

AISD REACH Program Update, 2012–2013:

Student Learning Objectives



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EXECUTIVE SUMMARY

During the 2012–2013 school year, 2,064 educators at 38 AISD REACH schools wrote a total of 4,128 student learning objectives (SLOs) to address the needs of the students they served. Overall, 87% of educators earned a stipend for meeting at least one of their two SLOs. The percentage of teachers who met SLOs ranged from 53% to 100% across participating schools, and there were some differences in the percentages of SLOs met by various staff groups. For example, librarians and secondary core area teachers met fewer SLOs than did their peers.

Teachers' attitudes toward SLOs remained stable since 2009–2010; about two-thirds of teachers agreed or strongly agreed that using SLOs has improved their teaching. However, teachers working at schools that have been in the program longer expressed slightly more favorable attitudes toward the program than did those at school that had only recently joined REACH. Although SLO performance (i.e., whether teachers met 0, 1, or 2 SLOs) was unrelated to teachers' reported data use, reflective teaching, or professional learning community activities, data suggested REACH teachers may have engaged in more data use than did their peers at similar non-REACH schools.

Some evidence indicated a relationship between SLOs and student achievement. Although longitudinal analyses were hindered by the change in 2012 from the Texas Assessment of Knowledge and Skills (TAKS) to the State of Texas Assessments of Academic Readiness (STAAR), REACH schools from the first two program cohorts (i.e., those with at least three years of program implementation and TAKS data) showed greater improvement in passing rates on the Texas Assessment of Knowledge and Skills (TAKS) over time than did similar non-REACH schools, and REACH schools from the first three program cohorts (i.e., those with at least three years of program implementation and matched comparison schools) outperformed their comparison schools on passing rates for all STAAR tests taken in 2013 in 8 of 13 instances.

Within REACH, the school-wide percentage of teachers from subjects and grade levels tested by the STAAR who met team SLOs was related to school-wide performance on the STAAR. Additionally, although the ability to examine student performance in relation to the specific areas their teachers targeted for SLOs was limited, results suggested fourth-grade students improved significantly on STAAR from Spring 2012 to Spring 2013 in the area of Numbers, Operations, and Quantitative Reasoning when their teachers had targeted that area. Improved SLO data collection processes will provide better opportunities to examine the influence of SLOs with more granularity in the future.

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INTRODUCTION

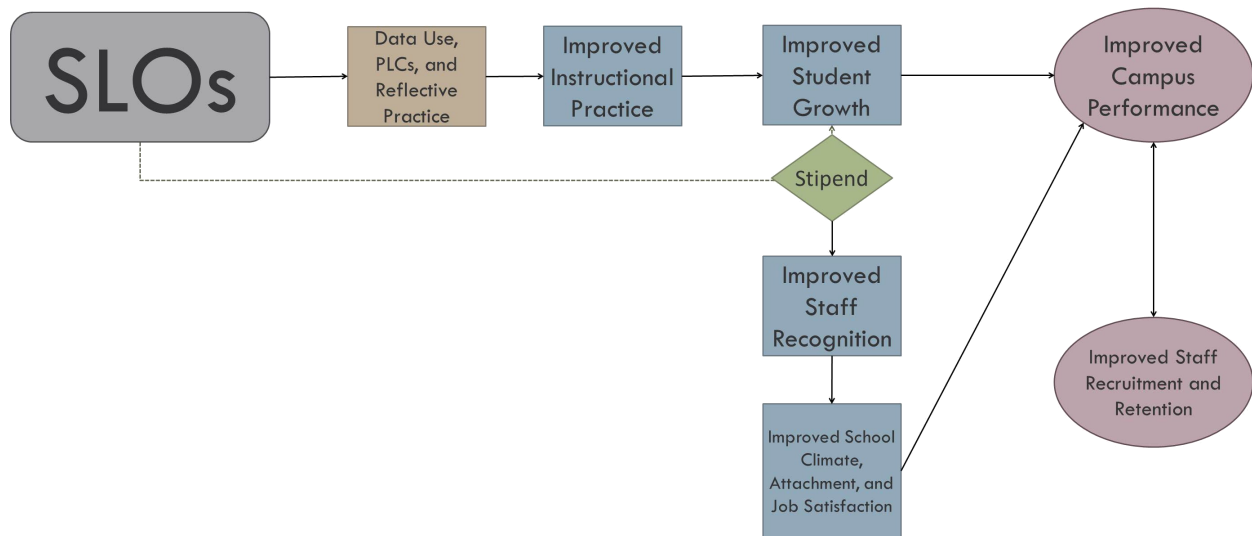
The AISD REACH program, implemented in Austin Independent School District (AISD) at 38 high-needs schools in 2012–2013, provides educators a framework for targeting instruction to meet students' needs. The program includes a variety of supports and opportunities for teachers to hone their own instructional skills. This report is a summary of the results of the 2012–2013 AISD REACH student learning objectives (SLOs), including survey teachers' perceptions of SLOs; the percentage of teachers who met SLOs; and the relationships between SLOs and data use, professional learning community (PLC) behaviors, and reflective teaching practice. This report also summarizes the relationship between students' performance on SLOs and campus SLO requirements and the relationship between student growth, as measured by the Texas Assessment of Knowledge and Skills (TAKS) and the State of Texas Assessments of Academic Readiness (STAAR). Recommendations also are presented.

SLOs are a central component of the AISD REACH Strategic Compensation program. SLOs are targets for student growth that are designed to assist teachers in focusing instruction on a particular area of student need and monitoring students' progress to inform adjustments in practice. SLOs are based on the Texas Essential Knowledge and Skills (TEKS) and are established and implemented through a multi-step process, including analyzing student data, collaboration with colleagues, guidance and approval from principals and central administrators, and measuring students' progress. Teachers work toward one individual SLO for their own students and one team SLO for the students served by a group of colleagues (e.g., a grade level team). Teachers whose students meet their SLOs receive a stipend of \$1,500 per individual SLO and \$2,000 per team SLO met. Teachers who use SLOs as an instructional tool are expected to exhibit increased use of data for instructional planning, increased PLC behaviors, and an increase in reflective practice (Figure 1). These practices, associated with high-quality teaching, are expected to result in greater student growth, and eventually improved campus academic performance (see Appendix A for the full program model). SLOs are designed to operate in conjunction with campus goals, teacher professional development opportunities (professional development units, or PDU), and feedback from classroom observations to enhance the quality of teaching and learning at participating schools.

What is AISD REACH?

AISD REACH was designed to advance the district's efforts to recruit, recognize, and retain the best teachers and principals for Austin's schools. Educators at AISD REACH schools, some of the hardest-to-staff in the area, can earn up to \$13,000 each year by meeting a variety of performance measures including student learning objectives, professional development units, and rigorous campus goals. In 2011–2012, the average stipend earned was \$5,285. For more information about AISD REACH, please visit: <http://www.austinisd.org/reach>.

Figure 1. Hypothesized Relationships Among Student Learning Objectives (SLOs), Instructional Practice,



SLO PERFORMANCE IN 2012-2013

In 2012–2013, a total of 2,064 teachers and other educators established SLOs. Of those, 87% ($n = 1,794$) met at least one objective and 63% ($n = 1,301$) met both SLOs. Some teachers established two individual SLOs, while most established one individual and one team SLO. In all, 75% of all individual and team SLOs were met (1,675/2,222 and 1,420/1,906, respectively).

