

Research Results

Read 180 Tuscaloosa City Schools

Study Profile

District:

Tuscaloosa City Schools, Tuscaloosa, AL

Grades:

6–11

Study design:

Tier 3 ESSA Promising Evidence

Evaluation period:

2022–2023 school year

Study Conducted By:

Forge Research Group

Outcome Measures:

- HMH Growth Measure for English Language Arts
- Alabama Comprehensive Assessment Program: Summative English Language Arts

Implementation:

Intervention classroom model

District Characteristics

Tuscaloosa City Schools (TCS), located in Alabama, serves students throughout metropolitan Tuscaloosa. TCS served 11,303¹ PK–Grade 12 students within 11 elementary schools, 1 K–Grade 8 school, 4 middle schools, 2 specialty schools, and 3 high schools during the 2022–2023 school year. The ethnic backgrounds of these students were: Black (67%), White (23%), Hispanic (6%), Asian (2%), Native American (0.5%), Pacific Islander (0.2%), and other (1.7%). In TCS, 68% of students were socio-economically disadvantaged (eligible for free or reduced-price lunch), 17% were classified as Students with Disabilities (SWD), and 5% were English learners (EL)².

scores. HMH provided teachers a Getting Started and Teacher Success Pathway along with access to professional development throughout the year.

Participants

Three TCS middle schools and two high schools utilized *Read 180* during the 2022–2023 school year. All students who completed at least 100 minutes of *Read 180* software and at least one of the testing measures at two time points were included in the analysis (see Table 1). These *Read 180* student demographics included: Asian (0.6%), Black (87.2%), Native American (2.9%), Pacific Islander (0.6%), and White (8.7%). Of these students, 54% were female and 47% were male, 85% were economically disadvantaged, 13% were classified as a SWD, and 4% were classified as EL.

Implementation Overview

Implementation Model

Tuscaloosa City Schools (TCS) students in Grades 6–11 who were identified as struggling with reading continued regular ELA instruction and were enrolled in additional *Read 180*[®] instruction. *Read 180* instruction focuses on the pillars of reading including phonetic awareness, phonics, fluency, vocabulary, and comprehension. Lessons incorporate teacher-led instruction and independent reading, and the *Read 180* student application provides a personalized learning path to reading proficiency based on initial student assessment

¹Retrieved from <https://www.tuscaloosacityschools.com/about-us/about-us/about-tuscaloosa-city-schools>

²Retrieved from <https://reportcard.alsde.edu/OverallScorePage.aspx?ReportYear=2023&SystemCode=200&SchoolCode=0000>

Table 1. TCS *Read 180* students, Grades 6–11 (*N* = 172)
Demographic characteristics, 2022–2023

Characteristics	<i>n</i>	Percentage
Grade		
6	67	39.0
7	57	33.1
8	23	13.4
9	15	8.7
10	7	4.1
11	3	1.7
Gender		
Male	80	46.5
Female	92	53.5
Ethnicity		
Asian	1	0.6
Black	150	87.2
Native American	5	2.9
Pacific Islander	1	0.6
White	15	8.7
English Learner		
Yes	7	4.1
Economically disadvantaged		
Yes	146	84.9
Student with a Disability		
Yes	22	12.8

Measures

Software Usage Data

Student software usage data was collected as students used the *Read 180* online Student App. Software usage data included total time, number of completed topics (for those students working on phonics), number of completed segments (for those students working on reading comprehension), number of completed sessions, average time spent in each session, and number of sessions averaged per week.

HMH Growth Measure for English Language Arts

The HMH Growth Measure for English Language Arts (ELA) provides a standards-based interim computerized adaptive assessment to measure reading comprehension proficiency for students in Grades K–11. The assessment is typically administered three times per year (e.g., fall, winter, and spring) and includes valid, reliable items. Assessment results include a grade-specific scaled score (with a range from G01 to G99, where G represents the test grade administered) and a corresponding performance level of *Far Below Level*, *Below Level*, *Approaching*, *On Level*, or *Above Level*, indicating competency compared to grade-level expectations. Additionally, the results include language and reading comprehension domain performance levels. A grade level equivalent (GLE) category linked to the Lexile®/Quantile® frameworks is also reported, representing the student's GLE minus the test grade, categorized as >2 grades below level, 2 grades below level, 1 grade below level, on grade level, or above grade level. A student proficiency indicator (SPI) based on grade level expectations categorizes beginning-of-year to end-of-year growth as low, targeted, and high. TCS *Read 180* students completed the HMH Growth Measure for ELA in the fall, before beginning *Read 180* instruction, and in the spring, following *Read 180* implementation.

