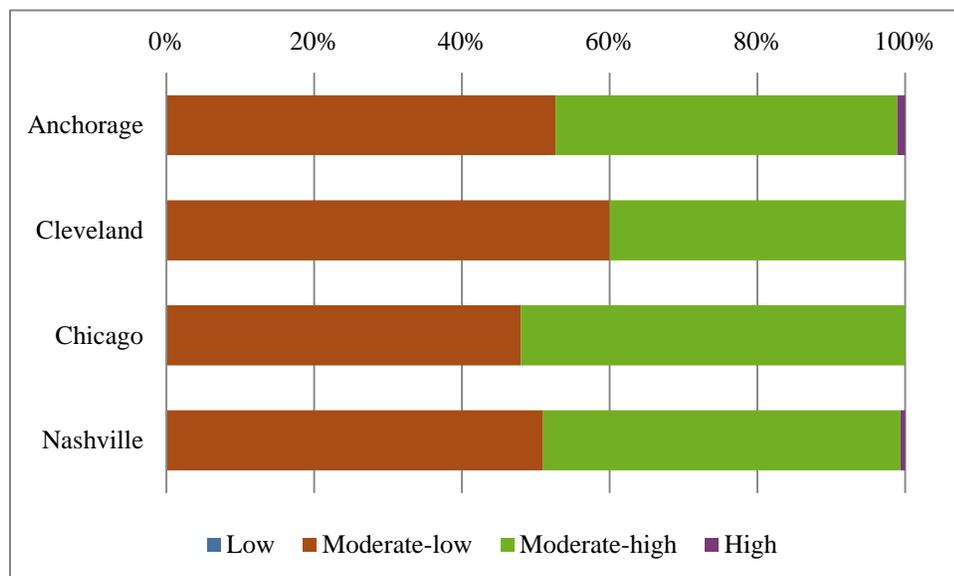
**Figure 10. 2014 Staff SEL Survey Results: Leadership**



**District Support.** Four items measure district emphasis on and support for SEL, as well as inclusion of SEL in the districts’ vision and standards. Schools do not exist in a vacuum; support

from other schools and coordination from the district can result in a more successful implementation. Results are shown in Figure 11.

**Figure 11. 2014 Staff SEL Survey Results: District Support for SEL**



### Staff SEL Survey: Change Over Time

We conducted a set of analyses to examine whether staff SEL survey scores changed over time for the five districts that had surveys in both 2012–13 and 2013–14 (Anchorage, Chicago, Cleveland, Nashville, and Washoe County). These districts showed significant<sup>7</sup> growth from one year to the next on several of the staff survey constructs, and these results are consistent with the interviews that we conducted. In addition to the 10 constructs described above, we also examined the *overall school implementation score*, which is an average of the six constructs specifically related to school SEL implementation as conceptualized in the CASEL School Guide (change management, teacher practices, professional development, classroom-based practices, schoolwide integration, and continuous improvement).

Anchorage showed significant growth in teacher attitudes, change management, schoolwide integration, and teacher practices. Anchorage’s overall implementation score was lower in 2013–14 than in 2012–13, however. Chicago, Cleveland, and Nashville had significant increases in their scores with respect to change management, teacher practices, schoolwide integration, and teacher attitudes. Scores also increased for professional development in Chicago and Nashville. Levels of continuous improvement and district support for SEL were also significantly higher in Nashville in 2013–14. Finally, Washoe County showed significant increases in both change management and district support for SEL.

<sup>7</sup> Throughout this report, “significant” refers to a probability of finding an effect by chance of 5 percent or less; that is, an alpha value of .05.

## Staff SEL Survey: Analysis of Responses by Grade Level

AIR examined the extent to which staff teaching different grades levels of students reported higher or lower implementation across the 10 survey constructs<sup>8</sup> as well as the overall implementation score (the standardized average of the six constructs mapping to the School Guide). Overall, there were very few differences in SEL implementation constructs as measured by the staff survey across grade levels. There were many tests conducted in this analysis (4 grade bands × 10 construct scores + 1 computed implementation score = 44 tests for each district), which increases the chance that some findings may be significant due to chance.

In **Anchorage**, prekindergarten and elementary school staff scored significantly higher with respect to teacher attitudes than staff at middle or high schools. Implementation scores were not statistically significant, but they were higher for the lower grades than for the higher grades.

In **Cleveland**, implementation and construct scores were generally higher for prekindergarten staff in comparison to K–12 staff. The differences for professional development and overall implementation were statistically significant, but the other nine constructs showed no differences. With respect to implementation, prekindergarten was the highest, and grades in middle and high schools were relatively lower. This pattern of findings matches what we have learned from qualitative data collection in the district about implementation. Namely, most SEL work has been done at PK–8, and relatively little at middle or high school grades. This pattern of findings suggests that our measure is working as expected.

**Chicago** analyses included only 51 schools that were originally in the Rock Island and West Side networks; the whole district was not included. Overall implementation and construct level scores tended to be higher for staff at the prekindergarten and middle school grade levels than for staff in elementary or high school grades. However, the only statistically significant difference based on grade level was for the teacher practice construct. Middle school teachers in Chicago reported higher implementation of this construct; the other nine were not different across grade levels.

In **Nashville**, there were no significant differences across grade levels for nine of the measured constructs. However, there was a statistically significant difference across grade levels with respect to teacher attitudes. Prekindergarten was the highest, followed by elementary grades, with middle and high school grades reporting the lowest scores for teacher attitudes.

### School Contrasts: Staff SEL Survey Ratings in Focus and Nonfocus Schools

AIR analyzed the 2014 data for the 10 staff survey constructs and overall implementation score for differences between SEL focus and nonfocus schools. We included four districts (Anchorage, Chicago, Nashville and Washoe County) in our analysis. Cleveland administered the staff survey, but did not have any contrasts available for SEL focus because all elementary schools implement the PATHS SEL program.

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<sup>8</sup> The 10 staff survey constructs are described in Table 4. The first six are standardized and averaged together to form an overall implementation score. The constructs are change management, professional development, teacher practices, classroom-based practices, schoolwide integration, continuous improvement, teacher attitudes, staff climate and culture, school leadership, and district support for SEL.

Across the three districts where we had both focus schools and staff survey data, there were generally very few differences in staff-reported SEL implementation activities based on whether the district identified a school as having a particular focus on SEL as part of their CDI work. In Chicago where there were some differences, the results varied by cohort. As noted in the description of the study design earlier in this report, the contrast between focus and nonfocus schools may be weakened if there are effects of districtwide SEL activities in nonfocus schools (such as new teacher training that includes a focus on SEL, district communications about SEL, or SEL standards).

Results for specific districts are detailed in the following paragraphs.

In **Anchorage**, there were 30 SEL focus schools. Significant differences in change management scores were found when comparing these focus schools to nonfocus schools. No other statistically significant differences were observed for the 2013–14 staff survey.

In **Chicago**, there were two cohorts of SEL focus schools. One cohort of 15 schools started in 2012–13 and another 11 in 2013–14. With respect to the computed overall implementation score, 2013–14 focus schools were significantly lower than nonfocus schools and schools that implemented in 2012–13. Furthermore, significant differences were found based on implementation status (2012–13, 2013–14, or nonfocus) for 6 of the 10 staff survey constructs. For five of these six constructs (change management, schoolwide integration, continuous improvement, teacher practices, and staff culture), 2013–14 focus schools were significantly lower than nonfocus schools and 2012–13 implementers; the 2012–13 schools were not significantly different than the nonfocus schools. Schools that implemented in 2012–13 showed significantly higher professional development scores than nonfocus schools and schools that implemented in 2013–14.

In **Nashville**, there were no differences in the computed overall implementation score based on whether a school was a focus or nonfocus school. Although overall implementation scores did not differ by group, in general, SEL focus schools were higher on nine of the 10 survey constructs (except for continuous improvement). Of these nine differences, only one was statistically significant. Teacher attitudes were higher in SEL focus schools in 2013–14 than in nonfocus schools.

**Washoe County** administered enough of the staff survey to have scores for six of the 10 survey constructs (but not overall implementation). There were no significant differences across these constructs based on school group.

## **School Outcome: School Climate**

Based on the theory of action for the CDI, the school outcome of interest is school climate. We know from work we have done in a variety of districts that other school level outcomes are relevant to the implementation of systemic SEL in school districts, such as school discipline. We expect to be able to study these in future years for this sample.

In 2014, the AIR team had school climate data that were suitable for ITS analyses from two districts: Anchorage and Cleveland. In some districts, school climate measures were consistent

over time, but data were not available for each year (e.g., Oakland, Sacramento). In other districts, the instrument has changed during the CDI implementation period, limiting the ability to conduct a longitudinal analysis (e.g., Austin, Chicago, Washoe County). In Nashville, climate data collection was interrupted due to issues regarding consent.

### Effect of the CDI on Student Perceptions of Climate in Anchorage and Cleveland

Longitudinal, student-level data were available for both Anchorage and Cleveland regarding student perceptions of school climate. In Anchorage, students were administered the School Climate and Connectedness Survey, with data available from 2005–06 to 2013–14. In Cleveland, students responded to the Conditions for Learning Survey, for which data were available from 2007–08 through 2013–14.

Each of these surveys measured multiple constructs, which are listed in Table 9.

**Table 9. Student School Climate Constructs by District**

| Anchorage                                 | Cleveland                            |
|---|--------------------------------------|
| Overall Climate                           | Safe and Respectful Climate          |
| Overall Connectedness                     | Challenge and High Expectations      |
| High Expectations                         | Student Support                      |
| School Safety                             | Peer Social and Emotional Competence |
| School Leadership and Student Involvement |                                      |
| Respectful Climate                        |                                      |
| Peer Climate                              |                                      |
| Caring Adults                             |                                      |
| Parent and Community Involvement          |                                      |
| SEL                                       |                                      |
| Student Delinquent Behavior               |                                      |
| Student Drug and Alcohol Use              |                                      |
| Overall Climate                           |                                      |

### Anchorage Results

We share the results for Anchorage with a strong caveat: there were anomalies in the numbers of students taking the survey across years (see Table 10). Starting in 2011, many fewer (about a third fewer) students took the survey. The same schools participated, but fewer students per school completed the measure. The drop may be related to the survey having been administered online beginning that year. The caution we offer is that we cannot sort out whether changes observed are due to real changes in school climate or due to different students completing the survey or selection bias as a product of changing the mode of survey administration.

**Table 10. Anchorage Students Completing the School Climate and Connectedness Survey**

| Year | Grade 3 | Grade 7 | Grade 10 |
|------|---------|---------|----------|
|------|---------|---------|----------|

|      | Number of Students | Change From Prior Year | Number of Students | Change From Prior Year | Number of Students | Change From Prior Year |
|------|--------------------|------------------------|--------------------|------------------------|--------------------|------------------------|
| 2006 | 0                  |                        | 3,030              |                        | 2,581              |                        |
| 2007 | 0                  |                        | 2,562              | -15%                   | 2,519              | -2%                    |
| 2008 | 3,138              |                        | 2,590              | 1%                     | 3,025              | 20%                    |
| 2009 | 3,318              | 6%                     | 2,470              | -5%                    | 2,683              | -11%                   |
| 2010 | 3,180              | -4%                    | 2,668              | 8%                     | 2,427              | -10%                   |
| 2011 | 2,606              | -18%                   | 2,260              | -15%                   | 1,490              | -39%                   |
| 2012 | 2,357              | -10%                   | 2,440              | 8%                     | 2,129              | 43%                    |
| 2013 | 2,395              | 2%                     | 2,395              | -2%                    | 2,292              | 8%                     |
| 2014 | 2,591              | 8%                     | 1,903              | -21%                   | 2,239              | -2%                    |

We analyzed student survey scale scores for the 12 constructs on the Climate and Connectedness Survey. These scores were modeled with a three-level hierarchical linear model, with students nested in cohorts (school years) and in schools. The model included a linear time trend and student demographics (gender and race/ethnicity). The model examined the extent to which student scores deviated from the preintervention trend after the introduction of CDI. The results of these analyses are summarized here.

After the introduction of CDI:

- Students provided significantly higher ratings for overall climate, overall connectedness, high expectations, school safety, peer climate, caring adults, parent and community involvement, and social-emotional learning.
- Students indicated that there were significantly lower levels of delinquent behavior and drug and alcohol use in their schools.
- Student data showed no statistically significant change for the school-leadership and student-involvement scale and the respectful-climate scale.

## Cleveland Results

For Cleveland, student ratings were available for four constructs on the Conditions for Learning Survey. Student responses were rated as either “needs improvement,” “adequate,” or “excellent.” These ratings were modeled with a three-level hierarchical generalized linear model (logistic ordinal mixed-effects regression), with students nested in cohorts (school years) and in schools. The model included student demographics (gender, race/ethnicity, student disability status, and free/reduced-price lunch eligibility status). The model examined the extent to which student scores deviated from the preintervention trend after the introduction of CDI.

We found that after the introduction of CDI, student reports were significantly higher with respect to all four elements of school climate measured: safe and respectful climate, challenge, student support, and peer social and emotional climate.

## Student Outcomes

The student outcomes we examined included both social and emotional competence and outcomes from students' extant educational records (achievement, attendance, suspensions). In the following sections, we describe results for change over time, results of school contrasts, and results of examining the association between SEL implementation scores as reported by staff and student outcomes.

### Change in Student Social and Emotional Competence

AIR examined the extent to which student social and emotional competence in specific grades changed from 2011–12 to 2013–14 in the CDI districts. We also compared the change over this period between the focus and nonfocus schools. Social and emotional competence ratings were collected via teacher ratings in Grade 3 and student self-report surveys in Grades 7 and 10 (see the Measures Appendix, a companion document). For five of the districts, ratings were summarized into five construct-level scores: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Anchorage administered student surveys in Grades 3, 7, and 10; their surveys measured a single, overarching SEL construct. Anchorage also had data going back to 2004–05 for Grades 7 and 10 and 2008–09 for Grade 3.

Overall, results for change in students' social and emotional competence across the years of the CDI were mixed: of the 80 tests, 19 had significant positive findings, 10 had significant negative findings, and 51 had nonsignificant findings. Of the 19 positive effects, 13 (68 percent) were from Austin and Nashville and 12 (63 percent) were for Grade 3. For most competence areas in most grades, there were no significant effects.

Although most SEL skills at most grades did not change, the pattern in which change tended to occur was suggestive. There were very few significant effects at Grade 10, which is consistent with the districts generally placing much less focus on high schools. Results for Grade 3 students in both Austin and Nashville were consistently positive. In those two districts, teacher-rated social and emotional competence in 2014 was significantly higher than ratings in the same school the prior year. However, just as results for those two districts were consistently up, Grade 3 students in Oakland had significantly lower social and emotional competence scores in 2014 than in 2013.

Table 11 shows the results of the gain score analysis for each of the five social and emotional competence constructs.

- Blank cells indicate where a model was run, but no significant results at the district level from 2011–12 to 2013–14 were found.
- A + sign indicates a positive significant growth in student scores at the district level from 2011–12 to 2013–14.
- A – sign indicates a statistically significant decrease in scores from 2011–12 to 2013–14.

The Anchorage results are discussed after Table 11.

**Table 11. Significant Positive or Negative Within-School Change in Social and Emotional Competence Over Two or Three CDI Implementation Years**

| District      | Grade | # Years | # Schools | Self - Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |
|---------------|-------|---------|-----------|------------------|-----------------|------------------|---------------------|-----------------------------|
| Austin        | 3     | 3       | 74        | +                | +               | +                | +                   | +                           |
|               | 7     | 3       | 16        | -                |                 |                  |                     |                             |
|               | 10    | 3       | 9         |                  |                 |                  |                     |                             |
| Cleveland     | 3     | 2       | 68        |                  |                 |                  |                     |                             |
|               | 7     | 2       | 66        |                  |                 | -                | -                   |                             |
|               | 10    | 2       | 26        |                  | +               |                  |                     |                             |
| Chicago       | 3     | 3       | 21        |                  |                 | +                |                     | +                           |
|               | 7     | 3       | 17        | -                |                 | +                |                     |                             |
|               | 10    | 3       | 21        | -                |                 |                  |                     |                             |
| Nashville     | 3     | 3       | 73        | +                | +               | +                | +                   | +                           |
|               | 7     | 2       | 30        |                  |                 | +                | +                   | +                           |
|               | 10    | 2       | 14        |                  |                 |                  |                     |                             |
| Oakland       | 3     | 2       | 41        | -                | -               | -                | -                   | -                           |
| Washoe County | 3     | 3       | 41        |                  |                 |                  |                     |                             |
|               | 7     | 2       | 74        |                  | +               | +                |                     |                             |
|               | 10    | 2       | 16        |                  |                 |                  |                     |                             |

*Note.* Cleveland implemented universal SEL programming only at the elementary level; programming was not available for all students at Grades 7 or 10. Cleveland’s SEL measures from 2012 were not comparable to 2013 or 2014. Oakland provided data for Grade 3 only. Sacramento did not have a consistent measure in use across years. Anchorage produced a single overall SEL score analyzed at Grades 3, 7, and 10.

