ACHIEVE**3000**®

Impact Report

2017-2018 STAAR Reading Performance for Students Using Achieve3000's BOOST Literacy Solution as Part of the Response-to-Intervention Model in Aldine Independent School District, TX

2017-2018

INTRODUCTION

Aldine Independent School District (Aldine ISD) serves approximately 60,000 students and is among the ten largest school districts in Texas. Aldine ISD is located about 10 miles north of downtown Houston and serves students from the communities of Aldine, Greenspoint, East Aldine, Airline, Acres Homes, Bordersville, and Inwood Forest. In the 2017-2018 school year, 74 percent of students were Hispanic, 23 percent of students were African American, and 3 percent were white or multi-ethnic[1]. Like most urban districts in America, Aldine ISD serves students who are at risk; approximately three-quarters of all students are identified as at risk of dropping out from high school according to state criteria. Nine out of ten students in Aldine ISD are considered economically disadvantaged and over a third of students in Aldine ISD are English language learners[2].

Educators in Aldine ISD work hand-in-hand across the district and within its schools to help their students beat the odds. Aldine ISD has received statewide awards and has been featured in the national spotlight multiple times for the district's remarkable dedication to narrowing the achievement gap for its students and investing in comprehensive and targeted professional development for its teachers. Aldine ISD was a recipient of the Texas Quality Award in 2006 and the H-E-B Excellence in Education Award in 2008. In 2009, Aldine ISD won the Broad Prize for Urban Education. In 2016, Aldine ISD was both recognized as a national case study on school turnaround efforts in *The Rewards of Perseverance*[3] , a report by a Boston-based nonprofit that works with urban schools and was also highlighted in the *District Rising*[4] series by Education First, funded by the Bill and Melinda Gates Foundation.

IMPLEMENTATION

Aldine ISD middle schools began using Achieve3000's BOOST in their reading labs for students in need of reading intervention during the 2017-2018 school year as part of an effort to incorporate a data-driven approach into their literacy instruction. Professional development was provided to all the reading lab teachers three times a year with data review and analysis sessions scheduled with district leadership every six weeks. Students who were designated as RtI Tier II were placed into a reading lab where they used BOOST as a supplement to their regular English language arts (ELA) core class. Reading lab teachers facilitated BOOST lessons using direct instruction, small group work, and independent practice. Educators were encouraged to schedule monthly data chats with students and to celebrate their Lexile® growth by posting highly visible charts in the hallways and reading labs.

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1   Aldine Independent School District. "Fast Facts." Fast Facts - Aldine Independent School (EN). Accessed May 30, 2019.
      https://www.aldineisd.org/about/accountability/fast_facts
2   Murphy, Ryan, and Annie Daniel. "Aldine ISD." Texas Public Schools. April 05, 2019. Accessed May 30, 2019.
      https://schools.texastribune.org/districts/aldine-isd/
3   Education Resource Strategies. The Rewards of Perseverance: A Case Study of Aldine Independent School District
      (AISD).Report. Education Resource Strategies. 2016. Accessed June 2019.
4   Education First. Districts Rising: ALDINE INDEPENDENT SCHOOL DISTRICT Pursuing Equity for Two Decades (and
      Counting). Publication. Education First. Seattle, WA: Education First, 2018.

METHODOLOGY

Achieve3000 conducted an analysis of Aldine ISD's seventh- and eighth-grade students' performance on the STAAR Reading test in relation to students' usage of Achieve3000's literacy solutions during the 2017-2018 school year. The solution examined in this document, BOOST (grades 6-8), is powered by a patented methodology that delivers grade-appropriate lessons to the entire class, and simultaneously tailors them according to each student's Lexile reading level.

This report relies on internal Achieve3000 usage and Lexile data as well as STAAR Reading assessment data from Spring 2017 and Spring 2018. To examine the impact of BOOST usage on students' reading achievement, a sample of 1,161 seventh- and eighth-grade students who met the following inclusion criteria was identified:

- Valid pre-test and end-of-year Lexile measures during the 2017-2018 school year

- At least 60 days had passed in between the date of their most recent Lexile assessment and their pre-test

