Department of Research and Evaluation
Austin Independent School District

AISD REACH Program Update, 2010-2011

Texas Assessment of Knowledge and Skills Growth and Student Learning Objectives

Introduction

Purpose. The 2010-2011 school year marked both the conclusion of the original 4-year pilot strategic compensation program and the beginning of an enhanced AISD REACH strategic compensation program, which continues to expand. The program is designed to enhance student achievement by rewarding educators and principals for success in the classroom and providing support for their professional growth. To assist teachers in focusing on a particular area of student need, teachers[1] are trained in the development and implementation of Student Learning Objectives (SLOs). The following sections describe analyses conducted to examine the influence of SLOs with regard to student growth.

Methodology. SLO performance was examined over time and across schools. Attitudes toward REACH and SLOs were compared for participants who met SLOs and participants who did not meet SLOs in 2010-2011. Because SLOs are designed to target the Texas Essential Knowledge and Skills (TEKS), Texas Assessment of Knowledge and Skills (TAKS) data were used to quantify the effects of SLOs in mathematics (math) and reading/English language arts (ELA) across REACH elementary, middle, and high schools. Each teacher's net growth was measured as the percentage of students in a classroom who performed above predicted on TAKS, minus the percentage of students who performed below predicted. We examined TAKS net growth in both subject areas across all levels for REACH teachers and teachers at selected similar comparison schools. TAKS analyses examined whether setting, meeting SLOs, or both was related to TAKS growth for students of teachers at REACH schools.

Key findings. High school teachers were less likely than were those at other levels to meet SLOs in 2010-2011. High school teachers who met SLOs had more positive attitudes toward the program than did those who did not meet SLOs. Although some evidence suggested that students of teachers who meet individual SLOs outperform students of teachers who do not meet their individual SLOs, results were inconsistent. Results also were inconsistent regarding the overall influence of SLOs on student growth at REACH and at similar comparison schools. Though results for team SLOs were mixed, secondary teachers who met team SLOs outperformed teachers at comparison schools and teachers who did not meet team SLOs.

Austin ISD EDUCATOR QUALITY

What are SLOs and how do they work? SLOs are targets for student growth that teachers[1] set at the beginning of the school year and strive to achieve by the end of the semester or school year. They are designed to assist teachers in focusing instruction on a particular area of student need, tying particular instructional practices to that area of need, and monitoring students' progress in order to inform adjustments in practice. SLOs are based on the TEKS and are established and implemented through a multi-step process. 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., grade level team).

About this report. This is the second report in a series of research briefs containing results for REACH in 2010-2011. The previous report included implementation survey results; subsequent reports will address topics including relationships between TAKS and Professional Development Units (PDUs), participants' attitudes in a variety of key areas, and teacher retention.

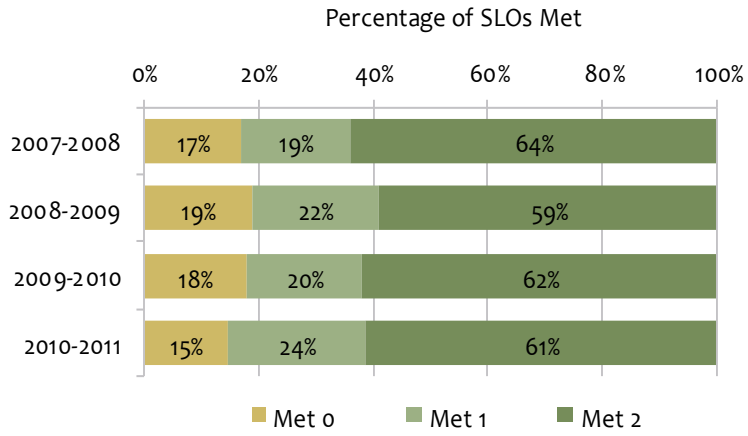
[1] Other educators (e.g., counselors, assistant principals, librarians, and instructional specialists) also implement SLOs and are eligible for stipends.