SLOs for each School

In a typical year, approximately 81% to 86% of AISD REACH teachers meet at least one SLO, but the rates at which teachers meet SLOs vary by school. This is due in part to two factors: the length of time that the school has been involved in the program (and therefore the familiarity with which teachers understand the process), and school-level variations in the specific requirements for meeting SLOs. To receive SLO stipends, REACH requires that at least 75% of students achieve teachers’ SLO targets, and that targets reflect at least half the distance between pre-test scores and perfect scores. However, some principals have established more rigorous decision rules regarding SLO achievement requirements for stipends. Interestingly, more students met their teacher’s SLOs at schools that required that 80% of students meet the SLO target (81% of students, on average) than did so at schools that required the program standard of 75% (76% of students, on average) (Table 1).

Table 1. Comparison of Students’ Student Learning Objective (SLO) Passing Rates for Schools with Different Decision Rules

Campus SLO stipend requirement	N	Mean percentage of teachers' students meeting SLOs
At least 75% of students meet target	1,454	75.5% ^{ab}
At least 75% of students score 70% or more	174	66.7% ^{ab}
At least 80% of students meet target	339	81.3% ^a
At least 80% of students score 80% or more	65	86.8% ^b

Note. The standard SLO target is half the distance between pre-test and 100% on the post-test. Means sharing the same superscript are significantly different from each other at $p < .05$.

Table 2. Percentage of Teachers Who Met One or Two Student Learning Objectives (SLOs), by School

Level	School	% of teachers who met			Level	School	% of teachers who met		
		1 SLO	2 SLOs	1 or 2 SLOs			1 SLO	2 SLOs	1 or 2 SLOs
High	Akins*	28%	49%	77%	Elementary, continued	Graham	0%	100%	100%
	Eastside	21%	54%	75%		Harris*	36%	58%	94%
	Lanier	23%	60%	83%		Hart	10%	90%	100%
	LBJ	33%	55%	88%		Jordan*	7%	93%	100%
	Reagan	27%	49%	76%		Metz	25%	66%	91%
	Travis*	27%	55%	82%		Norman	14%	68%	82%
Middle	Dobie	24%	75%	98%	Ortega	13%	88%	100%	
	Garcia	30%	44%	74%	Overton	35%	47%	82%	
	Martin	27%	47%	73%	Pecan Springs	16%	84%	100%	
	Pearce	35%	48%	83%	Pickle*	25%	75%	100%	
	Webb	44%	53%	97%	Pleasant Hill	7%	93%	100%	
Elementary	Allison	5%	95%	100%	Rodriguez*	29%	66%	95%	
	Andrews	33%	54%	87%	Sanchez	48%	8%	55%	
	Barrington	20%	65%	85%	Sims*	21%	79%	100%	
	Blanton	16%	65%	81%	Sunset Valley*	33%	52%	86%	
	Brooke	18%	76%	94%	Walnut Creek	19%	76%	96%	
	Brown	29%	24%	53%	Webb Primary	0%	100%	100%	
	Dobie Pre-K	0%	100%	100%	Winn	21%	67%	88%	
	Govalle	18%	73%	91%	Zavala	26%	66%	91%	

Source. SLO database

*School with minimum SLO target more rigorous than the program requirement

Table 2 lists SLO results for each school. All teachers at 11 schools met at least one SLO. Overall, the same percentages of individual and team SLOs were met, but the likelihood of meeting individual SLOs, team SLOs, or both varied by school (Table 3).

Table 3. Percentage of Individual and Team Student Learning Objectives (SLOs) Met, by School

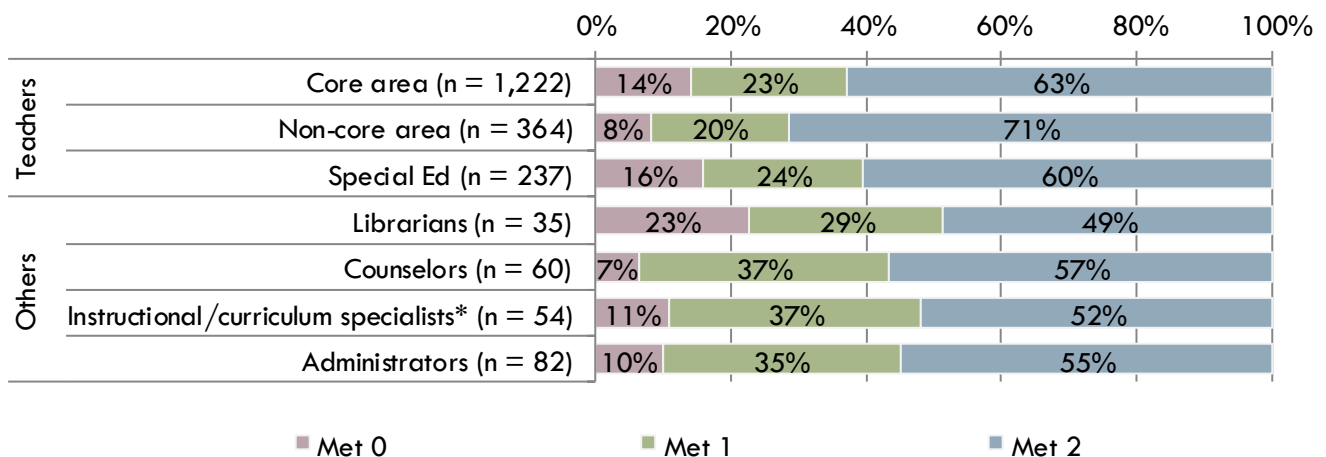
Level	School	% of SLOs met		Level	School	% of SLOs met		Level	School	% of SLOs met	
		Individual	Team			Individual	Team			Individual	Team
High	Akins	65%	61%	Elem., cont.	Barrington	78%	72%	Elem., cont.	Overton	62%	68%
	Eastside	68%	61%		Blanton	75%	71%		Pecan Springs	84%	100%
	LBJ	78%	63%		Brooke	84%	87%		Pickle	91%	83%
	Lanier	71%	71%		Brown	49%	27%		Pleasant Hill	93%	100%
	Reagan	59%	67%		Dobie Pre-K	100%	100%		Rodriguez	92%	69%
	Travis	67%	71%		Govalle	87%	77%		Sanchez	37%	26%
Middle	Dobie	78%	95%	Graham	100%	100%	Sims	81%	100%		
	Garcia	68%	49%	Harris	79%	73%	Sunset Valley	75%	63%		
	Martin	56%	67%	Hart	90%	100%	Walnut Creek	85%	87%		
	Pearce	74%	54%	Jordan	93%	100%	Webb Primary	100%	100%		
	Webb	86%	59%	Metz	81%	76%	Winn	80%	74%		
Elementary	Allison	96%	100%	Norman	75%	75%	Zavala	68%	91%		
	Andrews	60%	80%	Ortega	88%	100%					

Source. SLO database

SLOs for each Staff Group

In addition to classroom teachers, SLOs also are completed by other school staff, including counselors, librarians, and school administrators. In 2012–2013, the rates at which members of these groups met SLOs varied (Figure 2). Among the groups, non-core area teachers had the highest percentage who met both SLOs (71%), and librarians had the lowest percentage who met both SLOs (49%). In addition, librarians had the highest percentage who did not meet either SLO (23%). Focus groups with librarians during the early stages of the AISD REACH pilot revealed that librarians perceived unique challenges to their successful completion of SLOs, such as the amount of time that students were pulled out of library time during testing seasons and variation in the degree of cooperation they were afforded by the teachers with whose students they were working (Schmitt, Cornetto, Lamb, & Imes, 2008).

Figure 2. Percentage of Student Learning Objectives (SLOs) Met, by Staff Group



Source. SLO database; district human resources records

*Staff identified with a teacher job category label including terms “instructional specialist” are included with teachers.