Alabama Comprehensive Assessment Program: Summative English Language Arts

The Alabama Comprehensive Assessment Program: Summative (ACAP Summative) was designed to measure student progress in achieving end-of-year mastery of the Alabama Course of Study Standards, which define the knowledge and skills students are expected to know and be able to do within each grade. Students in Grades 2 through 8 complete the online assessment in the spring of each school year. The computer-administered ACAP Summative ELA assessment includes multiple-choice questions measuring reading comprehension of literary and informational passages and language

standards and a writing prompt requiring information synthesis. Assessment results include a grade-independent scale score, corresponding performance level 1–4 (with level 3 indicating grade-level proficiency), and equivalent percentile rank.

Results

An independent evaluator from Forge Research Group analyzed student academic achievement using data provided by Tuscaloosa City Schools and HMH. *Read 180* students' ELA performance was examined pre- and post-*Read 180* implementation utilizing multiple independent outcome measures.

Software Usage Findings

During the 2022–2023 school year, TCS *Read 180* students completed an average of 63.1 (*SD* = 21.0) total sessions with 2.6 (*SD* = 0.5) sessions averaged a week and averaging 24.7 minutes (*SD* = 7.5) per session in the *Read 180* online student application (see Table 2). Usage varied widely by grade, with ninth-grade students utilizing the student application software for the greatest number of hours (*M* = 40.4 hours) and sixth-grade students utilizing the student application software for the fewest number of hours (*M* = 21.2). As each student was provided with an individual learning path based on initial testing, students completed varying amounts of lessons focusing on the different pillars of reading. Sixth-grade students completed the fewest software segments (focused on reading comprehension) but most software topics (focused on phonics and fluency), and eleventh-grade students completed the most segments and no topics (focusing exclusively on reading comprehension), indicating an expected different beginning level in the *Read 180* software.

Table 2. TCS *Read 180* students, Grades 6–11 (*n* = 172)
Mean software usage by grade, 2022–2023

Software Usage	6 th <i>n</i> = 67	7 th <i>n</i> = 57	8 th <i>n</i> = 23	9 th <i>n</i> = 15	10 th <i>n</i> = 7	11 th <i>n</i> = 3
Mean Sessions Completed	58.0	69.6	63.8	66.3	56.0	49.7
Mean Minutes Per Session	22.2	22.1	28.1	36.3	32.8	28.2
Mean Sessions Per Week	2.5	2.6	2.6	2.9	2.6	3.1
Mean Total Time (hours)	21.2	26.8	30.2	40.4	28.5	24.0
Mean Segments Completed	1.8	3.4	4.5	4.9	5.0	7.0
Mean Topics Completed	12.6	6.8	3.7	4.9	0	0

English Language Arts Assessment Findings

HMH Growth Measure for English Language Arts Findings

Students completed the HMH Growth Measure ELA in fall 2022 before beginning *Read 180* and in the spring of 2023 at the conclusion of the school year. Overall, students who completed the HMH Growth Measure ELA in the fall and spring demonstrated a statistically significant overall gain in scale scores, averaging a 9-point increase (see Figure 1), effect size Cohen's *d* = .49. Disaggregation of the data indicated that students in Grades 6, 7, 8, and 9 achieved statistically significant scale score gains, effect size Cohen's *d* = .51, .48, .61, and .56, respectively. Likewise, students in each demographic category of gender, ethnicity, and socioeconomic status achieved statistically significant scale score gains (see Appendix Table 1).