DPE Publication #10.84
Lisa Schmitt, Ph.D.

Who met their Student Learning Objectives (SLOs)?

Figure 1 summarizes the percentage of REACH participants who met 0, 1, or 2 SLOs each year. Data were examined for trends over time and for factors that best described those who met SLOs.

Figure 1. Percentage of REACH participants who met 0, 1, or 2 SLOs each year since 2007-2008. The percentage of participants meeting SLOs has remained stable over time, despite the addition of new schools to the REACH program each year.



Source. REACH SLO database

In general, 80% to 85% of participants met at least one SLO each year of the REACH program, while 59% to 64% met both SLOs. However, campus results varied widely. For example, in 2010-2011, the percentage of participants meeting at least one SLO ranged from 53% to 100%, and the percentage meeting both SLOs ranged from 29% to 94%, across campuses (Table 1). High schools (i.e., particularly those new to the program) had the greatest percentages of participants who did not meet SLOs in 2011.

Table 1. Percentage of REACH participants at each campus who met 0 or at least 1 SLO in 2010-2011, by years in REACH. REACH participants at high schools were less likely than were those at elementary and middle schools to meet their SLOs in 2010-2011.

Elementary schools	Years in REACH	% met 0 SLOs	% met 1 or 2 SLOs	Middle schools	Years in REACH	% met 0 SLOs	% met 1 or 2 SLOs	High schools	Years in REACH	% met 0 SLOs	% met 1 or 2 SLOs
Barton Hills	4	3%	97%	Dobie	4	13%	87%	Lanier	4	19%	81%
Hart	4	5%	95%	Webb	3	2%	98%	Akins	2	20%	80%
Menchaca	4	0%	100%	Garcia	1	10%	90%	LBJ	1	34%	66%
Rodriguez	4	11%	89%					Reagan	1	47%	53%
Sims	4	0%	100%					Travis	1	20%	80%
Sunset Valley	4	0%	100%								
Jordan	3	3%	97%								
Harris	2	10%	90%								
Norman	2	6%	94%								
Pickle	2	0%	100%								
Pleasant Hill	2	11%	89%								

Source. REACH SLO database

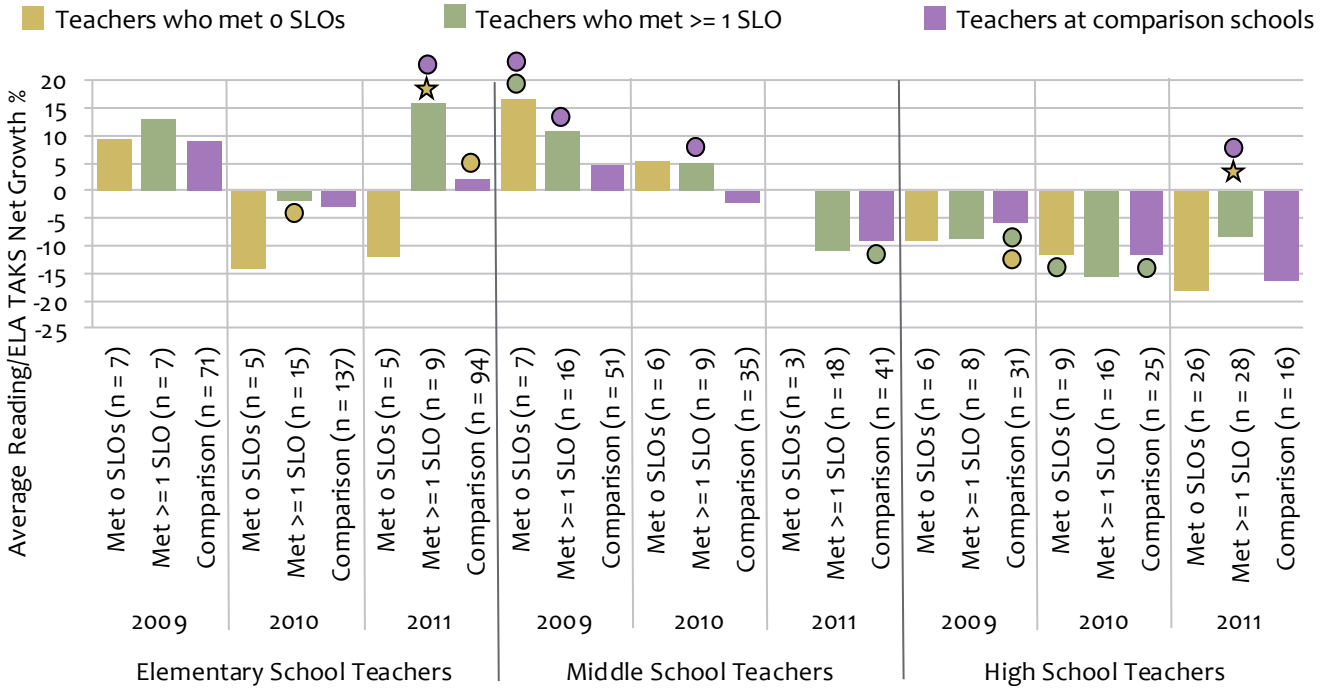
High school teachers who met SLOs in 2010-2011 had somewhat more favorable attitudes toward SLOs and toward REACH in general ($r = .29$, $p < .01$ and $r = .30$, $p < .01$, respectively), and reported greater program impact on their campuses ($r = .30$, $p < .01$) than did those who did not meet SLOs. (See Appendix A.) No differences in attitudes were found between teachers who met and did not meet SLOs at either the elementary or middle school level.[2]

