

# High-Impact Virtual Tutoring Within MTSS: Longitudinal Literacy Growth Among Elementary Students

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with Carly D. Robinson, Monica G. Lee & Susanna Loeb

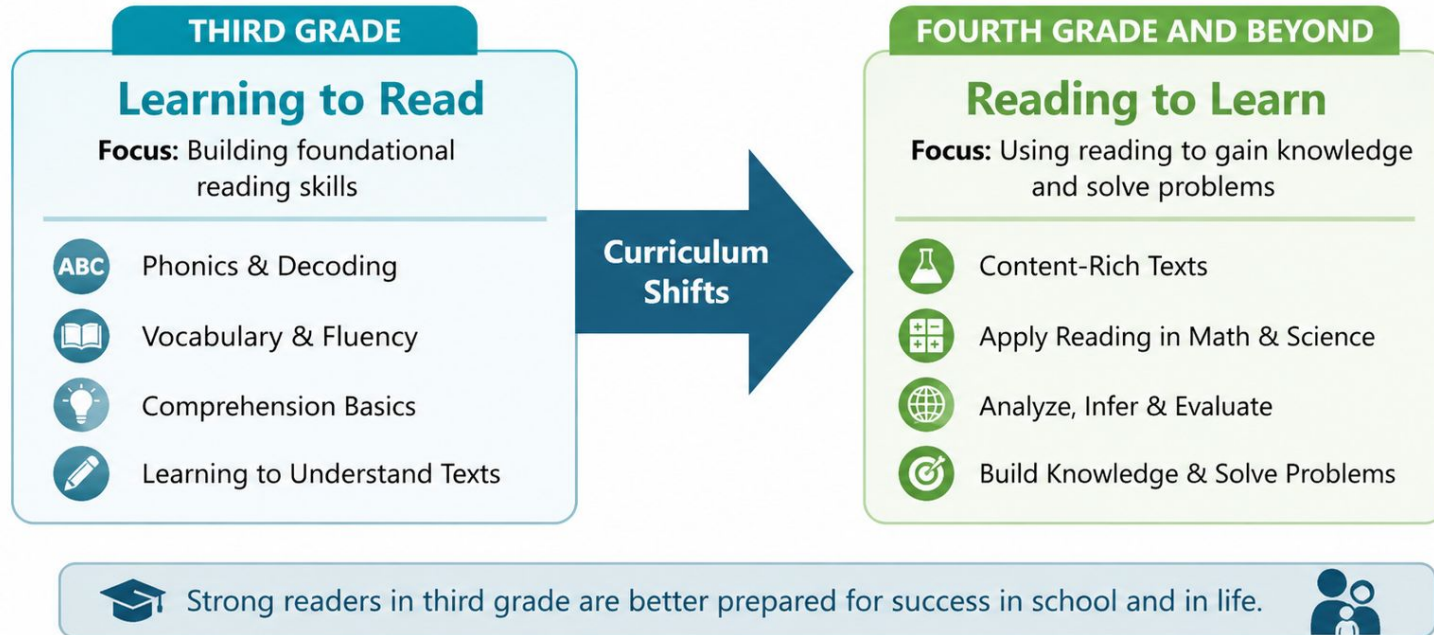
May 6, 2026

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**Stanford**

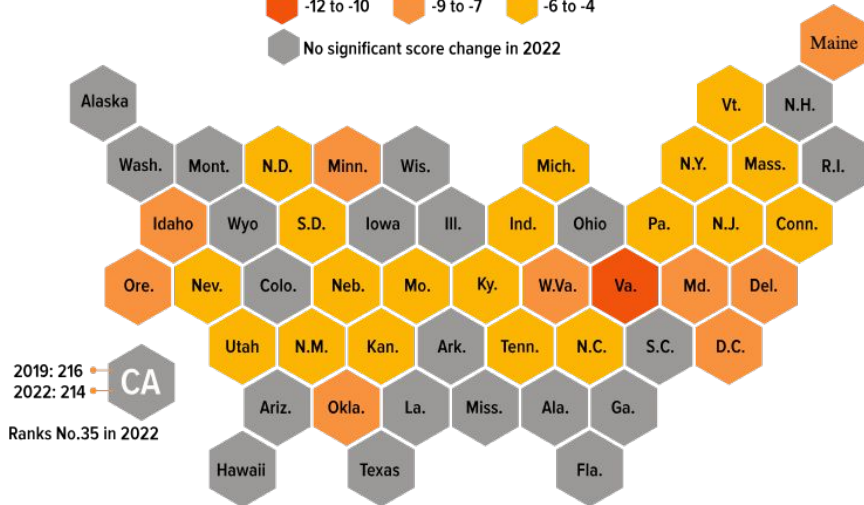
SCALE Initiative  
*Accelerator for Learning*