- Completed at least 10 embedded assessments within BOOST lessons

- Had a STAAR scale score from spring 2017 and spring 2018

MEASURES

LevelSet™

Developed by Achieve3000 in partnership with MetaMetrics®, the LevelSet™ assessment identifies each student's Lexile reading measure and is a reliable means of matching student reading levels to informational text. The LevelSet assessment is administered two to three times a year to measure student progress and provide a benchmark measurement of student growth in English or Spanish. Achieve3000 and MetaMetrics developed 4 grade-specific achievement level descriptors for college and career readiness: falls far below, approaches, meets, and exceeds. Achieve3000 considers students performing in the higher two achievement levels (meets and exceeds) to be "on track" for college and career readiness, whereas students performing in the lower two achievement levels (falls far below and approaches) are considered to be "not-on-track." Achieve3000 uses a Bayesian scoring algorithm, also developed by MetaMetrics, to provide continually updated measures that reflect the students' progress in reading development. As the student reads and responds to nonfiction text during their reading lessons, the Bayesian approach refines each student's Lexile measure. By using multiple measures over time, the Bayesian scoring improves the accuracy of measurement as students learn. With this approach, Achieve3000's proprietary engine

is able to improve its ability to match students with appropriate texts and to forecast student readiness for college and career benchmarks.

STAAR READING

Students enrolled in grades 3-8 participate in the State of Texas Assessments of Academic Readiness (STAAR) program, which, among other assessments, includes yearly assessments in reading (TEA, 2018a). Students taking the STAAR are given a raw score, equivalent to the number of questions students answered correctly. These are then converted to scale scores that can be interpreted across different sets of test questions, allowing for direct comparisons of student performance between specific sets of test questions from different tests. Ranges of scale scores are further converted to performance levels that relate to expectations defined in the state-mandated curriculum standards known as the Texas Essential Knowledge and Skills (TEKS) (TEA, 2018b). The performance level categories are masters grade level, meets grade level, approaches grade level, and did not meet grade level (TEA, 2018c). Passing scores in the STAAR Reading are those that fall in the approaches, meets, or masters grade level categories.

RESULTS

Program Usage

Over the course of the 2017-2018 school year, participating students in grades 7 and 8 logged in an average of 85 times, completed 51 embedded assessments (activities) within BOOST lessons, and demonstrated an average first-try score (AFTS) of 65 percent on embedded assessments. Seventh grade students completed more activities and spent more time in the program, on average, than eighth graders. (See Table 1.)
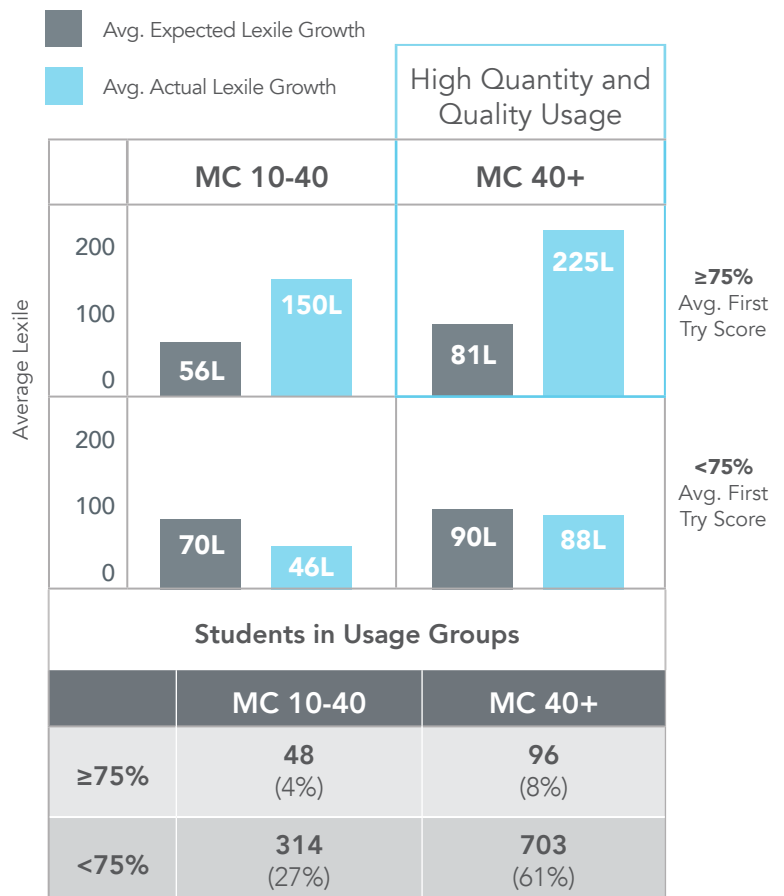
PROGRAM USAGE SUMMARY OVERALL AND BY GRADE

Grade	Students	Avg. Logins/Student	Avg. Hours of Usage/Student	Avg. Activities/Student	AFTS	% Who Completed 40+ Lessons w/ an AFTS ≥ 75%
7	602	92	34	55	64%	8%
8	559	77	27	47	66%	9%
All Grades	1,161	85	31	51	65%	8%