[2] At the elementary school level, the relationship between meeting SLOs and attitudes toward REACH was statistically significant ($p < .05$), but its magnitude was small ($r = .15$).

Did setting and/or meeting individual SLOs correspond to better TAKS growth?

To examine whether individual teachers' SLOs have made a meaningful impact on REACH campuses, we examined the TAKS growth in reading/ELA (Figure 2) and math (Figure 4) in 2009, 2010, and 2011 for students of REACH teachers who established but did not meet their individual SLOs, REACH teachers who met at least 1 individual SLO,[3] and teachers at comparison schools with similar teacher experience and retention and student performance and demographics. A percentage of each teacher's students exceeded their predicted TAKS scores, and a percentage performed below their predicted TAKS scores.[4] The difference between the percentage exceeding prediction and the percentage below prediction was the teacher's "net growth."

Figure 2. Reading/ELA TAKS average net growth for REACH teachers who met at least 1 individual reading/ELA SLO, REACH teachers who established but did not meet an individual reading/ELA SLO, and teachers at comparison schools. Although results were mixed for each year since 2009, some evidence suggested that teachers who met individual SLOs in reading/ELA outperformed teachers at comparison schools.



Note. ○ indicates a meaningful magnitude of difference from another group (effect size of ≥ .20) in the same year, indicated by the color of the circle; ☆ indicates both a meaningful magnitude of difference (effect size) and a statistically significant difference from another group ($p < .05$) in the same year, indicated by the color of the star. Data are not displayed for groups with fewer than five teachers.

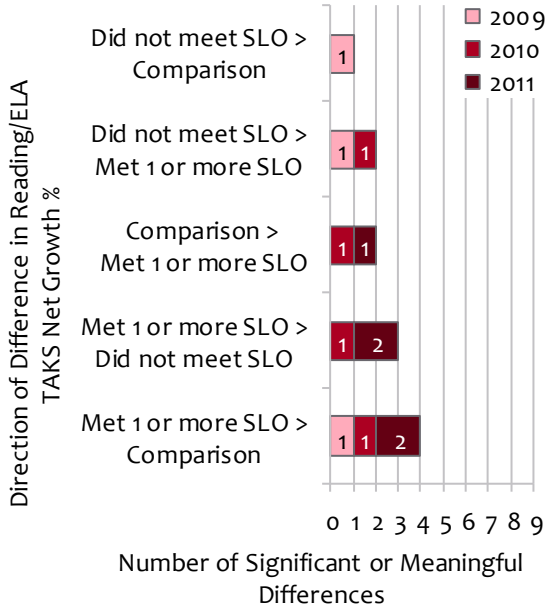
Source. REACH SLO database and AISD TAKS file