### Student Social and Emotional Competence Outcomes in Anchorage

Because Anchorage uses a different measure to assess students’ SEL, we analyze this district separately. Anchorage has used the same SEL scale since 2006, and the pattern of data availability allow for analysis through ITS. Descriptively, there was quite a large discontinuity from 2009–10 to 2010–11: starting in 2011, 30 percent fewer students took the survey, more of those were female, and there was a large increase in SEL scores (a range of 0.14 to 0.35 standard deviations, averaging 0.24 standard deviations across all grades). The time series analysis confirmed significant gains between the three CDI implementation years and the three years before the planning phase for all grades, including the three grades modeled for this evaluation. The improvement over time was largest in Grade 7.

The changes in the numbers of students responding to this survey over time, particularly the drop from 19,212 respondents in 2010 to 13,531 in 2011 (when the survey mode changed from paper

to online) make it difficult to interpret the results with confidence. The change was not plausibly driven by the CDI, since the large increase occurred before the planning phase began.

### Subgroup Findings for Change in Social and Emotional Competence

The change analyses described above aim to determine whether there was change for students overall. In addition, we look for variation in impact by student gender and ethnicity. In particular, we looked at social and emotional competence for female, male, African-American, Alaska Native/American Indian, Hispanic/Latino, and White students. Table 12 shows the results. Of 450 tests run for these subgroup analyses, 343 (76 percent) showed no statistically significant change over time; 71 (16 percent) showed positive change over time; and 36 (8 percent) showed declines over time.

**Table 12. Subgroup Results: Significant Positive or Negative Change in Social and Emotional Competence**

| District | Subgroup                         | Grade  | <i>n</i> | Self-Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |
|----------|----------------------------------|--------|----------|----------------|-----------------|------------------|---------------------|-----------------------------|
| Austin   | Female                           | 3      | 1,578    |                |                 |                  |                     |                             |
|          |                                  | 7      | 3,776    | -              |                 |                  |                     |                             |
|          |                                  | 10     | 2,011    |                | +               | +                |                     | +                           |
|          | Male                             | 3      | 1,614    | +              | +               | +                | +                   | +                           |
|          |                                  | 7      | 3,378    |                |                 |                  |                     |                             |
|          |                                  | 10     | 1,808    |                |                 |                  |                     |                             |
|          | African American                 | 3      | 283      |                |                 |                  |                     |                             |
|          |                                  | 7      | 433      |                |                 |                  | -                   |                             |
|          |                                  | 10     | 247      |                |                 |                  |                     |                             |
|          | Alaska Native or American Indian | 7      | 39       |                |                 |                  |                     |                             |
|          |                                  | 10     | 10       |                |                 |                  |                     |                             |
|          | Latino                           | 3      | 1,790    | +              | +               | +                | +                   | +                           |
|          |                                  | 7      | 4,088    |                |                 |                  |                     |                             |
|          |                                  | 10     | 2,004    |                |                 |                  |                     |                             |
|          | White                            | 3      | 988      |                |                 |                  |                     |                             |
|          |                                  | 7      | 1,958    |                |                 |                  |                     |                             |
|          |                                  | 10     | 1,214    |                |                 |                  |                     |                             |
|          | Cleveland                        | Female | 3        | 900            |                 |                  |                     |                             |
| 7        |                                  |        | 2,173    |                |                 | -                |                     |                             |
| 10       |                                  |        | 1,936    |                | +               | -                |                     |                             |

| District                         | Subgroup                         | Grade  | <i>n</i> | Self-Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |  |
|----------------------------------|----------------------------------|--------|----------|----------------|-----------------|------------------|---------------------|-----------------------------|--|
|                                  | Male                             | 3      | 1,049    |                |                 |                  |                     |                             |  |
|                                  |                                  | 7      | 2,163    |                |                 |                  |                     |                             |  |
|                                  |                                  | 10     | 1,830    |                |                 |                  |                     |                             |  |
|                                  | African American                 | 3      | 1,266    |                |                 |                  |                     |                             |  |
|                                  |                                  | 7      | 2,789    |                |                 |                  | -                   |                             |  |
|                                  |                                  | 10     | 2,631    |                | +               |                  |                     |                             |  |
|                                  | Alaska Native or American Indian | 7      | 13       |                |                 |                  | -                   |                             |  |
|                                  | Latino                           | 3      | 349      |                |                 |                  |                     |                             |  |
|                                  | Latino ( <i>cont.</i> )          | 7      | 705      |                | +               |                  |                     |                             |  |
|                                  |                                  | 10     | 490      |                |                 |                  | -                   |                             |  |
|                                  | White                            | 3      | 315      |                | -               | -                | -                   | -                           |  |
|                                  |                                  | 7      | 643      |                |                 |                  |                     |                             |  |
|                                  |                                  | 10     | 481      |                |                 |                  |                     |                             |  |
|                                  | Chicago                          | Female | 3        | 282            |                 |                  | +                   |                             |  |
|                                  |                                  |        | 7        | 712            |                 | +                |                     |                             |  |
| 10                               |                                  |        | 3,406    |                |                 |                  |                     |                             |  |
| Male                             |                                  | 3      | 286      |                |                 |                  |                     |                             |  |
|                                  |                                  | 7      | 650      |                | -               |                  |                     |                             |  |
|                                  |                                  | 10     | 3,174    |                | -               | -                | -                   |                             |  |
| African American                 |                                  | 3      | 455      |                |                 | +                | +                   | +                           |  |
|                                  |                                  | 7      | 1,017    |                |                 |                  |                     |                             |  |
|                                  |                                  | 10     | 1,865    |                |                 |                  |                     |                             |  |
| Alaska Native or American Indian |                                  | 7      | 21       |                |                 |                  |                     |                             |  |
|                                  |                                  | 10     | 24       |                |                 |                  |                     |                             |  |
| Latino                           |                                  | 3      | 16       |                |                 |                  |                     |                             |  |
|                                  |                                  | 7      | 87       |                |                 |                  |                     |                             |  |
|                                  |                                  | 10     | 3,920    |                | -               |                  |                     | -                           |  |
| White                            |                                  | 3      | 72       |                |                 |                  |                     |                             |  |
|                                  | 7                                | 78     |          |                |                 |                  |                     |                             |  |
|                                  | 10                               | 378    |          |                |                 |                  |                     |                             |  |

| District      | Subgroup                         | Grade            | <i>n</i> | Self-Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |   |
|---------------|----------------------------------|------------------|----------|----------------|-----------------|------------------|---------------------|-----------------------------|---|
| Nashville     | Female                           | 3                | 2,053    | +              | +               | +                | +                   | +                           |   |
|               |                                  | 7                | 3,566    |                | -               | +                |                     |                             |   |
|               |                                  | 10               | 2,024    |                |                 |                  |                     |                             |   |
|               | Male                             | 3                | 2,102    | +              | +               | +                | +                   | +                           |   |
|               |                                  | 7                | 3,704    |                |                 | +                | +                   | +                           |   |
|               |                                  | 10               | 2,163    |                |                 |                  |                     |                             |   |
|               | African American                 | 3                | 1,796    | +              | +               | +                | +                   | +                           |   |
|               |                                  | 7                | 2,769    | +              |                 | +                | +                   | +                           |   |
|               |                                  | 10               | 1,746    |                | -               |                  |                     |                             |   |
|               | Alaska Native or American Indian | 7                | 37       |                |                 |                  |                     |                             |   |
|               |                                  | 10               | 19       |                |                 |                  |                     |                             |   |
|               | Latino                           | 3                | 868      | +              | +               | +                | +                   | +                           |   |
|               |                                  | 7                | 1,318    |                |                 | +                | +                   |                             |   |
|               |                                  | 10               | 801      |                |                 |                  |                     |                             |   |
|               | White                            | 3                | 1,247    | +              | +               | +                | +                   | +                           |   |
|               |                                  | 7                | 2,210    |                |                 | +                | +                   |                             |   |
|               |                                  | 10               | 1,030    |                |                 |                  |                     |                             |   |
|               | Oakland                          | Female           | 3        | 530            | -               | -                | -                   |                             |   |
|               |                                  | Male             | 3        | 571            | -               | -                | -                   | -                           | - |
|               |                                  | African American | 3        | 305            | -               | -                | -                   | -                           | - |
|               |                                  | Latino           | 3        | 435            | -               |                  | -                   |                             | - |
| White         |                                  | 3                | 154      |                |                 |                  |                     |                             |   |
| Washoe County | Female                           | 3                | 878      | +              |                 | +                | +                   |                             |   |
|               |                                  | 7                | 1,357    |                |                 |                  |                     |                             |   |
|               |                                  | 10               | 1,126    |                |                 |                  |                     |                             |   |
|               | Male                             | 3                | 957      |                |                 |                  |                     |                             |   |
|               |                                  | 7                | 1,482    |                | +               | +                |                     |                             |   |
|               |                                  | 10               | 1,171    |                |                 |                  |                     |                             |   |
|               | African American                 | 3                | 76       |                |                 |                  |                     |                             |   |
|               |                                  | 7                | 47       |                | +               |                  |                     |                             |   |
|               |                                  | 10               | 47       |                |                 |                  |                     |                             |   |

| District | Subgroup                         | Grade | <i>n</i> | Self-Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |
|----------|----------------------------------|-------|----------|----------------|-----------------|------------------|---------------------|-----------------------------|
|          | Alaska Native or American Indian | 3     | 35       |                |                 |                  | -                   |                             |
|          |                                  | 7     | 21       |                |                 |                  |                     |                             |
|          |                                  | 10    | 37       |                |                 |                  |                     |                             |
|          | Latino                           | 3     | 525      |                |                 |                  |                     |                             |
|          |                                  | 7     | 862      |                |                 | +                |                     |                             |
|          |                                  | 10    | 837      |                |                 |                  |                     |                             |
|          | White                            | 3     | 944      | +              | +               | +                | +                   |                             |
|          |                                  | 7     | 1,397    |                | +               | +                |                     |                             |
|          |                                  | 10    | 1,068    |                |                 |                  |                     |                             |

Subgroup findings for the districts were as follows:

- In **Austin**, there was positive change at Grade 3 for males and Latinos in every construct, whereas Grade 10 females saw increases in self-management, social awareness, and responsible decision making. Grade 7 females saw a decline in self-awareness.
- In **Cleveland**, social awareness declined at Grades 7 and 10 for females, Grade 10 for Latinos, and Grade 3 for Whites. There was also an increase in self-management at Grade 10 for females, African-Americans, and at Grade 7 for Latinos. Self-management declined for Grade 3 males. Grade 3 males also showed a decline in self-awareness and responsible decision making. Relationship skills also showed a decline for Grade 7 African-Americans and Grade 7 Alaska Natives/American Indians.
- In **Chicago**, there was no strong pattern of increases or declines, except for declines in self-awareness, self-management, and social awareness among Grade 10 males. Grade 3 African Americans showed increases in social awareness, relationship skills, and responsible decision making.
- In **Nashville**, there were increases in all five constructs across many subgroups, especially in Grade 3. In Grade 7, social awareness increased in every demographic except Alaska Natives/American Indians, and relationship skills increased in all but females and Alaska Natives/American Indians. Responsible decision making increased at Grade 7 among African-Americans and Whites. African-American students in Grade 7 also showed increases in self-awareness.
- In **Oakland**, there were declines almost across the board at Grade 3, except for White students.
- In **Washoe County**, all significant results by demographic were positive and appeared mainly in Grades 3 and 7—especially in self-management and social awareness. Whites and females also showed improvements in self-awareness and relationship skills at Grade 3.

It is worth emphasizing that these change analyses do not follow individual students over time, but rather track the SEL skills for students in the same grades each year. These analyses are appropriate over multiple years, since the unit of interest for this broad initiative is the school, not the particular student. However, changes in the composition of student cohorts over shorter periods of time may influence these results. With more years of data going forward, we expect this source of noise in our data to stabilize.

### **School Contrasts: Change in Student Social and Emotional Competence in Focus and Nonfocus Schools**

The AIR evaluation team examined the social and emotional competence scores for students in focus schools in comparison with students in nonfocus schools in Chicago and Washoe County. Data availability was limited as described earlier. Scores were modeled to look for differences between the two school types in overall scores. These analyses addressed the question, “Does social and emotional competence change more in focus schools within the CDI districts?”

The results showed that the difference between focus schools and nonfocus schools was not significant in any district or grade for any of the five SEL skills. There were two marginally significant results: in Washoe County at Grade 10 self-awareness and self-management showed marginally significant ( $p < 0.10$ ) differences in the rate of improvement over the years measured.

### **School Contrasts: Subgroup Results for Change in Social and Emotional Competence**

Social and emotional competence across the five constructs in focus and nonfocus schools was analyzed by student subgroup. Overall, every demographic showed largely no difference between the focus and nonfocus schools either in level or in change over time. This is similar to the results shown earlier when students were aggregated across subgroups.

Subgroup findings for the districts were as follows:

- In **Chicago**, there were positive differences between focus and nonfocus schools at Grade 7 in self-awareness for Latinos and negative differences in the increase in student SEL for the same group. There was a positive, marginally significant difference ( $p < 0.10$ ), at Grade 10 for African Americans in social awareness and a negative marginally significant difference in the same group in the increase in social awareness as well as an increase in relationship skills. Continuing to compare focus to nonfocus schools, students identified as Alaska Natives or American Indian also showed a negative difference in the increase of responsible decision making as well as a marginally significant decrease in relationship skills.
- In **Washoe County**, there were no statistically significant ( $p < 0.05$ ) differences between focus and non-focus schools in either the level of student SEL or the increase in student SEL for any subgroup in Washoe County. There were several marginally significant ( $p < 0.10$ ) differences between student SEL in focus and non-focus schools, including a negative difference in student SEL at grade 10 in self-management and relationship skills as well as a positive difference in the increase in self-awareness at Grade 10 for males and in the increase in self-management at Grade 10 for whites.

## Association of School SEL Implementation Activities and Student Social and Emotional Competence

A consistent body of research has indicated that implementation is a critical factor in whether an initiative implemented at a higher level of organization, such as a district or a school, is successful in realizing improvements at the student level (Berends, Bodilly, & Kirby, 2002; Cuban, 2010; Garet et al., 2008). To determine whether schools engaged in higher levels of SEL implementation had students with higher levels of social and emotional skills, we examined the relation between school aggregate SEL implementation scores (the combined measure of school implementation constructs and Staff Climate and Culture) and student social and emotional outcomes in Grades 3, 7, and 10 (measured via teacher report in Grade 3 and student self-report in Grades 7 and 10). Student SEL competence scores were calculated for all five constructs: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. In Anchorage, a different SEL measure was administered, and only a single, overall SEL construct score was generated. Models were fit for each grade for each of six districts (Anchorage, Cleveland, Chicago, Nashville, and Washoe County) and included the social and emotional competence scores.

Table 13 shows the results of our analysis. Overall, the results show a positive association between staff-reported SEL implementation and student SEL competence scores. There were no negative effects, only significantly positive relations or associations that were not significant. There was variation within district between grades, although no pattern for particular grades emerged. In districts where the staff SEL implementation score was positively correlated with almost every construct, the only construct that did not show such a correlation was self-awareness.

Grades in districts with entirely positive or almost entirely positive results include Grade 10 in Anchorage (not shown in table), Grade 3 in Cleveland, Grades 3 and 7 in Chicago, Grade 10 in Nashville, and Grades 3 and 10 in Washoe County.

**Table 13. Association of School SEL Implementation Activities and Student Social and Emotional Competence**

| District  | Grade | # Years in Analysis | # Schools in Analysis | Self - Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |
|-----------|-------|---------------------|-----------------------|------------------|-----------------|------------------|---------------------|-----------------------------|
| Cleveland | 3     | 2                   | 67                    | +                | +               | +                | +                   | +                           |
|           | 7     | 2                   | 69                    |                  |                 |                  |                     |                             |
|           | 10    | 2                   | 27                    |                  |                 |                  |                     |                             |
| Chicago   | 3     | 3                   | 25                    | +                | +               | +                | +                   | +                           |
|           | 7     | 3                   | 23                    |                  | +               | +                | +                   | +                           |
|           | 10    | 3                   | 24                    |                  |                 |                  |                     |                             |
| Nashville | 3     | 3                   | 77                    |                  |                 |                  |                     |                             |

| District      | Grade | # Years in Analysis | # Schools in Analysis | Self - Awareness | Self-Management | Social Awareness | Relationship Skills | Responsible Decision Making |
|---------------|-------|---------------------|-----------------------|------------------|-----------------|------------------|---------------------|-----------------------------|
|               | 7     | 2                   | 38                    |                  |                 |                  |                     |                             |
|               | 10    | 2                   | 19                    | +                | +               | +                | +                   | +                           |
| Washoe County | 3     | 2                   | 51                    | +                | +               | +                | +                   | +                           |
|               | 7     | 2                   | 69                    |                  |                 |                  |                     |                             |
|               | 10    | 2                   | 20                    |                  | +               | +                | +                   | +                           |

*Note.* Anchorage has a single SEL construct that has shown positive change in the three CDI implementation years relative to the trend in the three years prior to the CDI. This analysis is described in the text.

