

Services to Students with Dyslexia

The Dyslexia Program at Overton Elementary School
2018—2019



Executive Summary

Overton Elementary School received funding from the Texas Education Agency under the Services to Students with Dyslexia grant to serve one classroom per grade level in prekindergarten (pre-K) through 3rd grade during the 2018–2019 school year. The Dyslexia Program at Overton revised the core curriculum and implementation, used evidence-based interventions and progress monitoring to better serve student literacy attainment and increase early identification of dyslexia and related conditions. The grant provided funding for organized learning opportunities for parents on dyslexia-specific topics throughout the school year, as well as dyslexia-focused professional development opportunities for teachers, reading specialists, and related professional learning staff.

Findings

Reading and Literacy Attainment:

- Grant-classroom students' standardized test scores improved in certain skill content areas from the beginning to end of year, and had outcomes similar when compared to a matched group of AISD students.

Curriculum Revision and Intervention:

- The predominant curriculum resources used in grant-targeted classrooms included internally created exemplar lessons, grade-level reading lists, and textbook aligned online modules. Literacy intervention resources used at Overton included Esperanza, Wilson Reading Systems, and Reading A to Z.

Screening and Identification of Dyslexia:

- The program maintained consistent numbers of dyslexia identification year to year, but did not significantly increase identification of students with dyslexia or comorbid conditions.

Learning Opportunities and Professional Development:

- Staff funded by the Services to Students with Dyslexia grant provided professional development for staff focused on literacy interventions and programs, dyslexia strategies, and effective data use.
- Overton held dyslexia-focused parent engagement events throughout the school year, providing information on student progress, at-home intervention practices, and general information on dyslexia.



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Introduction

In 2018–2019, Austin Independent School District (AISD) received funding from the Texas Education Agency (TEA) under the Services to Students with Dyslexia grant (Texas Education Code § 29.027) to better serve students in prekindergarten (pre-K) through 3rd grade who are identified with dyslexia at Overton Elementary School. During the 2018–2019 school year, the Dyslexia Program at Overton served one class per grade level (pre-K through 3rd grade) through core curriculum revision and implementation, evidence-based intervention, and progress monitoring. Organized learning opportunities for parents on dyslexic-specific topics were offered throughout the school year, as were dyslexia-focused professional development opportunities for teachers, reading specialists, and related professional learning staff. This evaluation summarizes the program’s implementation and examines student outcomes during the 2018–2019 school year. Overton continued the Dyslexia Program during the 2019–2020 school year, prior to the mandatory school closings in March 2020, serving one class per grade level in pre-K through 2nd grade.

Research Questions and Findings

The evaluation examined the overarching question of whether the grant improved reading and literacy attainment in the grant-targeted classrooms. Overall, grant-classroom students’ standardized test scores improved in certain skill content areas from the beginning to end of year. However, the difference in score changes from the beginning to end of year between grant-classroom students and a matched group of AISD students were not significant.

Dyslexia affects 5-8% of school-age children and youth. (Clemens, 2019)

Program

Overton Elementary was identified for the Services to Students with Dyslexia grant because of the campus demographics, a demonstrated need for services supporting reading attainment and dyslexia intervention, and a strong interest from the principal and teaching staff. Students and teachers from one classroom in pre-K, kindergarten, 1st, 2nd, and 3rd grade participated in the Dyslexia Program. In order to reach the goal of improving reading and literacy attainment, five top priorities were identified for the 2018–2019 school year:

1. Increase explicit instruction in systematic letter / sound correspondence.

Finding: The predominant curriculum resources used in grant-targeted classrooms included internally created exemplar lessons, grade-level reading lists, and textbook-aligned online modules. Literacy intervention resources used at Overton included Esperanza, Wilson Reading Systems, and Reading A to Z.

2. Increase early intervention.

Finding: Overton implemented a school-based intervention program for kindergarten that was not available prior to the 2018–2019 school year.

3. Increase screening and support for comorbid conditions.

Finding: The program maintained consistent numbers of students identified for dyslexia intervention year to year and did not significantly increase identification of students with comorbid conditions.

4. Increase parental knowledge and engagement.

Finding: Overton held dyslexia-focused parent engagement events throughout the school year, providing information on student progress, at-home intervention practices, and general information about dyslexia.