Core area and special education teachers at the secondary level also were less likely than were non-core area teachers to meet SLOs (Table 4).

Table 4. Percentage Who Met at Least One Student Learning Objective (SLO), by Staff Group and Level

Staff group	Elementary	Middle	High
Teachers - Core area	91%	85%	69%
Teachers - Non-core area	98%	95%	89%
Teachers - Special Ed	88%	80%	80%
Others - Librarians	76%	100%	67%
Others - Counselors	100%	77%	95%
Others - Instructional/curriculum specialist*	86%	100%	100%
Others - Campus administrators	93%	82%	91%

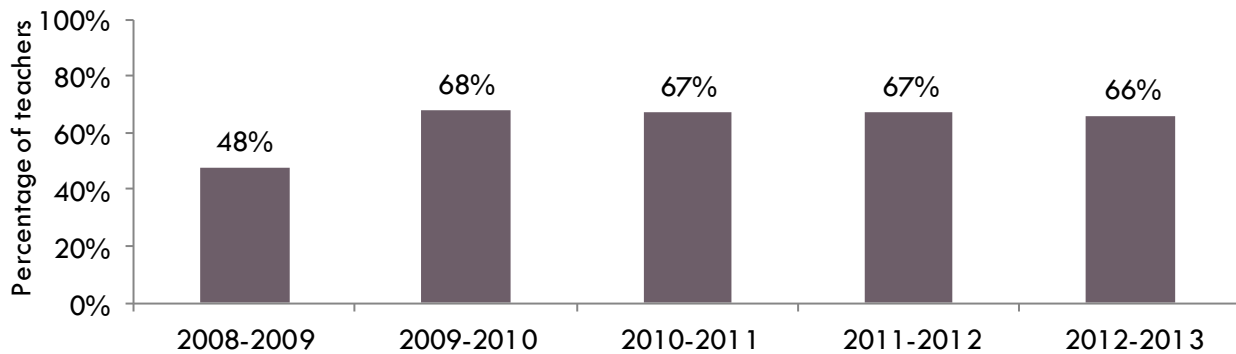
Source. SLO database; district human resources records

*Staff identified with a teacher job category label including term “instructional specialist” are included with teachers.

TEACHERS’ PERCEPTIONS OF SLOs

Since 2009–2010, most AISD REACH teachers have indicated that the use of SLOs has improved their teaching (Figure 3). A particularly pronounced shift in attitudes occurred in 2009–2010, but attitudes appear to have remained stable since then. However, it is important to note that new schools joined the REACH program each year; thus, the ratings in Figure 3 include teachers who were new to the program as well as those who had participated for multiple years. Teachers’ perceptions about the usefulness of SLOs and about the extent to which they are a critical part of teachers’ planning processes appear to vary based on when their school entered the AISD REACH program.

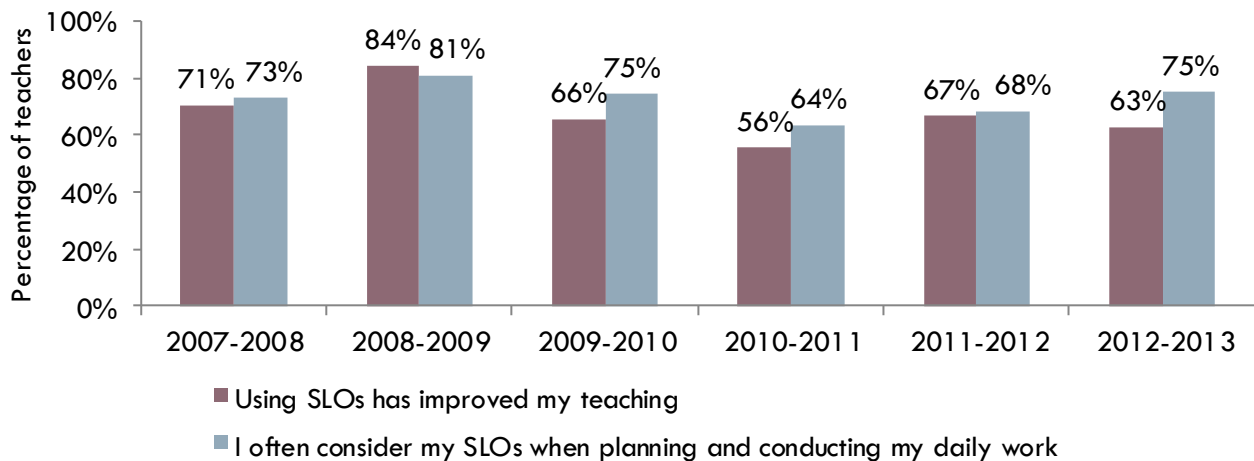
Figure 3. Percentage of AISD REACH Teachers Who Agreed or Strongly Agreed that “Using SLOs has improved my teaching,” 2008-2009 Through 2012-2013



Source. AISD 2009 through 2013 Spring Employee Coordinated Survey

Figure 4 displays results for two SLO questions that AISD REACH teachers responded to in Spring 2013, disaggregated by the year in which their school entered the AISD REACH program. The data suggest that the length of time a school has been in the REACH program minimally affects teachers’ attitudes. In general, teachers working at campuses that have been in the program longer expressed slightly more positive attitudes toward the program than did those at schools that had only recently joined.

Figure 4. Percentage of AISD REACH Teachers Who Agree or Strongly Agree in Spring 2013 that “Using SLOs has improved my teaching” and “I often consider my SLOs when planning and conducting my daily work,” by Year Schools Entered REACH



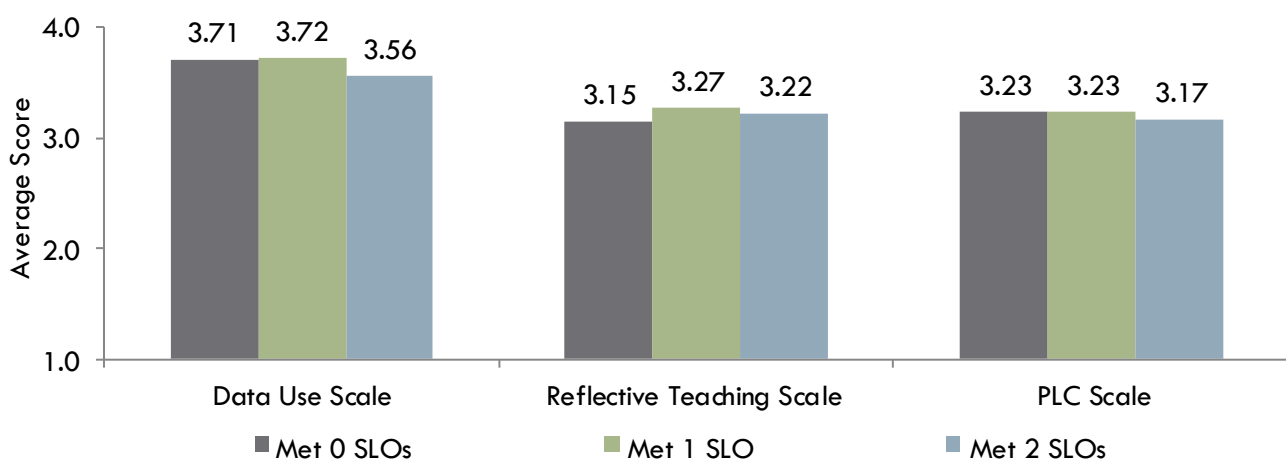
Source. AISD 2013 Spring Employee Coordinated Survey

Teachers working at campuses that have been in REACH since 2008–2009 were more likely to claim that SLOs had improved their teaching than were teachers working in schools that had only recently joined (Figure 4). However, the most recent cohort appeared slightly more favorable than did those from the 2010–2011 and 2011–2012 cohorts. The correlation between teachers' responses and their school's year in the program was small but statistically significant ($r = .10$, $n = 525$, $p < .05$). See Appendix B for a list of schools and mean responses for each program entry year.