REACH teachers who met their individual SLOs in reading/ELA appeared more likely than their peers who did not meet SLOs in reading/ELA and teachers at comparison schools to have students who exceeded their predicted TAKS performance in some instances. However, mixed evidence indicated that in some instances, teachers who did not meet SLOs and teachers at comparison schools outperformed REACH teachers who met reading/ELA SLOs (Figure 3).

[3] In 2011, REACH teachers established only 1 individual SLO. Results for 2011 included teachers who either met or did not meet their individual SLOs.

[4] Predicted TAKS performance was computed for each student, based on his or her prior score in the same subject. Students who scored more than 2 standard errors of measurement above or below their predicted scores were considered to have exceeded or fallen below their predicted performance. (See http://archive.austinisd.org/inside/docs/ope_08-87_Elem_Level_Report_Summary_Research.pdf for more information.)

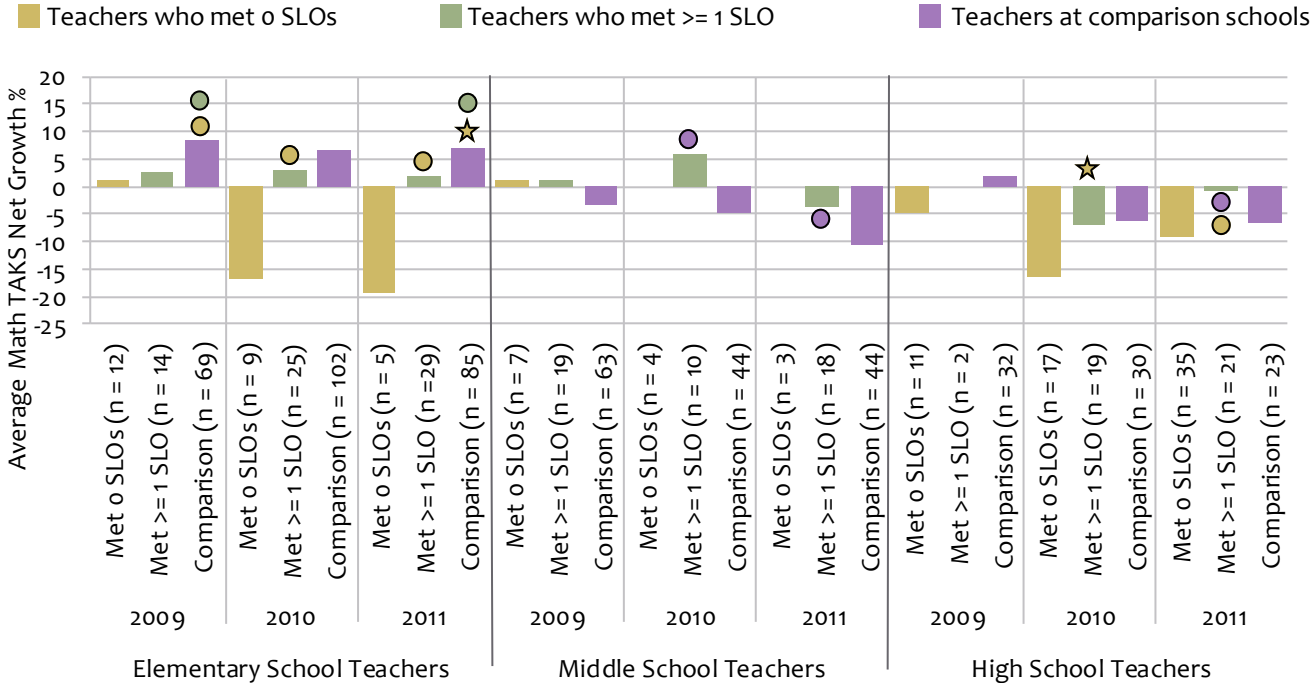
Figure 3. Number of statistically significant or meaningful differences between teachers at comparison schools, REACH teachers who met at least 1 individual reading/ELA SLO, and REACH teachers who did not meet an individual reading/ELA SLO. Evidence was mixed regarding the impact of individual SLOs.