Table 1: Aldine ISD Students' Program Usage Summary Overall and by Grade, 2017-2018 School Year

LevelSet Performance

Overall, students demonstrated an average Lexile growth of 91L, which exceeded their average expected growth of 82L. Students who used BOOST with greater fidelity saw greater Lexile gains. Specifically, students who completed 40 or more lessons with an average first-try score ≥75 percent on the embedded assessment achieved gains of 225L on average, which was two and a half times their expected growth of 81L. (See Graph 1.) In addition, the percentage of students in this sample who were performing in the falls far below college and career readiness range decreased from 77 percent to 58 percent while the percentage of students whose Lexile measures approach or meet proficiency levels for college and career readiness increased from 23 percent to 41 percent over the course of the 2017-2018 school year.

Graph 1: Actual versus expected Lexile growth for students using BOOST with different levels of quantity and quality of practice

Legend:
- Avg. Expected Lexile Growth
- Avg. Actual Lexile Growth

High Quantity and Quality Usage

	MC 10-40	MC 40+	
Average Lexile	56L / 150L	81L / 225L	≥75% Avg. First Try Score
	70L / 46L	90L / 88L	<75% Avg. First Try Score

Students in Usage Groups

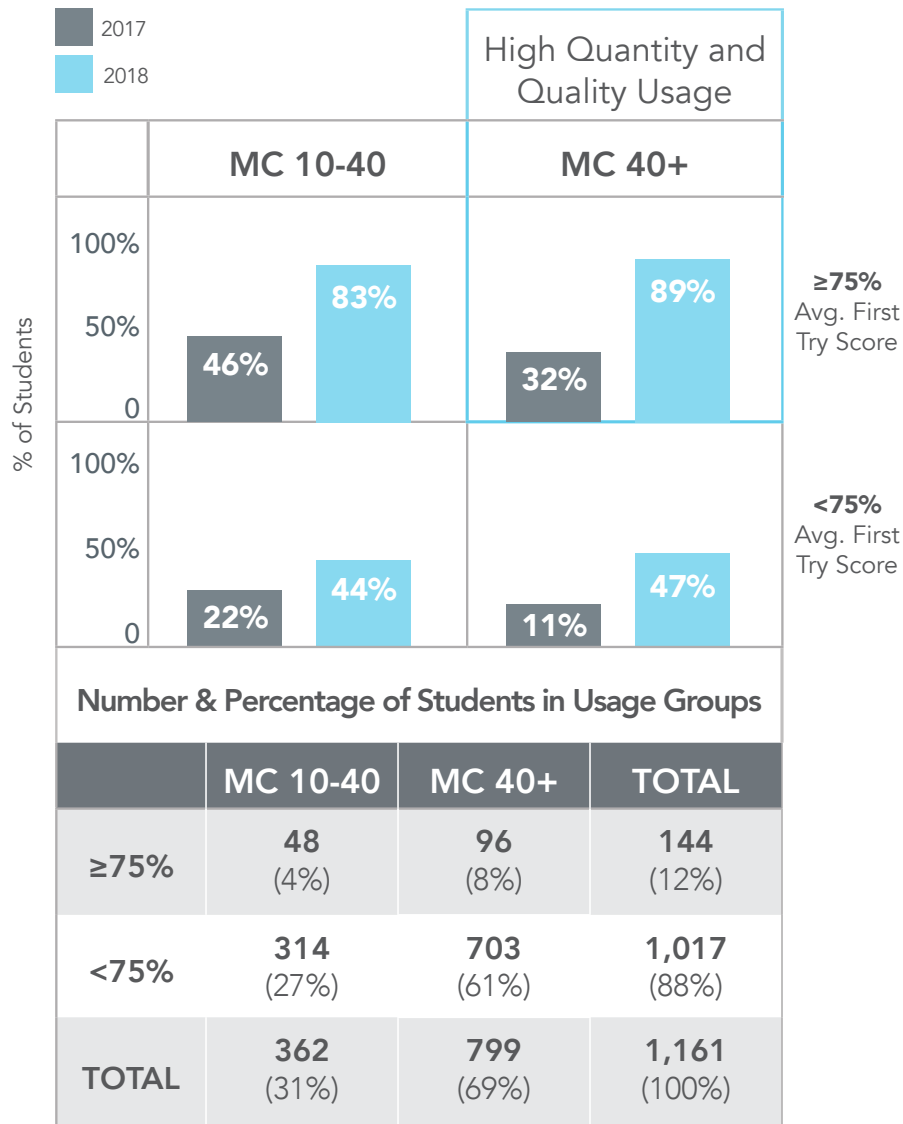|	MC 10-40	MC 40+
≥75%	48 (4%)	96 (8%)
<75%	314 (27%)	703 (61%)

RESULTS (cont.)