5. Integrate support from other beneficial programs on campus.

Finding: Social Emotional Learning and Creative Learning Initiative components were embedded in lessons used in the grant-funded classrooms

To address the instructional and intervention priorities, the program used evidence-based programs such as the Heggerty Phonemic Awareness Curriculum, and reading and literacy intervention programs Pre-Flight, Take Flight, and Wilson Foundations. Within the grant classrooms, teachers used the Pre-School Early Literacy Indicators (PELLI) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) to assess and monitor students' literacy attainment. Teachers maintained students' progress records and routinely shared data with the program director, the district Dyslexia Support Committee, and parents. In addition to classroom teachers, the grant supported one assistive technology professional and one reading specialist who worked with the entire school.

Parent support and engagement events occurred throughout the 2018–2019 school year. Overton held five events: a general session providing information on Dyslexia, a session providing information on how to support student literacy at home, a “lunch and learn” session, a student progress celebration, and additional support over the summer. The events were generally held during the school day and were attended by both parents and staff involved with the Dyslexia Program at Overton.

Staff professional development events during the 2018–2019 school year involved teachers from both AISD and other districts. The topics included training about curriculum and intervention resources, developing strategies for students with dyslexia, how to use and understand data to meet student needs, and general information about dyslexia. Presenters included regional professional educational staff, University of Texas staff, and AISD employees.

Curriculum and Intervention Strategies

AISD collates resources into yearly planning guides (YPGs) for each grade level and each subject to help teachers develop unit and lesson plans throughout the year. YPG resources include reading lists, intervention strategies, vocabulary lists, and lesson plan exemplars. AISD's Dyslexia and Literacy Department also provides teachers with intervention resources and strategies to use in the classroom or in small group settings. Results from the 2020 AISD Literacy survey indicated that the majority of teachers

surveyed at Overton routinely used exemplar lessons, suggested grade-level texts (reading lists), and the Houghton Mifflin Harcourt online module resources. Additionally, teachers at Overton used or received training on multiple dyslexia intervention resources, including Esperanza, Wilson Reading Systems (preventive and early intervention systems), and Reading A to Z.

The Dyslexia Program at Overton provided additional intervention resources for students focused specifically on early literacy intervention and dyslexia interventions. Small-group interventions used the Take Flight and Pre-Flight Comprehensive Intervention for Students with Dyslexia programs. Students older than 7 years old used Take Flight, while students younger than 7 years old used Pre-Flight for early intervention. Additional dyslexia-specific intervention groups existed for students already receiving dyslexia-related services.

Of the classrooms participating in the Dyslexia Program, approximately 26% of kindergartners, 64% of 1st graders, 64% of 2nd graders, and 41% of 3rd graders were enrolled in either a small-group literacy-based intervention program or a dyslexia-specific intervention program. Due to changes in intervention reporting and names of intervention programs used, it is difficult to determine if the number of students served through interventions increased during the 2018–2019 school year.

Reading and Literacy Attainment

AISD students routinely participate in testing throughout the year, using different platforms and assessment tools. CLI Engage, a platform offering online assessment and quality improvement for early childhood education, is available for prekindergarten classes.¹ The TX-KEA assessment provides teachers in kindergarten classrooms with the ability to implement a three-wave progress monitoring tool (beginning, middle, and end of year) that includes dyslexia and general literacy screening components.² Istation's Indicators of Progress (ISIP) assessment tool is administered throughout the year in 1st through 3rd grades to monitor students' growth in several academic areas, including reading and literacy attainment.

The Services to Students with Dyslexia grant funds served only one classroom in each grade level from prekindergarten, through 3rd grade. The grant-funded classrooms at Overton provided a relatively small sample of students within each grade level and overall. While the findings show that outcomes of students from the grant classrooms are not statistically different from outcomes of similar students (matched on ethnicity and economically disadvantaged status), it is important to use caution when interpreting results, given the small number of students in the study.

Using several literacy and reading components from the CLI Engage, TX-KEA, and ISIP assessments, we compared grant-classroom students' scores from the end of the year to their own scores from the beginning of the year. We also compared grant classroom students' annual progress on those assessments outcomes (i.e., change in scores between the beginning and end of year) to the annual progress on the same assessments of a randomly selected group of AISD students with similar demographic characteristics. The analysis used students' best scores for each testing period (beginning of year and

CLI Engage (pre-K)

Phonemic awareness subtests:

- Alliteration
- Onset rime
- Rhyming
- Syllabication
- Composite

Rapid letter naming

Rapid vocabulary

TXKEA (kindergarten)

Blending

Spelling

Vocabulary

iStation ISIP (1st–3rd grade)

Reading comprehension

Alphabetic decoding

Letter knowledge

Phonemic awareness

Spelling

Vocabulary

Text fluency

Overall reading score

All scores used in the study were calculated by taking the single best or highest score from a student's various attempts from the beginning of the year (September–November) and the end of the year (March–May) testing windows.