Comparison teachers outperformed REACH teachers who met individual reading/ELA SLOs in two of nine instances, while REACH teachers who met individual reading/ELA SLOs outperformed comparison teachers in four of nine instances. REACH teachers who met their individual reading/ELA SLOs outperformed peers who did not meet their SLOs in three of eight instances.

The impact of SLOs was greatest in 2011, when elementary and high school teachers who met SLOs outperformed both their peers who did not meet reading/ELA SLOs and teachers at comparison schools. However, middle school REACH teachers in 2011 showed the opposite trend; teachers at comparison middle schools outperformed REACH

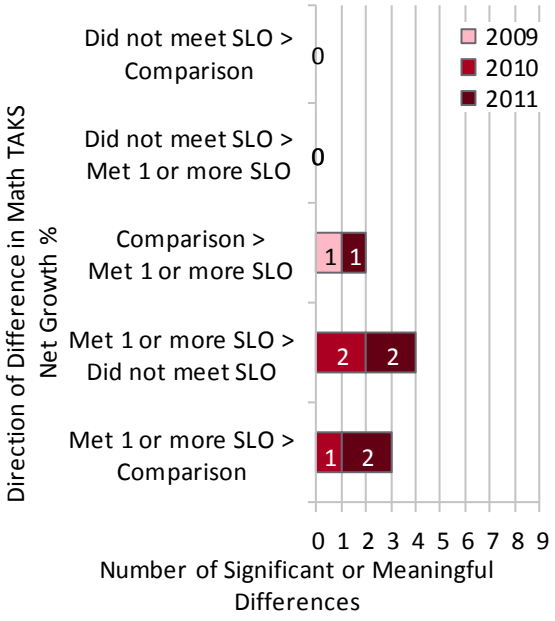
Figure 4. Math TAKS average net growth for REACH teachers who met at least 1 individual math SLO, REACH teachers who established but did not meet an individual math SLO, and teachers at comparison schools. Though elementary results were mixed, evidence indicated secondary teachers who met individual math SLOs outperformed teachers at comparison schools and those who did not meet math SLOs.



Note. ○ indicates a meaningful magnitude of difference from another group (effect size of ≥ .20) in the same year, indicated by the color of the circle; ☆ indicates both a meaningful magnitude of difference (effect size) and a statistically significant difference from another group ($p < .05$) in the same year, indicated by the color of the star. Data are not displayed for groups with fewer than five teachers.

Source. REACH SLO Database and AISD TAKS file

Figure 5. Number of statistically significant or meaningful differences between teachers at comparison schools, REACH teachers who met at least 1 individual math SLO, and REACH teachers who did not meet an individual math SLO. Evidence is mixed regarding the impact of individual SLOs.