### Student Outcomes From Extant Student Records

The impact of CDI on student academic and behavioral outcomes was analyzed for all eight districts in the study. Academic outcomes include reading and mathematics standardized test scores and grade point average (GPA). Behavioral outcomes include attendance, suspensions, and expulsions. The available outcomes (with sufficient longitudinal data) vary across district. The outcomes included for each district are listed in earlier in this report in the Methods section (Table 15).

These districtwide analyses constitute a relatively blunt test of the CDI. No district was targeting every school for improvement in SEL, and in all districts other initiatives (e.g., Common Core State Standards, changes in teacher and school leader evaluation systems) and historical factors (e.g., local recession and recovery) likely influenced these outcomes. The purpose of these districtwide intent-to-treat analyses is to discern whether there are common patterns of change across different districts, each with its own context, as they implement the CDI in their own ways. Overall, we saw that findings for students’ academic performance were more positive in CDI implementation years than in the three years before CDI in Cleveland, Chicago, and Nashville. In Washoe County, achievement was higher in the first year, but lower in the second. Findings for attendance were mixed, but outcomes for discipline<sup>9</sup> were more positive (Austin and Cleveland showed improvements; there was no change in Nashville; in Washoe County, suspensions were higher after the CDI started).

The change in student outcomes since the inception of CDI is presented separately for each district.

- **Anchorage.** As a Cohort 1 district, Austin started planning in 2010–11, and therefore has three years of implementation extant data (2011–12, 2012–13, and 2013–14). AIR had sufficient data to examine changes at the district level in reading and mathematics achievement (Grades 3–8 SBA proficiency and Grades 10–12 HSGQE proficiency), student graduation, the number of disciplinary referrals, and dropouts.

<sup>9</sup> Note that when we discuss discipline outcomes, we are referring to counts of suspensions or expulsions. This report does not examine disparities in discipline outcomes.

- The number of disciplinary referrals was significantly higher in the first two years after implementation of CDI.
  - There was a higher dropout rate in the first year after CDI implementation, but no significant differences in the two following years from the pretrend.
  - Mathematics SBA proficiency rates (Grades 3–10) were significantly higher in the second year of implementation, but not significantly different from baseline in years 1 or 3 post implementation.
  - Mathematics HSGQE proficiency (Grades 10–12) was significantly lower in all three postimplementation years.
  - Reading SBA proficiency rates (Grades 3–10) were significantly lower in year 2 and significantly higher in Year 3.
  - Reading HSGQE proficiency (Grades 10–12) was significantly lower in all three postimplementation years.
- **Austin.** As a Cohort 1 district, Austin started planning in 2010–11, and therefore has three years of implementation extant data (2011–12, 2012–13, and 2013–14). AIR was able to examine changes in attendance, suspensions, and expulsions in Austin. Because Texas switched achievement tests from TAKS to STAAR at the same time of the intervention, the district-level ITS could not examine changes in achievement (due to the change in test score metric). However, achievement changes are examined within-district (with respect to SEL focus and non-SEL focus schools) later in this report.
    - The attendance rate was significantly higher in the first two years after implementation of CDI than it was prior to implementation. In the third year, attendance was significantly lower than pre-CDI.
    - The number of students suspended at least once were significantly lower in all postimplementation years.
    - Expulsions were significantly lower in the second and third years after implementation.
  - **Cleveland.** As a Cohort 1 district, Cleveland started planning in 2010–11, and has three years of implementation extant data (2011–12, 2012–13, and 2013–14). Extant data from Cleveland included reading and mathematics achievement scores, GPA, and suspensions.
    - Reading and mathematics scale scores were significantly higher in all three years after CDI implementation in comparison to scores prior to CDI implementation.
    - Student GPAs were higher in all three years after CDI implementation. The first two years, although higher, were only marginally statistically significant. Year 3 was significantly higher than the pre-CDI average GPA.
    - Student suspensions were significantly lower in the first and third year after CDI implementation. However, in the second year after CDI (2012–13), the number of students suspended at least once was significantly higher than in the years prior to CDI.

- **Chicago.** As a Cohort 2 district, Chicago started planning in 2011–12, and has two years of implementation extant data (2012–13 and 2013–14). AIR had sufficient data to measure post-CDI changes in reading and mathematics achievement, GPA, and attendance.
  - Reading and mathematics scores were significantly higher in both the first and second year after CDI implementation than in the years prior to implementation.
  - GPA was significantly higher in both years after implementation of the initiative.
  - Attendance rates were significantly lower in both post-implementation years
- **Nashville.** As a Cohort 2 district, Nashville began planning in 2011–12 and has two years of implementation data (2012–13 and 2013–14). AIR was able to examine changes in reading and mathematics scores, Algebra 1 scores, English 1 and 2 scores, GPA, attendance, suspensions, and expulsions.
  - Scores for Algebra 1, English 1, Reading (Grades 3–8), and Mathematics (Grades 3–8) were significantly higher in both years after the implementation in CDI than in years prior to the initiative. English 2 scores were also significantly higher in the second year after implementation.
  - GPA was significantly higher the second year after CDI implementation.
  - The attendance rate was significantly higher both years after the implementation of CDI than prior to CDI.
  - There were no significant changes observed for either suspensions or expulsions.
- **Washoe County.** As a Cohort 2 district, Washoe County began planning during 2011–12 and has two years of implementation data (2012–13 and 2013–14). Longitudinal data existed to examine student outcomes with respect to reading and mathematics achievement scores, as well as student suspensions.
  - Changes in reading and mathematics scores after the implementation of CDI were mixed. Scores were significantly higher in the first post-CDI year, but significantly lower in the second year postimplementation.
  - Suspensions were significantly higher in the first two years after the implementation of CDI than in the years prior to the initiative.

### **School Contrasts: Student Outcomes From Extant Student Record Data**

In addition to the main ITS models for each district, AIR also examined the extent to which post-CDI-implementation change in student academic and behavioral outcomes differed between those schools identified by the districts as having an SEL focus, and other schools. As described in the methods section of this report, these analyses were conducted using multiple baseline CITS models. Results are presented for the six districts with SEL focus schools (Cleveland and Oakland do not have contrasts available).

As reported earlier, the schools that the districts have labeled as focusing on SEL did not have different staff-reported SEL implementation scores than did other schools. The contrasts may have been weakened by districtwide effects, other schools may be engaged in their own SEL

efforts, or some focus schools may have had low levels of SEL implementation. The analyses show that schools with focus or nonfocus designations were not very different with respect to students' educational outcomes.

- **Anchorage.** There are two separate cohorts of SEL focus schools in Anchorage (starting in 2011–12 and 2012–13).
  - Schools implementing an SEL-focused approach (called the SEL Implementation and Sustainability Process, or ISP) in 2011–12 had higher graduation rates in the CDI implementation period than schools not implementing the CDI-related ISP.
  - Reading proficiency rates were significantly higher in the CDI implementation period (Grades 7 and 8) for schools starting an SEL-focused approach in 2012–13 in comparison to schools not implementing such an approach.
- **Austin.** There were three separate cohorts of SEL-focused schools in Austin (starting in 2011–12, 2012–13, and 2013–14).
  - There were no significant differences between SEL focus and non-SEL focus schools with respect to reading and mathematics achievement, suspensions, or expulsions.
  - Attendance differences between SEL focus and non-SEL focus schools were mixed. During their first year of SEL implementation, focus schools showed significantly higher attendance rates. However, in the second year of implementation, attendance was significantly lower. Schools in their third year of implementation of SEL focus activities showed no significant changes from preimplementation in comparison to non-SEL focus schools.
- **Chicago.** Chicago had two cohorts of SEL focus schools (starting in 2012–13 and 2013–14).
  - There were no significant differences between SEL focus and non-SEL focus schools with respect to reading test scores, mathematics test scores, or GPA.
  - During their second year of implementation, attendance was significantly lower in SEL focus schools than in non-SEL focus schools.
- **Nashville.** There was a single cohort of SEL focus implementing schools which started in 2013–14 in Nashville.
  - Attendance was higher in SEL focus schools post CDI implementation, although the result was only marginally significant.
  - Mathematics scores were significantly higher in 2012–13 for SEL focus schools in comparison to nonfocus schools. However, no significant differences were found for 2013–14. There were no significant differences for ELA.
- **Washoe County:** There was one cohort of SEL focus schools, which started in 2012–13 in Washoe County. No significant differences were found based on school group with respect to reading scores, mathematics scores, or suspensions.

## Association of School SEL Implementation Activities and Student Outcomes From Extant Student Record Data

AIR analyzed the extent to which implementation scores based on the staff survey predicted student academic and behavior scores. To conduct this analysis, implementation scores from the staff survey from 2012–13 and 2013–14 were aggregated to the school level and then fit as predictors of student outcomes in a multilevel regression model, which controlled for student demographics. Four districts administered the full staff survey in 2013–14, allowing for calculation of the overall implementation score (Anchorage, Chicago, Cleveland, and Nashville).

- **Anchorage.** In 2013–14, schools with higher implementation scores tended to have significantly lower numbers of disciplinary referrals than schools with lower implementation scores.
- **Cleveland.** Schools with higher implementation scores tended to have significantly higher reading and mathematics scores on state achievement tests. In addition, GPAs were higher and suspensions were lower in schools with greater overall implementation scores.
- **Chicago.** There were no significant differences in students reading scores, mathematics scores, attendance, or GPA in relation to the overall school SEL implementation score from the staff survey.
- **Nashville.** GPAs and mathematics scores (but not reading scores) were significantly higher in schools with higher implementation scores. Attendance was higher and suspensions were lower in schools with greater overall implementation scores. However, Algebra 1 scores were significantly lower in higher-implementing schools.

### Implementation Contrasts

To extend our understanding of how our measure of implementation was related to students' educational outcomes, we conducted an exploratory analysis that involved identifying the 20 percent of schools with the highest implementation scores and contrasting outcomes with those schools that were in the lowest 20 percent for SEL implementation. We then applied our quasi-experimental CITS model, which includes student-level covariates (for gender and race/ethnicity), cohort-level covariates, and random effects at the school level. Results for each district with data appropriate for this analysis are as follows:

- In **Anchorage**, there were no significant differences between high- and low-implementation schools with respect to any extant variable.
- In **Cleveland**, high-implementation schools were significantly higher in mathematics (all Grades 3–8), but significantly lower in GPA in the years following CDI implementation.
- In **Chicago**, high-implementation schools were significantly higher in reading (all Grades 3–8) and GPA in the second year of implementation.
- In **Nashville**, high-implementation schools were significantly higher in English 1 proficiency in the second year of CDI implementation.

## General Discussion

The implementation report stated that “Implementation findings for the CDI are consistently positive,” and that based upon AIR’s examination of the implementation rubric, that districts are progressing overall and are continuing to achieve higher levels of SEL implementation each year.” This outcomes report, based on two and three years of implementation of this district-level initiative, has begun to show some positive results as well as continuing to show a larger number of non-significant and a few negative findings. School climate which was the one school level indicator of interest in the CASEL theory of action, has continued to show gains in the two districts with stable climate measures. Although improvement in students’ social and emotional competence showed a mixed picture overall, four measured districts (Anchorage, Austin, Chicago, and Nashville) showed consistent improvement in skills for students in Grade 3. Most analyses by demographic subgroups showed no changes in SEL skills over time. Achievement improved consistently across subjects and years in three out of four districts measured and superintendents and chief academic officers reported that the focus on SEL was contributing both to teacher quality and student’s ability to demonstrate the academic behaviors demanded by the deeper learning and the Common Core State Standards. Findings for attendance were mixed, but discipline outcomes generally were more positive during the CDI implementation period than in the years before the planning phase, and superintendents perceived that SEL was contributing to reductions in exclusionary discipline. Implementation appears to matter, and when we examined how student outcomes related to implementation, we found that for two out of three districts where we could do these analyses, there were positive associations between implementation and student outcomes. Our analyses did not discern significant differences between the focus and non-focus schools in terms of teacher survey reports and student outcomes.

In this section, we dig more deeply into the quantitative results from our analysis of school and student outcomes. Our analysis plan involved the systematic progression from intent-to-treat analyses to analyses of outcomes as a function of school implementation. The broadest tests were of districtwide effects on student educational outcomes. These were followed by tests (where feasible) of schools that districts had identified as having an SEL focus as part of the CDI work (the school contrasts). Finally, we tested the relationship of school SEL implementation to student outcomes. We address implications of these findings for practice and research.

### School Implementation

According to the CDI theory of action, for the district-level initiative to make a difference for students, it must change practice at the school level. Findings to date showed that a large majority of schools were rated by their staff members as being in the moderate level of implementation. Empirically based standards are not available to help us know whether this is a “good enough” level of implementation, nor do we understand fully how our measure of school implementation relates to local standards for fidelity and dosage, but we hope that three more years of data will provide insight into these matters. We did observe that on our measure, Anchorage and Chicago schools in particular were rated quite highly for professional development, teacher attitudes, schoolwide integration, and classroom-based practices.

In both Cleveland and Chicago, staff who identified their level of instruction as prekindergarten had significantly higher SEL scores than did staff at other instructional levels. This result is consistent with other research and practice knowledge that indicates a stronger emphasis on social and emotional skills in preschool compared to K–12 settings. Some evidence for a strong focus on social and emotional development in preschool is evidenced by the far more common establishment of standards for social and emotional learning in preschool (Dusenbury, Weissberg, Goren, & Domitrovich, 2014).

Examining the staff SEL survey scores across focus and nonfocus schools serves as a sort of implementation check: Are schools identified by the district’s social and emotional learning leaders in fact engaging in more SEL activities than schools not so identified? We must note that there may be effects of districtwide activities appearing in the nonfocus schools, and this is suggested by the interviews we conducted in 2014. Results of the focus school analysis showed relatively few differences. In both Nashville and in Washoe County, the large majority of differences between focus and nonfocus schools were not statistically significant. In Chicago, the focus schools were significantly higher than nonfocus schools in the first implementation year (2012–13), but in 2013–14 the focus schools were not only lower than they had been in 2012–13, but they were also significantly lower than the nonfocus schools in 2013–14.

A second implementation check involves looking not at whether the district identified a school as having an SEL focus, but at the scores from that school on the staff SEL survey. Regardless of intended implementation status, this measure tells us (the degree that respondents are representative of their schools) how well respondents think their school is doing at implementing SEL activities that are in the CDI’s school theory of action. Schools that are not identified as having an SEL focus may be engaged in meaningful activities related to developing their students’ social and emotional skills. Although the school contrasts may not pick this up, analyses by staff SEL survey scores should do so.

The steady improvement in district-level implementation of the CDI theory of action is not yet evident at the school level. Schools are still at moderate levels of SEL implementation overall. However, in about half the schools that implement SEL more fully, student SEL tends to be higher.

We found that for half of the 12 grades measured across four districts, there was a consistently positive, statistically significant association between SEL implementation and student social and emotional competence. Although this relation is not causal, and it was only seen in half the observed grades, it still suggests that higher implementation of SEL activities sometimes covaries with student SEL outcomes, and this is consistent with many studies of implementation.

## **School Outcome: School Climate**

In a prior study of the PATHS SEL program implementation in Grades PK–5 in Cleveland, we observed that in the second year of implementation (2011–12), as teacher ratings of implementation increased, so too did elementary students’ report of safety, challenge, teacher support, and peers’ social competence. As the implementation of social and emotional learning improved, so did students’ perception of the quality of school climate. These findings suggest that schools with better implementation of PATHS also had better school climate.

Last year, we saw that in Anchorage and Cleveland, school climate in the first two years of CDI implementation was significantly higher than in the two years before planning began. This year, we were able to replicate these effects: Both districts continued to show consistent gains in school climate in the CDI implementation years compared to the three years prior to CDI implementation. However, unusual patterns of student participation in the Anchorage survey require that we express caution about interpreting the findings for that district.

## Student Outcomes

The CASEL theory of action for the CDI posits that positive changes in students' social and emotional competence is a proximal outcome, and academic outcomes (student achievement, attendance, suspensions) are distal. We have seen that implementation of SEL activities remains moderate in most schools and is not significantly associated with whether a school has a district-identified SEL focus. However, our measure of implementation was significantly positively associated with students' social and emotional competence in half of the grades tested.

Given that school-level SEL implementation remains modest overall, it is consistent with the theory of action that for the most part, we did not see significant change over time in students' **social and emotional competence** across districts and grades.

Although overall there is not consistent change in students' social and emotional competence, both Austin and Nashville showed improvement in Grade 3.

However, in two of four measured districts, a majority of SEL outcomes were positive for one or two of the three grades tested. In both Austin and Nashville, there was significant positive change in Grade 3 over the CDI period for all measured social and emotional competencies. Nashville seventh-graders also showed statistically significant improvement in three out of five competence areas. These findings are consistent with the expectation that the use in each of these districts of an evidence-based social and emotional learning program in the elementary grades (Second Step in Austin and Responsive Classroom in Nashville) should influence students' social and emotional skills.