Figure 1. TCS *Read 180* students, Grades 6–11 (*n* = 158)
Change in HMH Growth Measure ELA scale score, 2022–2023

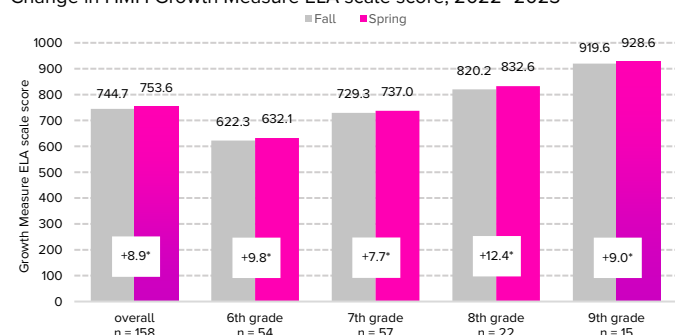


Figure note: *significant at *p* < .05. Student categories with *n* < 10 are suppressed for confidentiality.

HMH Growth Measure ELA score fall to spring growth was related to *Read 180* student application software use (see Appendix Table 2). On average, *Read 180* students who completed more segments or topics in the online software also achieved higher Growth Measure score gains (see Figure 2); students who completed 3 or more segments or 16 or more topics achieved 1.4 times more score growth (10.1 points) than students who completed 1–2 segments or 16–29 topics (7.0 points), effect size Cohen's $d = -0.07$ with minimal implementation, Cohen's $d = .40$ with low implementation, Cohen's $d = .54$ with moderate or high implementation.

Figure 2. TCS *Read 180* students, Grades 6–11 ($n = 158$)
HMH Growth Measure ELA school year growth by level of implementation, 2022–2023

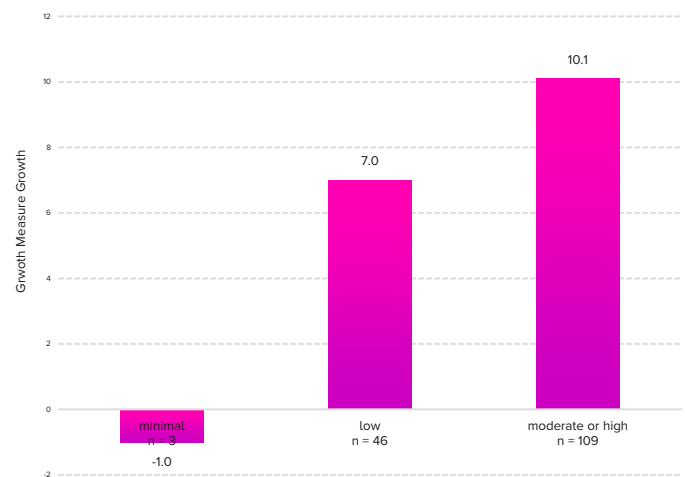


Figure note: minimal = 0 segments and 15 or fewer topics; low = 1–2 segments or 16–29 topics; moderate or high = 3+ segments or 30+ topics

Read 180 student HMH Growth Measure ELA performance levels also reflected these increases in reading proficiency (see Figure 3). The percentage of students achieving an On Level performance level increased from fall to spring by 500% overall (from 1.9% to 9.5%) in the 2022–2023 school year. Further, the percentage of students scoring a Far Below Level performance level decreased from fall to spring by 25.2% (from 43.1% to 32.2%) in the 2022–2023 school year. The increase in *Read 180* students' performance levels was statistically significant overall and at the sixth- to eighth-grade levels, effect size Cohen's $d = .43$ overall, .44 in Grade 6, .48 in Grade 7, .54 in Grade 8, and Cohen's $d = .36$ in Grade 9.

Figure 3. TCS *Read 180* students, Grades 6–11 ($n = 158$)
Change in HMH Growth Measure ELA performance level, 2022–2023