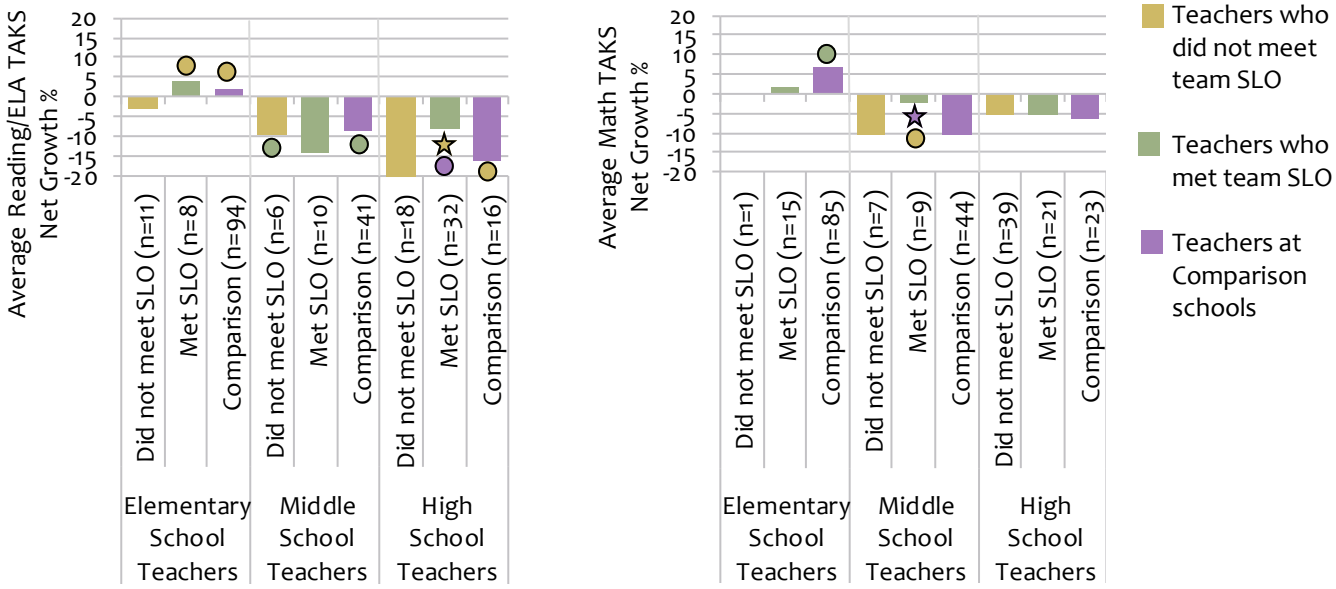
Comparison teachers outperformed REACH teachers who met individual math SLOs in two of eight instances, while REACH teachers who met individual math SLOs outperformed comparison teachers in three of eight instances. Evidence was more favorable within REACH schools. Teachers who met their individual math SLOs outperformed peers who did not meet their math SLOs in four of six instances.

The impact of SLOs was greatest in 2011, when middle and high school teachers who met SLOs outperformed teachers at comparison schools, and elementary and high school teachers who met math SLOs outperformed their REACH peers who did not. However, elementary school REACH teachers were outperformed by teachers at comparison schools in 2011.

Did meeting team SLOs correspond to better TAKS growth?

Team SLOs were implemented for the first time in 2010-2011. We examined the TAKS growth in reading/ELA and math (Figures 6 and 7) in 2011 for students of REACH teachers whose team established but did not meet a team SLO, REACH teachers whose team met their team SLO, and teachers at comparison schools.

Figures 6 and 7. Reading/ELA and math TAKS average net growth for REACH teachers who met their team SLO, REACH teachers who established but did not meet their team SLO, and teachers at comparison schools. Though results were mixed, some evidence indicated secondary teachers who met team SLOs outperformed teachers at comparison schools and teachers who did not meet team SLOs.



Note. ○ indicates a meaningful magnitude of difference from another group (effect size of ≥ .20) in the same year, indicated by the color of the circle; ☆ indicates both a meaningful magnitude of difference (effect size) and a statistically significant difference from another group ($p < .05$) in the same year, indicated by the color of the star. Data are not displayed for groups with fewer than five teachers.

Source. REACH SLO Database and AISD TAKS file

Conclusion

Evidence regarding the usefulness of SLOs was mixed. REACH teachers who met SLOs did not necessarily have greater student TAKS growth in reading/ELA or math than did their REACH peers who did not meet SLOs or their peers at similar non-REACH schools. However, evidence was most favorable for SLOs in 2010-2011 than in any of the other school years.

