Department of Research and Evaluation
AUSTIN INDEPENDENT SCHOOL DISTRICT

High Dosage Tutoring Program Summary, 2013–2014

Tutoring Program Background and Overview

In the 2013–2014 school year, the Austin Independent School District (AISD) completed its third year with the High-Dosage Tutoring (HDT) Program. AISD developed HDT to provide academic help to students in select campuses throughout the district. The purpose of the HDT initiative was to:

- Provide regularly scheduled tutoring to students in targeted grade levels or subjects
- Base tutoring on students' unique academic needs
- Improve academic achievement in targeted subject areas

The academic outcome goals of the program for the 2013–2014 school year were:

- At least 85% of the Algebra I students in campuses supported by HDT will meet the passing standard on the Algebra I STAAR end-of-course (EOC) test
- At least 69% of 6th-grade students in campuses supported by HDT will meet the passing standard on the State of Texas Assessment of Academic Readiness (STAAR) mathematics (math) test
- At least 63% of 2nd-grade students in campuses supported by HDT will meet the Diagnostic Reading Assessment (DRA) grade level standard

The Harvard Education Innovation Laboratory recommends HDT as one way to improve academic achievement (Dobbie & Fryer, 2012). In the 2013–2014 school year, two high schools (Eastside Memorial and Lanier); three middle schools (Burnet, Martin, and Mendez); and four elementary schools (Govalle, Langford, Ortega, and Widen) implemented HDT. The HDT Program focused on Algebra I for high school students (primarily 9th graders), math for 6th graders, and reading for 2nd graders. Tutors worked with small groups of students (in a 2:1 to 4:1 student-to-tutor ratio) for an average of at least 45 minutes every day during the school day. Different schools used various programs to implement the HDT Program (Table 1).

AISD used a combination of district funds, Title I funds, and federal Texas Title I Priority Schools (TTIPS) improvement grants to maintain the HDT Program. With support from federal TTIPS grants, Lanier High School and Burnet Middle School joined the initiative in November, 2011. The program cost a total of $1,922,099 for the 2013–2014 school year, an average of $1,132 per student.

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Table 1. The High-Dosage Tutoring (HDT) Program served approximately 1,698 students at nine AISD schools.

Campus	Grade/Subject	Program Provider	Students Served
Eastside Memorial High School	Algebra I	Sylvan Learning	144
Lanier High School	Algebra I	Catapult Learning, District tutors	417
Burnet Middle School	6th-grade mathematics	Princeton Review	341
Martin Middle School	6th-grade mathematics	Princeton Review	173
Mendez Middle School	6th-grade mathematics	Catapult Learning, District tutors	295
Govalle Elementary	2nd-grade reading	Sylvan Learning	80
Langford Elementary	2nd-grade reading	District tutors	117
Ortega Elementary	2nd-grade reading	Sylvan Learning	46
Widen Elementary	2nd-grade reading	District tutors	85
Total students			***1,698***

Source. AISD Student Enrollment Records, July, 2014

Data Collection and Analysis

The HDT evaluation plan outlined evaluation questions for researchers to answer, including:

- Did students experience significant growth throughout the school year?
- How many students who were below grade level at the beginning of the school year or at the end of the previous school year achieved on-grade-level status by the end of the school year?
- Did tutors, teachers, and students perceive the HDT Program as beneficial for students?

To gauge HDT participants' progress throughout the school year, AISD Department of Research and Evaluation (DRE) staff used results from various student assessments and performed descriptive statistical analyses and significance testing. At the end of the 2013–2014 school year, Algebra I students took the Algebra I STAAR EOC test. DRE staff compared Algebra I participants' performance on the Algebra I EOC test with their performance on the 8th-grade STAAR math test at the end of the 2012–2013 school year to measure students' progress. Sixth-grade students took the STAAR exam in various subjects at the end of the 2013–2014 school year. Researchers looked at HDT participants' results on the STARR 6th-grade math exam and compared it with participants' results on the STAAR 5th-grade math exam from the end of the 2012–2013 school year to assess students' progress. Second graders took the DRA at multiple points throughout the school year. Researchers analyzed these students' performance on the DRA at the beginning of the school year and compared it with their results at the end of the school year.

Caution should be used interpreting results from surveys and assessment data in this report. Data limitations may occur when trying to generalize and draw conclusions from a single study. This report presents student outcome information for HDT participants. Only so much can be gleaned from this information without analyzing the results from a comparison group to rule out other factors that may have led to students' growth. Researchers did not evaluate teachers' and tutors' fidelity to the program and curriculum, also limiting the ability to draw conclusions from the information presented here.

Algebra I Program Summary

Algebra is often regarded as a "gatekeeper" subject: students' performance in algebra influences their success with advanced math, so it is especially important that students succeed in algebra courses (Paek, 2008).

Table 2. The High-Dosage Tutoring (HDT) Program served approximately 561 Algebra I students at Eastside Memorial High School and Lanier High School.

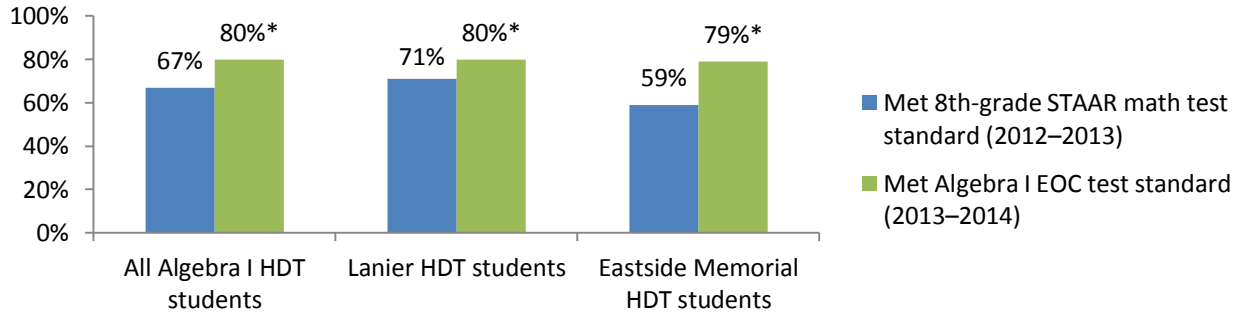
	Gender		Ethnicity				Other		
	Male	Female	Hispanic	Black	White	Other	Economically disadvantaged	English language learners	Special education
#	294	267	469	55	17	20	497	172	93
%	52%	48%	84%	10%	3%	4%	89%	31%	17%

Source. AISD Student Enrollment Records, 2013–2014
Note. The numbers of students served are approximate because the number of students enrolled in HDT programs fluctuated throughout the year.