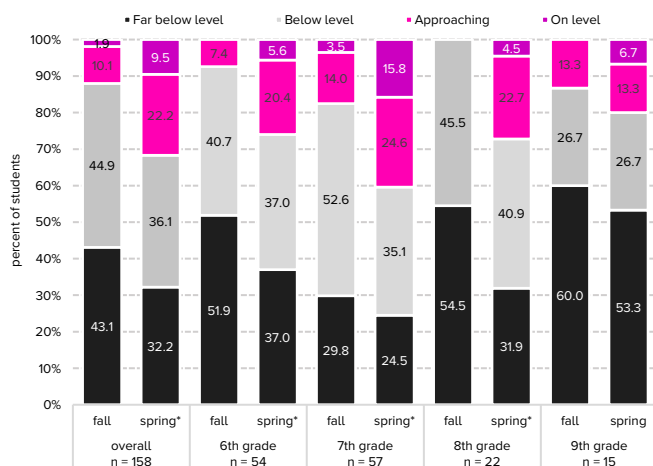
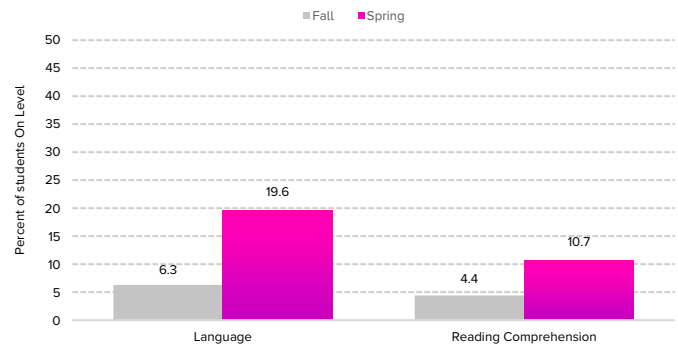


Figure note: *significant increase at $p < .05$. Student categories with $n < 10$ are suppressed for confidentiality.

TCS *Read 180* students also demonstrated statistically significant increases in the performance level subscales reported with the HMH Growth Measure ELA (see Figure 4). The percentage of students who achieved an On Level language performance level increased from 6% in the fall to 20% in the spring (effect size Cohen's $d = .48$). Likewise, the percentage of students who

achieved an On Level reading comprehension performance level increased from 4% in the fall to 11% in the spring (effect size Cohen's $d = .32$).

Figure 4. TCS *Read 180* students, Grades 6–11 ($n = 158$)
Percent scoring On Level in HMH Growth Measure performance level subscales, 2022–2023



Of note, in the 2022–2023 school year, based on a grade level equivalent (GLE) category linked to the Lexile/Quantile frameworks, the percentage of students reading two or more grades below level decreased significantly overall (see Figure 5) from 60% to 40% (effect size Cohen's $d = .51$), and among sixth-, seventh-, and eighth-grade students (effect size Cohen's $d = .49$, .60, and .88, respectively). Overall, 43% of *Read 180* students increased at least 1 grade level in reading proficiency, of which 11% of students increased 2, and 8% of students increased 3 or more grade levels in reading proficiency.

Figure 5. TCS *Read 180* students, Grades 6–11 ($n = 158$)
Change in grade level reading ability, 2022–2023

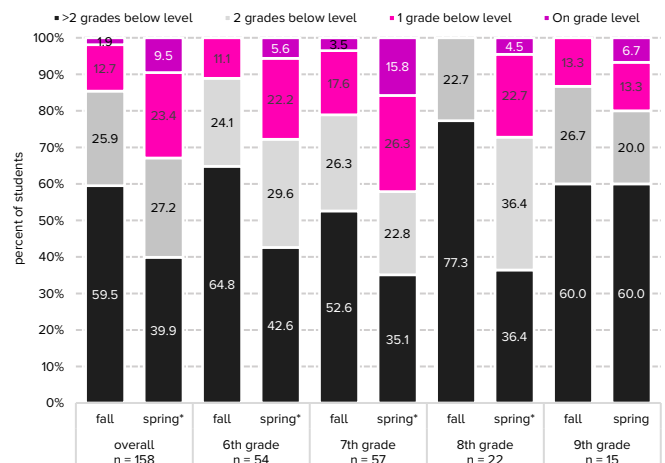


Figure note: *significant increase at $p < .05$. Student categories with $n < 10$ are suppressed for confidentiality.

Overall, 35% of *Read 180* students achieved growth targets from fall 2023 to spring 2024. Meeting or exceeding the growth target was related to *Read 180* student application software use (see Appendix Table 3). Overall, (see Figure 6) 39% of *Read 180* students who completed 3 or more segments or 16 or more topics (moderate or high implementation) met or exceeded fall to spring growth goals compared to 30% of students who completed 1–2 segments or 16–29 topics (low implementation).

