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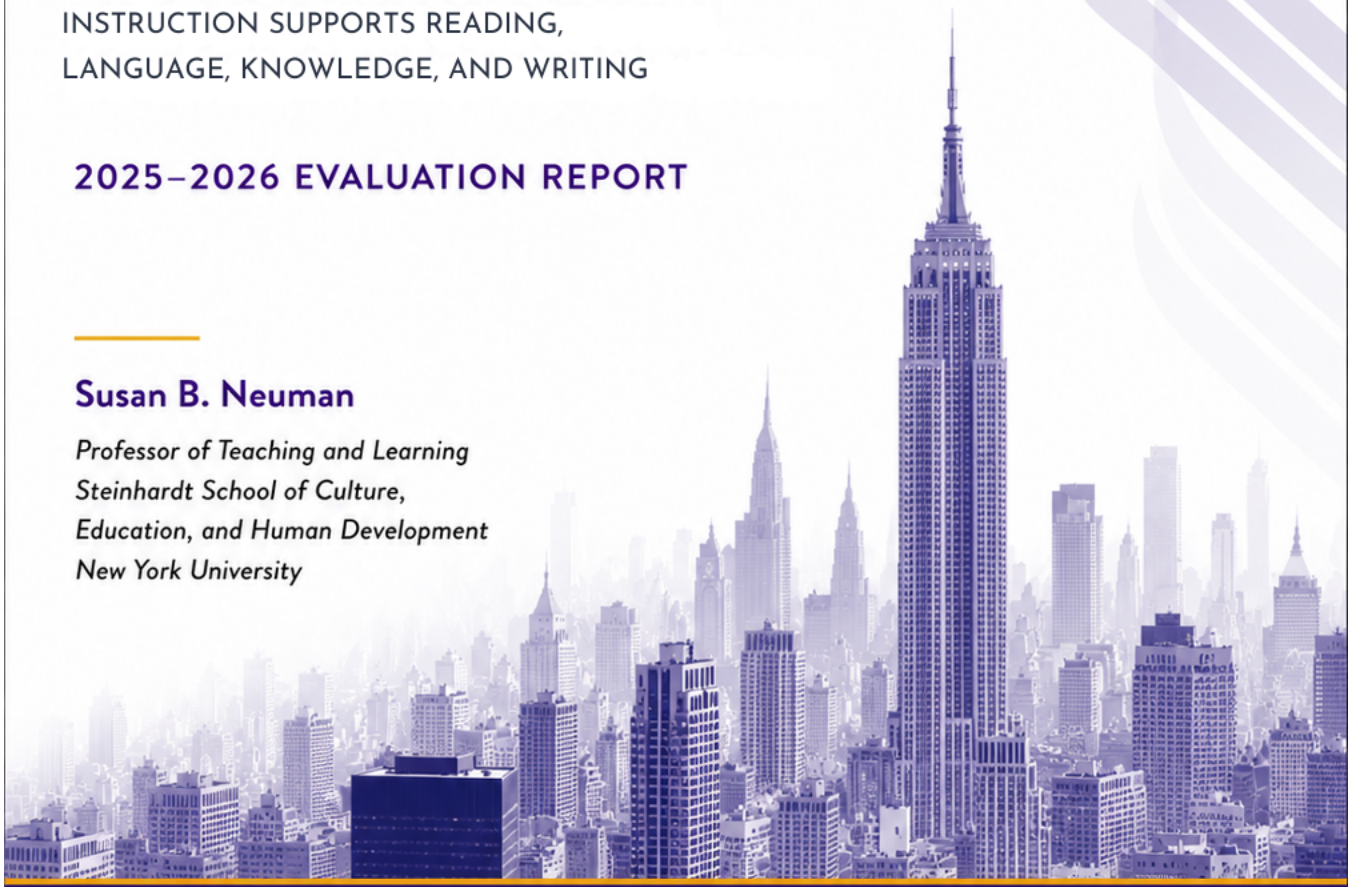
The RedThread Assessment Study

EVIDENCE THAT KNOWLEDGE-BUILDING INSTRUCTION SUPPORTS READING, LANGUAGE, KNOWLEDGE, AND WRITING

2025–2026 EVALUATION REPORT

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REDTHREAD

Knowledge-Building Evaluation Report

2025–2026

Executive Summary

The purpose of this report is to examine the implementation and outcomes of the **knowledge-building component** of the RedThread literacy curriculum during the 2025–2026 school year. RedThread is a comprehensive literacy program that includes both foundational reading instruction and a coherent knowledge-building curriculum. The present evaluation focuses specifically on the knowledge-building component and examines its association with students' reading development, academic language, conceptual knowledge, and writing.