Algebra I EOC Assessment Results

HDT students from each school met the Algebra I EOC standard at significantly higher rates than they had met the 8th-grade STAAR math test standard the previous year (Figure 1). Algebra I students took the Algebra I EOC exam at the end of the 2013–2014 school year. Eighty percent of students who participated in the Algebra I HDT Program met the EOC standard. Eighty percent of HDT students from Lanier met the standard, and 79% of Eastside Memorial HDT students met the standard.

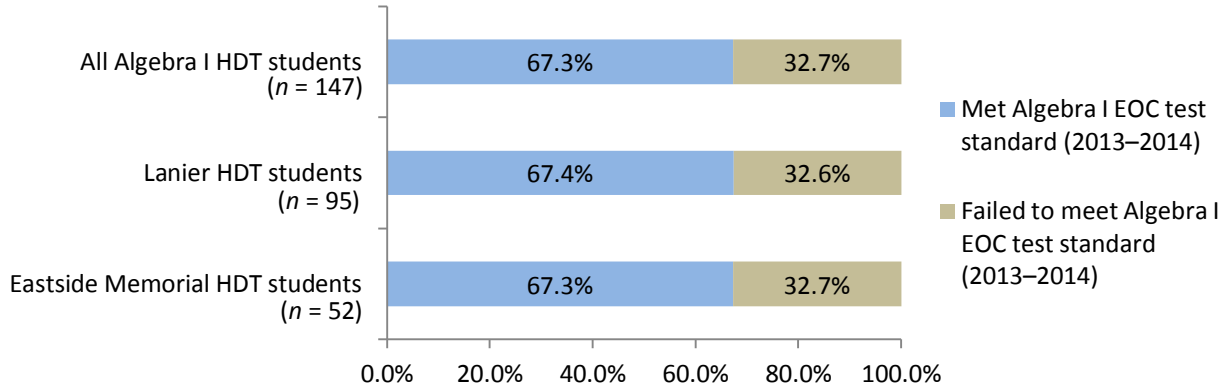
Figure 1. Algebra I High-Dosage Tutoring (HDT) students had a significantly higher passing rate on the Algebra I end-of-course (EOC) test than on the 8th-grade State of Texas Assessment of Academic Readiness (STAAR) math test.



Source. District STAAR and EOC Results, 2013 and 2014
Note. Students may have taken a test more than once. In these cases, the score from the first testing date was used in the analysis.
* Statistically significant (p<.05)

Most students who participated in the Algebra I HDT Program also took the 8th-grade math STAAR exam the previous year. Of the HDT students who failed to meet the 8th-grade math standard, 67% met the Algebra I EOC standard in 2013–2014. Sixty-seven percent of Lanier and Eastside Memorial HDT students who failed to meet the 8th-grade math standard met the Algebra I EOC standard (Figure 2).

Figure 2. Sixty-seven percent of Algebra I High-Dosage Tutoring (HDT) students who failed to meet the 8th-grade State of Texas Assessment of Academic Readiness (STAAR) math standard met the Algebra I end-of-course (EOC) standard.



Source. District STAAR, EOC Results, 2013, 2014
Note. Students may have taken a test more than once. In these cases, the score from the first testing date was used in the analysis.

Sixth-Grade Math Program Summary

Table 3. The High-Dosage Tutoring (HDT) Program served approximately 809 6th-grade students in math at Burnet Middle School, Martin Middle School, and Mendez Middle School.

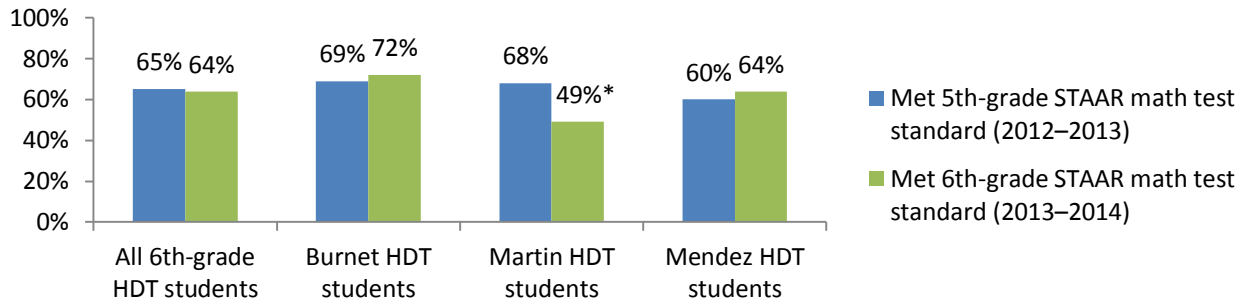
	Gender		Ethnicity				Other		
	Male	Female	Hispanic	Black	White	Other	Economically disadvantaged	English language learners	Special education
#	423	386	718	57	17	17	726	287	68
%	52%	48%	89%	7%	2%	2%	90%	35%	8%

Source. AISD Student Enrollment Records, 2013–2014
Note. The numbers of students served are approximate because the number of students enrolled in HDT programs fluctuated throughout the year.

Sixth-Grade STAAR Math Assessment Results

At the end of the 2013–2014 school year, 6th-grade students took the STAAR math test. Of the 6th-grade students who participated in the HDT Program, 64% met the 6th-grade STAAR math standard. Seventy-two percent of Burnet HDT students, 49% of Martin HDT students, and 64% of Mendez HDT students met the standard (Figure 3).

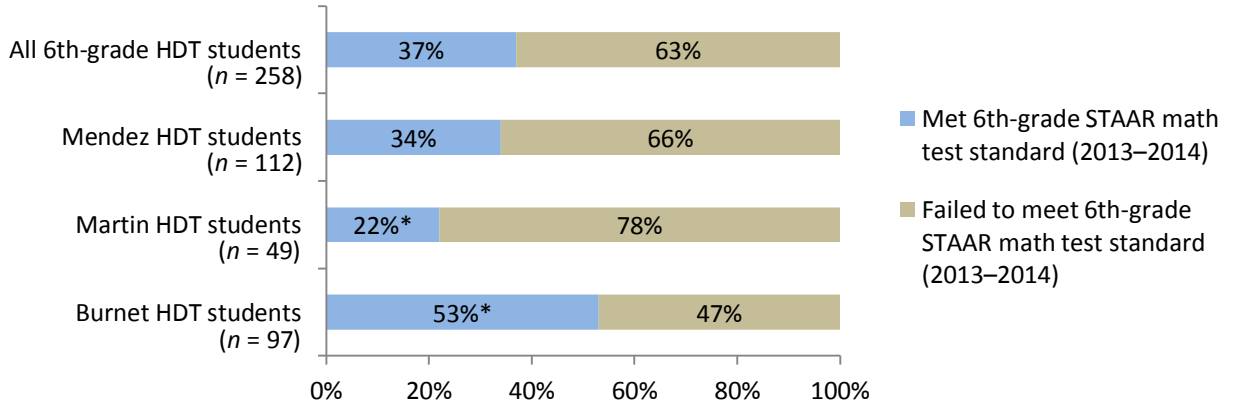
Figure 3. Martin High-Dosage Tutoring (HDT) students had a significantly lower passing rate on the 6th-grade STAAR math test than on the 5th-grade State of Texas Assessment of Academic Readiness (STAAR) math test. Students at other schools did not have significant differences.



