Benchmark EDUCATION
Building Knowledge, Language, and Literacy for Life™

RESEARCH REPORT
TEXAS

Benchmark Education Ready to Advance Boosts Receptive Vocabulary Growth

Implementation

During the 2022–2023 school year, a private school in Texas implemented the *Ready to Advance* (RTA) program with 49 PreK students. The Benchmark Education Company analyzed the pretest and posttest scores from the *Receptive One-Word Picture Vocabulary Test–Fourth Edition*® (ROWPVT-4), Spanish-Bilingual Edition, for two age-based groups: a three-year-old group (TYOG, n = 21) and a four-year-old group (FYOG, n = 28). The goal of the analysis was to evaluate the impact of RTA on the students' early literacy and mathematics development.

Impact

Across both age groups, students demonstrated statistically significant gains from pretest to posttest, as determined by paired-samples t-tests (see Figure 2). This reflects a medium effect size (d=0.50). Most notably, students achieved an average of 13 months of growth over a 7-month period.

FIGURE 2. PreK Students Show Significant Gains on the *ROWPVT-4* from Fall 2022 to Spring 2023

Student Group	N	Mean Age	Standard Score Mean (SD)	Age Equivalent	Mean Difference (SD)	*p*	Effect Size (*d*)
Pretest Fall 2022	49	4 years, 2 months	108.37 (9.03)	5 years, 0 months	4.08 (8.15)	$p<.001$	0.50
Posttest Spring 2023	49	4 years, 9 months	112.45 (7.17)	6 years, 1 month			

[1]Effect sizes are reported using Cohen's d, where 0.2 indicates a small effect, 0.5 a medium effect, and 0.8 a large effect (Cohen, 1988).

FIGURE 1. Private School in Texas, Demographics

Student Group (*N*=49)	Percent
GENDER	
Female	46.9%
Male	53.1%
ETHNICITY	
Asian	6.1%
Black/African American	2.0%
Hispanic/Latino	8.2%
Multi-Race	8.2%
White	57.1%

Benchmark Education's Ready to Advance Boosts Kindergarten Readiness

To assess PreK students' readiness for Kindergarten, the *DIBELS*® 8th Edition and *Acadience*® *Math* measures were administered in Spring 2023 to the four-year-old group (FYOG), whose average age was 5 years and 3 months. *DIBELS* evaluates foundational literacy skills—such as Letter Naming Fluency and Phonemic Segmentation Fluency—through a series of one-minute timed subtests. *Acadience Math* assessed early numeracy skills, including Quantity Discrimination, Number Identification Fluency, and Next Number Fluency. Composite scores were calculated by combining weighted values from each subtest and compared to benchmark goals for the beginning of kindergarten. *DIBELS* and *Acadience Math* scores are categorized into four performance levels: Above Benchmark, At Benchmark, Below Benchmark, and Well Below Benchmark. On average, FYOG students scored At Benchmark across all subtests and composite scores, indicating strong readiness for foundational reading (see Figure 3) and math (see Figure 4) instruction in kindergarten.

FIGURE 3. Four-Year-Old Children Using *Ready to Advance* Demonstrate Kindergarten Readiness in Literacy Skills (*n*=21)

DIBELS Kindergarten BOY Measures	Mean Score	% Students Above Benchmark	% Students At Benchmark	% Students Below Benchmark	% Students Well Below Benchmark
Letter Naming Fluency	25.6	N/A	52.4%	23.8%	23.8%
Phonemic Segmentation Fluency	7.5	19.0%	28.6%	28.6%	23.8%
Nonsense Word Fluency (Correct Letter Sounds)	14.0	28.6%	33.3%	19.0%	19.0%
Nonsense Word Fluency (Words Read Correctly)	1.6	N/A	47.6%	47.6%	4.8%
Word Reading Fluency	1.7	N/A	47.6%	47.6%	4.8%
Composite Score	312.8	33.3%	23.8%	14.3%	28.6%

FIGURE 4. Four-Year-Old Children Using *Ready to Advance* Demonstrate Kindergarten Readiness in Math Skills (*n*=21)

DIBELS Kindergarten BOY Measures	Mean Score	% Students Above Benchmark	% Students At Benchmark	% Students Below Benchmark	% Students Well Below Benchmark
Beginning Quantity Discrimination	8.5	76.2%	14.3%	9.5%	0.0%
Number Identification Fluency	8.2	28.6%	28.6%	38.1%	4.8%
Next Number Fluency	7.1	42.9%	14.3%	38.1%	4.8%
Composite Score	39.5	52.4%	23.8%	19.0%	4.8%

Ready to Advance Improves Pre-Academic Skills in Three-Year-Old Children

The TYOG completed three additional tasks at pretest and posttest. These tasks included verbal counting, combining two word parts, and shape drawing. Paired-samples t-tests revealed that all children made significant gains across all tasks (see Figure 5), with large effect sizes.

FIGURE 5. Three-Year-Old Children Show Gains from Pretest to Posttest on Verbal Counting, Word Parts, and Shape Drawing

Measure	N	Pretest Mean (SD)	Posttest Mean (SD)	Mean Difference (SD)	*p*	Effect Size (*d*)
Verbal Counting	28	15.14 (18.52)	20.71 (19.17)	5.57 (8.86)	*p*=.003	0.63
Word Parts	28	1.54 (2.46)	4.00 (2.65)	2.46 (2.05)	*p*<.001	1.20
Shape Drawing	28	8.79 (4.12)	12.82 (5.15)	4.13 (3.54)	*p*<.001	1.17

Conclusion

During the 2022–2023 school year, a private school in Texas implemented the *Ready to Advance* (RTA) curriculum with PreK students, leading to statistically significant gains in receptive vocabulary for both the three-year-old group (TYOG) and four-year-old group (FYOG). On average, students showed a 13-month increase in age-equivalent scores on the *Receptive One-Word Picture Vocabulary Test–Fourth Edition* (ROWPVT-4) over a 7-month instructional period. Beyond vocabulary gains, TYOG students demonstrated notable growth in pre-academic skills such as verbal counting, word parts, and shape drawing. FYOG students scored, on average, within benchmark ranges for reading and above math benchmarks, based on composite and individual measure scores. These results highlight the effectiveness of RTA in supporting both language development and foundational academic skills critical for kindergarten readiness.