STAAR ELA Performance

On average, students saw an increase of 85 scale score points from 2017 to 2018. Students who completed 40 or more lessons and maintained an average first-try score of 75 percent or above on the embedded assessments gained an average of 118 points. Overall, 51 percent of students who used BOOST passed the STAAR ELA in 2018 compared to 17 percent in spring 2017. Eighty-nine percent of the students who used BOOST with the highest quantity and quality of practice (80+ lessons with an AFTS ≥ 75 percent on the embedded assessments) passed the STAAR ELA exam. The correlation between students' spring Lexile and 2018 STAAR ELA scale score growth was strong and positive (r = 0.64, p < .0001).
(See Graphs 2 and 3.)

Graph 2: : Percent of students who passed STAAR ELA by quantity and quality of program usage in 2017 and 2018

Number & Percentage of Students in Usage Groups

	MC 10-40	MC 40+	TOTAL
≥75%	48 (4%)	96 (8%)	144 (12%)
<75%	314 (27%)	703 (61%)	1,017 (88%)
TOTAL	362 (31%)	799 (69%)	1,161 (100%)

RESULTS (cont.)

STARR READING PERFORMANCE LEVEL MOVEMENT FROM 2017-2018

Graph 3: Student performance on STAAR ELA in 2017 and 2018
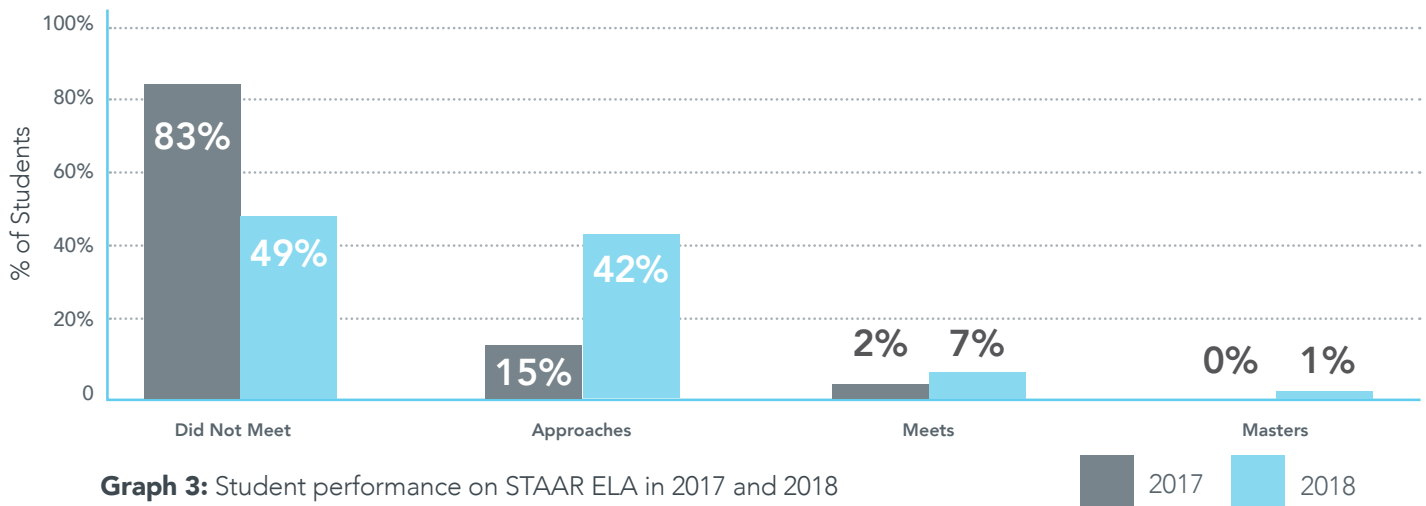
CONCLUSION

After one year of instruction, students in Aldine ISD who used Achieve3000's BOOST as part of the districts' RtI model demonstrated great improvement on the STAAR ELA with almost triple the percentage of students who passed (50 percent in 2018 compared to 17 percent in 2017). During the academic school year following this impact study (2018-2019) and under new leadership, Aldine ISD has been more focused than ever on cross-collaboration and data-driven student success. We are proud to continue partnering with Aldine ISD in their relentless pursuit of college and career readiness for each and every one of their students, all while supporting their teachers along the way.

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