Source. District STAAR Results, 2013, 2014
Note. Students may have taken a test more than once. In these cases, the score from the first testing date was used in the analysis.
* Statistically significant (p<.05)

Most 6th-grade HDT students who took the STAAR math test in 6thgrade also took the STAAR math test when in 5thgrade, in 2012–2013. Thirty-seven percent of the 6th-grade HDT students who failed to meet the 5th-grade math standard met the 6th-grade math standard in 2013–2014. Thirty-four percent of Mendez HDT students, 22% of Martin HDT students, and 53% of Burnet HDT students who failed to meet the 5th-grade STAAR math standard met the 6th-grade STAAR math standard (Figure 4).

Figure 4. Thirty-seven percent of 6th-grade High-Dosage Tutoring (HDT) students who failed to meet the 5th-grade State of Texas Assessment of Academic Readiness (STAAR) math standard met the 6th-grade STAAR math standard. Burnet students had a significantly higher passing rate and Martin students had a significantly lower passing rate than all 6th-grade HDT students.



Source. District STAAR Results, 2013, 2014
Note. Students may have taken a test more than once. In these cases, the score from the first testing date was used in the analysis.
* Statistically significant (p<.05)

Second-Grade Reading Program Summary

Table 4. The High-Dosage Tutoring (HDT) Program served approximately 328 2nd-grade students in reading at Govalle Elementary, Langford Elementary, Ortega Elementary, and Widen Elementary.

	Gender		Ethnicity				Other		
	Male	Female	Hispanic	Black	White	Other	Economically disadvantaged	English language learners	Special education
#	169	159	286	27	11	4	299	174	31
%	52%	48%	87%	8%	3%	1%	91%	53%	9%

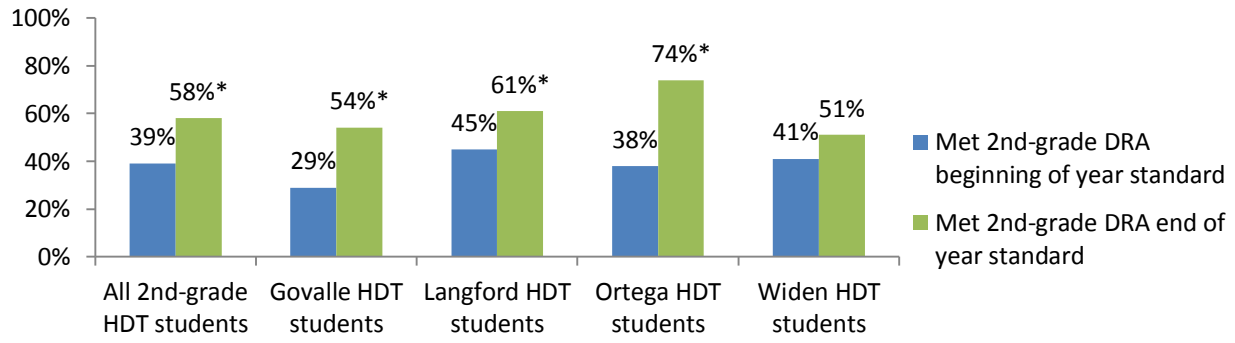
Source. AISD Student Enrollment Records, 2013–2014
Note. The numbers of students served are approximate because the number of students enrolled in HDT programs fluctuated throughout the year.

Second-Grade Reading Assessment Results

Second-grade HDT students took the DRA at the beginning of the year, middle of the year, and end of the year. The DRA indicates whether students are reading at a proficient level. The assessment identifies students' reading level, accuracy, fluency, and comprehension. This information can guide instruction to help students perform at grade level. The ability to read on grade level in elementary school is a strong indicator for future success: academic success, graduation, and success in the workforce (Fiester & Smith, 2010).

All HDT elementary schools showed growth between the percentage of students who met the beginning-of-year (BOY) and end-of-year (EOY) standards. At the beginning of the 2013–2014 school year, 39% of all 2nd-grade HDT students met the BOY DRA standard. By the end of the school year, 58% of 2nd-grade HDT students met the end of year EOY DRA standard. Results varied for each elementary school (Figure 5).

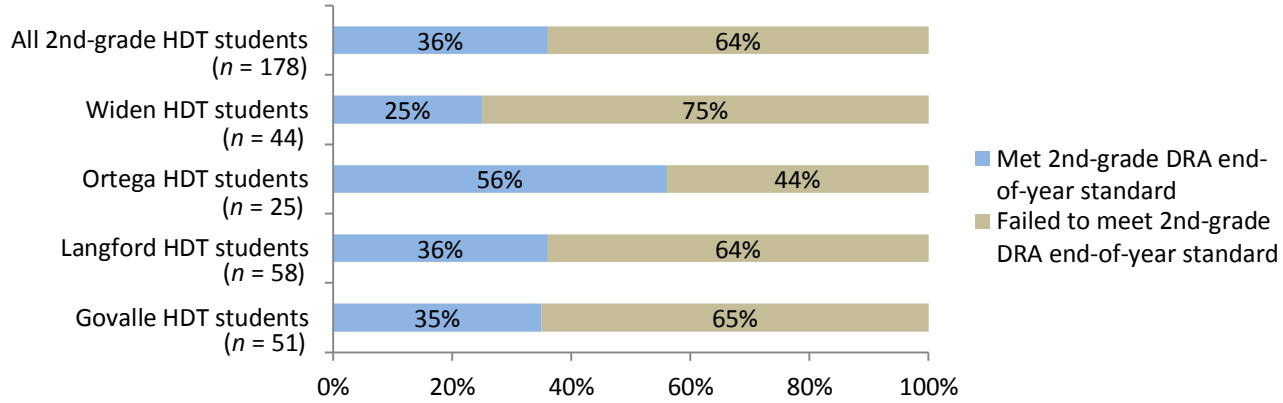
Figure 5. Second-grade High-Dosage Tutoring (HDT) students at all schools except Widen had a significantly higher passing rate on the end-of-year Diagnostic Reading Assessment (DRA) test than on the beginning-of-year DRA test.