The findings present a consistent pattern. Students participating in RedThread demonstrated strong reading growth while also developing the academic language, conceptual knowledge, and written communication skills that support successful comprehension. Rather than producing gains on a single assessment, students demonstrated coordinated growth across multiple dimensions of literacy development.

Key Findings

Students demonstrated strong and consistent reading growth. Across two consecutive cohorts, students made substantial gains on Aimsweb Plus reading measures, including nearly identical improvements in oral reading fluency.

Students developed stronger academic language. Researcher-developed assessments revealed meaningful gains in academic vocabulary and morphology, with particularly strong effects for academic vocabulary.

Students demonstrated advantages in assessed content knowledge. RedThread students scored higher than comparison students on broad content knowledge at both winter and spring. Adjusted spring analyses also favored RedThread, although initial differences between groups limit causal interpretation.

Students used their knowledge in writing. On open-ended writing tasks, RedThread students demonstrated stronger comprehension and richer use of content knowledge than comparison students.

Conclusions

The findings suggest that participation in the knowledge-building component of RedThread was associated with coordinated growth across multiple dimensions of literacy development. Although this evaluation focused on one component of a comprehensive literacy program, the results provide encouraging evidence that knowledge-building instruction can contribute to children's development as readers, language users, and learners.

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The Red Thread Assessment Study

Knowledge-building instruction supports reading growth in high-need schools

2025–2026 SCHOOL YEAR

Steinhardt School of Culture, Education, and Human Development
New York University



FINAL REPORT

MAY 2026

Prepared by
NYU Literacy Lab

In partnership with
Participating Schools and District Partners

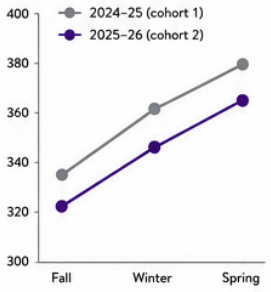
At a Glance: Evidence from the 2025–2026 Red Thread Evaluation

Second-grade students participating in the Red Thread knowledge-building curriculum demonstrated consistent growth in reading, academic language, knowledge, and writing.

READING GROWTH

Students demonstrated strong and consistent growth across two successive cohorts.

Mean Aimsweb Reading Score

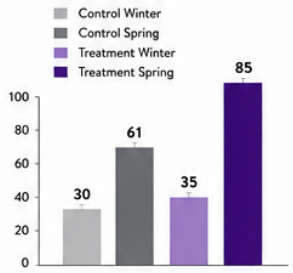


+10 points
treatment advantage in spring

ACADEMIC LANGUAGE GROWTH

Students showed the largest gains in academic vocabulary.

Academic Vocabulary & Sight Words (Percent Correct)

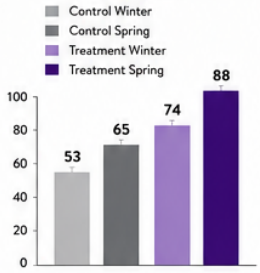


+24 points
treatment advantage in spring

KNOWLEDGE DEVELOPMENT

Students gained broad content knowledge across domains.

Broad Content Knowledge (Percent Correct)

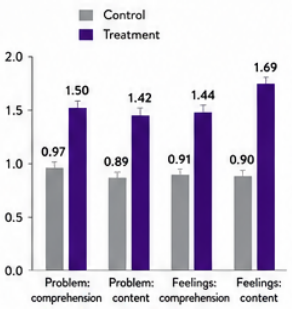


+23 points
treatment advantage in spring

WRITING OUTCOMES

Treatment students demonstrated stronger understanding in all written response constructs.

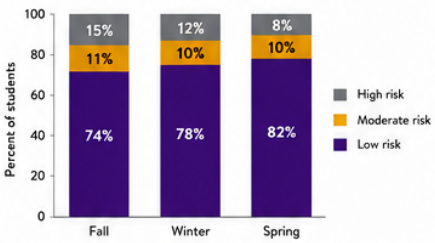
Mean Rubric Score (Spring)



+0.5 to +0.8
higher rubric scores across constructs

RISK STATUS SHIFT (2025–26)

Low-risk students increased from 74% in fall to 82% in spring.



HIGH-NEED SCHOOLS

Participating schools served students with high levels of poverty, multilingual learners, and special needs.