Cleveland, which also uses an evidence-based program for all elementary schools (PATHS), did not show improvement in measured student social and emotional competence from 2013 to 2014. This could be because the CDI-related interventions poorly implemented or are not effective. Alternatively, it may be because Cleveland began implementing PATHS before the CDI started and the timing of gains mismatches the CDI analysis. An earlier evaluation of that program by AIR (using an older version of the teacher rating instrument) did show improvement in the first two years of full PK–5 PATHS implementation. Student scores did not change over the last two years of CDI implementation, but that may simply mean that they remained at a posttreatment level. Anchorage also showed improvement in SEL for students in all grades. Given the observed peak in SEL scores in 2011, this change appears to predate the CDI implementation by one year. There were few changes in student social and emotional competence in high school, consistent with this being less of a focus by most districts.

Students' **academic and behavioral outcomes** in the CDI implementation years, compared to the years prior to CDI implementation, continued to be positive overall when examined districtwide. In three out of four districts where academic performance could be measured (i.e., performance on state achievement tests and GPA where available), outcomes were significantly

higher in the CDI implementation years. In the fourth district, outcomes were higher in the first year, but lower in the second. Findings for attendance were mixed, but outcomes for discipline were more consistently positive (except in Washoe County). When student educational outcomes were examined as a function of staff-reported implementation of SEL activities, in Cleveland and Nashville, student outcomes in the areas of achievement, attendance, and behavior were all more positive when school SEL implementation was higher. We did not see this association in the Chicago CDI schools.

For student outcomes from educational records, whether a school was supposed to be focusing on SEL activities did not seem to make a meaningful difference in achievement, attendance, or discipline. This was true for both staff survey results (except in Chicago CDI schools) and student social and emotional competence. Again, our interview data suggest the importance of districtwide activities such as integrating SEL with the Danielson pedagogical framework and SEL standards with the Common Core State Standards. These contrasts may be weakened by effects of districtwide SEL leadership and professional development activities influencing nonfocus schools, or nonfocus schools having a focus on SEL apart from the CDI work.

The more positive findings for the relationship of our school SEL implementation measure to student outcomes suggests that the focus/nonfocus designation, which is an intent-to-treat status, may not matter as much as actual implementation. This is particularly the case when the superintendents focused on the importance of districtwide leadership and activities. One superintendent told us, “I think that once you dedicate an entire office to this work, people understand that it’s important. It’s embedded in what I think our district culture and our theory of action is. Every opportunity I have I’m talking about it and how it benefits our children. I’ve tried to take it away from it’s the thing to do for poor minority children who are acting out, that it’s good for all our children.”

## Implications

This report comes at a time when the Cohort 2 districts have not yet finished their first three years of implementation, and all of the districts have another three to four years of CDI work ahead. It is still early in the process to expect notable change at the student level from this district-level initiative. Ideally, summative statements about this initiative would not be made before five to seven years of implementation.

It may be helpful to compare the course of the CDI to another complex, multicomponent reform effort: comprehensive school reform (CSR) (Borman, Hewes, Overman, & Brown, 2003). A meta-analysis of CSR effects showed that schools implementing these models for five years showed achievement advantages that were nearly twice those for CSR schools implemented for fewer years. After seven years of implementation, the effects were more than 2½ times the magnitude of the overall CSR impact ( $d = .15$ ). In addition, schools that had implemented CSR for three to five years were more likely to experience statistically significant associations between implementation and achievement (Aladjem et al., 2006). Effects were most likely to be observed when three conditions were met—high levels of implementation, implementing the model well during Years 3–5, and uniformity of implementation across components. Based on these experiences with the implementation of complex changes in schools, it seems reasonable that CDI effects on students could possibly take more time to develop.

At this time, our report of the evaluation of the CDI is designed to determine the extent to which proof points exist regarding systemic support for SEL in districts. The first proof point relates to feasibility and usefulness: With support from NoVo and with CASEL's technical assistance, can districts successfully implement policies and practices that make SEL an essential part of education? As reported in the implementation report, the answer is yes: Districts can implement SEL practices systemically and improve in the quality of this implementation over time. The second proof point relates to impact: Does participation in the CDI result in better outcomes for students? Overall, the quantitative answer is still emerging. The social competence outcomes in Austin and Nashville were positive at Grade 3, as were the educational outcomes in those two districts as well as Cleveland. However, school implementation is not yet at a high level in most schools, and positive student results were not yet evident across most grades or most measured outcomes in any district.

Although the quantitative proof point is still emerging, our qualitative findings are already compelling. Districts have sustained and in fact deepened their commitment to SEL in spite of changes in the superintendency in all eight districts. Language from two superintendents, the first from a Cohort 1 district, the second from a Cohort 2 district, neither of whom were superintendents when the district joined the CDI, suggest the importance and promise of this work, both within and across districts:

I think we're at a point now where we do see SEL as something, and again it's probably still a little more vision than it is the heart of implementation, it's what we do, it's who we are, it's like in our DNA and that's what we think about. This is what we want for all kids, it's based around the five principles of SEL for decision making and being self disciplined and empathetic towards others and understanding how to manage their own emotions. We're seeing the benefits of that. We're seeing the outcomes and results in our different schools that have been implementing. We see some schools that have not and where we can really ramp up and support them in some way and I think just as we continue the evolution of implementation of SEL, when I look at schools that have turned the school around, it's really by using the principles that are part of SEL and I think this is going to give them another way, approach to do it whereas before it was a hit and miss. I think this will give you a better framework for us to work from. I think that comes from common vocabulary. So I think I see it also, which is also another benefit, in when the board even asked me about this particular position and they said what are you going to do or this is what we want, there was true alignment with that.

I've just been interviewing and doing the end of year eval for some of our chiefs and some of our principals and to hear them talk about the way in which they've been changing their school culture and the impact that social emotional learning has had directly in the classroom that allows for teachers to teach, you know something good is happening and that the impact is much stronger than I probably would have anticipated.... This is core and fundamental to the work that we're doing. The partnership helps to sustain the effort too. I think sometimes you get incredibly lonely trying to do it, but you know that there are other armies of believers out there who are doing and engaged in this work, so no. As long as I'm in the seat we're going to be here for the long haul.

## Next Steps

The results of the outcome evaluation this year suggest that there is good and effective work going on in the CDI, yet more remains to be done. Some questions with which we must grapple as we move forward include the following:

- 1. Why did the focus/nonfocus school distinction fail to show expected differences?** The within-district quasi-experimental analyses were intended to be a strong test of the effects of the CDI on schools and students. Yet results this year showed that district-identified focus schools were not very different from nonfocus schools for either measures of school SEL implementation or for student outcomes. What does this mean for the CDI model if focus schools did not have higher SEL implementation than nonfocus schools? Can any SEL implementation be attributed to the school-level CDI work? In 2015, we have proposed collecting additional information (as suggested by our technical advisory group) from district informants about the quality of school implementation. It also may be helpful to develop a strategy for targeted school visits to deepen our knowledge of the important construct of school implementation.
- 2. What does it mean that achievement has improved in four districts out of five tested?** Last year, we documented improved achievement from the period prior to the CDI to the first year of CDI implementation for all three Cohort 1 districts. This year, we could not test achievement change quantitatively in Austin due to a change in achievement tests, and we did not receive Anchorage data in time for analysis for this draft report. For Cleveland, Chicago, and Nashville (but not Washoe County), academic performance during the CDI implementation period was significantly higher than in the three years prior to the CDI. Is this a reflection of national trends toward higher achievement? Is there something common across these diverse districts that is driving this trend? Might that something be related in some way to becoming a part of the CDI?
- 3. What does the pattern of results for social and emotional competence mean?** Although 64 percent of the tests for change in social and emotional competence were not statistically significant, 24 percent were positive and 13 percent were negative. This does not include the analysis for change in SEL in Anchorage, where change for all grades was significantly positive, but the meaning of these effects is clouded by large changes in student participation. The positive effects were clustered in Austin and Nashville, particularly for Grade 3; there was a cluster of negative effects for Oakland's Grade 3. Does this pattern speak to the use of an evidence-based SEL program? If so, why were there no effects in Cleveland, where prior evaluation has shown PATHS to be effective in improving students' SEL scores? Does the lack of findings for high school, where relatively few districts have concentrated efforts, suggest that our measure is working as expected?
- 4. Is there a conceptual foundation for the pattern of school implementation findings?** One of the most striking findings in this outcome analysis was the generally consistent relationship between our measure of school SEL implementation (from the staff survey) and student outcomes (both social and emotional and educational record outcomes). We saw that in schools where staff report higher levels of SEL implementation, student outcomes tended to be higher, even when controlling for student demographics. These associations are not causal, though, and it is possible that unmeasured variables may be

driving both measures. We can conduct additional analyses to examine the correlates of measured SEL implementation and their pattern across the districts. We are also planning to validate the staff survey against informant reports of school SEL implementation.

Last year, we found significant improvements in school climate in the two districts we were able to test and significant improvements for achievement, attendance, and discipline in the three Cohort 1 districts. The large majority of findings for social and emotional competence in each district were nonsignificant last year. Compared to these 2013 results, the findings this year are incrementally more positive. School climate results were consistent with last year, with both Anchorage and Cleveland continuing to show gains over time. This year, the generally positive changes seen for Cohort 1 districts' educational outcomes were evident in two out of the three Cohort 2 districts measured. The findings for social and emotional competence were still somewhat mixed this year and about half the tests showed no significant change over time, but there was a more discernible pattern of change, with positive and negative findings clustering together.

## References

- Aladjem, D. K., LeFloch, K. C., Zhang, Y., Kurki, A., Boyle, A., Taylor, J. E., et al. (2006). *Models matter—The final report of the National Longitudinal Evaluation of Comprehensive School Reform*. Washington, DC: American Institutes for Research.
- Berends, M., Bodilly, S., & Kirby, S. N. (2002). *Facing the challenges of whole-school reform: New American Schools After a decade*. Santa Monica, CA: RAND (MR-1498-EDU).
- Bloom, H. (1999). *Estimating program impacts on student achievement using “short” interrupted time series*. New York: Manpower Demonstration Research Corporation.
- Bloom, H. (2001). *Measuring the impacts of whole-school reforms: Methodological lessons from an evaluation of accelerated schools*. New York: Manpower Demonstration Research Corporation.
- Borman, G., Hewes, G. M., Overman, L. T., & Brown, S. (2003). Comprehensive school reform and achievement: A meta-analysis. *Review of Educational Research*, 73(2), 125–230.
- Collaborative for Academic, Social, and Emotional Learning. (2012). *What is SEL?* Retrieved from <http://casel.org/why-it-matters/what-is-sel/>
- Cuban, L. (2010). *As good as it gets: What school reform brought to Austin*. Cambridge, MA: Harvard University Press.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students’ social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432.
- Dusenbury, L., Weissberg, R. P., Goren, P., & Domitrovich, C. (2014). *State standards to advance social and emotional learning: Findings from state scan of social and emotional learning standards, preschool through high school, 2014*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.
- Garet, M. S., Cronen, S., Eaton, M., Kurki, A., Ludwig, M., Jones, W., Uekawa, K., Falk, A., Bloom, H., Doolittle, F., Zhu, P., & Szejnberg, L. (2008). *The impact of two professional development interventions on early reading instruction and achievement* (NCEE 2008-4030). Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Faria, A. M., Kendziora, K., Brown, L., O’Brien, B., & Osher, D. (2013). *PATHS implementation and outcome study in the Cleveland Metropolitan School District: Final report*. Washington, DC: American Institutes for Research.
- Kendziora, K., & Osher, D. (2009). *Starting to turn schools around: The academic outcomes of the Safe Schools, Successful Students Initiative*. Washington, DC: American Institutes for Research.

National Center for Education Statistics. (n.d.). *The nation's report card: The official site for results from the National Assessment of Educational Progress*. Washington, DC: U.S. Department of Education, Institute of Education Sciences. Retrieved from <http://nationsreportcard.gov/tuda.asp>

Osher, D., Kelly, D. L., Tolani-Brown, N., Shors, L., & Chen, Chen-Su. (2009). *UNICEF child friendly schools programming: Global evaluation final report*. Washington, DC: American Institutes for Research.

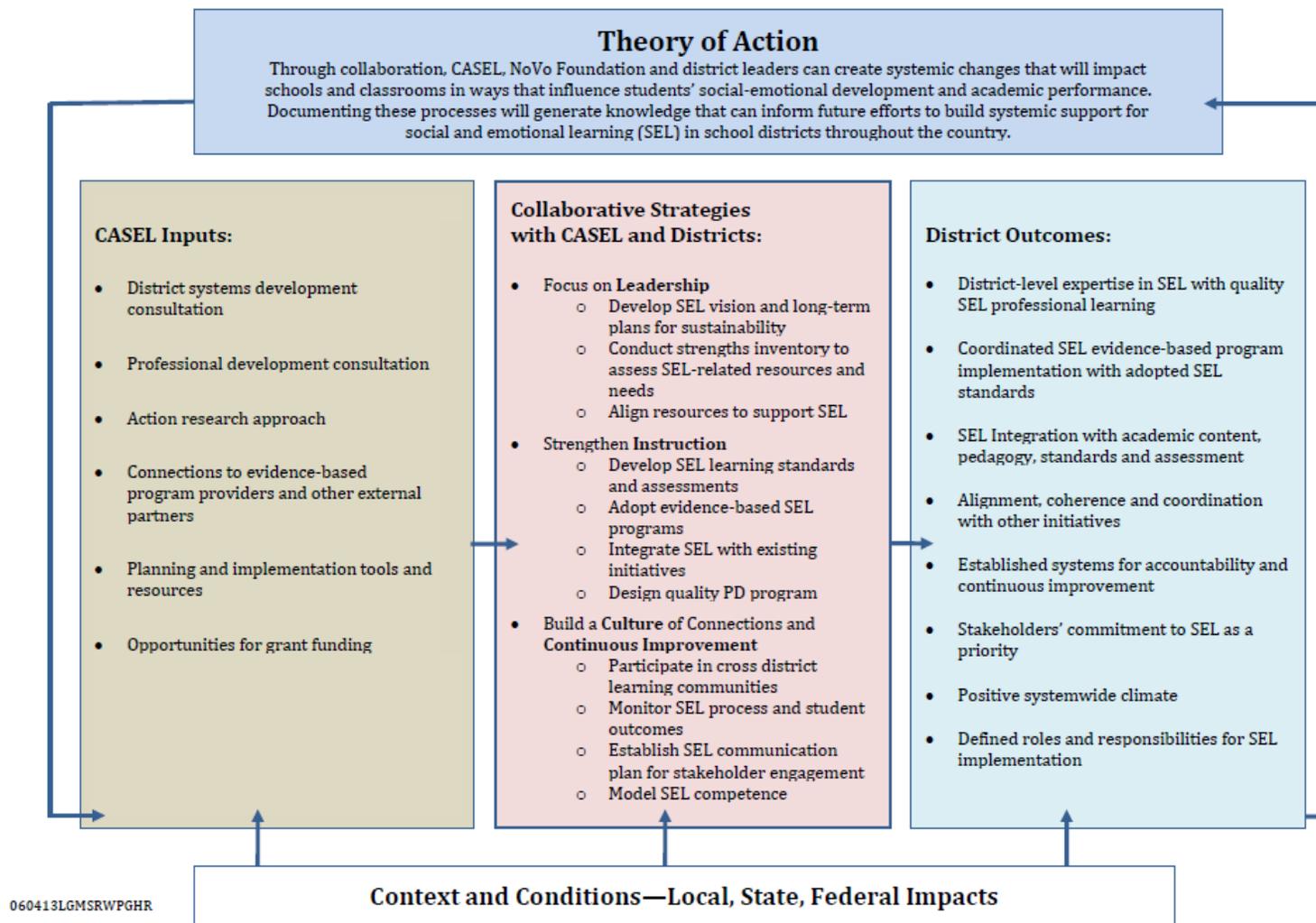
Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Winkler, A. M., Scull, J., & Zeehandelaar, D. (2012, October). *How strong are U.S. teacher unions? A state-by-state comparison*. Washington, DC: Thomas B. Fordham Institute. Retrieved from <http://www.edexcellence.net/publications/how-strong-are-us-teacher-unions.html>