Source. District DRA Results, 2013–2014
Note. Not all students in each HDT program were tested, so percentages may not align with the total number of students.
* Statistically significant (p<.05)

To understand how students who did not meet the DRA BOY standard fared when taking the EOY assessment, DRE staff analyzed the results of just those students who did not meet the BOY standard. Of these students who did not meet the BOY standard, 36% met the EOY standard. Thirty-five percent of Govalle, 36% of Langford, 56% of Ortega, and 25% of Widen HDT students who failed to meet the DRA BOY standard met the EOY standard (Figure 6).

Figure 6. Thirty-six percent of 2nd-grade High-Dosage Tutoring (HDT) students who failed to meet the beginning-of-year Diagnostic Reading Assessment (DRA) standard met the end-of-year DRA standard.



Source. District DRA Results, 2013–2014
Note. Not all students in each HDT program were tested, so percentages may not align with the total number of students.

TUTOR , TEACHER, AND STUDENT SURVEYS

Tutors, teachers, and students at the HDT campuses were invited to complete surveys at the end of the 2013–2014 school year. The surveys asked about experiences with and perceptions of their HDT program. DRE staff administered surveys electronically, and 90 tutors, 29 teachers, and 1,210 students participated. The HDT Program was generally popular among tutors, teachers, and students. Students, in particular, enjoyed the program and reported positive outcomes because of their participation.

> *The improvement made by the students was incredible. It was nice to see how the work was paying off and that the students were growing more confident.*
> — HDT tutor

> *I liked the small groups and ability to really connect with the students, as well as the ability to meet their individual needs academically.*
> — HDT tutor

> *Tutors have the responsibility for classroom management but not the tools to do so (ability to give consequences, talk to parents, etc)*
> — HDT tutor

> *I feel that there should be more communication between the HDT tutors and the school's teaching staff.*
> — HDT tutor

Tutor Survey Results

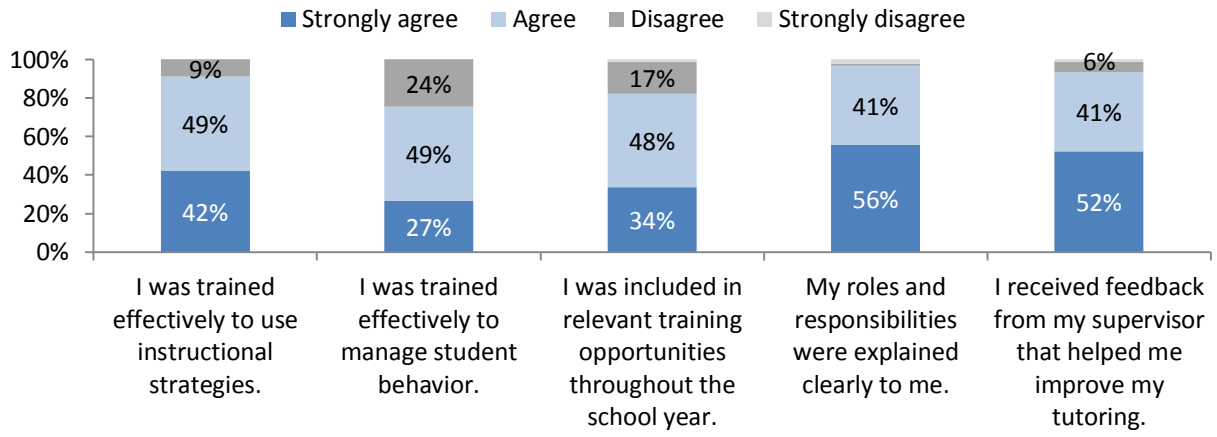
Ninety out of 127 tutors participated in the end-of-year HDT survey, yielding a response rate of 71%. Tutors were asked about their experiences with training, instruction, support, and program practices, and their perceptions of program effectiveness.

Tutors were generally very positive about their time with HDT, especially about their experiences with the students and how effective they believed HDT was for students. Tutors were less

positive in their responses to questions about collaborating with teachers and other school staff: 48% reported not communicating regularly with teachers, and 35% did not feel like part of the school's instructional team. Though almost all tutors enjoyed their time with the students, 24% of tutors did not feel trained effectively to manage students' behavior (Figures 7 through 10).

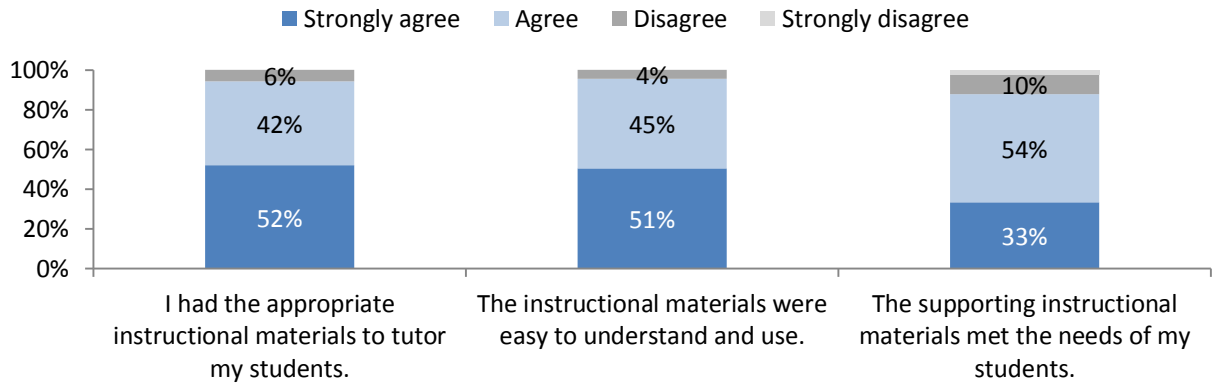
Tutors were given the opportunity to provide open-ended comments. They were asked specifically to "in a few sentences, tell us what you liked best about the high-dosage tutoring program." Many tutors responded that they enjoyed spending time with and getting to know the students, seeing the students improve, and working in small groups. Tutors were also asked to describe "what you liked least about the high-dosage tutoring program." A large number of tutors cited problems managing students' behavior and a lack of communication between tutors and teachers.

Figure 7. High-Dosage Tutoring (HDT) tutors provided primarily positive feedback about their training and support.