SLOs AND DATA USE, PLCs, AND REFLECTIVE TEACHING

The hypothesized relationship between SLOs and instructional practice depicted in Figure 1 is that engaging in the SLO process will lead to improvements in important elements of instructional practices, such as using data, engaging with PLCs, and reflective teaching. Teachers who met SLOs were expected to engage in these practices in more meaningful ways than were those who did not meet their SLOs. Figure 5 displays the reported data use, PLC activity, and reflective teaching practices of AISD REACH teachers, disaggregated by whether they met zero, one, or two SLOs. Data suggest no significant relationship between the number of SLOs met and these teaching practices. For example, teachers who reported practicing higher levels of reflective teaching were no more likely to meet more of their SLOs than were teachers who reported less reflective teaching. Likewise, teachers reporting stronger PLC practices were no more likely to attain their SLOs than were teachers who reported fewer PLC behaviors. Similarly, no relationship was found between the percentage of a teacher's students making their SLOs and that teacher's reports of using these instructional practices.

Figure 5. Reported Data Use, Professional Learning Community (PLC) Activity, and Reflective Teaching, by Student Learning Objectives (SLOs) Met

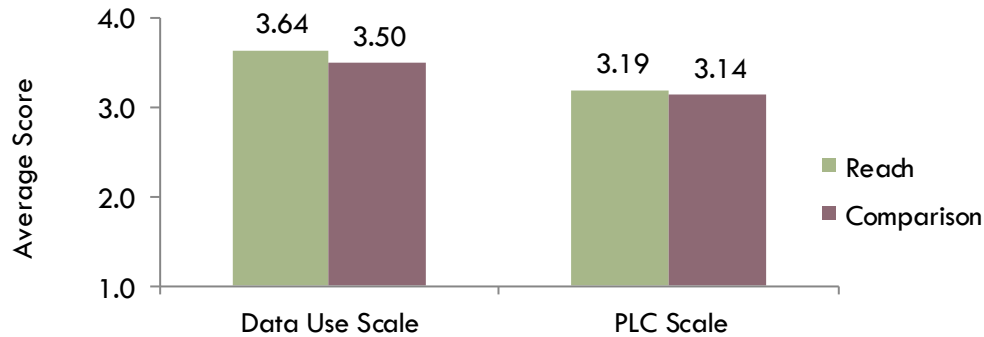


Source. 2013 Spring Employee Coordinated Survey; 2013 TELL AISD Working Conditions Survey

However, although SLO performance was not related to teachers' reported data use, reflective teaching, or PLC behaviors, we also tested the hypothesis that the SLO process, itself, is related to instructional practices. Figure 6 shows the reported data use and PLC behaviors of REACH teachers from

the first three cohorts of schools compared with the data use and PLC behavior of teachers at matched similar non-REACH comparison schools.¹

Figure 6. Reported Data Use and Professional Learning Community (PLC) Activity for Reach and Matched Comparison Schools From the First Three Cohorts



Source. 2013 TELL AISD Working Conditions Survey

Note. See Appendix C for a list of items and response options for these survey scales.

Although it does not meet the strict threshold for statistical significance, data suggest REACH teachers may engage in more data use than do their peers at similar non-REACH schools ($t(1158) = 1.92, p = .055$).

SLOs AND STUDENT PERFORMANCE

SLOs are intended to improve instructional practices, setting the stage for improvements in student and campus performance. Teachers whose students meet SLOs that target specific TEKS should have greater student growth in those areas on the state assessment than do teachers whose students do not meet their SLOs, and schools where more teachers meet SLOs should have better student performance than do schools where fewer teachers meet SLOs. These differences should be driven by students' performance in the specific TEKS that are targeted by their teachers' SLOs. The following sections describe the relationships between SLOs and school-wide performance, teachers' student growth, and students' growth in the specific areas targeted by their teachers' SLOs.

SLOs and School Performance on STAAR

The percentage of elementary teachers in tested subjects and grades who met team SLOs was significantly related to the school's percentage of STAAR tests passed in reading, mathematics (math), and all subjects (Table 5). Additionally, moderate to strong correlations were found between the school's percentage of secondary teachers in tested subjects and areas who met team SLOs and the percentage of STAAR tests passed in reading, math, science, and all subjects. The relationship between SLOs and passing rates was less for individual than for team SLOs in every subject for both elementary and secondary schools. To examine whether students at REACH schools, which use SLOs, performed better than they otherwise might have, we examined 2013 STAAR passing rates for REACH schools relative to matched similar non-REACH schools (Table 6). REACH schools had greater passing rates for all subjects than did their comparison schools in eight of 13 instances.

¹Comparison schools are only available for schools from the first three cohorts of REACH.

Table 5. Correlations Between School Percentages of Teachers in Tested Areas Meeting SLOs and School-wide Passing Rates on the State of Texas Assessments of Academic Readiness (STAAR), 2012–2013

% of individual SLOs met	Level	% of tests passed				
		All subjects	Reading	Math	Science	Social studies
	Elementary (n = 25)	.31	.36	.23	.26	n/a
	Secondary (n = 9)	.33	.17	-.01	.13	.11
% of team SLOs met	Elementary (n = 25)	.47*	.50*	.42*	.33	n/a
	Secondary (n = 9)	.66	.62	.51	.76*	.38

Source. 2013 Index 1 Student Achievement Calculation Report, SLO database, human resources database

Note. Two schools were removed from analyses because they were outliers for SLO or STAAR. See Appendix D for details.

* $p < .05$

Table 6. Percentage of All Tests Passed on the State of Texas Assessments of Academic Readiness (STAAR), REACH and Comparison Schools, Spring 2013, First Three REACH Cohorts

Cohort	School and status	All subjects	Reading	Mathematics	Science	Social studies
2007–2008	Lanier HS (REACH)	67%	67%	80%	81%	65%
	Crockett HS (comparison)	70%	70%	77%	83%	72%
	Dobie MS (REACH)	51%	52%	58%	54%	39%
	Burnet MS (comparison)	62%	59%	71%	64%	62%
	Hart ES (REACH)	81%	80%	86%	80%	—
	Palm ES (comparison)	72%	76%	70%	63%	—
	Rodriguez ES (REACH)	62%	64%	66%	64%	—
	St. Elmo ES (comparison)	85%	87%	83%	88%	—
	Sunset Valley ES (REACH)	75%	82%	78%	75%	—
	Galindo ES (comparison)	69%	77%	73%	61%	—
	Sims ES (REACH)	70%	83%	70%	71%	—
	Williams ES (comparison)	69%	74%	70%	55%	—
2008–2009	Webb MS (REACH)	69%	65%	75%	77%	57%
	Mendez MS (comparison)	52%	57%	57%	63%	32%
	Jordan ES (REACH)	63%	65%	63%	64%	—
	Widen ES (comparison)	58%	62%	62%	57%	—
2009–2010	Akins HS (REACH)	76%	79%	86%	86%	77%
	Crockett HS (comparison)	70%	70%	77%	83%	72%
	Harris ES (REACH)	69%	67%	74%	73%	—
	Ridgetop ES (comparison)	79%	86%	75%	79%	—
	Norman ES (REACH)	63%	62%	61%	74%	—
	Campbell ES (comparison)	70%	72%	67%	68%	—
	Pickle ES (REACH)	68%	79%	70%	48%	—
	Houston ES (comparison)	60%	61%	64%	65%	—
	Pleasant Hill ES (REACH)	82%	84%	86%	70%	—
	Oak Springs ES (comparison)	76%	74%	76%	95%	—