Indicator	Cohort 1 (2024–25)	Cohort 2 (2025–26)
ELA level 3/4	47%	51%
Attendance ≥ 95%	88%	91%
English Language Learners	7%	7%
Economically Disadvantaged	90%	89%
Students with Disabilities	23%	20%
Homeless	19%	12%

THE BOTTOM LINE: Integrating knowledge-building instruction with strong foundational skills leads to meaningful growth in reading, academic language, knowledge, and writing for second-grade students in high-need schools.

See inside for details.

Introduction

Over the past two decades, research on reading development has produced a broad consensus: successful reading depends on far more than accurate word recognition. Although decoding and reading fluency are indispensable foundations, comprehension ultimately rests on children's vocabulary, oral language, background knowledge, and their ability to integrate ideas across texts and experiences. These components develop together, reinforcing one another as children read, talk, write, and learn about the world.

This understanding has important implications for literacy instruction. While comprehensive literacy programs increasingly combine foundational reading instruction with opportunities to build language and knowledge, relatively little research has examined how knowledge-building contributes to children's broader literacy development. Most evaluations continue to emphasize reading achievement alone, leaving unanswered questions about students' growth in the language, knowledge, and communication abilities that support successful comprehension.

RedThread was developed in response to this broader view of literacy. As a comprehensive literacy program, it combines systematic foundational reading instruction with a coherent knowledge-building curriculum. The present evaluation focuses specifically on the knowledge-building component, which engages students in connected texts, academic vocabulary, discussion, writing, and content learning organized around coherent instructional units.

The purpose of this report is to examine the implementation and outcomes of the knowledge-building component of RedThread during the 2025–2026 school year. Using standardized assessments of reading achievement together with researcher-developed measures of academic vocabulary, morphology, content knowledge, and writing, the evaluation examines whether participation in this component was associated with growth across multiple dimensions of literacy development.

Methods

Our evaluation drew on two complementary sources of evidence to examine children's literacy development.

- District benchmark assessments (Aimsweb Plus ReadB screener). District-provided Aimsweb Plus ReadB screener data were obtained from two consecutive cohorts of Grade 2 students attending three Ascend elementary schools implementing the RedThread curriculum during the 2024–2025 and 2025–2026 school years. Students were assessed in the fall, winter, and spring on measures of reading achievement, oral reading fluency, vocabulary, and reading comprehension, allowing reading growth to be examined across the school year and compared across successive years of RedThread implementation.
- Researcher-developed assessments. Researcher-developed assessments were administered in January 2026 with posttests administered in May 2026 to all Grade 2 students in the three Ascend schools implementing RedThread in seven classrooms and to students in three comparison classrooms from two additional elementary schools. The sample included 246 students, including 166 students participating in RedThread and 80 comparison students. Measures assessed

academic vocabulary, morphology, broad content knowledge, curriculum-specific knowledge, and written responses to open-ended prompts.

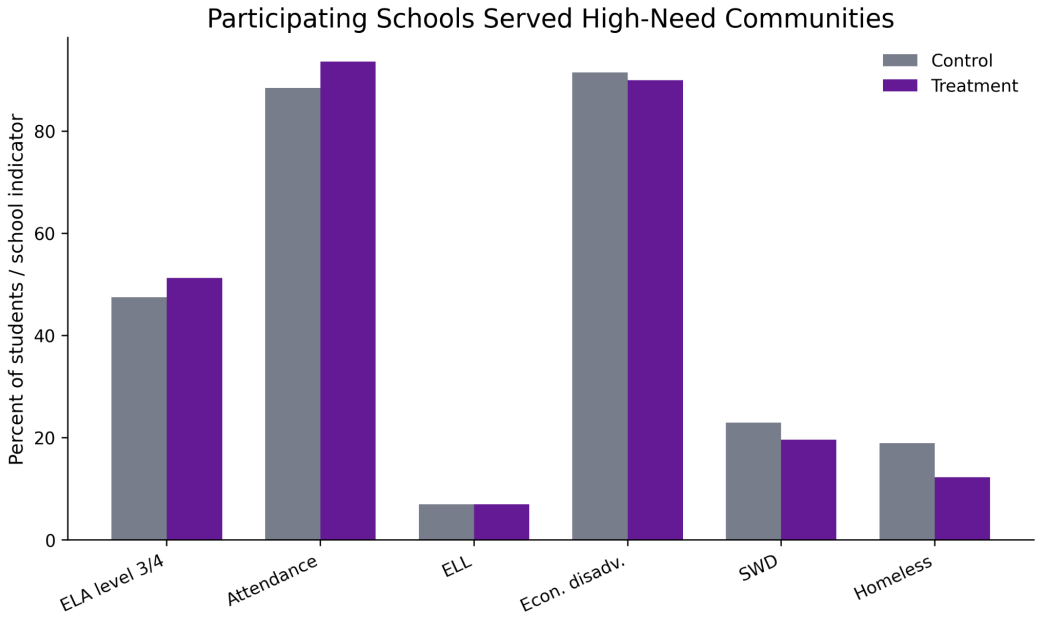
Together, these complementary sources of evidence provided a comprehensive picture of children's literacy development. District benchmark assessments documented students' reading growth across two years of implementation, while the researcher-developed assessments examined dimensions of literacy development—including academic language, knowledge, and writing—not captured by standardized reading measures.