# Third-Grade Reading Proficiency is Critical to Student Learning



# 4th-Grade Reading Decline Requires Targeted Remediation

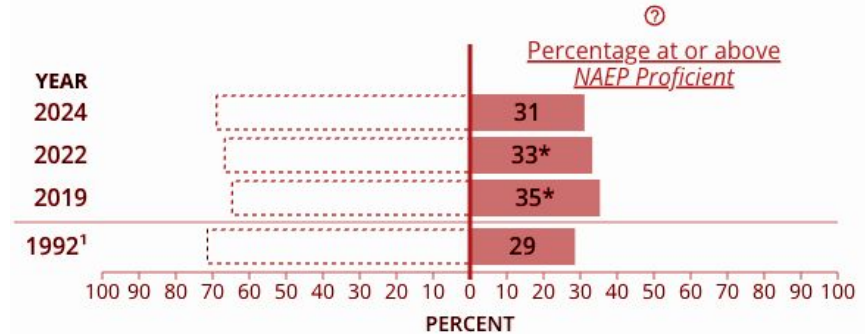
## 4th grade reading scores declined in 30 states between 2019 and 2022



Source: The National Assessment of Educational Progress (NAEP) 2022 Highlights  
 Graphic designed by Yuxuan Xie

EdSource

FIGURE | Trend in fourth-grade NAEP reading achievement-level results



NAEP

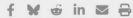
# Virtual Tutoring Supports Scalability and Maintains Impacts of HIT

Recent evidence demonstrates that virtual tutoring can be effective when it maintains the elements of high-impact tutoring (Neitzel & Storey, 2024; Robinson et al., 2024; Ready et al., 2025)

## Advocates push to expand high-impact tutoring programs, citing success

New Jersey Tutoring Corps has provided more than 15,000 students with small group tutoring in 19 of 21 counties

HANNAH GROSS, EDUCATION AND CHILD WELFARE WRITER | NOVEMBER 19, 2025 | EDUCATION



Third graders at KIPP SPARK Academy in Newark are tutored in math by Priya Shah.

Credit: Hannah Gross/NJ Spotlight News

EDCAST

## How High-Impact Tutoring Is Reshaping Post-Pandemic Learning Recovery

Harvard Ed Press author Liz Cohen discusses one of the most promising strategies for helping students recover from pandemic learning loss

POSTED November 6, 2025 BY Jill Anderson

Disruption and Crisis Education Reform K-12 System Leadership

## In San Francisco, Short Bursts of High-Impact Tutoring Support Young Readers

After working with tutors for five months last year, the number of students who met grade-level reading standards rose from 24% to 54%.

## Exclusive: New Research Strengthens Case for Virtual Tutoring

John Hopkins study found that first graders who received services were still on track in reading a year later with no additional help.



First graders in the Chelsea, Massachusetts, schools meet virtually with their tutors in their classrooms. (iGuite Reading)