# Appendix A. CASEL’s District-Level Theory of Action

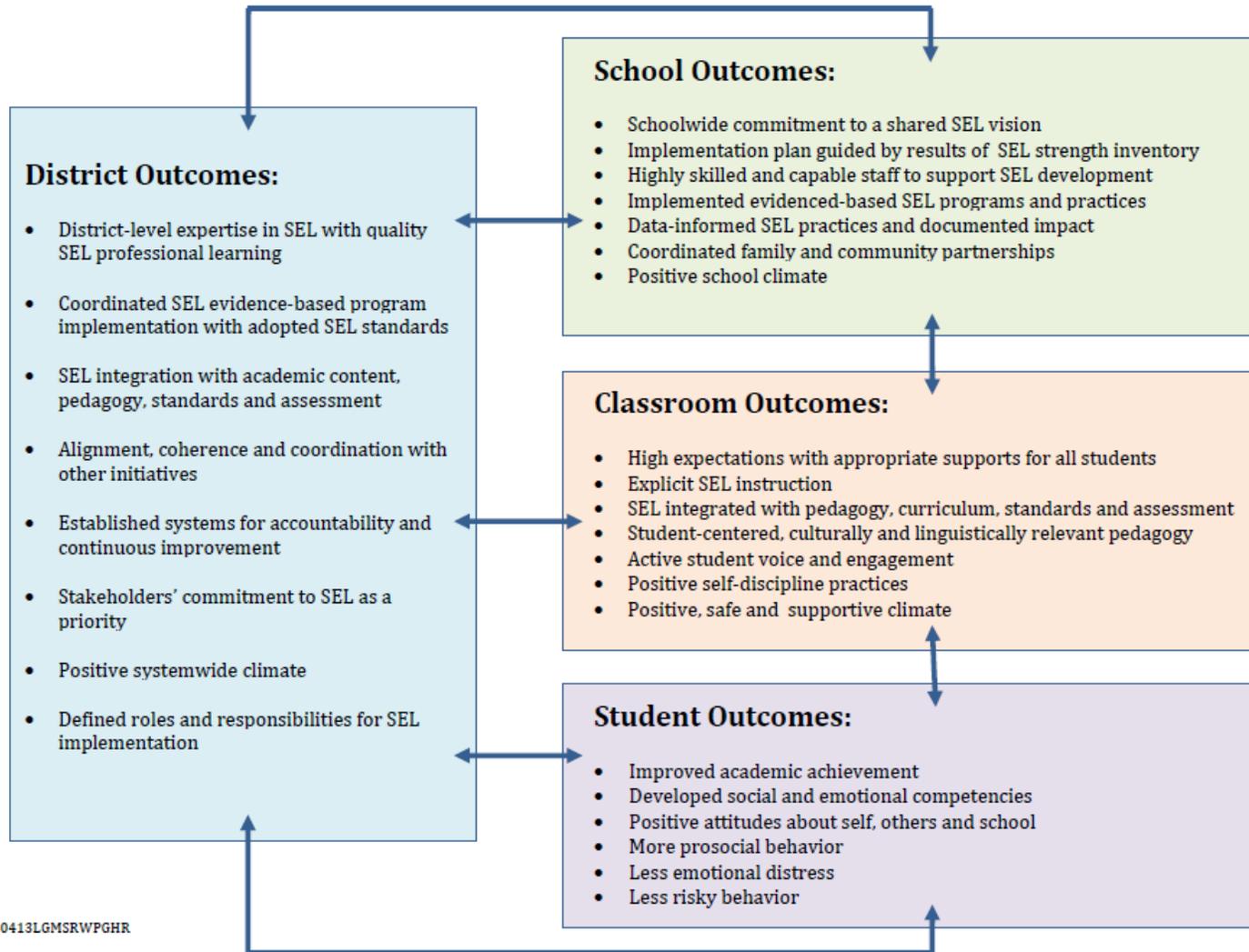
## Logic Model for CASEL’s Collaborating Districts Initiative

VERSION 1.5



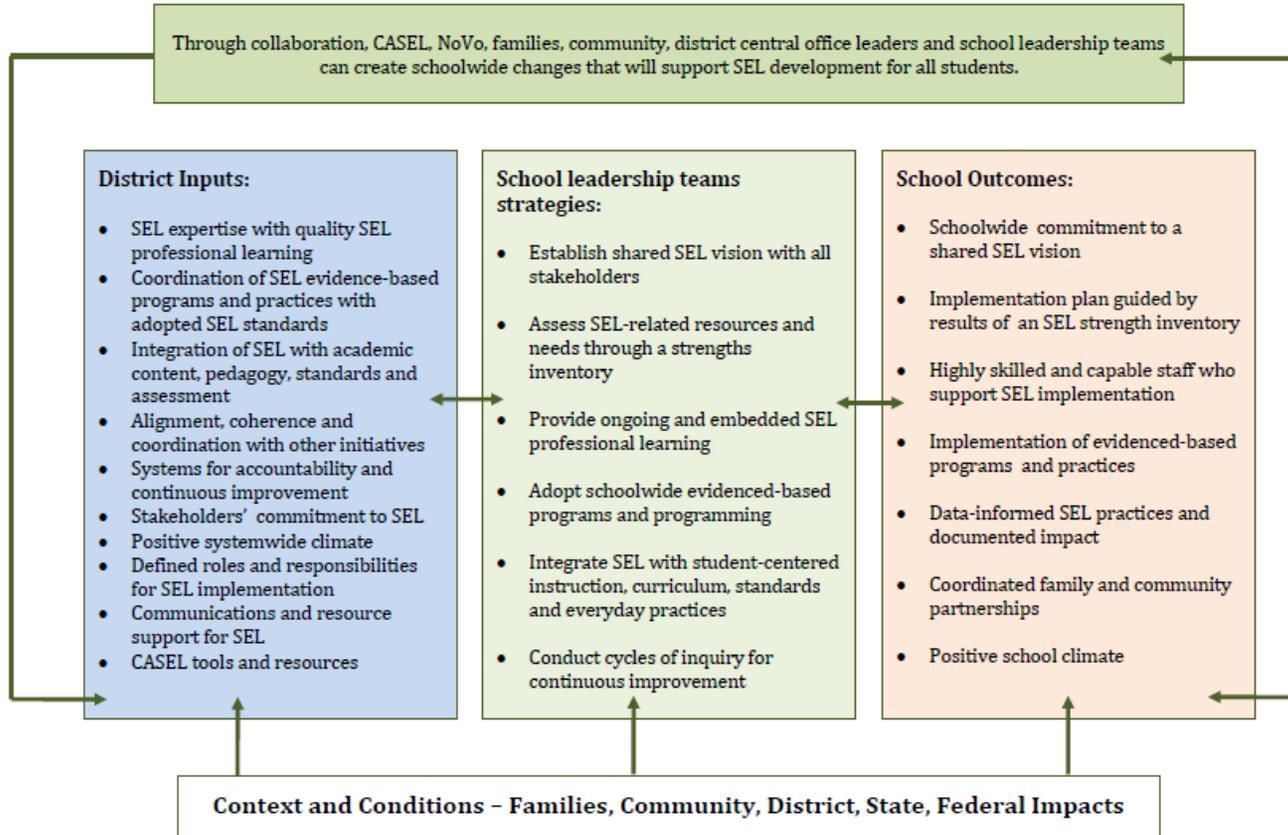
# Logic Model for CASEL's Collaborating Districts Initiative

VERSION 1.5



# Appendix B. CASEL’s School-Level Theory of Action

## CASEL’s Collaborating Districts Initiative School-Level Theory of Action VERSION 1.5



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## Appendix C. Analytic Methods and Limitations

### Analytic Methods: Student Outcomes From Extant Student Record Data

To examine the impact of CDI on students’ academic and behavioral outcomes, AIR fit a series of district-level ITS models using extant data received from each district. Different models were fit to examine the impact of CDI at the district level as well as at the school level within district (comparing SEL schools to non-SEL schools).

Interrupted time series analysis is a method for examining the impact of a program or intervention by analyzing changes in the trend of outcome data over time. This research design uses the pretrend in the outcome variable (e.g., student test scores) as a comparison for the outcome measurements obtained after the program is implemented. Changes in the overall level of the outcome (intercept change) or its slope over time provide evidence that the program is having an impact on the district. This design can be strengthened by adding either a comparison group (equivalent or nonequivalent, as in a comparative ITS design), or by having multiple cohorts of schools implementing the program (or certain aspects of the program) at staggered times (i.e., a within-district multiple baseline comparative ITS design).

Because the first year of CDI implementation consists primarily of district planning, there is no anticipated impact on student outcomes during this year. However, the planning phase does not truly represent an “untreated” year. Therefore, AIR (in consultation with CASEL and the technical advisory group) dropped this year from models of program impact. Table 14 shows the academic years in which Cohort 1 and Cohort 2 schools are in their preimplementation, planning, and postimplementation years.

**Table 14. Implementation and Planning by Cohort and District**

| District      | 2007–08 | 2008–09 | 2009–10 | 2010–11  | 2011–12  | 2012–13 | 2013–14 |
|---------------|---------|---------|---------|----------|----------|---------|---------|
| Cohort 1      |         |         |         |          |          |         |         |
| Anchorage     | Pre     | Pre     | Pre     | Planning | Post     | Post    | Post    |
| Austin        | Pre     | Pre     | Pre     | Planning | Post     | Post    | Post    |
| Cleveland     | Pre     | Pre     | Pre     | Planning | Post     | Post    | Post    |
| Cohort 2      |         |         |         |          |          |         |         |
| Chicago       |         | Pre     | Pre     | Pre      | Planning | Post    | Post    |
| Nashville     |         | Pre     | Pre     | Pre      | Planning | Post    | Post    |
| Oakland       |         | Pre     | Pre     | Pre      | Planning | Post    | Post    |
| Sacramento    |         | Pre     | Pre     | Pre      | Planning | Post    | Post    |
| Washoe County |         | Pre     | Pre     | Pre      | Planning | Post    | Post    |

The ITS model projects what student performance *would have been* in the absence of the intervention during a multiyear follow-up period after the program was introduced. This projection is based on the pattern of student performance during the multiyear baseline period,

which is projected into the postintervention period. The difference between the actual and projected student performance provides an estimate of the effect of the reform. We estimate treatment effects for the first year of intervention and separately for each subsequent year that postintervention data are available. We are then able to track intervention impact over time as the intervention is fully implemented and students gain intervention exposure.

A three-level mixed modeling framework follows for the baseline mean model (students nested in cohorts nested in schools) for the whole district analysis<sup>10</sup>. The ITS design for the whole district model is a within-school comparison, with precohorts of students untreated, and postimplementation cohorts as the treatment group.

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<sup>10</sup> The model presented here includes a single post-CDI effect to reduce the models' complexity. The models fit as part of the 2013–14 analysis include two or three follow-up year effects, depending on the district.

$$Y_{ijk} = \beta_0 + \beta_1 Post_{jk} + \sum_{p=2}^{P+1} \beta_p X_{ijk} + \sum_{q=P+2}^{Q+P+2} \beta_q W_{jk} + \tau_k + \delta_{jk} + \varepsilon_{ijk}$$

Where

- $\beta_1$  is the estimate of the treatment effect
- $Post_{jk}$  is an indicator variable taking value 1 for years that are postimplementation
- $X_{ijk}$  are student-level covariates, with fixed coefficients  $\beta_p$
- $W_{jk}$  are cohort-level covariates, with fixed coefficients  $\beta_q$
- $\tau_k$  is a school-level random effect
- $\delta_k$  is a cohort-level random effect
- $\varepsilon_{ijk}$  is a student error term

ITS models were fit separately for each grade level for a given outcome variable (e.g., Grade 3 reading achievement scores). This approach was taken to ensure that the grade-to-grade differences in test score metrics and trends were accounted for by the models. Although analyzed separately by grade, treatment effects were aggregated across grades to produce an overall treatment effect. Furthermore, treatment effects for achievement test scores were standardized (to z scores) to allow aggregation. For all outcomes, the overall treatment effect was created by using inverse variance weights to produce a weighed mean treatment effect and weighted standard error for that effect.

Districts varied in the data they had available for inclusion in the ITS analyses, and the grades at which subject tests were offered varied across districts. The format of attendance and behavior information varied by district as well. Table 15 shows the specific measures that were used for each district. Data were analyzed separately for each grade level and then pooled at the district level for an overall estimate of the impact of CDI on the particular measure.

**Table 15. Extant Data Used in Whole-District Short ITS Analyses by Cohort 1 District**

| District  | Academic (Grade)   | Attendance and Behavior  |
|-----------|--|--|
| Anchorage | TBD  |  |
| Austin    | TAKS and STAAR Reading (3–8)<br>TAKS and STAAR Mathematics (3–8)   | Attendance rate (PK–12)<br>Suspensions (PK–12)<br>Expulsions (PK–12) |
| Cleveland | OAA Reading (3–8)<br>OAA Mathematics (3–8)<br>OGT Reading (10)<br>OGT Mathematics (10)<br>Grade Point Average (9–12)     | Suspensions (2–12)   |
| Chicago   | ISAT Reading (3–8)<br>ISAT Mathematics (3–8)<br>PSAE Reading (11)<br>PSAE Mathematics (11)<br>Grade Point Average (9–12) | Attendance rate (K–12)   |

| District      | Academic (Grade)  | Attendance and Behavior   |
|---------------|---|---|
| Nashville     | *TCAP Reading (3–8)<br>*TCAP Mathematics (3–8)<br>EOC Algebra I (8–9)<br>EOC English I (9)<br>EOC English II (10)<br>Grade Point Average (3–12) | Attendance rate (1–12)<br>Suspensions (1–12)<br>Expulsions (5–12) |
| Oakland       | CAHSEE Reading (10–12)<br>CAHSEE Mathematics (10–12)  |   |
| Sacramento    | TBD   |   |
| Washoe County | NCRT Reading (4–8)<br>NCRT Mathematics (4–8)  | Suspensions (K–12)  |

*Note.* \*TCAP student data were provided as an indicator of whether or not students were proficient or not proficient. Nashville achievement data were not modeled using assessment scale scores.

## **Analytic Methods: School Climate Outcomes**

Longitudinal data on school climate were available for Anchorage and Cleveland. In all other districts, changes in the measures used over time (Austin, Chicago, Washoe County), or lack of availability for certain years (Nashville, Oakland, Sacramento), made longitudinal analysis unworkable. To examine the extent to which student’s perceptions of school climate became more favorable after the introduction of the CDI, AIR fit a series of ITS models similar to those used to examine the impact of CDI on extant student academic and behavioral outcomes. Both of these districts are Cohort 1 districts and began CDI planning during the 2010–11 school year. Similar to the ITS models for extant achievement outcomes, the three postintervention years are 2011–12, 2012–13, and 2013–14, with 2010–11 dropped from the analysis. For Anchorage, data from 2005–06 through 2009–10 were used to establish the pretrend. For Cleveland, there were three preintervention years of data (2007–08 through 2009–10).

## **Analytic Methods: Student Social and Emotional Competence Outcomes**

Unlike the extant student outcomes (academics and behavior), social and emotional competence for seven of the eight districts cannot be used in a short ITS design because no data were collected before this evaluation began. The analysis of the district that is an exception, Anchorage, will be described in the next section.

In the seven districts without a pretrend of student social and emotional competence ratings from the same instruments, the first SEL competence scores for students were collected in 2011–12.<sup>11</sup> This was the first implementation year for Cohort 1 and the planning phase for Cohort 2 districts. A separate model was run in each of the districts and grades for which we had multiple years of survey data regarding students’ SEL competence.

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<sup>11</sup> Changes in question wording make comparisons across years in the constructs used for this report possible only from 2012–13 forward.

The models for SEL competence looked at changes in cross-sectional student SEL competence scores from one year to the next while controlling for student demographics provided by respondents (gender and ethnicity) and accounting for the clustering of students within schools. The general model for the whole-district SEL competence model can be described as follows:

Level 1: Students within schools

$$SS_{ij} = \beta_{0j} + \beta_1 Year_{ij} + \beta_p X_{pij} + \varepsilon_{ij}$$

where  $SS_{ij}$  is the student SEL competence scale score outcome of interest for student  $i$  in school  $j$ ,  $Year_{ij}$  is an indicator variable that takes the value 0 for 2011–12 scores, 1 for 2012–13 scores, and 2 for 2013–14 scores, and  $X_{pij}$  is a vector of student covariates (gender and ethnicity indicator variables).

Level 2: Schools

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

There are no Level 2 predictors (school-level variables) in the model.<sup>12</sup> The coefficient  $\beta_1$  is the effect of interest in the model, and a positive significant result indicates growth in districtwide SEL ratings over time.

## Analytic Methods: Student Social and Emotional Competence Outcomes in Anchorage

Although other districts implemented surveys of social and emotional competence while planning or beginning implementation of the program, Anchorage had an existing measure in place since 2006, when the district adopted social and emotional learning standards. This allows us to do an ITS analysis of these student survey responses in Anchorage.

These surveys we analyzed were administered in Grade 3 from the 2008–09 school year to present and Grade 7 and 10 from 2004–05 school year to present, allowing for three and five years, respectively, of data. As with all our ITS models for CDI analyses, we omitted the planning phase (2010–11). The text of all survey instruments remained consistent by the mode of administration was changed from paper forms to online surveys starting in the 2010–11 year.

$$SS_{ijk} = \beta_0 + \beta_1 Post_{jk} + \sum_{p=2}^{P+1} \beta_p X_{ijk} + R_{jk} + \tau_k + \delta_{jk} + \varepsilon_{ijk}$$

where the same terms are used as for the ITS design previously mentioned except the dependent variable is not student SEL competence scale scores and the additional variable  $R_{jk}$  is the

<sup>12</sup> The model described here is a two-level HLM (students nested in schools). For the Grade 3 teacher ratings of student social and emotional competence, data were not modeled using a three-level HLM (students nested in teachers, teachers nested in schools) despite these data having a student-teacher link because the teacher identifiers were deliberately created so that they could not be linked across time and including such links in the model would potentially hide real year-to-year changes in student outcome scores.

response rate at school  $j$  in cohort year  $k$ , and is fitted as a fixed effect. The  $R_{jk}$  term is defined as the current year response rate divided by the mean response rate in the years prior to implementation. The term is added to attempt to account for the decreased response rates after the move to online forms.