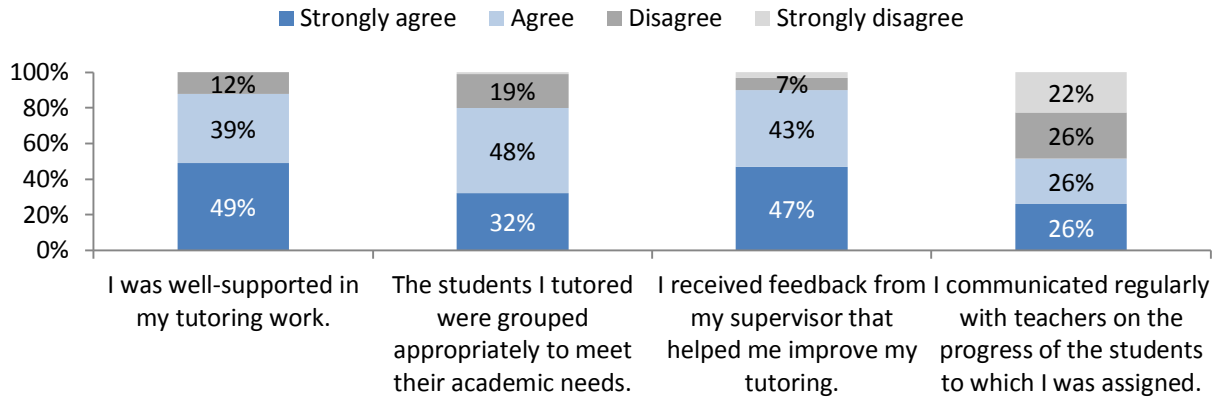
Source. HDT Volunteer Survey, 2013–2014

Figure 8. Most High-Dosage Tutoring (HDT) tutors responded positively to questions about instructional materials.



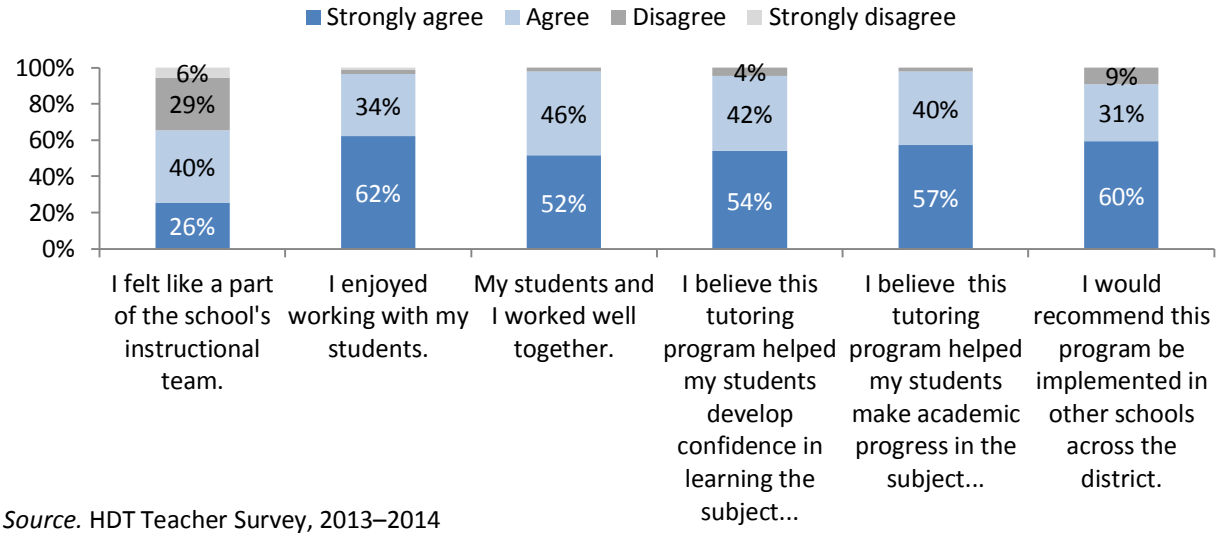
Source. HDT Volunteer Survey, 2013–2014

Figure 9. Most High-Dosage Tutoring (HDT) tutors gave positive feedback to about program implementation, but only 52% reported communicating regularly with teachers.



Source. HDT Volunteer Survey, 2013–2014

Figure 10. Most High-Dosage Tutoring (HDT) tutors enjoyed the experience and perceived the program as effective. Only 66% reported feeling like part of the school's instructional team.



Source. HDT Teacher Survey, 2013–2014

Teacher Survey Results

Of the 37 teachers who participated with HDT during the 2013–2014 school year, 29 took the end-of-year survey, a response rate of 78%. Teachers were asked questions about HDT training, program implementation, and their perceptions of student outcomes. Teachers had mixed responses to the survey questions.

Most teachers felt they were effectively trained, provided positive feedback about tutors, and believed students' understanding of the subject improved because of HDT. Teachers echoed tutors' feedback about the lack of communication between tutors, HDT staff, and teachers.

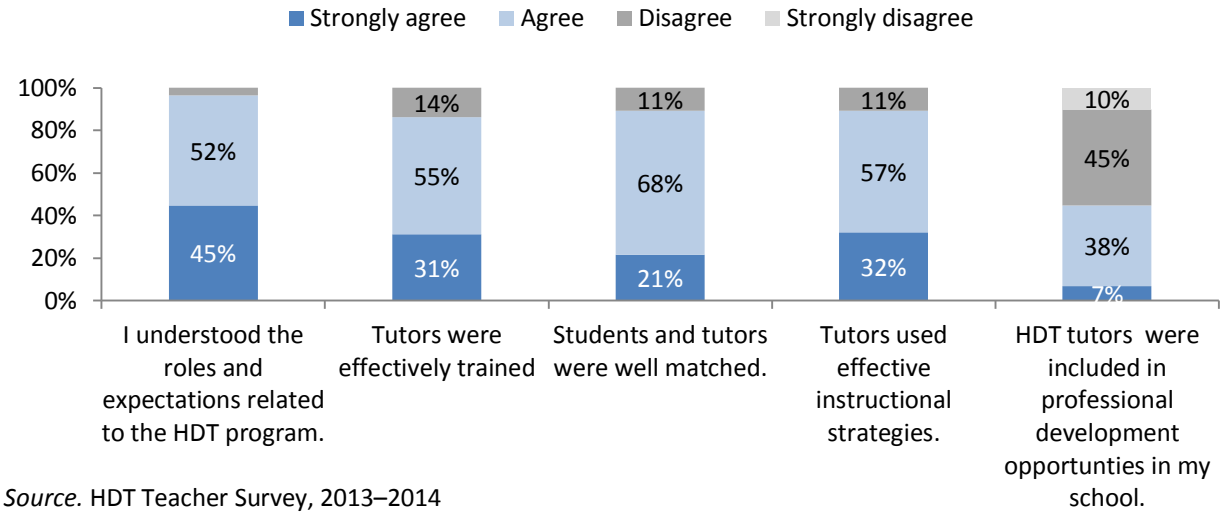
> *My students formed bonds with their tutors and enjoyed the extra attention. I appreciate the fact that reading comprehension topics were reinforced in tutoring.*
> — Teacher

> *The 45 minute block of time dedicated to tutoring made our schedule extremely tight, leaving limited time for other subjects such as science.*
> — Teacher

Fifty-five percent of teachers reported that tutors were not included in the school's professional development opportunities. One-third of teachers felt that they were not provided with guidance to effectively use HDT to support their instruction (Figures 11 through 14).