Participating Schools and Students

This evaluation used two datasets. The Aimsweb Plus analyses included Grade 2 students attending three Ascend elementary schools using the RedThread curriculum. The 2024–2025 cohort included 210 students, and the 2025–2026 cohort included 201 students. Students completed district benchmark assessments in the fall, winter, and spring, providing repeated measures of reading development across the school year.

The researcher-developed assessment sample was drawn from five elementary schools in economically disadvantaged neighborhoods. Ten second-grade classrooms participated: 166 students in seven RedThread classrooms (three at BACS, two at EFACS, and two at FACS) and 80 students in three comparison classrooms at two additional schools. These assessments examined academic vocabulary, morphology, broad and curriculum-specific content knowledge, and writing. Figure 1 describes the demographics of the sample.

Figure 1: Characteristics of participating schools and student populations



Treatment and comparison schools served similarly high-need student populations, providing an appropriate context for interpreting outcome differences.

Analytic Approach

Our analysis examined student growth over time and differences between students participating in RedThread and comparison students.

For the district benchmark data, longitudinal trends in reading achievement, oral reading fluency, vocabulary, and reading comprehension were examined across the fall, winter, and spring benchmark administrations for two consecutive cohorts of Grade 2 students. Changes in performance across the school year were compared descriptively to evaluate the consistency of growth across successive years of RedThread implementation.

For the researcher-developed assessments, analyses of variance (ANOVAs) were conducted to compare pretest-to-posttest gains for students participating in RedThread and comparison students. Effect sizes (Cohen's d) were calculated to estimate the magnitude of group differences. Where appropriate, analyses of covariance (ANCOVAs) were also conducted using winter performance as a covariate to provide a more conservative estimate of differences in spring outcomes by adjusting for initial group differences.

Throughout the report, findings are presented using descriptive statistics, inferential analyses, effect sizes, and graphical displays to provide a comprehensive picture of student growth across multiple dimensions of literacy development.

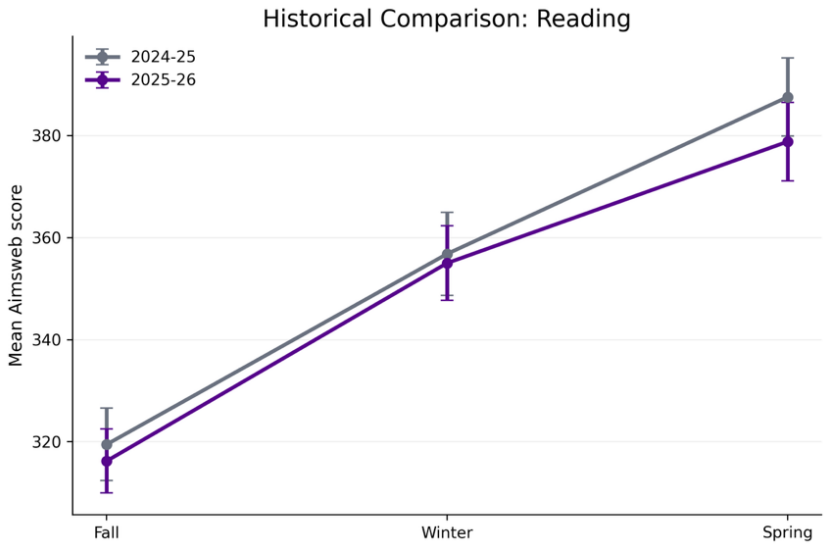
Findings

Across the two cohorts, RedThread students demonstrated reading growth on district benchmark measures. In the separate researcher-developed assessment sample, adjusted spring comparisons favored RedThread in academic vocabulary, morphology, and broad content knowledge, while spring writing scores were higher for RedThread students. Because groups differed at baseline and were not randomly assigned, these differences should not be interpreted as causal effects.

