

STATE IMPACT REPORT

Impact of Lexia® Core5® Reading in Texas

Key Insights

- Students in Texas schools that used Core5 scored 4-5 points higher, on average, on the TX STAAR Reading Language Arts (RLA) assessment than students at Texas schools that did not use Core5.
- Students at Core5 schools correctly answered more reading and writing items on the STAAR RLA assessment than students at non-Core5 schools.

Introduction

Faced with less than a third of fourth-grade elementary school students in Texas reading proficiently (NAEP, 2022, 2019), Texas launched a new initiative to improve elementary school reading scores by advocating for instructional materials utilizing evidence-based science of reading practices (TX House Bill 1605, 2023). As part of this initiative, many school districts began implementing computer-based reading interventions, including Lexia® Core5® Reading (Core5), to improve students' reading achievement.

Programs such as Core5 may accelerate growth of students' literacy skills, with recent research showing that students in grades 3–5 exhibit greater reading achievement than students from matched schools (Pane et al., 2023). Importantly, elementary reading proficiency is crucial to students' overall academic success, as elementary reading scores are highly predictive of high school graduation rates (Hernandez, 2012). Given the critical need to improve Texas students' elementary reading proficiency, this study focused on the impact of Core5 on students' RLA achievement in Texas's public schools in the 2022–23 school year. This study is the first to investigate the impact of Core5 at scale in Texas schools and provides Moderate evidence of effectiveness according to the federal guidelines provided under ESSA.

Study Design

Lexia researchers merged publicly available school- and grade-level STAAR assessment data from Spring 2022 and Spring 2023, together with school-level demographic data from the 2022-23 school year. All assessment and demographic data were obtained from the Texas Education Agency (TEA) website. The TEA reports schools' average scale scores in RLA achievement, as well as the average percent correct of reading items and writing items by grade for each school. Lexia researchers merged grade-level Core5 usage data with Spring 2022 STAAR, Spring 2023 STAAR, and 2022-23 demographic data. We restricted our analyses to grades 3-5, as grade 3 is the earliest grade tested on the STAAR, and we considered any school with at least one student using Core5 to be a "Core5 school."



Characteristics of Schools in Texas (2022-23).

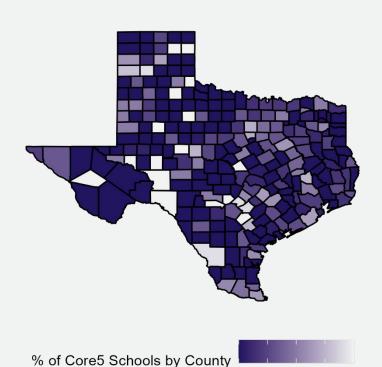
	Core5 School (n=1448)	Non-Core5 School (n=3517)	Overall (n=4965)
% At or Above Grade Level on Spring 2023 STAAR RLA Test	51	48	49
Avg. School Total Enrollment	582	509	531
% Free/Reduced Price Lunch	56	57	57
% White	24	28	27
% Black/African-American	11	13	13
% Hispanic/Latino	57	51	53
% Other Race	8	8	8

The sample for this study consisted of 1,091,469 3rd–5th grade students across 4,965 schools in 1,167 districts in Texas (all those with STAAR scores for 3rd–5th grades in the 2021-22 and 2022-23 school years). Of these, 1,448 schools used Core5 and 3,517 schools did not use Core5 in the 2022-23 school year. The above table presents school-level characteristics for these schools. On average, schools had a total enrollment of 531 students and 57% of students qualified for free or reduced-price lunch. Schools in this analytic sample included 27% white students, 13% black students, 53% Hispanic/Latino students, and 8% students of another race. During the 2022-23 school year, 49% of students scored at or above grade level on the Spring 2023 STAAR RLA assessment. The table also summarizes school-level variables for Core5 schools (n=1,448 supporting 350,574 3rd–5th grade students) and non-Core5 schools (n=3,517 supporting 740,895 3rd–5th grade students) separately. On average, Core5 schools are larger, have more Hispanic/Latino students, have fewer white and black students, and have fewer students receiving free/reduced-price lunch than non-Core5 schools. However, Core5 and non-Core5 schools are similar in the percentage of students of other races and in their gender makeup. A map showing the percentage of schools using Core5 by county is also provided.



In a first set of analyses, we examined 2023 STAAR RLA scores for all Core5 and non-Core5 schools. Given that Core5 and non-Core5 schools differed significantly in several demographic characteristics (see above), we also conducted a second set of sensitivity analyses by closely matching Core5 schools to non-Core5 schools on 2022 STAAR RLA scores and demographic characteristics. These sensitivity analyses are informed by the What Works Clearinghouse Standards 2.0 (2022), which ensured that the Core5 and non-Core5 schools were similar at baseline in 2022 STAAR RLA average scale scores, race/ethnicity, school enrollment, and economic disadvantage. We then fit multiple linear regression models to predict the effect of using Core5 on 2023 STAAR RLA scores, controlling for schools' prior RLA achievement on the 2022 STAAR.

Percentage of Schools Using Core5 in Texas



25

50

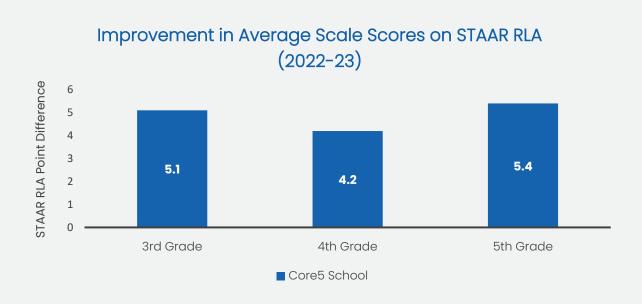
75 100



Results

Students in Texas schools that used Core5 scored 4-5 points higher, on average, on the TX STAAR Reading Language Arts (RLA) assessment than students at Texas schools that did not use Core5.

Students at Core5 schools in all grades 3–5 scored significantly higher on the 2023 STAAR RLA assessment compared to students at non-Core5 schools. When examining average scale scores, third grade students at Core5 schools scored 4.1 points higher (p < 0.001), fourth grade students scored 3.8 points higher (p < 0.001), and fifth grade students scored 4.5 points higher (p < 0.001) than students at non-Core5 schools. In the sensitivity analyses, when matching Core5 and non-Core5 schools based on prior year scores and demographics, the effect of Core5 was even stronger. Specifically, third grade students at Core5 schools scored 5.1 points higher in their average scale scores (p < 0.001), fourth grade students scored 4.2 points higher (p < 0.001), and fifth grade students scored 5.4 points higher (p < 0.001) than students at matched non-Core5 schools.





Students at Core5 schools correctly answered more reading and writing items on the STAAR RLA assessment than students at non-Core5 schools.

Students in Core5 schools correctly answered significantly more reading and writing items than students at non-Core5 schools (all ps < 0.05). As with the full sample analysis, sensitivity analyses also showed that students at Core5 schools correctly answered significantly more reading and writing items than students at non-Core5 schools (all ps < 0.05). Thus, both sets of analyses indicate that $3^{rd}-5^{th}$ grade students at Core5 schools have higher reading and writing proficiency than students at non-Core5 schools in Texas.

Want to learn more?

For additional information or updates on research related to Core5, please contact research@lexialearning.com.





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