Source. 2013 Index 1 Student Achievement Calculation Report

However, although 2013 test performance represented one indicator of REACH program success, a single year of performance could not consider the performance levels of REACH and comparison schools prior to program implementation. Our ability to examine the longitudinal influence of REACH on state assessment results was limited due to the change in Texas assessments that occurred in Spring 2012, when STAAR began. Because of the inability to compare passing rates on TAKS with those on STAAR, we examined the improvement in passing rates on the TAKS for each REACH school in the first two cohorts (i.e., those with at least 3 years of program implementation) compared with that of matched similar non-REACH schools (Table 7). REACH schools improved more than did their comparison schools in six of eight instances, improved the same amount in one of eight instances, and improved less than their comparison schools in one of eight instances. Although school-wide performance could not be attributed to SLOs alone, SLOs are a major component of the REACH program.

Table 7. Percentage of Students Passing All Tests Taken on the Texas Assessment of Knowledge and Skills (TAKS), REACH and Comparison Schools for the Year Prior to Implementation Through Spring 2011 for the First Two Cohorts

Cohort	School and status	2007	2008	2009	2010	2011	Change	School with most improvement
2007-2008	Lanier HS (REACH)	40%	41%	49%	53%	56%	+16	tie
	Crockett HS (comparison)	49%	47%	56%	64%	65%	+16	
	Dobie MS (REACH)	39%	57%	59%	57%	58%	+19	REACH
	Burnet MS (comparison)	44%	48%	47%	49%	54%	+10	
	Hart ES (REACH)	48%	49%	56%	68%	79%	+31	REACH
	Palm ES (comparison)	55%	60%	56%	71%	79%	+24	
	Rodriguez ES (REACH)	57%	57%	55%	58%	66%	+9	comparison
	St. Elmo ES (comparison)	61%	67%	79%	85%	89%	+28	
	Sunset Valley ES (REACH)	57%	63%	74%	79%	82%	+25	REACH
	Galindo ES (comparison)	62%	73%	76%	79%	76%	+14	
2008-2009	Sims ES (REACH)	68%	67%	74%	84%	80%	+12	REACH
	Williams ES (comparison)	70%	67%	63%	75%	69%	-1	
	Webb MS (REACH)		48%	52%	50%	60%	+12	REACH
	Mendez MS (comparison)		47%	42%	45%	49%	+2	
	Jordan ES (REACH)		59%	56%	69%	72%	+13	REACH
	Widen ES (comparison)		56%	54%	55%	59%	+3	

Source. AEIS reports

SLOs and STAAR Reporting Category

SLOs are designed to provide a framework for teachers to use data to identify a specific area of student need, focus instruction in that area, and demonstrate measurable impact. A single SLO is not intended to cover a broad subject area; rather, SLOs are tightly focused and vary widely in their intended outcomes. For this reason, establishing a link between the use of SLOs and student growth on state assessments or even school-wide improvement has been challenging. Simply put, to expect a goal

that is focused on a small piece of a test to influence the results of the entire test would be unreasonable.

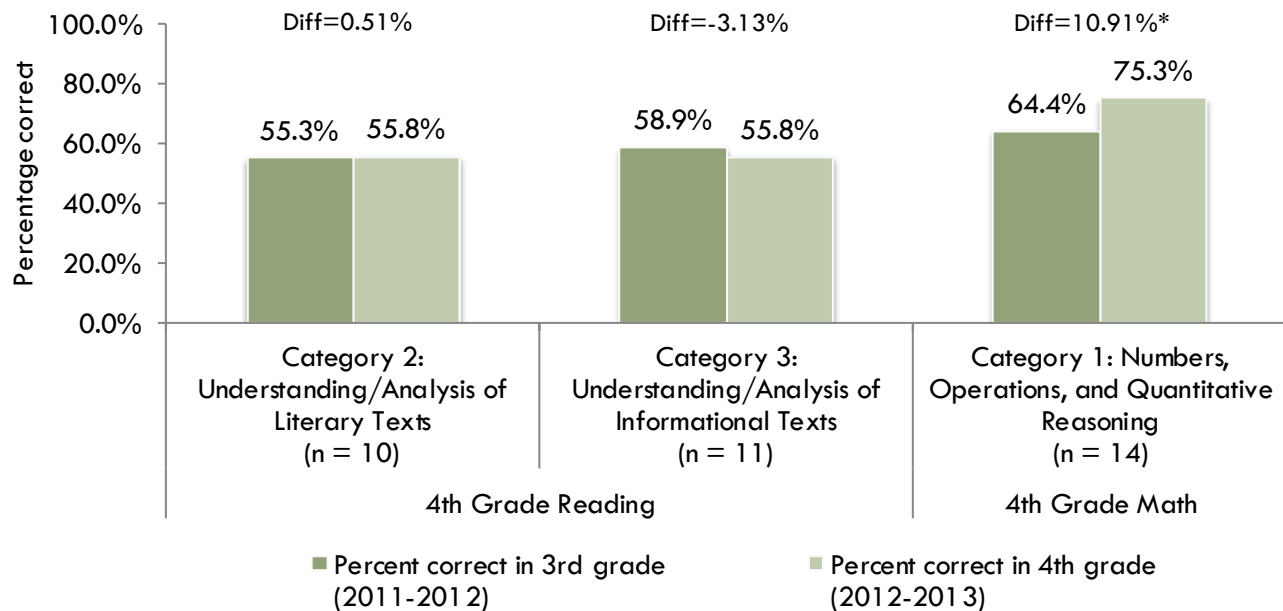
To address the issue of granularity of measurement, in 2009, analysts in the AISD Department of Research and Evaluation examined the TAKS objective-level results together with SLOs. Analyses assessed the relationship between setting an SLO in a particular TAKS objective area and student performance on the test for that objective, controlling for prior student performance. TAKS objectives were smaller subunits of the broader subject area; depending on the subject and grade, a TAKS test might address four to six TAKS objectives. By examining the relationship between SLOs set for a particular TAKS objective and student performance on that objective (rather than looking at the SLO in relationship to the entire test), it was possible to better match the level of specificity at which the teachers were working. The results of these analyses were mixed; in only 24% of comparisons (28/115), students whose teachers established an SLO focused on a particular TAKS objective outperformed students whose teachers did not establish an SLO focused on the particular TAKS objective. No detectable, systematic pattern was observed with respect to which grades, subjects, or objectives benefitted most from SLOs. (For details of these analyses, see Malerba & Herrera, 2009)

In the time since the Malerba and Herrera (2009) report, the state of Texas adopted a new set of state assessments, STAAR, and some significant policy changes have been made to SLOs, both centrally and at the campus level. Therefore, the question of the impact of SLOs on students' growth remains critical. To address this, analyses were conducted to determine if students improved in the specific STAAR reporting categories that were targeted in their teachers' SLOs in 2012–2013. STAAR reporting categories are similar in scope to the TAKS objectives that were examined in the 2009 study. The specific TEKS identified by teachers as the focus of their SLOs were matched with the appropriate STAAR reporting category. From the list of teachers with SLOs that properly identified the relevant STAAR reporting category, only those who selected a STAAR reporting category with 10 or more test items in 2011–2012 and 2012–2013 were included in the analyses. Additionally, analyses were only conducted using reporting categories targeted by at least 10 teachers. In order to compute differences between scores from 2011–2012 to 2012–2013, reporting categories also were limited to those with a prior year STAAR test (e.g., 3rd grade reading and 5th grade science were excluded; for additional information, see Appendices E and F). To determine the percentage of items answered correctly in each reporting category, the number of students' correct responses to each was summed and divided by the total number of items for each reporting category; therefore, students only were included in the analysis if they had both 2011–2012 and 2012–2013 data. This computation was conducted for both 2011–2012 and 2012–2013, and differences were computed. For example, students' 3rd grade 2011–2012 math reporting 1 category scores were matched to their 4th grade 2012–2013 math reporting category 1 scores. Teachers then were matched to their 2012–2013 students.