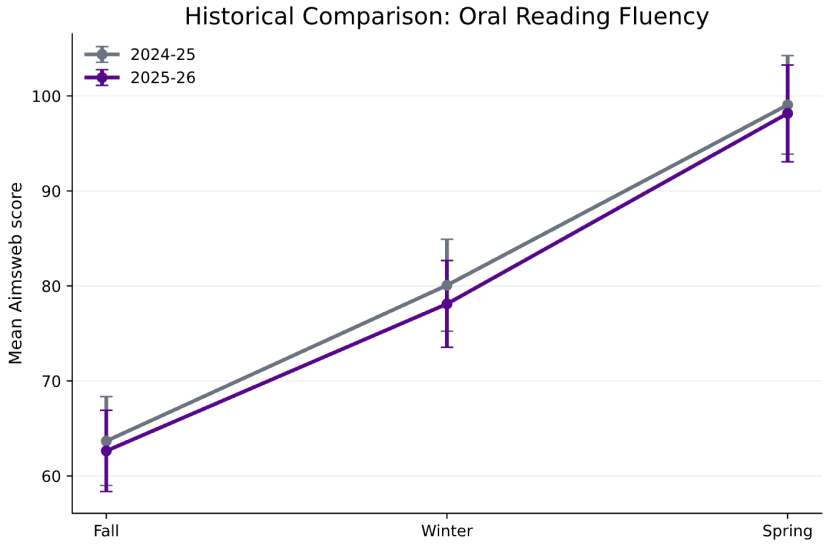
Reading Development

Findings from the Aimsweb Plus analysis indicated strong growth in achievement in both years. The most notable feature of the findings was the consistency of students' growth. Despite representing different groups of children, the two cohorts entered Grade 2 with similar levels of reading performance and followed nearly identical trajectories across the school year. This consistency was evident across all major Aimsweb Plus measures and suggests that the observed gains reflected a stable pattern of student learning.

Figure 2. Growth in overall Aimsweb Plus reading outcomes for 2024–2025 and 2025–2026 school years.



Students demonstrated steady improvement across reading achievement, oral reading fluency, vocabulary, and reading comprehension from fall through spring.



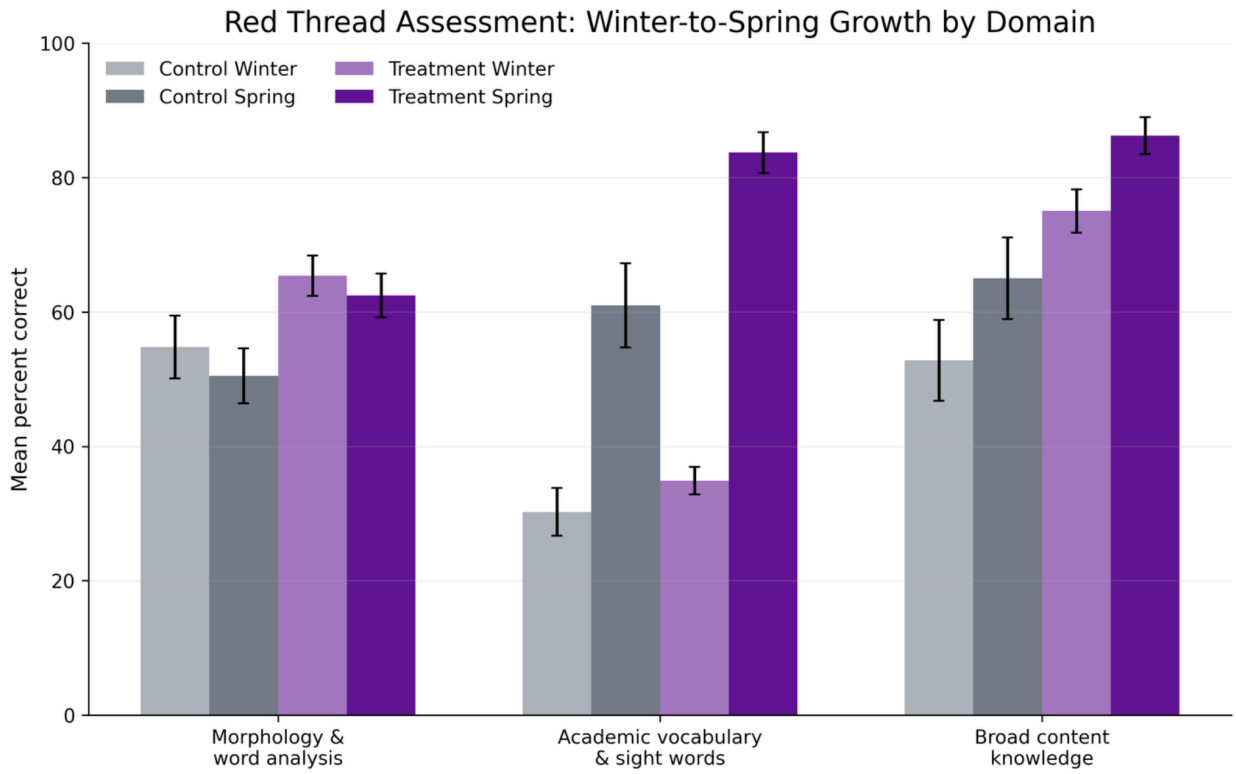
Growth was particularly strong in oral reading fluency. Across both cohorts, students increased their reading fluency by approximately 35 words correct per minute between fall and spring. Comparable improvements were