Figure 6. TCS *Read 180* students, Grades 6–11 (*n* = 158)
HMH Growth Measure ELA growth goals met by level of implementation, 2022–2023

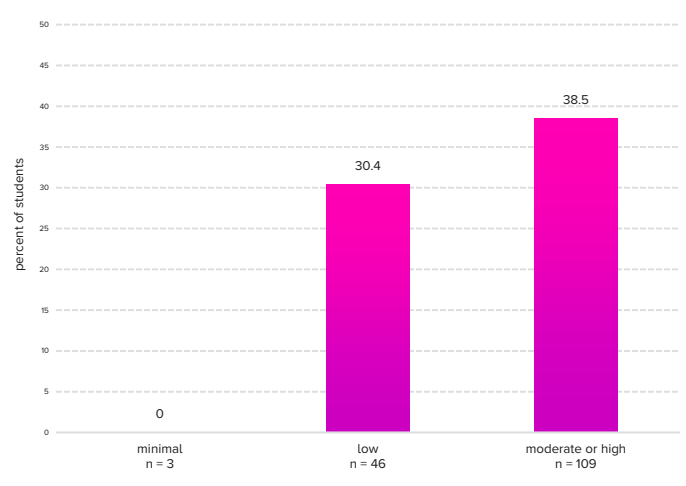


Figure note: minimal = 0 segments and 15 or fewer topics; low = 1–2 segments or 16–29 topics; moderate or high = 3+ segments or 30+ topics

Alabama Comprehensive Assessment Program: Summative English Language Arts Findings

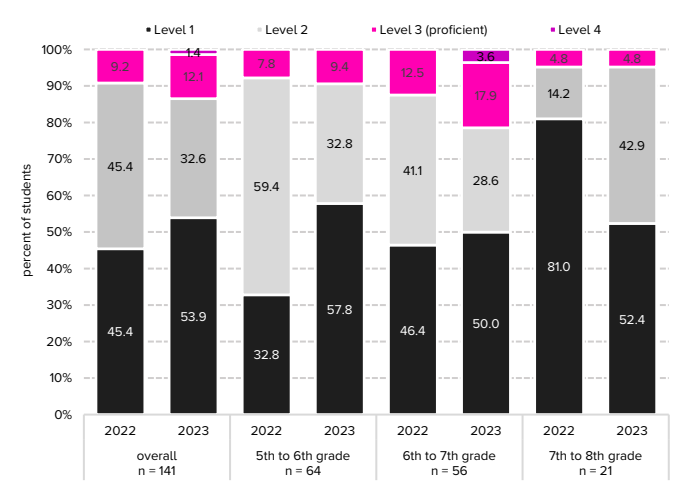
In the spring of 2022, TCS *Read 180* students (see Table 3) averaged ACAP Summative ELA scores of 444 (5th grade), 442 (6th grade), and 387 (7th grade). In the spring of 2023, these same students averaged ACAP Summative ELA scores of 434 (6th grade), 434 (7th grade), and 431 (8th grade). While these scores are not comparable across grades, seventh-grade students averaged higher scores in 2023, following *Read 180* implementation, as compared to seventh-grade students in 2022.

Table 3. TCS *Read 180* students, Grades 5–8 (*n* = 141)
Alabama Comprehensive Assessment Program ELA scores, 2022 and 2023

Grade	2022		2023	
	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>
5 th grade	444.1	64	433.8	64
6 th grade	441.9	56	433.8	56
7 th grade	387.0	21	430.5	21
8 th grade				

Read 180 student ACAP Summative ELA proficiency levels demonstrated year-to-year increases in reading proficiency (see Figure 7). The percentage of students achieving a Level 3 or higher proficiency level increased from 2022 to 2023 by 147% (from 9.2% to 13.5%). Seventh-grade students achieved notable growth moving from the Level 2 to the Level 3 and Level 4 proficiency levels and eighth-grade students achieved notable growth moving from the Level 1 to the Level 2 proficiency level.

Figure 7. TCS *Read 180* students, Grades 6–8 (*n* = 141)
Change in ACAP Summative ELA performance levels, 2022–2023



TCS *Read 180* students showed accelerated growth in ACAP Summative ELA percentile rank compared to their initially same-scoring peers. On average, *Read 180* students scored better than 21% of their peers during the spring 2022 ACAP ELA test but better than 23% of their peers during the spring 2023 ACAP ELA test (see Figure 8). Eighth-grade students achieved a notable and statistically significant 10-point increase in percentile rank from 2022 to 2023.