Several data considerations are noteworthy for the interpretation of these findings. First, the TAKS data were limited to only math and reading/ELA teachers in grades 4 through 11; thus, these results do not generalize to the influence SLOs may have for teachers in other grades and subject areas. Second, the sample sizes were relatively small, particularly for teachers who did not meet SLOs. Because the vast majority of elementary and middle school teachers met SLOs, differences in both attitudes and TAKS performance between those who met and those who did not meet SLOs were less detectible at the elementary and middle school than at the high school level, due both to small cell sizes that made statistical significance more difficult to prove and to the lack of differentiation among teachers that SLO performance provided. Finally, the REACH program has expanded each year to include new schools.

The results for 2010-2011 may have been more favorable than the results for the other school years for a variety of reasons. The sample size increased, so differences were more easily detected. Also, the sample included more high schools, where fewer teachers met SLOs and differences between groups were more likely. Most importantly, the program has matured and staff have modified its implementation based on prior experience. Not only have central office staff refined the program rollout for new schools, but REACH principals have adjusted their approach to implementation over time. It is possible that favorable results for SLOs in 2010-2011 reflected programmatic improvements that will continue to reap rewards in the future.

Finally, SLOs are one of several critical REACH program elements. Subsequent reports will include results for other program elements (e.g., PDUs, novice teacher mentoring) and key outcomes (e.g., teacher retention rates), and will describe results from focus groups with program participants.

Appendix

Appendix A. Relationship between meeting individual SLOs and attitudes toward SLOs, REACH, and program impact in 2010-2011.

	Elementary (n = 220)		Middle (n = 68)		High (n = 202)	
Survey subscale	Pearson's r	p	Pearson's r	p	Pearson's r	p
Attitudes toward SLOs	.07	-	.07	-	.29	<.01
Attitudes toward REACH	.15	<.05	.17	-	.30	<.01
REACH program impact	.05	-	.10	-	.30	<.01

Note. See Appendix B for items included on each subscale.
Source. AISD Employee Coordinated Survey and AISD TAKS file, Spring 2011

Appendix B. Survey items contained on attitudes toward SLOs, attitudes toward REACH, and program impact subscales of the Spring 2011 AISD Employee Coordinated Survey.

Attitudes toward SLOs
- Using SLOs has improved my teaching.
- I often consider my SLOs when planning and conducting my daily work.
- Using SLOs should improve student TAKS performance.
- The individual SLO stipends are large enough for the amount of work involved.
- The team SLO stipends are large enough for the amount of work involved.
- The results of using an individual SLO are worth the extra work.
- The results of using a team SLO are worth the extra work.
- Team SLOs are a good idea.
- My students have benefitted from team SLOs.

Attitudes toward REACH
- I would like to be eligible to participate in the REACH program (or continue participating).
- Strategic compensation (i.e., a performance-based pay system) is a good idea.
- If given the choice, I would choose to continue in the REACH program.

REACH program impact
- I feel that my work is more valued than it was before we started the REACH program.
- The conversations that I have with my principal about my teaching are more valuable than they were before REACH.
- AISD REACH has motivated non-TAKS teachers to focus more on reading and math.
- Participation in AISD REACH has helped me to make better use of student data.
- Our school climate has improved since we started the AISD REACH program.
- My job satisfaction has improved as a result of the AISD REACH program.
- AISD REACH is a major factor in my decision to remain at this school next year.
- I have learned things through AISD REACH that I will continue to do, regardless of my school's participation in the program.

SUPERINTENDENT OF SCHOOLS
Meria J. Carstarphen Ed.D.

OFFICE OF ACCOUNTABILITY
William H. Caritj, M.Ed.

DEPARTMENT OF RESEARCH AND EVALUATION
Holly Williams, Ph.D.

BOARD OF TRUSTEES
Mark Williams, President • Vincent Torres, M.S., Vice President
Lori Moya, Secretary • Cheryl Bradley • Annette LoVoi, M.A. • Christine Brister •
Robert Schneider • Tamala Barksdale • Sam Guzman