observed in overall reading achievement and vocabulary, while reading comprehension showed steady progress across the school year. Although the magnitude of growth varied somewhat across measures, the overall pattern remained remarkably similar from one year to the next.

Academic Language and Knowledge Development

Figure 3 displays winter and spring scores on researcher-developed assessments. Adjusted spring analyses accounting for winter performance favored RedThread students on morphology, academic vocabulary, and broad content knowledge, with the largest adjusted difference in academic vocabulary. The plotted unadjusted scores should not be interpreted as adjusted outcomes or as evidence of greater growth on every measure.

Figure 3. Winter-to-spring growth on researcher-developed assessments.



Adjusted spring comparisons favored RedThread students in academic vocabulary, morphology, and broad content knowledge. The unadjusted winter-to-spring patterns differed across measures.

These findings complement the district benchmark data by demonstrating that students' literacy development extended beyond reading achievement to include important language and knowledge outcomes associated with the knowledge-building component of the curriculum.

Students also demonstrated stronger performance on the morphology assessment. Although the magnitude of the effect was more modest than for academic vocabulary, the pattern consistently favored RedThread students, indicating stronger understanding of meaningful word parts and their contribution to word meaning.

Together, the adjusted spring results favored RedThread students on academic language measures, particularly academic vocabulary. Given the nonrandomized design and initial group differences, these associations do not establish that the curriculum caused the observed differences.

Knowledge Development

The evaluation also examined whether students acquired broad content knowledge assessed across the instructional period. Researcher-developed items measured students' understanding of content addressed in the knowledge-building component of RedThread.

RedThread students scored higher than comparison students on broad content knowledge at both winter and spring. The advantage was evident across all eight spring knowledge items. Because the RedThread group already had higher scores in winter, the spring difference should not be interpreted by itself as evidence of greater knowledge growth.