Figure 8. TCS *Read 180* students, Grades 6–8 (*n* = 141)
Change in ACAP Summative ELA percentile rank, 2022–2023

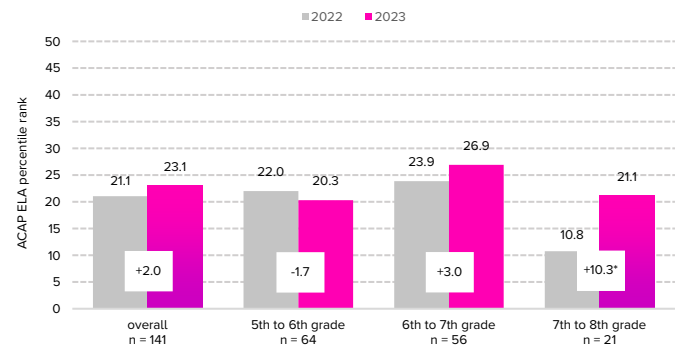


Figure note: *significant year-to-year increase at *p* < .05.

Year-to-year ACAP Summative ELA percentile rank growth was related to *Read 180* student application software use (see Figure 9). On average, *Read 180* students who completed more segments or topics in the online software also achieved greater percentile rank gains; students who completed 3 or more segments or 16 or more topics achieved 32 times more percentile rank growth (3.2 ranks) than students who completed 1–2 segments or 16–29 topics (0.1 ranks), effect size Cohen’s *d* = -0.46 with minimal implementation, Cohen’s *d* = .01 with low implementation, Cohen’s *d* = .20 with moderate or high implementation.

Figure 9. TCS *Read 180* students, Grades 6–8 (*n* = 141)
Change in ACAP Summative ELA percentile rank by level of implementation, 2022–2023

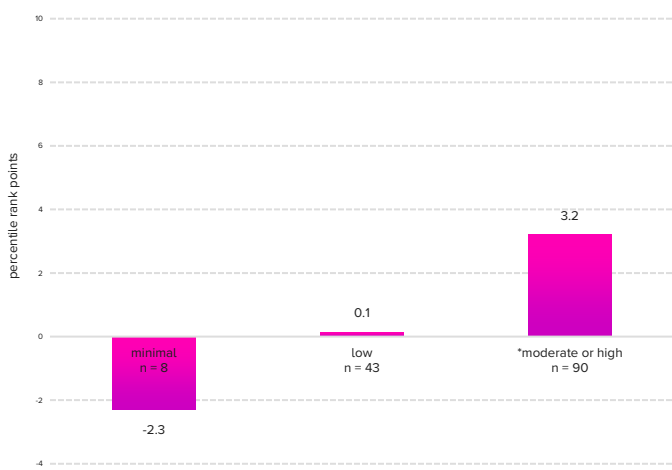


Figure note: minimal = 0 segments and 15 or fewer topics; low = 1–2 segments or 16–29 topics; moderate or high = 3+ segments or 30+ topics

Conclusion

A correlational analysis using multiple independent ELA outcome measures supported the idea that Tuscaloosa City Schools (TCS) students enrolled in *Read 180* for reading intervention made significant improvements in English Language Arts proficiency.

TCS enrolled sixth- through eleventh-grade students struggling to achieve grade-level ELA proficiency in *Read 180*. *Read 180* students demonstrated statistically significant fall to spring increases in HMH Growth Measure ELA scale scores. These increases were demonstrated by each demographic category of gender, ethnicity, and socioeconomic status. The percentage of *Read 180* students who achieved an On Level performance level increased from 2% in the fall to 10% in the spring. Further, large HMH Growth Measure ELA gains were demonstrated by students who began at the lowest levels of ELA proficiency, as demonstrated by the significant 60% to 40% decrease in students reading 2 or more grades below level. Importantly, 19% of *Read 180* students increased at least two grade levels in reading comprehension after one year of instruction.

TCS *Read 180* students also demonstrated notable growth on the ACAP Summative ELA assessment, with the percentage of students achieving a Level 3 (proficient) or greater performance level increasing from 9% in spring 2022 to 14% in spring 2023. Year-to-year increases in ACAP Summative ELA percentile ranks demonstrated that TCS *Read 180* students achieved accelerated growth in ELA proficiency during the 2022–2023 school year.