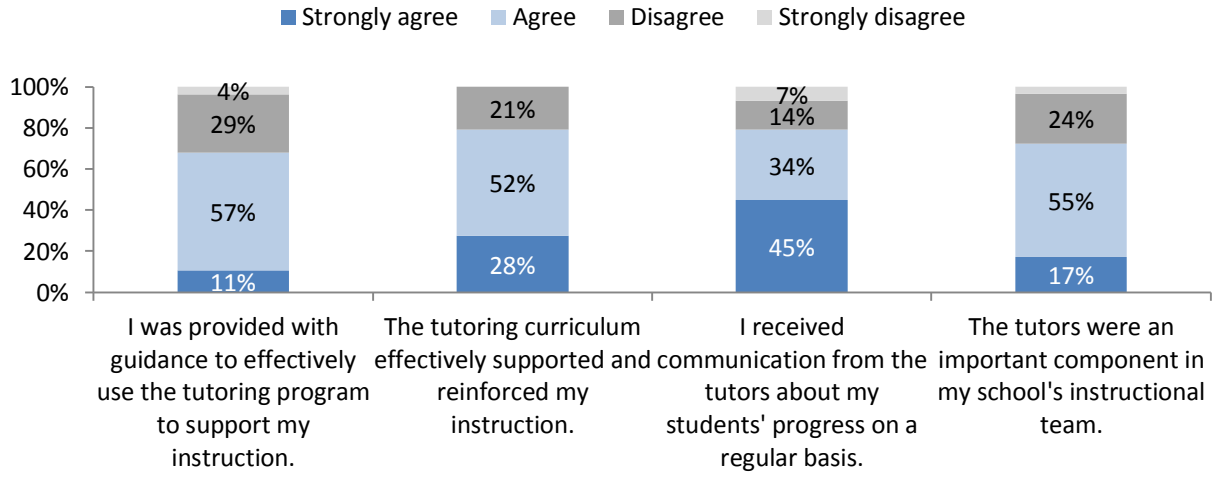
Teachers were asked to describe what they liked best and least about the HDT Program. Teachers applauded the small-group instruction and personalized attention, the relationships tutors built with the students, and the capacity of the HDT Program to support their teaching. Several Algebra I teachers described issues with tutor quality and tutors' teaching methods. A small number of 6th-grade teachers cited problems with classroom management, as well as the lack of communication with tutors. Many 2nd-grade teachers lamented that the tutoring block was too long, causing them scheduling problems.

Figure 11. Most High-Dosage Tutoring (HDT) teachers provided positive feedback about program implementation. Only 45% reported including tutors in professional development opportunities.



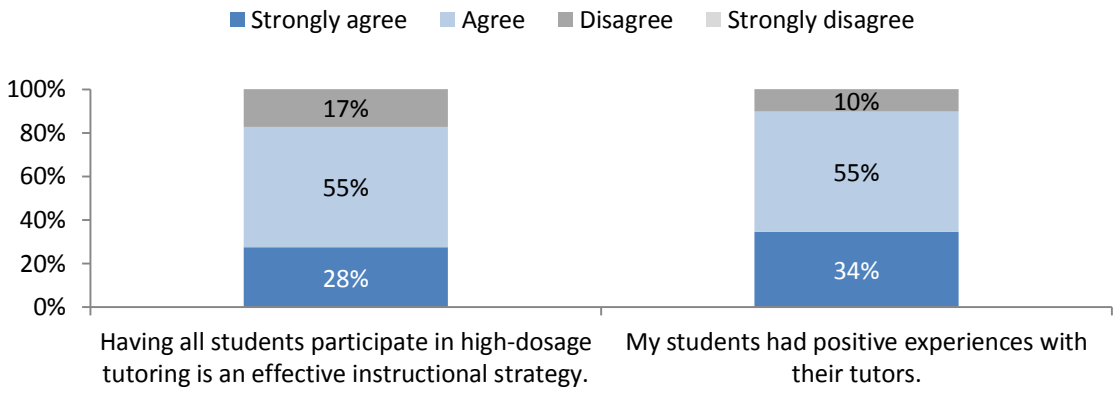
Source. HDT Teacher Survey, 2013–2014

Figure 12. Most High-Dosage Tutoring (HDT) teachers reported feeling supported in terms of training, curriculum, and communication with tutors.



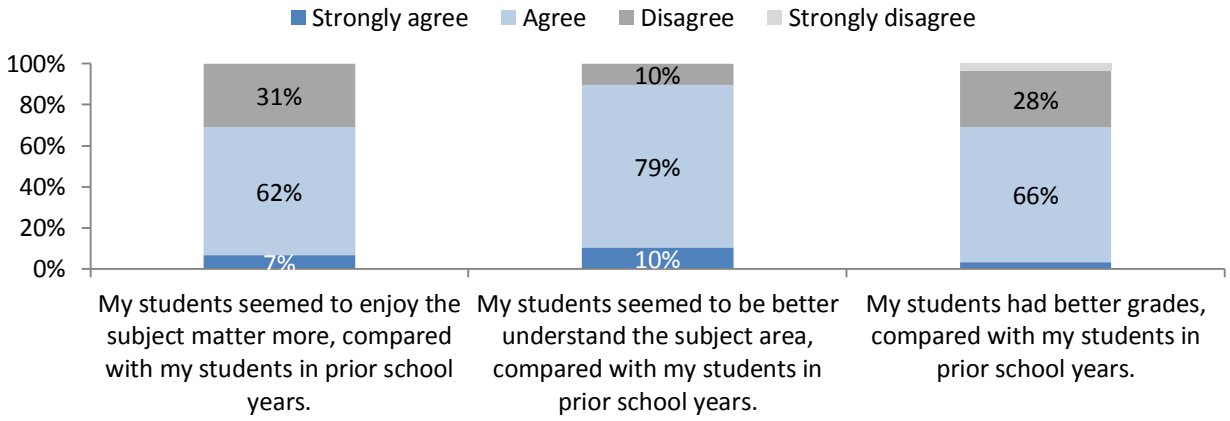
Source. HDT Teacher Survey, 2013–2014

Figure 13. Most High-Dosage Tutoring (HDT) teachers perceived HDT as effective and reported that students enjoyed their tutors.