¹ CLI Engage website, <https://cliengage.org/public/about/>

² CLI TX-KEA website, <https://cliengage.org/public/tools/assessment/tx-kea/>

end of year) for each skill tested. The literacy and reading components used in the analysis included phonemic awareness, comprehension, vocabulary, and text fluency. Overall, the grant-funded target classrooms showed mixed results when looking at students' own test scores over time, and students did not perform significantly better than a matched group of peers. The overall findings are summarized in Table 1, and the details of the analysis for each grade level follows.

Table 1.

Target-classroom students showed mixed results, when compared with their own change over time, and did not show significant differences in test score change over time, when compared with a matched group of peers.

Grade	Change over time	Compared with matched group
Pre-K	Improved in 7 of 7 skills	No significant difference in 7 of 7 skills
KG	Improved in 1 skill Declined in 1 skill No change in 1 skill	No significant difference in 3 of 3 skills
1	Improved in 1 skill No change in 6 of 7 skills	No significant difference in 5 of 7 skills Significantly worse in 2 of 7 skills
2	Improved in 3 of 5 skills No change in 2 of 5 skills	No significant difference in 5 of 5 skills
3	Improved in 3 of 5 skills No difference in 2 of 5 skills	No significant difference in 5 of 5 skills

Note. KG = kindergarten. Significance level tested at $p = 0.05$

Pre-Kindergarten

The pre-K students in the targeted classroom improved their average scores across all selected CLI Engage components, often meeting or exceeding prescribed benchmarks for their age group by the end of the school year. Six students moved from the “needs support” tier to the “monitor” or “on-track” tier of the blending skill set. Statistical analysis, shown in Table 2, comparing only the targeted pre-K students' score changes revealed a significant positive difference between beginning- and end-of-year test scores.

Table 2.

Students at Overton significantly improved their average CLI Engage scores from the beginning- to the end-of-year testing periods on all subtests.

Skill	Phonemic awareness					Rapid letter naming	Rapid vocabulary
	Alliteration	Onset rime	Rhyming	Syllabication	Composite		
Pre-K	3.46	3.62	3.34	5.15	15.62	24.23	6.23

Note. Green = target group improved from beginning to end of year, with a statistical significance of 0.05 or greater; Red = target group performed worse from beginning to end of year, with a statistical significance of 0.05 or greater; Black = no statistical significance from beginning to end of year; NA = not enough students to perform analysis OR test was not administered to the grade level. Overton sample size $n=13$.

When average score changes from the beginning- to end-of-year testing periods for students in the target classroom were compared with those of a matched group of students, target-classroom students' average score changes were slightly higher than

their peers' score changes. However, as shown in Table 3, statistical testing comparing the target-classroom scores with scores of a matched group of peers did not yield any significant differences between average scores from the beginning- to the end-of-year testing windows, despite the positive trend in score changes. The lack of statistical significance in this case may be due to the small sample size available for analysis.

Table 3.
The difference in CLI Engage score changes from the beginning to end of year between the Overton target group and the comparison group were not significant.

Skill	Phonemic awareness					Rapid letter naming	Rapid vocabulary
	Alliteration	Onset rime	Rhyming	Syllabication	Composite		
Pre-K	+2.46	+1.12	+1.63	+2.15	+7.37	+10.48	+2.48

Note. The numbers presented in this table represent the difference between the score change averages for the target and comparison groups. **Green** = target group performed better than match group, with a statistical significance of 0.05 or greater; **Red** = target group performed worse than the match group, with a statistical significance of 0.05 or greater; **Black** = no statistical significance between the two groups; NA = not enough students to

Kindergarten

From the beginning of year to end of year, the grant-classroom kindergarteners' average scores improved in spelling and blending and declined in vocabulary. Table 4 details the statistical analysis comparing only the grant-classroom kindergarten score change from the beginning to end of year. Findings indicated a significant improvement in spelling, a decline in vocabulary, and no change in blending.

Table 4.
Students at Overton significantly improved their spelling score, did significantly worse in vocabulary, and showed no statistical difference in blending components of the TX-KEA.

Skill	Skill		
	Blending	Spelling	Vocabulary
KG	0.47	12.76	-7.76

Note. KG = kindergarten. **Green** = target group improved from beginning to end of year, with a statistical significance of 0.05 or greater; **Red** = target group performed worse from beginning to end of year, with a statistical significance of 0.05 or greater; **Black** = no statistical significance from beginning to end of year; NA = not enough students to perform analysis OR test was not administered to the grade level. Overton sample size $n=17$.