In one of the three scenarios that were included in the analyses, results suggested that students' performance improved in the targeted reporting category. Students of 4th grade math teachers who set an SLO focusing on reporting category 1 (Numbers, Operations, and Quantitative Reasoning) achieved

a significantly higher percentage of items correct in 2012–2013 (75.3%) than in 2011–2012 (64.4%). Results for reading categories 2 and 3 were not significant (Figure 7).

Figure 7. Percentage Correct and Change in Percentage Correct From 2011–2012 to 2012–2013, by State of Texas Assessments of Academic Readiness (STAAR) Reporting Category



Source. District STAAR records and Student Learning Objectives database.

Note. Students' percentage of items correct was averaged at the teacher level.

* $p < .05$

CONCLUSION

Most AISD REACH participants accomplished at least one of their SLOs and received stipends. About 87% of the 2012–2013 AISD REACH educators met at least one SLO, although results varied by school and job categories. Core area and special education teachers at the secondary level were less likely than were non-core area teachers to meet SLOs, and librarians were less likely to meet their SLOs than were other groups. Given the evidence from previous research that suggested specific challenges for librarians in executing SLOs, it would be beneficial for program staff to provide some additional support for librarians. Additionally, the potential inequity between types of secondary teachers should be explored.

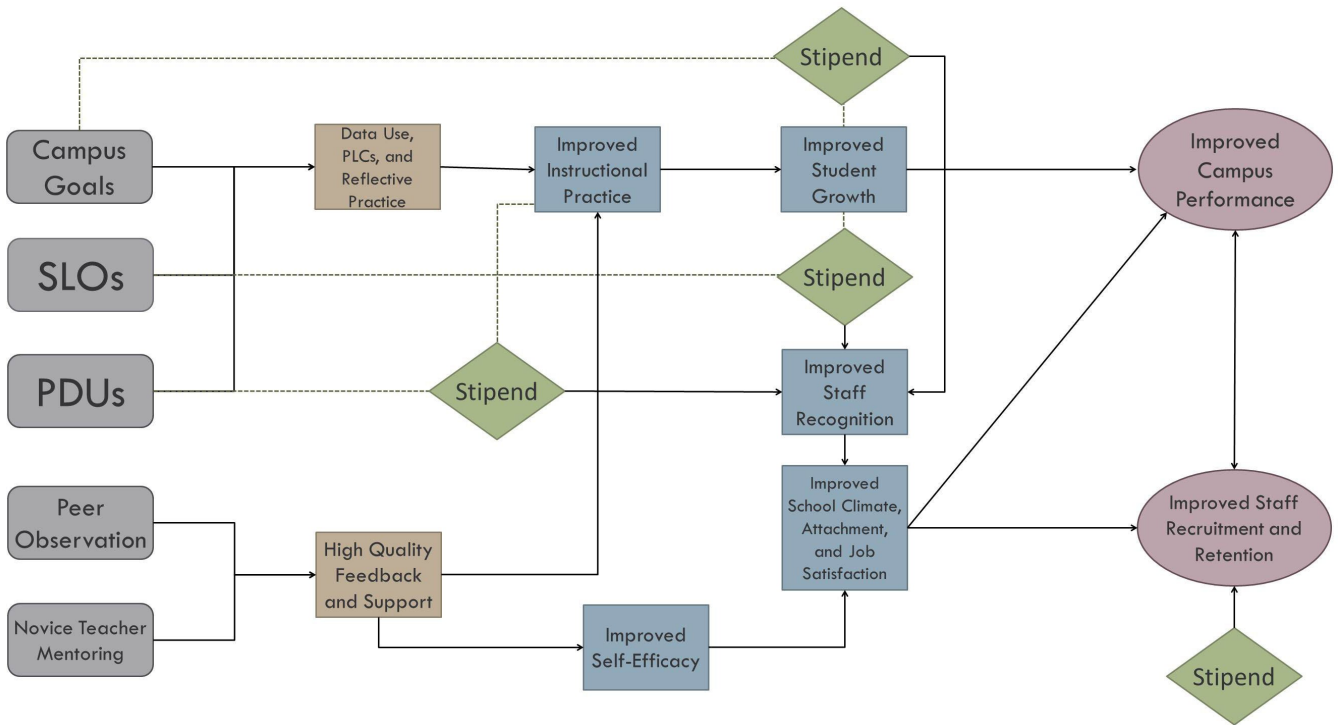
The majority of AISD REACH teachers continued to perceive that SLOs were instructionally valuable and reported that they used them in their day-to-day work, particularly those at schools from the first two cohorts of program implementation. Teachers who met more SLOs or who had more students meeting SLOs were no more likely to report engaging in data use, reflective teaching, or PLC behaviors than were those who met fewer SLOs or who had fewer students meeting SLOs. However, evidence suggests REACH teachers engaged in data use more frequently than did their peers at similar non-REACH campuses. Additionally, some evidence indicated that REACH schools improved more than similar

comparison schools on the TAKS, and data showed that schools where more teachers met team SLOs had greater passing rates on the STAAR than did schools where fewer teachers met team SLOs.

Identifying relationships between SLOs and other measures of student achievement remains challenging, particularly at the classroom level. The results of the reporting category analyses for 4th grade math were encouraging, and further analyses should continue to examine the extent to which students are benefitting from SLOs in other reporting categories and grade levels. Unfortunately, many teachers were excluded from the analyses because their SLOs could not be matched with the appropriate TEKS and STAAR reporting categories. In many instances, information necessary to match to STAAR/end-of-course (EOC) reporting category (e.g., subject area, grade, TEKS number) was omitted or teachers included inaccurate information (e.g., wrong TEKS number). Some also indicated that their SLO targeted “all TEKS,” or selected TEKS that were integrated into all reporting categories for that grade and subject area, removing the ability to analyze at a granular level whether students improved based on a specific targeted reporting category rather than the entire subject area of the STAAR/EOC exam. Inconsistent formatting in the SLO database required a lengthy manual process of identifying the relevant TEKS for each SLO. For example, some teachers listed TEKS as they appear in Texas Education Agency’s (TEA) manual and website (e.g., Chapter 111.15—TEKS 3.1A, 3.1B, 3.3B compared with Reporting Category 2- Patterns, Relations, and Algebraic Reasoning TEKS: 3.6(a,b,c);3.7(a,b), and §111.15, 3.4 (A),(B),(C); all are examples of TEKS teachers selected for 3rd grade math).

Differences in notation seemed to vary according to campus and subject area. The limitations in the data meant that very few reporting categories met both the criteria of having at least 10 questions on the test and at least 10 SLOs set in that category. In the end, sufficient sample sizes were available only for reporting category 1 for 4th grade math (numbers, operations, and quantitative reasoning) and reporting categories 2 and 3 in 4th grade reading (understanding/analysis of literary texts and understanding/analysis of informational texts, respectively; see Appendix E). For a robust analysis of reporting category data to be possible, the data must be collected in a more uniform way.