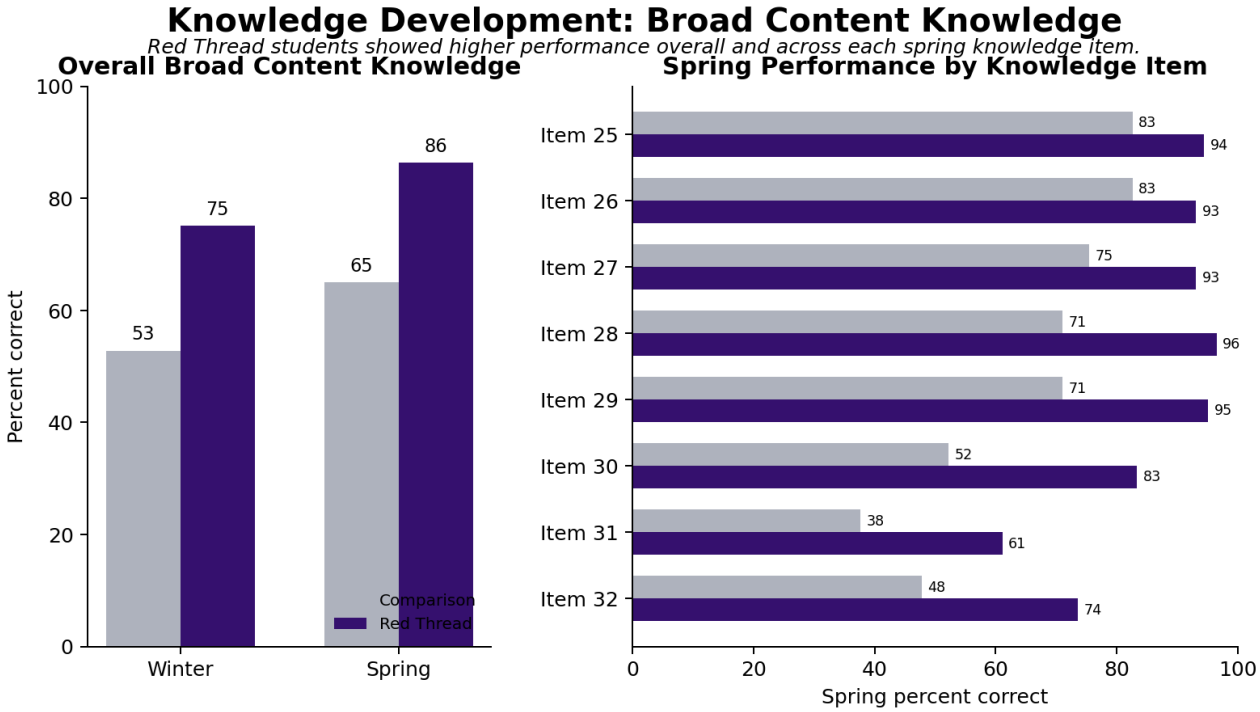


Figure 4. Knowledge development: broad content knowledge.

Students participating in RedThread showed higher broad content knowledge overall and on each spring knowledge item.

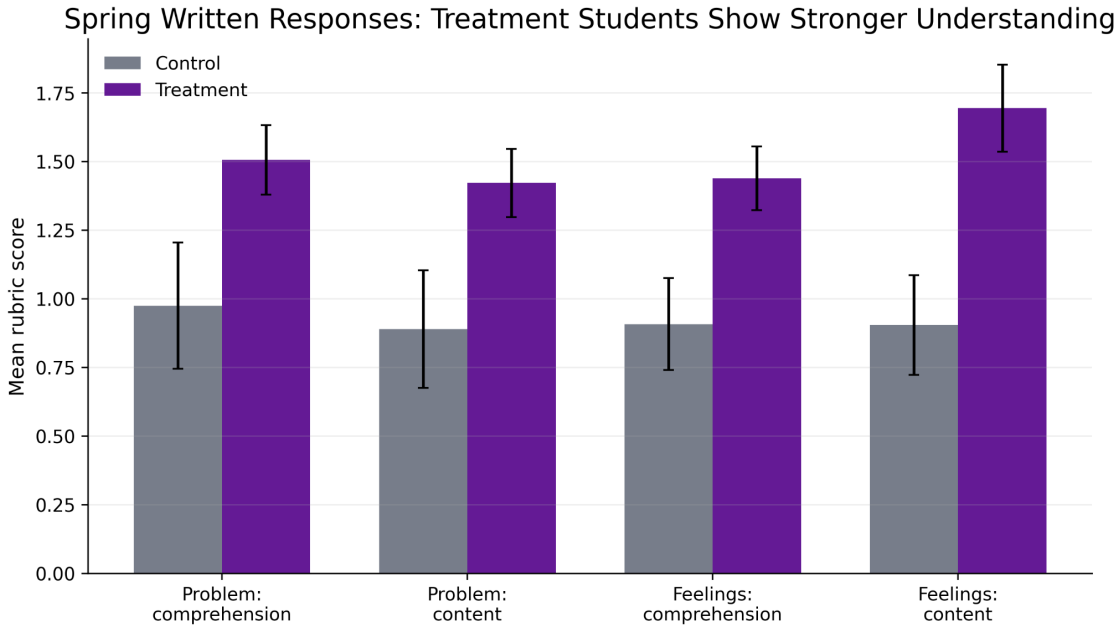
The overall pattern was consistent from winter to spring: RedThread students entered with higher broad content knowledge and maintained that advantage at spring. The adjusted analysis reported elsewhere in this report likewise favored RedThread students after accounting for winter performance.

Perhaps most encouraging, item-level analyses revealed advantages on all eight spring broad content knowledge items. The consistency of this pattern suggests learning across the assessed content rather than isolated success on a small number of questions.