## **Analytic Methods: Association of School SEL Implementation Activities and Student Social and Emotional Competence**

Models were fit to examine the relationship between school aggregate staff SEL implementation scores on 10 constructs and student SEL ratings in Grades 3, 7, and 10.<sup>13</sup> Student SEL scores were calculated for five constructs: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. In Anchorage, a different survey was administered, and only a single, overarching SEL scale score was generated. Models were fit for three target grades in each of six sites (Anchorage, Cleveland, Chicago, Nashville, Sacramento, and Washoe County).

The data were analyzed using a hierarchical linear model with students nested in schools. An implementation score, based on the average standardized scale score for six of the 10 constructs in the staff survey, was aggregated to the school level and used as predictors in the models. Separate models were fit for each grade, district, and student social and emotional competence construct. All school aggregate staff SEL survey scores were included in the model simultaneously. The HLM can be described as follows:

Level 1: Students within schools

$$SS_{ij} = \beta_{0j} + \varepsilon_{ij}$$

where  $SS_{jk}$  is the student social and emotional competence scale score outcome of interest for student  $i$  in school  $j$ .

Level 2: Schools

$$\beta_{0j} = \gamma_{00} + \gamma_0 X_j + u_{0j}$$

where the  $X_j$  is the summary of the staff SEL predictors aggregated to the school level. If the coefficient  $\gamma_0$  is statistically significant, it indicates that a relationship exists between the staff survey implementation score and student SEL competence.

## **Analytic Methods: School Contrasts**

To test for differences in variables between SEL-focus and nonfocus schools, we used models similar to the whole-district models described earlier. For these within-district comparative ITS models (CITS), it is necessary to add additional terms to the model. In the simple model

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<sup>13</sup> For Washoe County only, the district did not administer the SEL survey to Grade 10 students, so Grade 9 students—who were surveyed—are used in the analysis instead.

presented here, it is assumed that there is a shift in the mean performance for all schools in the district after the implementation of CDI. In addition, there is an additional shift in performance for focus schools. This model can be written as follows:<sup>14</sup>

$$Y_{ijk} = \beta_0 + \beta_1 Post_{jk} + \beta_2 SEL_{jk} + \beta_3 Post_{jk} SEL_{jk} + \sum_{p=4}^{P+3} \beta_p X_{ijk} + \sum_{q=P+4}^{Q+P+3} \beta_q W_{jk} + \tau_k + \delta_{jk} + \varepsilon_{ijk}$$

where

- $\beta_1$  is the change in intercept for the whole district in post-CDI years
- $\beta_2$  is the average difference in pretrend between focus and nonfocus schools
- $\beta_3$  is the treatment effect difference for focus and nonfocus schools post CDI
- $Post_{jk}$  is an indicator variable taking value 1 for cohorts that are postimplementation
- $SEL_{jk}$  is an indicator variable taking value 1 for cohorts that are in focus schools after that school became a focus school
- $X_{ijk}$  are student-level covariates, with fixed coefficients  $\beta_p$
- $W_{jk}$  are cohort-level covariates, with fixed coefficients  $\beta_q$
- $\tau_k$  is a school-level random effect
- $\delta_k$  is a cohort-level random effect
- $\varepsilon_{ijk}$  is a student error term

CITS models were fit separately for each grade level for a given outcome variable (e.g., Grade 3 reading achievement scores). This approach was taken to ensure the grade-to-grade differences in test score metrics and trends were accounted for by the models. Although analyzed separately by grade, treatment effects were aggregated across grades to produce an overall treatment effect. Furthermore, treatment effects for test scores were standardized (to  $z$  scores) to allow for aggregation. For all outcomes, the overall treatment effect was created by using inverse variance weights to produce a weighed mean treatment effect and weighted standard error for that effect.

### Analytic Methods: School Contrasts on Student SEL Scores

Unlike the measures described in the previous section, student SEL was measured only after the program was initiated, making an ITS or CITS analysis impossible. A purely exploratory model was fit to compare focus schools to non-focus schools on student SEL.

In the simple model presented below, it is assumed that there are two separate differences across focus schools, a shift in the baseline upon initiation of focus status, and a shift in the change of SEL starting with initiation of focus status. This model can be written as follows:

$$Y_{ijk} = \beta_0 + \beta_1 SEL_{jk} + \beta_2 SELt_{jk} + \sum_{p=4}^{P+3} \beta_p X_{ijk} + \tau_k + \delta_{jk} + \varepsilon_{ijk}$$

<sup>14</sup> The model presented here includes a single post-CDI effect to reduce the models' complexity. The models fit as part of the 2013–14 analysis include two or three follow-up-year effects, depending on the district.

Where

$\beta_1$  is the change in intercept for the focus schools in post-focus years

$\beta_2$  is the change in slope for the focus schools in the post-focus years

$SEL_{jk}$  is an indicator variable taking value 1 for cohorts that are in focus schools after that school became a focus school

$SELt_{jk}$  is a slope variable taking a value of 1 for the first year a school is a focus school and incrementing up one per year after that.

$X_{ijk}$  are student-level covariates, with fixed coefficients  $\beta_p$

$\tau_k$  is a school-level random effect

$\delta_k$  is a cohort-level random effect

$\varepsilon_{ijk}$  is a student error term

This model was fit separately for each grade-level for a given SEL construct (e.g., Grade 3 self-awareness). This approach was taken to ensure the grade to grade differences in test score metrics and trends were accounted for by the models.

## Limitations

There are limitations that should be considered when reviewing the results of the statistical models included in this report. There are three main types of models used: (1) ITS or CITS models for Cohort 1 district extant academic and behavioral outcomes; (2) gain score or difference-in-difference models for student SEL competence scores; and (3) descriptive HLM models looking at the relationship among various survey constructs, implementation, and student social- and emotional-competence measures.

1. **ITS or CITS models for extant academic and behavioral outcomes.** For the whole-district models, we had no comparison districts within the state where we could conduct parallel measurement. This means that we cannot rule out the possibility that policy changes or other interventions that occurred simultaneously in the district could have led to the changes that are described here. The CITS models examining the differences between SEL focus schools and non-SEL focus schools do control for districtwide changes that occurred at the time of CDI implementation. However, they cannot control for any changes that occurred in one of the school groups and not the other, or identify the factors that contribute to the development of social and emotional competence.
2. **Gain score or difference-in-difference models.** The models for student social and emotional competence use two or three years of student SEL scores to look at both change in scores from available data between the 2011–12 school year and the 2013–14 school year (at the whole-district level) and differential change based on school implementation status (focus versus nonfocus schools). These models must be considered exploratory rather than causal; the models simply show trends through time for the districts after implementing CDI.
3. **Descriptive HLM models.** The predictive models included in this report include those looking at differences in student and staff SEL survey ratings in focus and nonfocus schools and those examining the relationship between staff survey scores, student SEL

ratings, and extant data. These models are exploratory in nature, and no causal inference should be drawn from their results.

In addition, we must note important caveats in our work because of low response rates we obtained on a few of our data collections and selection bias for school contrasts.

4. **Low response rates for surveys.** Although all but one of the 2013–14 CDI surveys administered by AIR had response rates above 50 percent, many of the earlier survey response rates were low, particularly in 2011–12, when the average response rate across all surveys was 37 percent (see Table 16). The average increase in response rates from 2011–12 to 2013–14 across all surveys was 23 percent (ranging from a 14 percent average increase at Grade 7 to a 27 percent average increase for Grade 3).

**Table 16. Response Rates for AIR-administered Surveys Across Districts, 2012–14**

| District       | Survey                       | 2011–12 Response Rate | 2012–13 Response Rate | 2013–14 Response Rate |
|----------------|------------------------------|-----------------------|-----------------------|-----------------------|
| Anchorage      | Staff                        | 50%                   | 57%                   | 43%                   |
| Austin         | Grade 3 teacher ratings      | 15%                   | 53%                   | 64%                   |
|                | Grade 7 student self-report  | 37%                   | 42%                   | 76%                   |
|                | Grade 10 student self-report | 2%                    | 37%                   | 63%                   |
| Cleveland      | Grade 3 teacher ratings      | 75%                   | 54%                   | 65%                   |
|                | Staff                        | 50%                   | 55%                   | 62%                   |
| Chicago        | Grade 3 teacher ratings      | 41%                   | 67%                   | 53%                   |
|                | Grade 7 student self-report  | 54%                   | 57%                   | 77%                   |
|                | Grade 10 student self-report | 56%                   | 83%                   | 68%                   |
|                | Staff                        | 30%                   | 70%                   | 51%                   |
| Nashville      | Grade 3 teacher ratings      | 23%                   | 78%                   | 71%                   |
|                | Grade 7 student self-report  | 57%                   | 73%                   | —                     |
|                | Grade 10 student self-report | 27%                   | 58%                   | —                     |
|                | Staff                        | 50%                   | 27%                   | 52%                   |
| Oakland        | Grade 3 teacher ratings      | —                     | 62%                   | 67%                   |
|                | Staff                        | 18%                   | —                     | —                     |
| Sacramento     | Grade 3 teacher ratings      | —                     | 22%                   | —                     |
|                | Staff                        | 22%                   | 23%                   | —                     |
| Washoe County  | Grade 3 teacher ratings      | 28%                   | 55%                   | 64%                   |
| <b>Average</b> | <b>Grade 3</b>               | <b>36%</b>            | <b>61%</b>            | <b>63%</b>            |
| <b>Average</b> | <b>Grade 7</b>               | <b>37%</b>            | <b>43%</b>            | <b>51%</b>            |
| <b>Average</b> | <b>Grade 10</b>              | <b>21%</b>            | <b>45%</b>            | <b>44%</b>            |
| <b>Average</b> | <b>Staff</b>                 | <b>37%</b>            | <b>46%</b>            | <b>52%</b>            |

In our analyses of social and emotional competence, we used a regression adjustment procedure to achieve better school estimates, which accounts for changes in the composition if the only factors affecting response rates are the demographics that are controlled for in that regression; this is unlikely. Where our response rates were lower, the potential for selection bias is greater. Where our analyses include data for which the response rate was low, we must allow that differences may not be in the construct of interest, but rather in the samples responding to the surveys. As always, caution is advised when interpreting findings for which response rates are low.

5. In this report, implementation and outcome measures are examined across contrasting groups of schools: some schools that are engaged in intentional SEL implementation efforts and other schools that were not identified by the district as focusing on SEL as part of the CDI grant. It is important to understand that none of these groups were created by random assignment; there is **selection bias present for every school contrast** examined. Focus schools may be inherently different from nonfocus schools, and differences in SEL outcomes may be due to that preexisting difference rather than to CDI. For example, in Austin, vertical teams applied to the district to implement SEL, and they were selected based on a competitive process. In Washoe County, schools were selected based on the SEL expertise of the area administrator as well as principal willingness to participate. Any of these background factors, rather than SEL implementation itself, could be responsible for any group differences observed.

## Appendix D. District Characteristics

In this appendix, we present additional detail about the characteristics of the 8 CDI districts. In **Error! Reference source not found.** we present salient facts and figures. In this appendix we also describe issues of policy, the role of teachers unions, and differences in achievement levels.

**Table 17. Demographics, Achievement, and Graduation Rates for CDI Districts, by Cohort**

|                                   | District Size |                  | Ethnicity (%)    |       |        |       | Subgroups (%) |      |                  | Achievement Rate (%)* |                   | Graduation Rate (%) |
|-----------------------------------|---------------|------------------|------------------|-------|--------|-------|---------------|------|------------------|-----------------------|-------------------|---------------------|
|                                   | # Schools     | Total Enrollment | African American | Asian | Latino | White | SWD           | ELL  | FRPL             | ELA % Proficient      | Math % Proficient | Graduates           |
| <b>Cohort 1</b>                   |               |                  |                  |       |        |       |               |      |                  |                       |                   |                     |
| Anchorage (ASD) <sup>1</sup>      | 109           | 48,229           | 6                | 16    | 11     | 44    | 14.1          | 10.8 | 42               | 78.9                  | 70.5              | 73.5                |
| Austin (AISD) <sup>2</sup>        | 129           | 86,233           | 8.7              | 3.4   | 60.4   | 24.8  | 10.0          | 27.4 | 63.0             | 80                    | 81                | 84.9                |
| Cleveland (CMSD) <sup>3</sup>     | 120           | 37,967           | 66.3             | 1.1   | 14.8   | 14.9  | 23.9          | 8.0  | 100 <sup>§</sup> | 58.3                  | 48.0              | 64.3                |
| <b>Cohort 2</b>                   |               |                  |                  |       |        |       |               |      |                  |                       |                   |                     |
| Chicago (CPS) <sup>4</sup>        | 672           | 395,071          | 40.5             | 3.4   | 45.0   | 9.1   | 13.3          | 17.0 | 85.7             | 48.0                  | 50.1              | 69.2                |
| Nashville (MNPS) <sup>5</sup>     | 154           | 81,134           | 45.3             | 4.0   | 18.6   | 31.8  | 12.0          | 14.7 | 72.4             | 40.0                  | 42.5              | 86.3                |
| Oakland (OUSD) <sup>6</sup>       | 129           | 47,194           | 28               | 15    | 43     | 10    | 10.8          | 31   | 100 <sup>§</sup> | 45                    | 44                | 62.8                |
| Sacramento (SCUSD) <sup>7</sup>   | 87            | 47,031           | 17.4             | 17.3  | 37.7   | 18.5  | 21.3          | 21.7 | 73.2             | 48                    | 47                | 85.3                |
| Washoe County (WCSD) <sup>8</sup> | 104           | 62,986           | 2.4              | 4.4   | 38.9   | 46.4  | 13.5          | 15.9 | 47.7             | 65                    | 62                | 72.6                |

|                       |              |                |             |            |             |             |             |             |             |             |             |             |
|-----------------------|--------------|----------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Sum or average</b> | <b>1,504</b> | <b>805,845</b> | <b>31.7</b> | <b>5.7</b> | <b>39.5</b> | <b>18.9</b> | <b>14.9</b> | <b>18.3</b> | <b>64.0</b> | <b>57.9</b> | <b>55.6</b> | <b>74.9</b> |
|-----------------------|--------------|----------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|

*Note.* School totals include charter and alternative schools. SWD = students with disabilities. ELL = English language learners. FRPL = eligibility for the free or reduced-price lunch program. ELA = English language arts. Since 2011–12, districts are required to report four-year adjusted cohort graduation rates. These are the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. For any given cohort, students who are entering Grade 9 for the first time form a cohort that is subsequently “adjusted” by adding any students who transfer into the cohort later during the next three years and subtracting any students who transfer out, emigrate to another country, or die during that same period. The largest ethnic group in each district is identified in **bold** text.

\*Achievement rates refer to the percentage of all students scoring proficient or above on state achievement tests. These tests and the cut scores for proficiency are set by each state and vary widely from state to state, so rates are not directly comparable with each other. Where reading and writing are tested separately, the reading scores are reported here.

§ A provision of the National Student Lunch Program allows districts to provide free meals to all students and claim 100 percent. Cleveland and Oakland both make this claim.