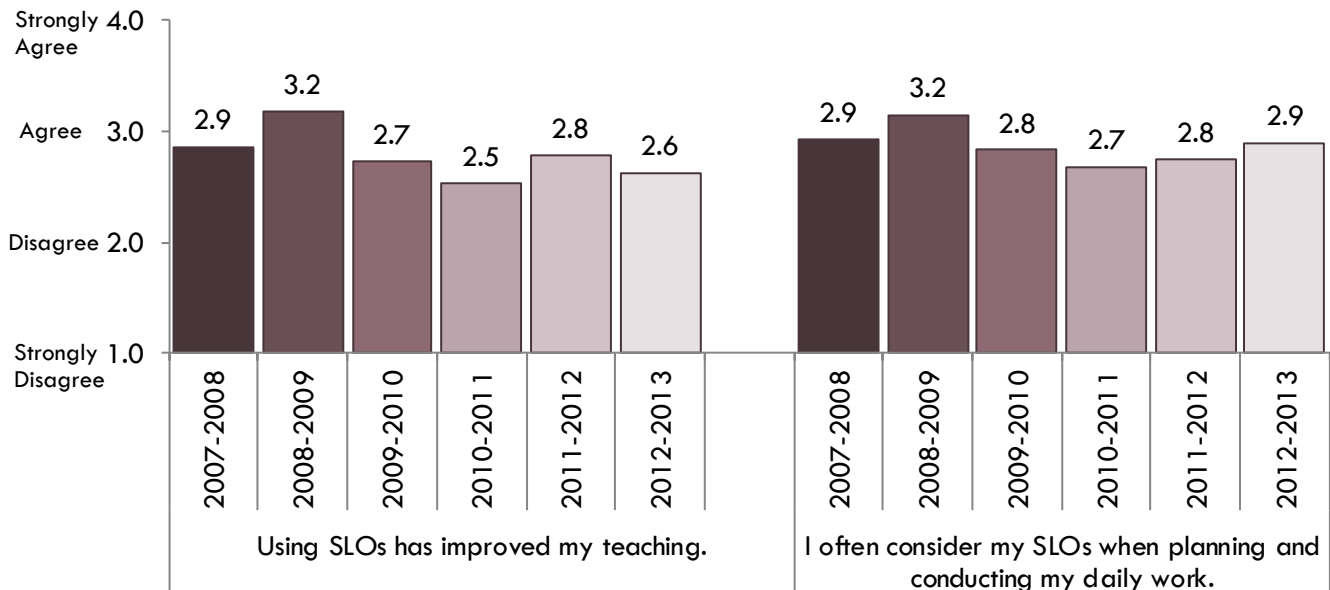
Appendix A. Hypothesized Relationships Among AISD Program Elements and Expected Outcomes



Appendix B1. 2012–2013 REACH Schools, by Program Entry Year

2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013
Lanier HS	Webb MS	Akins HS	LBJ HS	Eastside HS	Andrews ES
Dobie MS	Jordan ES	Harris ES	Reagan HS	Martin MS	Blanton ES
Hart ES		Norman ES	Travis HS	Pearce MS	Brooke ES
Rodriguez ES		Pickle ES	Garcia MS	Allison ES	Graham ES
Sims ES		Pleasant Hill ES		Barrington ES	Metz ES
Sunset Valley ES				Brown ES	Ortega ES
				Govalle ES	Overton ES
				Pecan Springs ES	Sanchez ES
				Walnut Creek ES	Winn ES
					Zavala ES

Appendix B2. Average AISD REACH Teacher Responses to Student Learning Objective (SLO) Questions, by Year Schools Entered REACH



Source. AISD 2013 Spring Employee Coordinated Survey

Appendix C. Items on the Data Use, Professional Learning Community (PLC), and Reflective Teaching Scales

Scale	Item Stem and Response Options	Item
Data Use (2013 TELL)	How frequently do you use data in the following ways? (Once a year, Once a semester, Once every two months, Once a month, Twice a month, Once a week)	Comparing test scores for your class across academic years (e.g., how 5th grade class as a whole performed in 3rd grade and 4th grade).
		Examining current benchmark scores to create classroom instructional groups.
		Examining data to identify students in need of intervention.
		Collaborating with other educators about data and how it relates to the learning needs of students.
Professional Learning Communities (2013 TELL)	Indicate how much you agree or disagree with each statement. I participate with a group of my campus colleagues to: (Strongly agree, Agree, Disagree, Strongly disagree, Don't know)	Analyze student performance data
		Discuss ways to meet objectives for specific students
		Plan lessons and units together
		Develop common student assessments
Reflective Teaching (2013 Employee Coordinated Survey)	Select the best response. (Frequently, Often, Sometimes, Rarely, Unsure/N/A)	How frequently do reflections on your past teaching experiences influence your lesson plans?
		How often do you seek out collaboration with other teachers to improve a lesson plan that did not go well?
		How often do you work with other teachers to improve your teaching even when it is going well?
		How often do you adjust your instructional strategies based on student assessment results?

Appendix D. Data for Correlational Analysis of Secondary School Student Learning Objectives (SLOs) Met and State of Texas Assessments of Academic Readiness (STAAR) Passing Rates

Secondary School	Percentage of STAAR tests passed					Percentage of teachers who met	
	All subjects	Reading	Math	Science	Social studies	Individual SLO	Team SLO
Garcia	49%	55%	54%	47%	27%	65%	41%
Pearce	50%	58%	47%	54%	36%	63%	44%
Dobie ¹	51%	52%	58%	54%	39%	78%	94%
Martin	55%	61%	60%	65%	31%	52%	62%
Eastside	56%	60%	73%	63%	54%	56%	40%
LBJ	58%	59%	67%	71%	60%	73%	51%
Travis	60%	57%	79%	74%	60%	52%	57%
Reagan	63%	65%	73%	73%	63%	53%	52%
Lanier	67%	67%	80%	81%	65%	61%	68%
Webb	69%	65%	75%	77%	57%	88%	56%
Akins ²	76%	79%	86%	86%	77%	56%	39%

¹Campus was removed from analysis due to extreme team SLO percentage.

²Campus was removed from analysis due to SLO minimum requirements resulting in significantly fewer teachers and students meeting SLOs at this school compared with all other schools.