Using Knowledge in Writing

The final figure examines spring written responses to open-ended prompts. RedThread students had higher average rubric scores than comparison students for comprehension and use of content knowledge. Because writing was assessed only in spring, these comparisons do not establish differences in writing growth.

Figure 5. Spring writing outcomes.



Students participating in RedThread demonstrated stronger comprehension and richer use of content knowledge in open-ended writing.

Importantly, the writing task required students to organize ideas rather than simply recall information. The findings therefore suggest that students were able to use newly acquired knowledge to explain, communicate, and support their thinking in writing. This pattern complements the results from the academic language and knowledge assessments and provides evidence that learning extended beyond recognition to meaningful application.

Across the reported spring writing outcomes, RedThread students had higher average scores than comparison students. The reported effect sizes describe between-group differences at spring, not pretest-to-posttest growth. These findings suggest stronger demonstrated comprehension and use of relevant knowledge, but do not establish causation.

Taken together, the district benchmarks document reading growth within RedThread cohorts, while the researcher-developed measures show adjusted spring differences in language and knowledge and unadjusted spring differences in writing. These are complementary but distinct forms of evidence; the reading data do not provide a contemporaneous treatment–comparison estimate.

Students participating in RedThread were not only able to acquire knowledge but also to communicate that knowledge effectively in writing. The writing findings provide evidence that learning extended beyond recognition and recall to explanation and written expression.

In summary, the table highlights the effect sizes of these outcome variables

Outcome	Comparison	Statistical Test	Effect Size (Cohen's *d*)	Interpretation
Academic Vocabulary	Treatment vs. Control	ANCOVA	0.88	Large
Morphology	Treatment vs. Control	ANCOVA	0.38	Small–Moderate
Broad Content Knowledge	Treatment vs. Control	ANCOVA	0.49	Moderate
Writing: Comprehension	Treatment vs. Control	Spring treatment vs. comparison	0.78	Moderate–Large
Writing: Content Knowledge	Treatment vs. Control	Spring treatment vs. comparison	0.94	Large

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Across outcomes, effect sizes ranged from small-to-moderate to large, with particularly strong effects for academic vocabulary and students' ability to incorporate content knowledge into writing.

What We Learned

This evaluation examined the knowledge-building component of RedThread through a broader lens than is typical of curriculum evaluations. Rather than focusing exclusively on reading achievement, it examined

whether participation in RedThread was associated with growth in reading, academic language, knowledge, and writing.

Across two successive cohorts, district benchmark data documented reading growth among RedThread students. Separately, researcher-developed assessments showed adjusted spring advantages in academic vocabulary, morphology, and broad content knowledge, as well as higher spring writing scores. These results are encouraging, although initial differences between groups and the nonrandomized design limit causal interpretation.

The contribution of this evaluation lies in examining several dimensions of literacy development together. The district benchmark data describe reading trajectories, while the researcher-developed assessments examine language, knowledge, and writing. Their convergence is suggestive, but these measures do not by themselves establish that gains in one domain caused gains in another.

Next Steps

The present evaluation provides encouraging evidence regarding the knowledge-building component of RedThread, while also identifying important opportunities for continued investigation.

First, the evaluation was conducted under authentic school conditions rather than through a randomized experimental design. Students were not randomly assigned to instructional conditions, the treatment and comparison groups differed at baseline, and the comparison sample was smaller than the treatment sample. Although additional analyses were conducted to account for initial differences between groups, future evaluations should employ larger, more comparable samples and, where feasible, more rigorous experimental or quasi-experimental designs.

Second, the study followed students over approximately one semester. Future research should examine whether the observed gains are sustained over multiple years and whether early growth in academic language and knowledge contributes to later reading comprehension, writing, and overall academic achievement.

Finally, this evaluation focused specifically on the knowledge-building component of RedThread. Because the broader curriculum also includes systematic foundational reading instruction, an important next step is to examine how these complementary components work together over time. Understanding how foundational skills instruction and knowledge-building jointly support children's literacy development has the potential to inform both curriculum design and classroom practice.

The present evaluation establishes an important foundation for this next phase of work. The consistency of the findings across multiple measures and two successive years of implementation provides encouraging evidence that continued investigation is warranted. Expanding this work across additional schools, grade levels, and instructional contexts will not only strengthen the evidence base for RedThread but will also contribute to a broader understanding of how coherent, knowledge-building instruction supports children's literacy development.