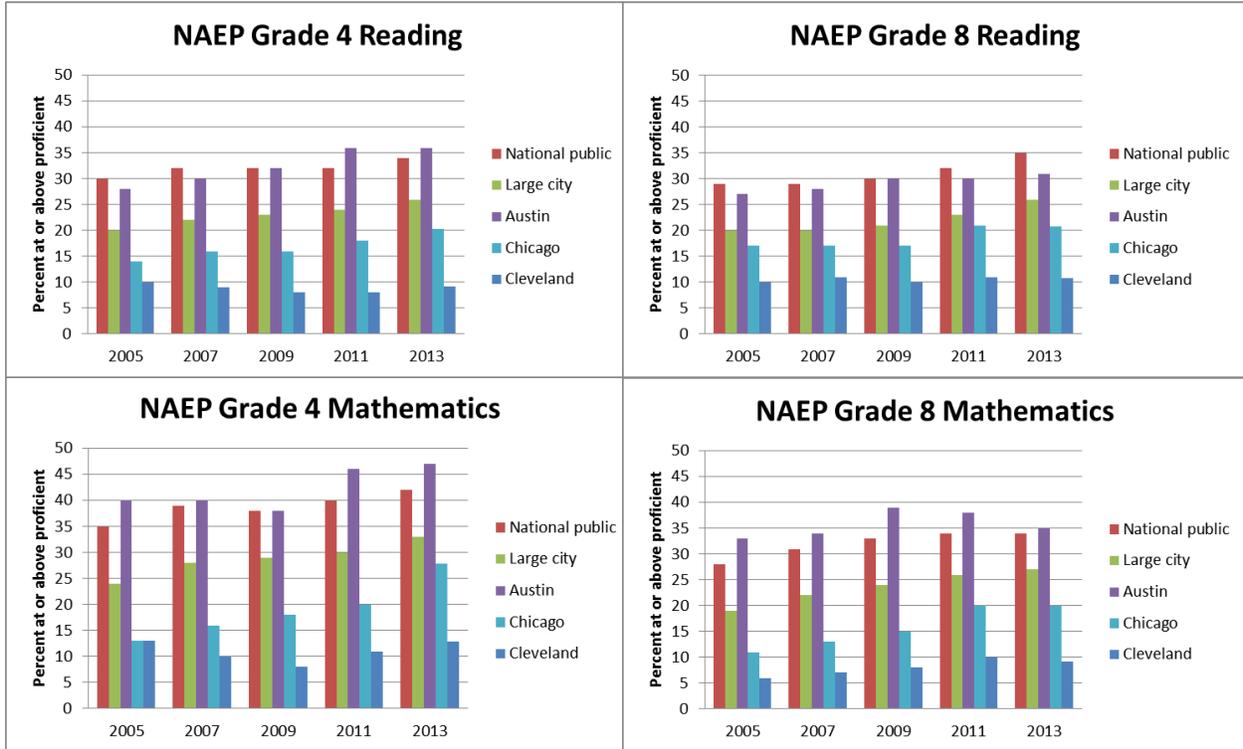
1. Anchorage demographic data and graduation rate for the 2013–14 school year, retrieved from <http://www.asdk12.org/media/anchorage/globalmedia/documents/demographics/Ethnicity13-14.pdf>. SWD and ELL data from NCES for the 2011–12 school year. FRPL data for 2013–14 retrieved from <https://www.eed.state.ak.us/tls/cnp/NSLP.html>. Achievement data for the 2012–13 Standards Based Assessment (SBA), Grades 3–10, retrieved from <http://www.eed.state.ak.us/tls/assessment/AsmtVer2013/DistrictOverview.cfm?DistrictID=5&Test=SBA>.
2. Austin demographic data for the 2012–13 school year retrieved from <http://ritter.tea.state.tx.us/perfreport/tapr/2013/static/district/d227901.pdf>.
3. Cleveland data from the 2013–14 District Report Card, retrieved from <http://reportcard.education.ohio.gov/Pages/District-Report.aspx?DistrictIRN=043786>. Achievement data retrieved from <http://reportcard.education.ohio.gov/Pages/Download-Data.aspx>.
4. Chicago data from the 2012–13 school year, retrieved from the 2013 Illinois District Report card at [http://www.isbe.net/assessment/report\\_card.htm](http://www.isbe.net/assessment/report_card.htm) (City of Chicago School District 299). Achievement data from the 2012–13 Illinois Standards Achievement Test (ISAT), Grades 3–8, retrieved from <http://cps.edu/SchoolData/Pages/SchoolData.aspx>. FRPL data retrieved from [http://www.isbe.net/nutrition/htmls/eligibility\\_listings.htm](http://www.isbe.net/nutrition/htmls/eligibility_listings.htm).
5. Nashville data from the 2012–13 school year, retrieved from the 2013 Tennessee Department of Education Report Card at [http://www.tn.gov/education/data/report\\_card/2013.shtml](http://www.tn.gov/education/data/report_card/2013.shtml). Graduation data from the 2012–13 school year, retrieved from the Nashville Public Schools Scorecard at <http://scorecard.mnps.org/Page100441.aspx>. Achievement data from the 2012–13 Tennessee Comprehensive Assessment Program (TCAP), Grades 3–8, Davidson County.
6. Oakland data from the 2013–14 school year, retrieved from the California Department of Education *DataQuest* at <http://dq.cde.ca.gov/dataquest/>. Achievement data from the 2012–13 California Standardized Testing and Reporting (STAR) Program, retrieved from <http://www.ed-data.k12.ca.us/>.
7. Sacramento data from the 2013–14 school year, retrieved from <http://www.ed-data.k12.ca.us/>. Graduation data from the 2012–13 school year, retrieved from <http://www.cde.ca.gov/ds/>. Achievement data from the 2012–13 STAR Program.
8. Washoe County data from the 2013–14 school year, retrieved from <http://www.nevadareportcard.com>. Achievement data from the 2013–14 Criterion Reference Test (CRT), for Grades 3–4, 6 and 8, as available on the Nevada Report Card.

With respect to issues that affect educational policy, the districts are also diverse. Two districts (Nashville and Cleveland) are in states that won Race to the Top grants from the U.S. Department of Education. These districts experience increased demand to address federal education reform targets, such as changing the way teacher and principal performances are reviewed, turning around low-performing schools, adopting rigorous standards and assessments, and adopting data systems to support improved instruction. All districts except Austin are implementing Common Core State Standards and are preparing for new and dramatically different achievement tests in 2015; Austin just experienced a change in achievement tests in 2012. Two districts are under mayoral control, in which the city's mayor appoints the school board and school superintendent and controls the budget: Chicago, since 1995, and Cleveland, since 1998, when the district emerged from receivership. Oakland was in receivership from 2003 through 2009 but regained local control in 2009.

The role of teachers' unions also varies by district. According to a report produced by the Fordham Foundation (Winkler, Scull, & Zeehandelaar, 2012), four CDI districts are in the top 12 states in the country for teachers' union strength (Oakland, Sacramento, Chicago, and Cleveland), whereas Austin is in a state that prohibits both collective bargaining and collection of agency fees (union dues as a condition of employment). District relations with the teacher unions also vary. For example, in 2012 Chicago experienced a seven-day teacher strike, whereas Cleveland's union collaborated with Cleveland and the mayor to secure state support of the so-called Cleveland Plan and had local support for the first tax levy in 16 years.

Although information on state achievement test performance is included in Table 17, note that except for Oakland and Sacramento, the scores reflect different state assessments, each with its own cut score for proficiency. Three of the districts (Austin, Chicago, and Cleveland) have participated in the National Assessment of Educational Progress Trial Urban District Assessment (NAEP TUDA; NCES, n.d.), which allows for direct comparison of district achievement for descriptive purposes. Results from these assessments are shown in Figure 12. Austin performs at or above the national average for all public schools and above the average for large cities. Chicago is below the large city average but has improved in recent years, particularly in mathematics. Among the 21 urban districts participating in NAEP TUDA, Cleveland is among the lower scoring districts (along with Detroit; Washington, D.C.; Milwaukee; Fresno, California; and Baltimore). Cleveland's performance levels have been essentially flat over time.

**Figure 12. NAEP TUDA Results for Austin, Chicago, and Cleveland, Compared With All Public Schools and With Large Cities**



Source: NCES, n.d.

## Appendix E. District Context and Implementation Summary

This appendix presents the key facts, current priorities, and major challenges for each district. Districts are organized alphabetically by cohort.

### Cohort 1 Districts

**Anchorage (ASD).** Anchorage students speak 91 different languages at home, the five most common of which are Spanish, Hmong, Samoan, Tagalog, and Yup'ik. In 2012–13, after having one superintendent in place for 12 years, Anchorage hired a new superintendent, Dr. Jim Browder. Dr. Browder's tenure was marked by sharp budget cuts and consequent central office reorganization, the development of a new strategic plan for the district (Destination 2020), and a more directive role for the central office in providing direction for schools. To the surprise of many, Dr. Browder announced his retirement in March 2013. The board replaced him with the former chief academic officer (CAO), Mr. Ed Graff, as of March 18, 2013—after less than 10 months on the job. Mr. Graff has stated that as superintendent he intends to continue to pursue the priorities set by Dr. Browder as defined in the strategic plan. These priorities include Response to Instruction (RTI), Common Core State Standards, and a new K–8 mathematics curriculum. SEL is not a stated objective in the plan, although Mr. Graff noted that it was embedded and integrated in the other objectives.

The centerpiece of Anchorage's SEL implementation plan is the SEL Implementation and Sustainability Process, which is a continuing-education-credit-bearing class offered to 16 elementary, 6 middle, and 8 high schools. School teams, often including school leaders, attend monthly three-hour workshops. Another major focus of Anchorage's work under the CDI has been integration. In the past year, reading strategies in three content areas have been aligned with SEL (the Reading Apprenticeship initiative), the second-grade social studies curriculum was rewritten with SEL and cultural standards embedded within lessons, and SEL was integrated with Response to Instruction.

District challenges include pressure to improve student academic performance. In 2011–12, the district failed to make adequate yearly progress (AYP) for the seventh consecutive year. In August 2011, the school board approved the adoption of a set of performance measures and goals against which to measure district progress in improving student achievement, reducing achievement gaps, and increasing graduation rates. Budget cuts, staffing reductions, and changes in leadership also continue to be challenges for the district. The ASD budget was cut by more than \$20 million in 2012–13, and the proposed budget for 2013–14 includes an additional \$25 million in cuts. A significant factor in the district's budget deficit is a continued decline in federal funding as reductions required by the Budget Control Act of 2011 (“the sequester”) take effect. Several changes in SEL organization and staffing also occurred during the past year. The district's SEL coordinator left, and the SEL PD coach retired last summer. Neither position was filled because of budget constraints. The SEL Department was incorporated into the Professional Learning Department this year, and the Executive Director of Professional Learning now has SEL coordination as part of her duties. The number of central office SEL staff has gone from nine to four in the last year.

**Austin (AISD).** Austin serves students from a range of cultural and socioeconomic backgrounds and is the CDI's one majority Latino district. It is also the highest performing CDI district academically; in 2011,<sup>15</sup> 92 percent of schools in Austin met or exceeded state accountability standards, but as documented in Cuban (2010), Austin has struggled over time with poor academic outcomes for children of color from economically disadvantaged neighborhoods. Prior to the CDI, Austin had a Safe Schools/Healthy Students grant that focused in part on positive behavioral supports. Two important current efforts are No Place for Hate, which addresses racial and ethnic disparities and the use of Child Study Teams to address the needs of students who need additional support and are at risk for poor school outcomes. Austin has an overarching Whole Child, Every Child framework, which integrates whole-child, student-centered, collaborative, cooperative, and constructivist teaching and learning principles and practices into the curriculum, culture, and climate of the school.

Austin is rolling out the CDI by vertical team (a vertical team is a high school and all its feeder elementary and middle schools). The number of schools in which SEL is being implemented more than doubled in Year 2 from 27 to 57 schools, exceeding earlier expectations; currently, five out of eleven vertical teams in the district are engaged in CDI implementation work. The district uses Second Step in K–8 together with Peace Paths and No Place for Hate. CASEL consultants reported that SEL implementation is going “spectacularly.” In particular, district coaching expertise has expanded this year as new SEL staff were added.

Challenges faced by Austin (in common with many other CDI districts) include budget-driven layoffs that went into effect in 2011–12, state pressures to focus more on achievement test scores, and lack of operational cohesion among multiple initiatives, although there have been improvements this year in coordination across initiatives and central office departments. There have also been several changes in district leadership this year, including a new CAO, a new Chief of Staff, and a new Associate Superintendent for Academics. According to interviewees, new district staff are supportive of SEL. Four new members were elected to the nine-member AISD Board of Trustees in November 2012; SEL remains a priority in the board's goal statements. During the past year, the SEL Department moved out of the Division of Special Programs and is now housed in the Curriculum Division of the Office of Academics. With the help of highly supportive local philanthropic investments, SEL staff doubled in number—from four to seven in the 2012–13 school year and then to nine for the 2013–14 school year.

**Cleveland (CMSD).** Cleveland is the one CDI district with a student population that is majority African American. It has very high levels of need. For example, 24 percent of its students are classified as students with disabilities, and all students in Cleveland receive free meals at school. Among the CDI districts, it is the lowest performing district academically. A series of academic reforms beginning with the Academic Transformation Plan in 2010 and the Cleveland Plan in 2012 are beginning to show early signs of promise.

Cleveland is in its fifth year of implementing the comprehensive Humanware initiative that focuses on improving conditions for learning through a public health approach that combines and aligns SEL with the systematic use of student support interventions and services for students who are at higher levels of risk. Major district initiatives include the adoption of the Common Core

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<sup>15</sup> There were no school accountability ratings in 2012 because of changes in the state achievement tests.

State Standards and the development of a new teacher evaluation system, which will include a focus on the conditions for learning, and the designation of 13 low-performing schools as Investment Schools targeted for investments to make rapid improvement. These schools were selected based on their academic standing, SEL needs, and special education designations. SEL staff have begun to look at school climate data from the Conditions for Learning survey, planning center information, and student support information from these schools to determine how to provide support next year. Cleveland continues to implement an evidence-based social and emotional learning program (Promoting Alternative Thinking Strategies [PATHS]) in all elementary schools.

Cleveland has been challenged by an ongoing budget crisis that has necessitated school closings and staff layoffs. These challenges have been addressed by downsizing in 2011, the passage of a levy in November 2012, and the sale of a district administration building in 2013. Cleveland has also experienced leadership changes. The district changed CEOs in 2011. The new CEO was the former CAO, who led Humanware and advocated for the universal implementation of their elementary evidence-based SEL program (PATHS). A new CAO started in August 2012, after the position had been vacant for a year. The former interim director of the Humanware department was appointed the Executive Director of the department this year.

## **Cohort 2 Districts**

**Chicago (CPS).** CPS is the third largest school district in the United States and the largest district by far in the CDI. It is focusing most of its work for this initiative in 2 of its 19 networks, which, when combined, equal roughly half the size of the smallest CDI district (56 schools and 27,700 students). Major Chicago initiatives include the adoption of the Common Core State Standards, the new teacher evaluation system, and the adoption of an extended school day. Like Cleveland, Chicago is under mayoral control. Labor relations are more contentious in Chicago, however, as indicated by a teacher strike in September 2012. Additional challenges include a large budget deficit that resulted in the closing of 54 schools. Two of the schools in the Rock Island Network, one the networks participating in the CDI, were identified for school closing in June 2013.

Chicago seated a new CEO in October 2012; the prior CEO had been in office for 17 months and, according to our interviews, had demonstrated to staff his commitment to SEL as a vehicle for changing the school system—a vision that is shared by many of the CDI superintendents. The new CEO has made a strong commitment to continuing the CDI work and recently released a five-year action plan that included an emphasis on SEL.

CPS has established a 15-member SEL implementation team in the central office to guide their programming and integration efforts. CPS has adopted an instructional framework that shows the connections among Common Core State Standards, 21st Century Skills, SEL learning standards, and other initiatives such as Full School Day with the district's teacher support and evaluation system. Implementation of systemic SEL in schools has focused on Wave 1 schools in the Rock Island (n=9) and West Side (n=7) Networks. These schools have been engaged in a pilot of CASEL's SchoolKit, which is an implementation support process for schoolwide SEL. CPS identifies three pillars for integrating SEL in schools: positive school climate, adult modeling of SEL competences, and explicit instruction. The network schools tend to focus primarily on one

of these three—that is, they may implement Foundations/PBIS (school climate), or they may choose to focus on adult modeling of SEL skills or integration of SEL skills into the school’s mission or vision.

CPS continues to be characterized by ongoing change. The school board approved several cabinet-level appointments in December 2012. New appointments include the Chief Officer of Teaching and Learning, the Chief Officer of Network Quality, the Chief Accountability Officer, the Chief Innovations and Incubation Officer, and the Chief Officer of Strategic School Support. In addition, the Director of Youth Development and Positive Behavior Supports, who served as one of the SEL leaders for the district, resigned at the end of the school year. According to multiple interviewees, the new CEO is considering a restructuring plan that would reorganize schools into fewer regions rather than the current 19 networks, which would result in a major shift in the current structure.

**Nashville (MNPS).** Nashville’s students are 46 percent African American, 33.5 percent White, and 16.4 percent Latino; 72.4 percent of the students are economically disadvantaged. The district’s major reform initiative (MNPS Achieves) targets transformation in 10 areas, each addressed by a Transformational Leadership Group. Process-oriented groups include those focused on topics such as human capital, communications, and information technology; performance-focused groups include groups working to improve outcomes for disadvantaged youth, students with special needs, ELLs, and middle and high school students.

MNPS reorganized during the 2012–13 school year; the Director of Schools (i.e., superintendent) now has 6 direct reports (rather than 12). The former Associate Superintendent of High Schools is now the CAO; he oversees the Executive Officers for elementary schools, instructional support, and innovation. The former Executive Officer for Instructional Support, who was the district’s SEL leader and who was instrumental in elevating SEL and bringing CASEL to MNPS, retired at the end of June 2013. The new SEL Director started working in MNPS in the summer of 2012.

Nashville’s plan for systemic SEL implementation includes a strong focus on integration with other initiatives (particularly project-based learning). Nashville has decided to support five SEL programs: Responsive Classroom, Ripple Effects, School Connect, Caring School Community, and Zaner-Bloser’s Voices Literature and Writing. Each of these programs offers professional learning opportunities that expand on the general SEL learning opportunities provided for central office staff, principals, and school staff. Twelve teachers will be selected as district Responsive Classroom trainers and will train other teachers during the 2013–14 school year.