Appendix E. Items on the State of Texas Assessments of Academic Readiness (STAAR) and Student Learning Objectives (SLOs) Set, by STAAR Reporting Category and Grade

STAAR grade and subject	Reporting category	Reporting category information	# of items on test	# of SLOs set in reporting category
3rd grade math	1	Numbers, Operations, and Quantitative Reasoning	15	9
	2	Patterns, Relationships, and Algebraic Reasoning	8	7
	3	Geometry and Spatial Reasoning	9	3
	4	Measurement	8	4
	5	Probability and Statistics	6	—
	All	All reporting categories	46	23
3rd grade reading	1	Understanding Across Genres	6	6
	2	Understanding/Analysis of Literary Texts	18	12
	3	Understanding/Analysis of Informational Texts	16	11
	All	All reporting categories	40	1
4th grade math	1	Numbers, Operations, and Quantitative Reasoning	17	18
	2	Patterns, Relationships, and Algebraic Reasoning	6	4
	3	Geometry and Spatial Reasoning	12	3
	4	Measurement	8	—
	5	Probability and Statistics	5	—
	All	All reporting categories	48	6
4th grade reading	1	Understanding Across Genres	10	12
	2	Understanding/Analysis of Literary Texts	18	17
	3	Understanding/Analysis of Informational Texts	16	16
	All	All reporting categories	44	—
4th grade writing	1	Composition	2	5
	2	Revision	9	5
	3	Editing	19	10
	All	All reporting categories	30	—
5th grade math	1	Numbers, Operations, and Quantitative Reasoning	18	16
	2	Patterns, Relationships, and Algebraic Reasoning	6	1
	3	Geometry and Spatial Reasoning	7	1
	4	Measurement	8	1
	5	Probability and Statistics	11	1
	All	All reporting categories	50	5
5th grade reading	1	Understanding Across Genres	10	14
	2	Understanding/Analysis of Literary Texts	19	11
	3	Understanding/Analysis of Informational Texts	17	14
	All	All reporting categories	46	—
5th grade science	1	Matter and Energy	8	—
	2	Force, Motion, and Energy	10	—
	3	Earth and Space	12	21
	4	Organisms and Environments	14	6
	All	All reporting categories	44	—

Appendix E. Items on the State of Texas Assessments of Academic Readiness (STAAR) and Student Learning Objectives (SLOs) Set, by STAAR Reporting Category and Grade (continued)

STAAR grade and subject	Reporting category	Reporting category information	# of items on test	# of SLOs set in reporting category
6th grade math	1	Numbers, Operations, and Quantitative Reasoning	17	7
	2	Patterns, Relationships, and Algebraic Reasoning	12	8
	3	Geometry and Spatial Reasoning	8	—
	4	Measurement	8	1
	5	Probability and Statistics	8	—
	All	All reporting categories	44	4
6th grade reading	1	Understanding Across Genres	10	1
	2	Understanding/Analysis of Literary Texts	20	4
	3	Understanding/Analysis of Informational Texts	18	3
	All	All reporting categories	48	—
7th grade math	1	Numbers, Operations, and Quantitative Reasoning	13	1
	2	Patterns, Relationships, and Algebraic Reasoning	13	1
	3	Geometry and Spatial Reasoning	10	—
	4	Measurement	8	2
	5	Probability and Statistics	10	1
	All	All reporting categories	54	2
7th grade reading	1	Understanding Across Genres	10	6
	2	Understanding/Analysis of Literary Texts	21	10
	3	Understanding/Analysis of Informational Texts	19	5
	All	All reporting categories	50	—
7th grade writing	1	Composition	2	6
	2	Revision	16	1
	3	Editing	24	—
	All	All reporting categories	42	—
8th grade math	1	Numbers, Operations, and Quantitative Reasoning	11	6
	2	Patterns, Relationships, and Algebraic Reasoning	14	7
	3	Geometry and Spatial Reasoning	8	7
	4	Measurement	13	7
	5	Probability and Statistics	10	—
	All	All reporting categories	56	—
8th grade reading	1	Understanding Across Genres	10	4
	2	Understanding/Analysis of Literary Texts	22	2
	3	Understanding/Analysis of Informational Texts	20	1
	All	All reporting categories	52	—
8th grade science	1	Matter and Energy	14	6
	2	Force, Motion, and Energy	12	—
	3	Earth and Space	14	3
	4	Organisms and Environments	14	—
	All	All reporting categories	44	—
8th grade social studies	1	History	20	4
	2	Geography and Culture	12	—
	3	Government and Citizenship	12	3
	4	Economics, Science, Technology, and Society	8	2
	All	All reporting categories	54	—

Appendix F. Items on the State of Texas Assessments of Academic Readiness (STAAR) End of Course Exams and Student Learning Objectives (SLOs) Set, by STAAR Reporting Category and Grade

End of course exam	Reporting category	Reporting category information	# of items on test	# of SLOs set in reporting category
Algebra I	1	Functional Relationships	8	7
	2	Properties and Attributes of Functions	12	3
	3	Linear Functions	15	11
	4	Linear Equations and Inequalities	10	4
	5	Quadratic and Other Nonlinear Functions	9	6
	All	All reporting categories	54	—
Algebra II	1	Properties and Attributes of Functions	8	—
	2	Representational Tools to Solve Problems	8	1
	3	Properties of Quadratic Relations	12	1
	4	Representations of Quadratic Relations	6	2
	5	Properties of Square Root Functions	5	3
	6	Properties of Rational Functions	5	2
	7	Properties of Exponential and Logarithmic Functions	6	—
All	All reporting categories	50	—	
Biology	1	Cell Structure and Function	11	4
	2	Mechanisms of Genetics	11	7
	3	Biological Evolution and Classification	10	1
	4	Biological Process and Systems	11	5
	5	Interdependence with Environmental Systems	11	1
	All	All reporting categories	54	—
Chemistry	1	Matter and Periodic Table	12	1
	2	Atomic Structure and Nuclear Chemistry	9	2
	3	Bonding and Chemical Reactions	14	5
	4	Gases and Thermochemistry	8	—
	5	Solutions	9	2
	All	All reporting categories	52	—
English I	1	Understanding/Analysis Across Genres - Reading	10	7
	2	Understanding/Analysis of Literary Texts - Reading	16	8
	3	Understanding/Analysis of Informational Texts -Reading	14	6
	4	Composition - Writing	2	8
	5	Revision - Writing	15	—
	6	Editing - Writing	15	1
	All	All reporting categories	32	—
English II	1	Understanding/Analysis Across Genres - Reading	10	4
	2	Understanding/Analysis of Literary Texts - Reading	16	1
	3	Understanding/Analysis of Informational Texts -Reading	14	3
	4	Composition - Writing	2	5
	5	Revision - Writing	15	—
	6	Editing - Writing	15	—
	All	All reporting categories	32	—
English III	1	Understanding/Analysis Across Genres - Reading	10	5
	2	Understanding/Analysis of Literary Texts - Reading	16	1
	3	Understanding/Analysis of Informational Texts -Reading	14	—
	4	Composition - Writing	2	7
	5	Revision - Writing	15	2
	6	Editing - Writing	15	6
	All	All reporting categories	32	—

Appendix F. Items on the State of Texas Assessments of Academic Readiness (STAAR) End of Course Exams and Student Learning Objectives (SLOs) Set, by STAAR Reporting Category and Grade (continued)

End of course exam	Reporting category	Reporting category information	# of items on test	# of SLOs set in reporting category
World Geography	1	History, Government, and Citizenship	14	—
	2	Geography	26	1
	3	Culture	14	—
	4	Economics, Science, Technology, and Society	14	—
	All	All reporting categories	68	—
Geometry	1	Geometric Structure	10	—
	2	Geometric Patterns and Representations	8	3
	3	Dimensionality and the Geometry of Location	10	2
	4	Congruence and Geometry of Size	16	6
	5	Similarity and the Geometry of Shape	8	4
	All	All reporting categories	52	—
Physics	1	Force and Motion	14	—
	2	Gravitational, Electrical, Magnetic, and Nuclear Forces	12	—
	3	Momentum and Energy	12	1
	4	Waves and Quantum Phenomena	12	1
	All	All reporting categories	50	—
US History	1	History, Government, and Citizenship	14	—
	2	Geography	12	1
	3	Culture	12	—
	4	Economics, Science, Technology, and Society	12	1
	All	All reporting categories	68	—
World History	1	History 8000 BC to AD 1750	14	4
	2	History 1750 through Present	12	4
	3	Geography and Culture	12	2
	4	Government and Citizenship		—
	5	Economics, Science, Technology, and Society	12	—
	All	All reporting categories	68	—

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