Both HMH Growth Measure ELA outcomes and ACAP Summative ELA outcomes demonstrated a relationship between dosage of the *Read 180* student application and ELA gains, with larger pre-post *Read 180* implementation effect sizes obtained with higher dosage. In the 2022–2023 school year, a moderate or high level of implementation was related to 1.4 times greater growth in HMH Growth Measure ELA scale scores and 32 times greater growth in ACAP Summative ELA percentile rank. Overall, this study adds to the body of evidence supporting the efficacy of utilizing *Read 180* to increase ELA proficiency.

Check out more *Read 180* research at
hnhco.com/read180research

Appendix

Table A1. TCS *Read 180* students, Grades 6–11 (n = 158)
Results of t tests and descriptive statistics, 2022–2023

	Fall <i>HMH Growth Measure</i> score		Spring <i>HMH Growth Measure</i> score		<i>n</i>	95% CI for mean difference	<i>t</i>	df	<i>p</i>	Cohen's <i>d</i> effect size
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
2022–2023	744.66	125.94	753.63	126.134	158	-11.28, -6.10	-6.18	157	<.001	.492
Fall to spring overall										
Grade										
Sixth	622.26	15.18	632.06	20.47	54	-15.04, -4.56	-3.75	53	<.001	.510
Seventh	729.25	16.56	737.00	22.22	57	-11.99, -3.52	-3.67	56	<.001	.485
Eighth	820.18	14.79	832.55	19.68	22	-21.41, -3.32	-2.84	21	.005	.606
Ninth	919.60	19.75	928.60	23.07	15	-17.88, -0.12	-2.17	14	.024	.561
Gender										
Female	749.25	123.47	762.34	121.61	76	-17.18, -9.01	-6.39	75	<.001	.733
Male	740.41	128.81	745.55	130.41	82	-9.05, -1.22	-2.61	81	.005	.288
Ethnicity										
Black	755.79	129.88	763.77	130.85	137	-11.09, -4.86	-5.07	136	<.001	.433
White	677.13	60.12	696.33	58.46	15	-27.52, -10.89	-4.95	14	<.001	1.279
Socio-economically disadvantaged										
FRPL eligible	747.91	127.02	755.63	128.03	134	-10.71, -4.73	-5.10	133	<.001	.441
Student with a Disability										
Yes	865.62	162.50	870.29	160.98	21	-11.74, 2.40	-1.38	20	.092	.300

Table note: *M* = mean; *SD* = standard deviation; *n* = sample size; CI = confidence interval; df = degrees of freedom; *p* = one-sided significance. Demographic categories with less than 10 students are suppressed to maintain student confidentiality.

Table A2. TCS *Read 180* students, Grades 6–11 (n = 157)
HMH Growth Measure ELA scale score growth and level of implementation regression analysis, fall 2022–spring 2023

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	Naïve Analysis		Corrected for Selection Bias	
					95% CI	<i>p</i>	95% CI	<i>p</i>
<i>Read 180</i> Segments	116	4.56	2.95	1.11	-0.50, 1.76	.269	-0.14, 1.50	.092
<i>Read 180</i> Topics	41 [^]	30.02	11.34	0.86	-0.29, 0.70	.398	-0.25, 0.70	.365

Table Note. *N* = sample size; *M* = mean; *SD* = standard deviation; CI = confidence interval; *p* = significance. [^]Excludes one multivariate outlier.

Table A3. TCS *Read 180* students, Grades 6–11 (n = 157)
HMH Growth Measure ELA student proficiency indicator and level of implementation regression analysis, fall 2022–spring 2023

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	Naïve Analysis		Corrected for Selection Bias	
					95% CI	<i>p</i>	95% CI	<i>p</i>
<i>Read 180</i> Segments	116	4.56	2.95	1.16	-0.36, 1.36	.247	-0.26, 1.23	.149
<i>Read 180</i> Topics	41 [^]	30.02	11.34	1.60	-.09, 0.68	.119	-0.04, 0.64	.078

Table Note. *N* = sample size; *M* = mean; *SD* = standard deviation; CI = confidence interval; *p* = significance. [^]Excludes one multivariate outlier.