The district currently benefits financially from Tennessee’s Race to the Top initiative (called *First to the Top* in Tennessee), as well as from its Safe and Supportive Schools Initiative, which focuses on the collection and use of data to improve school climate. The state received \$500 million in federal funding, \$30.3 million of which was allocated to Nashville for 2010–14. To comply with Tennessee’s First to the Top Act, Nashville is implementing a new teacher evaluation system and is adopting new goals in the areas of teachers and leaders, standards, data, science/technology/engineering/mathematics, and school turnaround. In part because of the Race to the Top award, MNPS staff report feeling overwhelmed with too many initiatives. They have placed a priority on integrating SEL with academic initiatives, such as project-based learning.

**Oakland (OUSD).** Approximately 69 percent of Oakland’s student population qualifies for free or reduced-price lunch (FRPL). A plurality of students are Latino (38.5 percent); 31 percent are African American, 14 percent are Asian, and 11 percent are White. Oakland’s former superintendent, who left in 2013, made it a priority to address the history of disparity, disadvantage, and disenfranchisement faced by the district’s students. In 2009, OUSD established a five-year strategic plan (Community Schools, Thriving Students) and a long-term vision that “serves the whole child, eliminates inequity, and provides each child with excellent teachers every day” (OUSD, 2011). The district bases this vision and strategy on three areas of focus: (1) high-quality instructional core, (2) social and emotional health and well-being, and (3) equitable opportunities for learning. On its website, the district reports that it is “California’s most improved urban school district over the last eight years.” Although the district failed to meet AYP in ELA and mathematics for the past three years, there is consistent improvement in the districts’ Academic Performance Index<sup>16</sup> (API; from 651 in 2006 to 728 in 2012; statewide API in 2012 was 788).

Oakland’s work in the CDI is guided by an SEL Design Team and is focused on SEL as a process for learning and on the development of adult social emotional competence. The district has focused on developing Pre K–adult SEL learning standards and a process for communicating and embedding those standards. The district facilitated a two-day standards institute with teachers from across the district. Oakland intends to make SEL adult learning standards an integral part of the Effective Teaching Task Force and Effective Leadership Task Force, which will define high-quality teaching and leading. After the SEL learning standards are approved by the board, the district will align recommendations for evidenced-based programs with the learning standards. Thereafter, schools will be encouraged to adopt a recommended program. Oakland has also done extensive work integrating SEL with academics and academic staff development.

As a result of severe state budget shortfalls since 2008, district funding levels have been falling each year. Passage of a November 2012 ballot measure alleviated the financial strain to some extent. Interviewees reported numerous, ongoing initiatives and minimal cross-departmental collaboration in the central office to facilitate districtwide SEL implementation. Employee turnover is also a challenge. Several district administrators recently retired or transferred to other districts. The superintendent also announced his resignation, effective June 30, 2013. A former board member has been selected as acting superintendent. The acting superintendent supports the district’s strategic plan, and the board president also reaffirmed the board’s commitment to the plan.

In August 2013, Oakland and Sacramento (and six other California districts) received No Child Left Behind waivers from the U.S. Department of Education, which provides substantial funding flexibility for Title I funds. In addition, under the waiver, nonacademic factors are worth 40 percent of a school’s grade (20 percent based on SEL metrics and 20 percent based on climate). In the coming year, we will see how this flexibility has been used.

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<sup>16</sup> The API is a single number, ranging from a low of 200 to a high of 1,000, which indicates performance on statewide testing. Its purpose is to measure the academic performance and growth of schools.

**Sacramento (SCUSD).** Sacramento's student population is more evenly distributed across races than are the other CDI districts, with 18 percent African American, 18 percent Asian, 18.6 percent White, and 36.5 percent Latino students. Almost 70 percent of students qualify for FRPL. Although the district failed to meet AYP in English language arts and mathematics for the past three years, there has been consistent API growth over the past several years. Sacramento's Strategic Plan 2010–2014: Putting Children First has launched initiatives to meet commitments to the community in three focus areas: (1) career- and college-ready students, (2) family and community engagement, and (3) organizational transformation. Although SEL-related components are integrated throughout these focal areas, the district is still in the early stages of establishing a vision for SEL.

After considerable leadership turnover for SEL in Sacramento, management has stabilized and SEL has gained traction. The SEL leadership team consists of 30 personnel from across the district and meets monthly. The four McClatchy Network schools are mentoring and guiding the next cohort of 14 schools that will be implementing SEL. Programming varies across schools, and includes Second Step, Restorative Justice, bullying prevention, and PBIS. Sacramento is integrating SEL core competences with 21st Century Skills to improve college and career readiness through Linked Learning.

Challenges include budgetary constraints, which are, in part, related to the same state budgetary crisis that Oakland faces—numerous ongoing initiatives and turnover in key staff positions that have disrupted program development and continuity. There has been turnover in the SEL Director position during the first half of the year. The current SEL Director came on as the part-time interim director in January 2013 and expects to continue through at least December 2013. The former Chief Family and Community Engagement Officer and SEL Director is now chief of staff, which has elevated the importance of SEL in the district. The solid leadership structure for SEL has been a significant indicator of progress in the CDI.

**Washoe County, Nevada (WCSD).** Washoe County is the only CDI district that is not solely urban. The county is roughly 200 miles long and 35 miles wide, bordering California and Oregon; most of the population is concentrated in the south. The northern half of the county is rural. Washoe County has the highest percentage of White students of any CDI district (48 percent). Another 37.5 percent are Latino, 4.7 percent are Asian, and 2.6 percent are African American; 44 percent of students are economically disadvantaged.

Since 2010, Washoe County's strategic plan has guided improvement efforts, including its three major initiatives: (1) Common Core State Standards, (2) the Professional Growth System (an evaluation system for teachers), and (3) multitiered systems of support. Washoe County began implementing RTI and PBIS, two major academic and behavioral support initiatives, districtwide in 2008.

Washoe County's major accomplishments in the CDI this year include developing SEL standards using the input of diverse stakeholders; providing many PD sessions related to SEL, particularly to central office staff and personnel in the 12 CDI schools; integrating SEL and Common Core State Standards, particularly through the Core Task Project (which was a three-day class over a six-week period with 30 implementation specialists on implementing SEL strategies in ELA);

and developing a communications plan. The focus has been on SEL as an integrated strategy rather than as a stand-alone program.

Washoe County faced a \$163 million reduction in its budget over the last six years, with cuts expected to continue in 2013–14. Washoe County’s prior superintendent was named National Superintendent of the Year in 2012 and then left the district last summer. A new superintendent took over in August 2012. Three new members also joined the seven-member school board in January 2013. District leaders in Washoe County are focused on integrating SEL into other district initiatives. SEL work in Washoe is led by the multitiered systems of support coordinator (who devotes 20 percent of her time to SEL) and one full-time SEL specialist. A graduate student was also hired part time to conduct an SEL needs assessment.

## Appendix F. Implementation and Outcome Measures by Level

This Appendix provides a summary of the measures used in the evaluation by level (CASEL, district, school) and indicates who provides the information, the constructs included in the measurement instrument (e.g., log, interview, survey), the number of items in the instrument, the purpose of the measures, and when they are collected.

| Measures by Level | Who                            | Constructs   | Number of Items | Purpose of Measure   | When Collected   |
|-------------------|--------------------------------|--|-----------------|--|--|
| <b>CASEL</b>      |                                |  |                 |  |  |
| Consultant logs   | Completed by CASEL consultants | Follows CASEL’s district theory of action, with 6 CASEL inputs, 10 district activities, and 3 district outcomes. <b>Inputs</b> are: (1) district systems development consultation, (2) staff development consultation, (3) action research approach, (4) connection to evidence-based program providers and other external partners, (5) planning and implementation tools, and (6) access to grant funding. <b>Activities</b> are: (1) needs and resources, (2) vision, (3) central office expertise, (4) PD programs, (5) alignment of resources, (6) communications, (7) SEL standards for PK–12, (8) evidence-based programs, (9) integration of SEL with other initiatives, and (10) continuous improvement. <b>Outcomes</b> are: (1) positive climate, (2) stakeholder commitment, and (3) SEL roles and responsibilities. | 18              | <ul style="list-style-type: none"> <li>▪ Records the purpose of each consultation</li> <li>▪ Identifies activities and outcomes</li> <li>▪ Collects ratings of how well received the consultation was</li> <li>▪ Records any issues or follow-ups</li> </ul> | Collected on an ongoing basis; reported quarterly to CASEL |

| Measures by Level  | Who  | Constructs   | Number of Items | Purpose of Measure  | When Collected       |
|--|--|--|-----------------|---|----------------------|
| Interviews with consultants, CASEL Vice President for Practice | AIR interviews each consultant team and the Vice President for Practice (conducted by phone) | Context, implementation, district outcomes, and CASEL feedback | Varies          | <ul style="list-style-type: none"> <li>▪ Records consultant perceptions of context, strengths and needs, plans, and progress</li> <li>▪ Documents consultant perceptions of barriers and facilitators to change</li> <li>▪ Documents perceptions about the initiative as a whole</li> </ul> | By June of each year |

| Measures by Level  | Who   | Constructs  | Number of Items  | Purpose of Measure   | When Collected          |
|--|---|---|--|--|-------------------------|
| <b>Districts</b>   |   |   |  |  |                         |
| SEL leader, other district stakeholders, consultant, staff, and CASEL interviews | AIR conducts interviews with up to 18 purposively selected district stakeholders each spring, including the SEL leader(s) for each district | Context; implementation; district, school, and student outcomes | Up to 20, but number of questions varies by role of respondent | <ul style="list-style-type: none"> <li>▪ Understand district context, history, priorities, and other major initiatives</li> <li>▪ Understand components of each district’s plan and why and how choices were made about focus and intensity</li> <li>▪ Examine where the districts are relative to their plans</li> <li>▪ Collect perceptions about the value of focusing on SEL and the value of the specific activities</li> <li>▪ Collect perceptions about what difference systemically focusing on SEL at the district, school, and classroom levels makes for the district, its schools, and its students</li> </ul> | April–June of each year |

| Measures by Level     | Who  | Constructs  | Number of Items                       | Purpose of Measure   | When Collected  |
|-----------------------|--|---|---------------------------------------|--|---|
| Document review       | AIR collects and reviews evidence of CDI activities  | Align with CASEL’s district theory of action explained above  | N/A                                   | <ul style="list-style-type: none"> <li>▪ Document vision, plans, activities, resource allocation, etc.</li> <li>▪ Review NoVo proposals and plans each year</li> </ul> | AIR’s team updates documents on an ongoing basis, with annual collection complete by June |
| Rubric and benchmarks | AIR completes rubrics for each district based on data collected                                | Aligned with CASEL’s district theory of action: activities and outcomes   | 13                                    | Monitor levels of engagement in CDI activities and progress toward achieving desired district and school outcomes  | Each July   |
| Staff SEL survey      | School-based and central office staff with functions related to instruction or student support | <ol style="list-style-type: none"> <li>1. Teacher attitudes (7 items)—awareness and commitment in the theory of action</li> <li>2. Change management (10 items)—combines vision, needs, and resources elements from theory of action</li> <li>3. PD (6 items)—elements in the school theory of action</li> <li>4. Classroom-based practices (5 items)—related to evidence-based programming element; only asked of teachers who report that there is an SEL program in use at their school</li> <li>5. Schoolwide integration (5 items)—element in the school theory of action</li> <li>6. Continuous improvement (4</li> </ol> | Varies by role and use of SEL program | <ul style="list-style-type: none"> <li>▪ Measures commitment to and attitudes about SEL at the district level</li> </ul>   | Annually, usually in the spring, but timing can be set by districts                       |

| Measures by Level | Who   | Constructs  | Number of Items | Purpose of Measure   | When Collected  |
|-------------------|---|---|-----------------|--|---|
|                   |   | <p>items)—element in the school theory of action</p> <p>7. Teacher practices (9 items)—measures teacher behaviors related to SEL but not specific to evidence-based programming</p> <p>8. Leadership (4 items)—reflects school leadership for SEL</p> <p>9. District support for SEL (4 items)—measures district factors related to school SEL</p> <p>10. Staff climate and culture (3 items)—relates to the school-level outcome of positive climate in the theory of action</p> |                 |  |   |
| <b>Schools</b>    |   |   |                 |  |   |
| Staff SEL survey  | Principals, school leaders, teachers, student support staff | See above   | See above       | <ul style="list-style-type: none"> <li>▪ Measures components of school-level SEL implementation</li> <li>▪ Measures commitment to and attitudes about SEL</li> </ul> | Annually, usually in the spring, but timing can be set by districts |

| Measures by Level  | Who   | Constructs  | Number of Items   | Purpose of Measure  | When Collected   |
|--|---|---|---|---|--|
| <b>Students</b>  |   |   |   |   |  |
| Student record data  | District-provided extant student record data  | Achievement (ELA and mathematics), attendance, suspensions, dropout, graduation   | N/A   | <ul style="list-style-type: none"> <li>Monitor students' educational outcomes over time</li> </ul>  | Specific dates vary depending on when the prior year's achievement data are available            |
| Social and emotional competence: <ul style="list-style-type: none"> <li>Teacher report for Grade 3 (except in Anchorage, which uses self-report)</li> <li>Student self-report for Grades 7 and 10</li> </ul> | AIR helps districts administer these surveys; the aim is to build capacity for ongoing district measurement of these outcomes | Both the teacher report and student self-report measures assess the 5 core SEL competences: <ol style="list-style-type: none"> <li>Self-awareness</li> <li>Self-management</li> <li>Social awareness</li> <li>Relationship skills</li> <li>Responsible decision making</li> </ol> | Teacher report is 20 SEL + 3 demographic items for each of up to 7 students (up to 161 items altogether)<br>Student survey has 15- and 30-item versions | <ul style="list-style-type: none"> <li>Monitor students' SEL skills</li> <li>Link with other outcomes to understand relationships with SEL</li> <li>Link with implementation data to examine how variation in SEL implementation relates to student SEL outcomes</li> </ul> | Timing varies by district; we generally prefer to add 15-item scales to existing student surveys |

## Appendix E. Staff SEL Survey Scaling and Standard Setting

The reliabilities of the individual staff scores for each of the constructs are summarized in Table E1. Sufficient reliability is important for ensuring the validity of comparing the scores of individuals with one another. They also allow for accurate use in statistical models (as is done in this report). Constructs with lower reliability reduce statistical power, reducing the likelihood of finding significant effects in the relationships among these constructs and with other outcomes. However, these data are used to compare schools rather than individuals, which somewhat mitigates these concerns.

For one of the constructs, Leadership, the Rasch reliability was calculated as 0.0, which may occur when variation in the construct scores is low relative to the amount of measurement error. This is the case for Leadership, which exhibited a ceiling effect (all ratings were very high). However, despite the Rasch reliability being 0 for this construct, the Cronbach's alpha was estimated as 0.91. Therefore, we consider it appropriate to use these scores in our analyses with the caveats just stated.

**Table E1. Individual Staff Score Rasch Reliability and Cronbach's Alpha by Construct**

| Construct                 | Rasch Reliability | Cronbach's Alpha |
|---------------------------|-------------------|------------------|
| Teacher attitudes         | 0.60              | 0.95             |
| Change management         | 0.84              | 0.84             |
| PD                        | 0.70              | 0.93             |
| Classroom-based practices | 0.78              | 0.95             |
| Schoolwide integration    | 0.74              | 0.97             |
| Continuous improvement    | 0.79              | 0.95             |
| Teacher practices         | 0.64              | 0.94             |
| Leadership                | 0.00              | 0.91             |
| District support for SEL  | 0.57              | 0.99             |
| Staff climate and culture | 0.51              | 0.92             |

*Note.* Cronbach's alpha statistics are based on raw scores rather than the scaled scores used in our analyses.

CDI evaluation team members worked with staff from CASEL and district consultants to develop a set of standards for the 10 constructs derived from the survey to delineate levels of implementation: (1) low implementation, (2) medium implementation, or (3) high implementation. These categories were designed to identify schools that were just starting to implement SEL initiatives; schools that were partially, but not fully, implementing SEL initiatives; and schools that were implementing fully. In a process driven by the expertise and experience of CASEL staff and CASEL consultants, cut scores for each of the performance levels were established and were applied to the data. The cut scores were then applied to the school average scores for each construct. The percentage of schools in the low, medium, and high implementation category for each construct was then calculated.

Staff survey scores were available and could be aggregated to the school level for four districts and one district network (Anchorage, Cleveland, Nashville, Sacramento, and Chicago Public Schools West Side Network). Although the response rates for Nashville and Sacramento were 27 percent and 28 percent, respectively, we include them here because these did not aim to represent the district as a whole but rather only the schools that had at least five respondents. In Nashville, this was 133 out of 156 schools, or 85 percent; in Sacramento, this was 67 out of 81 schools, or 83 percent.



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