Source. HDT Teacher Survey, 2013–2014

Figure 14. Nearly 90% of High-Dosage Tutoring (HDT) teachers believed students understood the subject better. Approximately 70% of teachers believed students' grades improved and they enjoyed the subject more after HDT.



Source. HDT Teacher Survey, 2013–2014

Student Survey Results

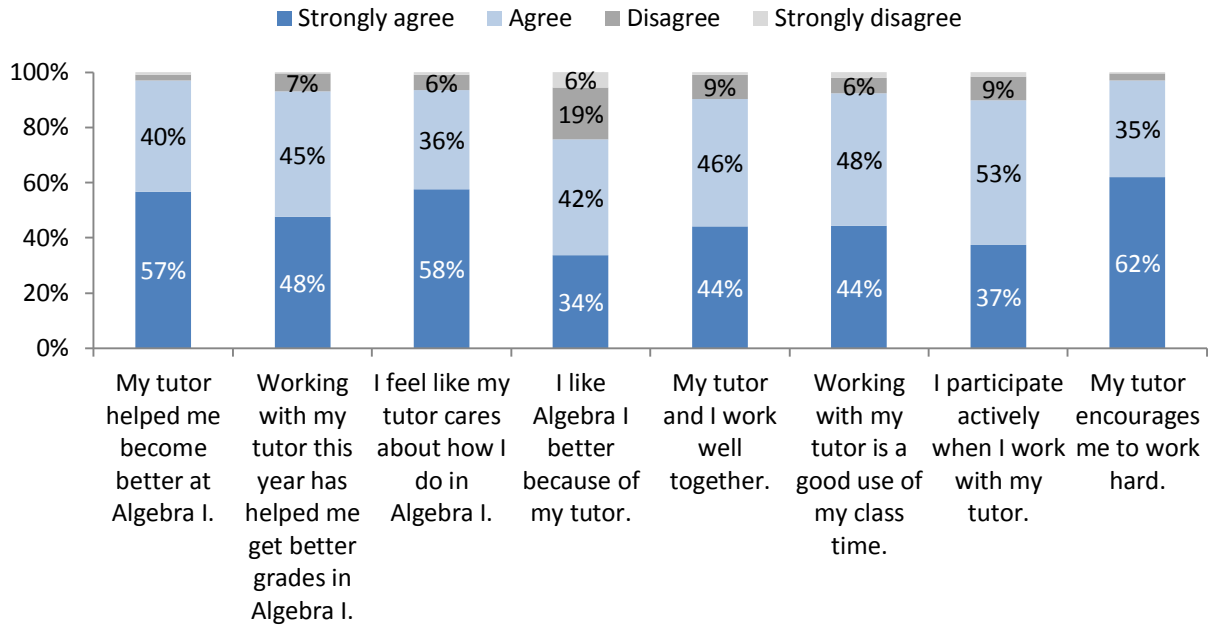
Algebra I Students

DRE staff collected survey responses from 200 Algebra I students, a response rate of 36%. Additional students completed the survey, but results were lost due to a problem with the electronic survey tool. Because of the low response rate, caution should be used when interpreting the results.

> *My tutors are amazing both as a teacher and friend. The best part of my whole day is coming here to work with them... My tutors made math so much fun and helped me out in so many ways.* sic
> — Algebra I student

Almost all students provided positive feedback about the HDT Program. Approximately one-quarter of students did not like Algebra I better because of their tutor (Figure 15). Asked to "share any additional comments about your algebra tutoring experience," a few students expressed a dislike of the program, but the vast majority appreciated their tutors and felt that the HDT Program helped them improve academically.

Figure 15. Algebra I participants responded positively to questions about their experience with high-dosage tutoring (HDT).



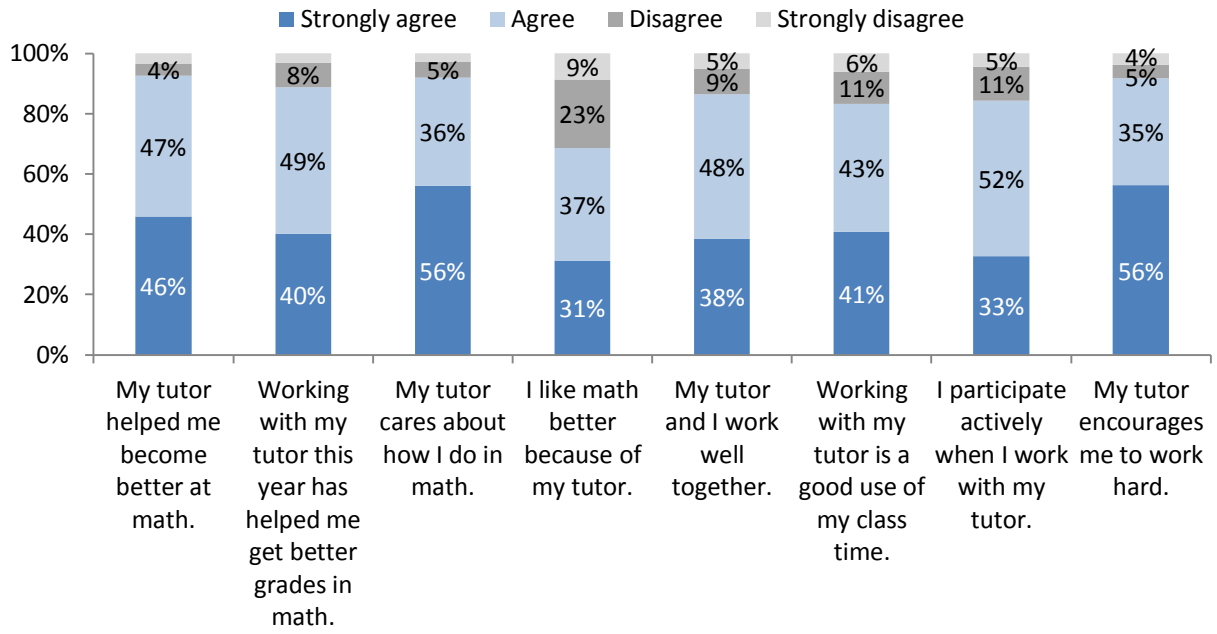
Source. HDT Student Survey, 2013–2014

Sixth-Grade Math Students

> *It has helped me become better at math and has taught me new things*
> — 6th-grade student

In the 6th-grade math HDT Program, 687 students completed the survey, yielding a response rate of 85%. Students were generally very positive about their experiences with HDT, especially about working with their tutors. Approximately one-third of students responded that they did not like math better because of their tutor (Figure 16). Students' open-ended responses about HDT were mixed. Most students provided positive feedback about their tutors; some students complained that the program was boring or that they did not like their tutor.