When compared with a matched group of peers in AISD, Overton students' average change scores were slightly better in blending and slightly lower in spelling and vocabulary than were scores of the comparison group. However, as shown in Table 5, this difference between groups was not statistically significant, indicating that no performance advantage was found in the grant-funded classroom.

Table 5.
The differences in TX-KEA score changes over time between students at Overton and the comparison group were not significant across all tested skills.

Skill			
	Blending	Spelling	Vocabulary
KG	+1.29	-3.95	-3.77

Note. KG = kindergarten. The numbers presented in this table represent the difference between the score change averages for the target and comparison groups **Green** = target group performed better than match group, with a statistical significance of 0.05 or greater; **Red** = target group performed worse than the match group, with a statistical significance of 0.05 or greater; **Black** = no statistical significance between the two groups; **NA** = not enough students to perform analysis OR test was not administered to the grade level. Sample size $n = 15/8$ (target group / match group).

Practices in early childhood literacy and dyslexia curriculum often focus on phonemic awareness, letter recognition, and decoding strategies.³ The vocabulary component of TX-KEA determines a student’s ability to define a word. Because the curriculum and teacher trainings focused on phonemic awareness, letter recognition, and other dyslexia-centered strategies, the observed improvement in blending and lack of improvement in vocabulary is expected, due to the nature of the literacy curriculum.

First through third grade

ISIP is an assessment that categorizes students’ scores into three tiers: performing at grade level, in need of intervention, and in need of intensive intervention. Regardless of the tier on which a student’s score places them, there is an expected score growth from the beginning to end of year, varying by skill tested. The 1st-, 2nd-, and 3rd-grade grant-classrooms improved their test scores from the beginning to the end of year in all tested skills. However, only 3rd-grade vocabulary, 2nd-grade spelling, and 1st-grade phonemic awareness scores improved within the range of expected growth according to the ISIP guidelines. While test scores within the other categories improved, they did not meet expected annual growth. For more information on expected growth in tested skills, see Appendix B. Statistical analysis of the average score change from beginning to end of year revealed a significant positive difference in one skill for 1st grade and three skills each for 2nd and 3rd graders, as shown in Table 6.

Table 6.
Students at Overton generally improved their scores on ISIP subtests, but only overall reading was significantly improved at all three grade levels.

Skill								
Grade	Reading comprehension	Alphabetic decoding	Letter knowledge	Phonemic awareness	Spelling	Vocabulary	Overall reading	Text fluency
1	5.41	1.41	2.62	2.61	5.13	3.61	3.91	NA
2	8.42	NA	NA	NA	11.91	4.5	9.7	12.55
3	3.88	NA	NA	NA	5.82	12.62	4.71	1.5

Note. **Green** = target group improved from beginning to end of year, with a statistical significance of 0.05 or greater; **Red** = target group performed worse from beginning to end of year, with a statistical significance of 0.05 or greater; **Black** = no statistical significance from beginning to end of year; **NA** = not enough students to perform analysis OR test was not administered to the grade level. Overton sample size: grade 1, $n = 14$; grade 2, $n = 11$; grade 3, $n = 17$.

When comparing the grant-classroom cohort’s score changes with those of a matched peer group, the 1st-grade students at Overton performed slightly worse in all seven

³Nathan Clemens, AISD Dyslexia Grant Keynote Presentation, August 8, 2019.

tested skills, two of which were statistically significantly worse. Students in both 2nd- and 3rd-grade classes performed slightly better in two of the five tested skills, and worse in the other three skills; however, statistical testing revealed no significant difference between the grant and comparison groups of students in these grade levels (Table 7).

Table 7.
The differences in iStation ISIP score changes over time between target and comparison groups were not significant, except for 1st-grade overall and spelling.

Skill								
Grade	Reading comprehension	Alphabetic decoding	Letter knowledge	Phonemic awareness	Spelling	Vocabulary	Overall reading	Text fluency
1	-8.03	-8.13	-6.35	-3.44	-11.83	-2.33	-6.69	NA
2	-2.75	NA	NA	NA	+3.01	-5.17	-3.13	+12.99
3	-1.63	NA	NA	NA	-3.46	+7.95	-4.62	+7.47

Note. The numbers presented in this table represent the difference between the score change averages for the target and comparison groups. **Green** = target group performed better than match group, with a statistical significance of 0.05 or greater; **Red** = target group performed worse than the match group, with a statistical significance of 0.05 or greater; **Black** = no statistical significance between the two groups; NA = not enough students to perform analysis OR test was not administered to the grade level. See Appendix A, Table A1, for sample sizes.

Summary and Recommendations

The Services to Students with Dyslexia grant provided funds for staff, professional development opportunities, curriculum resources, and technology at Overton Elementary School during the 2018–2019 school year. While the grant extended through the 2019–2020 school year, this evaluation examined only the impact and outcomes for the 2018–2019 school year. In 2017, approximately 90% of kindergarten and 1st-grade students at Overton displayed difficulty with phonological awareness and letter knowledge. Intervention programs and detection of phonological processing difficulties in early childhood are important for literacy attainment in later grades.

This study primarily examined differences in average beginning- and end-of-year scores from several common assessment tools used for literacy attainment in pre-K through 3rd grade. When their personal growth was compared from the beginning to the end of year, students at Overton were found to have generally improved their average scores. However, using different benchmark indicators, scores for students at Overton were often below on-track benchmarks for their grade levels. Average scores from both the beginning and end of year did not indicate that students gained enough knowledge to move them from needing intervention or needing support to being on track.

When compared with a matched group of AISD students, pre-K students at Overton improved their scores more than did their matched peers, but kindergarten through 3rd-grade students did not, on average, perform better than their matched peers. This finding indicates that there was essentially no difference between students involved in the grant-funded intervention programs and curriculum and those who were exposed to the general AISD curriculum.

However, this study was not able to thoroughly examine many qualitative indicators that go into curriculum development, intervention strategies, and daily classroom routines. Several indirect measures could contribute to a more robust future study on the impact of dyslexia intervention programs. This study would have benefitted from

thorough student-level assessment data and additional teacher feedback.

Additionally, the assessment data used in this study were taken from non-high stakes assessments, as opposed to systematic test data, such as the State of Texas Assessment of Academic Readiness (STAAR). The CLI Engage, TXKEA, and ISIP are all measures of progress typically conducted several times throughout the year, and several times within each testing period (beginning, middle, and end of year). Evidence exists that students involved in the study at Overton did make improvements throughout the year, and this type of intervention and curriculum study could provide more robust findings with a larger sample over a longer time period.

Moving forward, AISD should continue to seek resources to assist with literacy curriculum development and focus on early dyslexia interventions and identification, continue working with external dyslexia-focused resources and programs, and use dyslexia and literacy-focused professional development opportunities for all teachers.



Appendix A

Sample Sizes for Statistical Analyses

Table A1.

Sample Sizes for ISIP Test Scores, by Test Skill

Grade	Skill							
	Reading comprehension	Alphabetic decoding	Letter knowledge	Phonemic awareness	Spelling	Vocabulary	Overall reading	Text fluency
1	14/9	14/10	12/5	13/7	14/9	14/10	14/9	NA
2	11/9	NA	NA	NA	11/9	11/9	11/9	11/9
3	17/15				17/15	17/15	17/15	17/15

Appendix B

Assessment Instrument Benchmarks

CLI Engage Benchmark Guide

On track: The student meets the benchmark within their age range.

Monitor: The student does not meet the benchmark and is under 4 years old.

Needs support: The student does not meet the benchmark and is at least 4 years old.

Table B1.

Expected Point Growth for CLI Engage Subtests From Wave 1 (Beginning of Year) to Wave 3 (End of Year), per Pre-K Age Group

Age	Phonemic awareness					Rapid letter naming	Rapid vocabulary
	Alliteration*	Onset rime*	Rhyming*	Syllabication*	Composite		
3.5-4.0	6	3	7	6	5	1	2
4.0-4.5	6	3	7	6	7	7	3
4.5	6	3	7	6	7	6	4

Source. CIRCLE Progress Monitoring User Guide, 2018

Note. The phonological awareness sub-measures do not reflect point growth from Wave 1 to Wave 3, but are expected benchmark scores for all test-

Texas KEA Benchmark Guide

Raw score benchmarks for TXKEA differ by test wave, test year, and test language. As such, the benchmark scores do not necessarily require a point growth for a student to move from a “needs support” tier to an “on-track” tier.

ISIP Tier Guide

Tier 1: Students perform at grade level.

Tier 2: Students perform moderately below grade level (in need of intervention).

Tier 3: Students perform seriously below grade level (in need of intensive intervention).

Table B2.

Expected Point Growth for ISIP Subtests From September to May, Across All Tiers

Grade	Tier	Skill							
		Reading comprehension	Alphabetic decoding	Letter knowledge	Phonemic awareness	Spelling	Vocabulary	Overall reading	Text fluency
1	Overall	22-24	17-19	3-4	2	18-20	13-15	20-21	NA
2	Overall	10-12	NA	NA	NA	12-15	11-13	12-14	37-43
3	Overall	5-7	NA	NA	NA	8	12-17	8-10	12

Source. ISIP IStation Instrument Guide (n.d.)

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