Figure 16. Sixth-grade High-Dosage Tutoring (HDT) students had primarily positive feedback about the HDT Program.



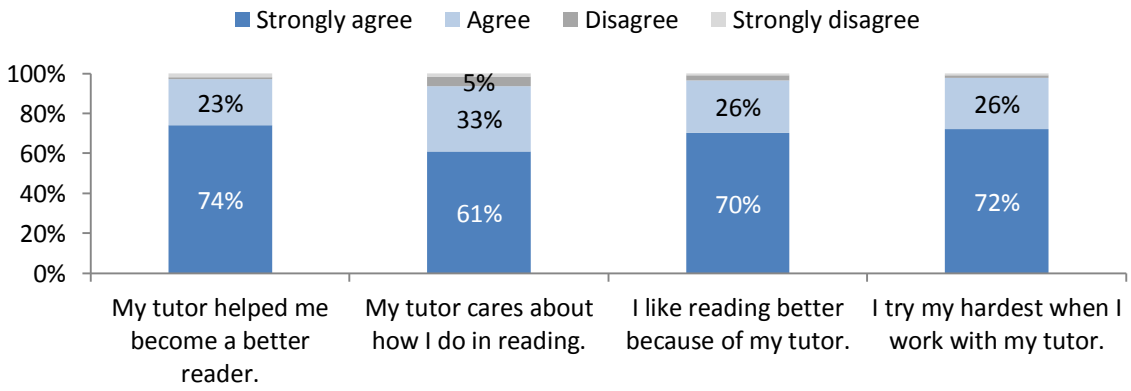
Source. HDT Student Survey, 2013–2014

Second-Grade Reading Students

> *It's fun. I learn a lot. They inspire me about reading so now I read a lot.*
> — 2nd-grade student

Three-hundred, twenty-three 2nd-grade students took the HDT student survey, a response rate of 98%. Students' responses to questions about their experiences with the HDT Program were overwhelmingly positive (Figure 17). When asked to "tell us anything else that you would like for us to know about working with your reading tutor," students provided many positive statements about their tutors. Students described how much they liked their tutors and how much they learned through the program.

Figure 17. Almost all second-grade High-Dosage Tutoring (HDT) students responded positively to questions about the program.



Source. HDT Student Survey, 2013–2014

Discussion of Results

Did students experience significant growth throughout the school year?

At almost all participating HDT schools, a higher proportion of students met the 2013–2014 measured test standard than met the previous year measured test standard. At both HDT high schools, a significantly higher proportion of students passed the Algebra I EOC test than passed the 8th-grade STAAR math test the prior year. At Burnet and Mendez Middle School, a higher percentage of students passed the 6th-grade STAAR math test than passed the 5th-grade STAAR math test the prior year, though this difference was not significant. At Martin Middle School, a significantly lower proportion of students passed the 6th-grade STAAR math test than passed the 5th-grade STAAR math test the prior year. At Govalle, Langford, and Ortega Elementary School, a significantly higher proportion of participants met the 2nd-grade DRA EOY standard than met the BOY standard. A higher proportion of participants at Widen Elementary School met the DRA EOY standard than met the BOY standard, but this difference was not significant. Because a matched comparison analysis was outside the capacity of this evaluation, caution should be used interpreting results and assuming causation

All HDT programs fell short of their 2013–2014 passing rate goals, by approximately 5 percentage points at each program level. Eighty percent of HDT Algebra I participants met the Algebra I EOC standard, falling short of the 85% goal. Of all 6th-grade HDT participants, 64% met the 6th-grade STAAR math standard, not reaching the goal of 69%. Fifty-eight percent of 2nd-grade HDT participants met the end-of-year DRA standard. This outcome missed the goal of a 63% passing rate.

How many students, who were below grade level at the beginning of the school year or at the end of the previous school year, achieved on-grade-level status by the end of the school year?

Of Algebra I HDT students who failed to meet the 8th-grade STAAR math standard during the 2012–2013 school year, 67% met the Algebra I EOC standard at the end of the 2013–2014 school year. Thirty-seven percent of 6th-grade HDT students who failed to meet the 5th-grade STAAR math standard met the 6th-grade STAAR math standard. Thirty-six percent of the 2nd-grade participants who did not meet the BOY DRA standard met the EOY DRA standard.

Did tutors, teachers, and students perceive the HDT Program as beneficial for students?

Overall, a majority of tutors, teachers, and students reported in end-of-year HDT surveys that they believed the HDT Program was beneficial for participants. More than 90% of tutors who took the HDT end-of-year survey reported that they believed the program helped students develop confidence in the subject in which they were tutored, believed the program helped their students make academic progress in the subject, and would recommend implementing the program at additional schools. Teachers were not as enthusiastic as were the tutors about their perceptions of the program's effectiveness, but a majority (between 69% and 90%) believed that their students enjoyed the subject more, better understood the subject, and had better grades because of HDT. Nearly all Algebra I HDT students reported that they became better at Algebra I and their grades in the subject improved because of the program. Most Algebra I participants reported enjoying the subject more because of HDT. A strong majority of 6th-grade HDT participants responded that they believed they became better at math and improved their grades in the subject because of the HDT Program. Most also reported that they liked math more because of HDT. Almost all 2nd-grade HDT students agreed that they liked reading more and became better readers because of their tutoring.

CONSIDERATIONS

Several themes emerged from survey responses that can help guide future decisions about high dosage tutoring programs:

Communication and collaboration: In survey responses, tutors and teachers reported a disconnect between tutors, teachers, and the school instructional team. Future programs may benefit from including tutors in campus professional development opportunities or other school training, encouraging teachers and tutors to communicate with each other about students' needs and progress, and ensuring teachers understand how to best use the tutoring program.

Student behavior management: Tutors reported issues managing students' behavior. Tutors felt that their hands were tied or that they were ill prepared to deal with disruptive or undesirable behavior. Future training could provide tutors with clear expectations regarding student behavior management, as well as training about how to refocus students. Teachers and school staff could also work with tutors to better manage students' behavior and support tutors.

Program scheduling: Second-grade teachers reported problems with the amount of time devoted to the HDT Program. Tutoring staff could make an effort to work with teachers to discern the best time of day to implement this program, even if retaining the same length of time is necessary.

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