By Linda Jacobson | February 25, 2026

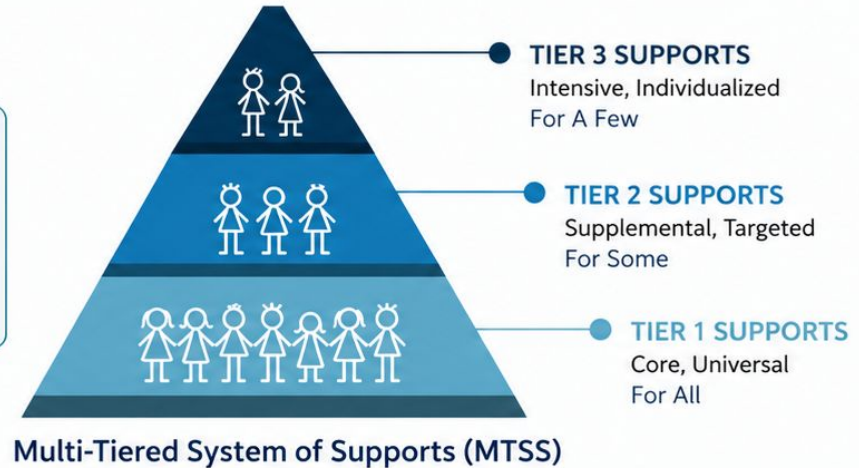
# Integrating Virtual, 1:1, Teacher-Led Tutoring as a District Strategy



What happens when a district uses a virtual tutoring initiative as a core component of their approach to literacy instruction for struggling readers (MTSS–Tier 3 esp.)?



Pre-registered Research Question (RQ):  
To what extent does a teacher-led virtual tutoring program improve elementary literacy outcomes?

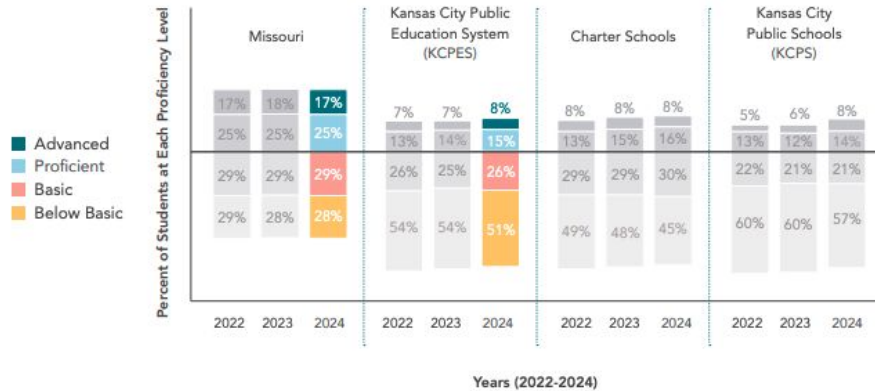


# Study Context

## Student demographics and performance:

The majority of the student body is Black or Hispanic; 100% Qualified for FRPL; 23% Receiving EL Services; 10% Receiving SPED Services

FIGURE 1: ELA PROFICIENCY, MISSOURI ASSESSMENT PROGRAM, GRADE 3



## District literacy strategies:



### High-Impact Tutoring

Every K-3 student gets 20 minutes of extra reading help, three times each week. Tutoring happens both in-person & online.



### Classroom Support

Literacy coaches partner with teachers inside the classroom, helping them use the best resources & ideas so every child can learn to read.



### Whole-School Support

Principals & school leaders receive training & support, ensuring the entire school is focused on reading success.



### Community Partnership

SchoolSmartKC connects schools with literacy organizations and researchers to monitor progress and improve results across the city.

# Intervention at a Glance



## Tutoring Program: **Hoot**



**Delivery:** Virtual



**Ratio:** 1:1



**Tutors:** All tutors are certified teachers



**Curriculum:** Literacy curriculum draws on Science of Reading principles



**Expectations:** Students receive tutoring for **30 minutes a day**, at least **3 times a week**, **during the school day**, over **20 weeks** (from October 2024 to May 2025), with a maximum of 60 lessons in total (target dosage = 30+ lessons).

### High Impact Tutoring Checklist

- ✓ Regularly 3+ times/week for 10+ weeks
- ✓ Consistent, well-trained tutor
- ✓ Aligns with high-quality curriculum
- ✓ Small groups (preferably 1:1)
- ✓ Part of the school day

# Study Design: Randomized Controlled Trial



**Participants:** 1,690 students in grades 1–4 from 14 elementary schools



## Eligibility

- Prioritizing students in **MTSS Tier-III** (2+ grade levels below the benchmark on the BOY i-Ready assessment).
  - Unfilled seats were assigned to **Tier-II** students (1 grade level below the benchmark).
  - Schools excluded students not eligible for tutoring



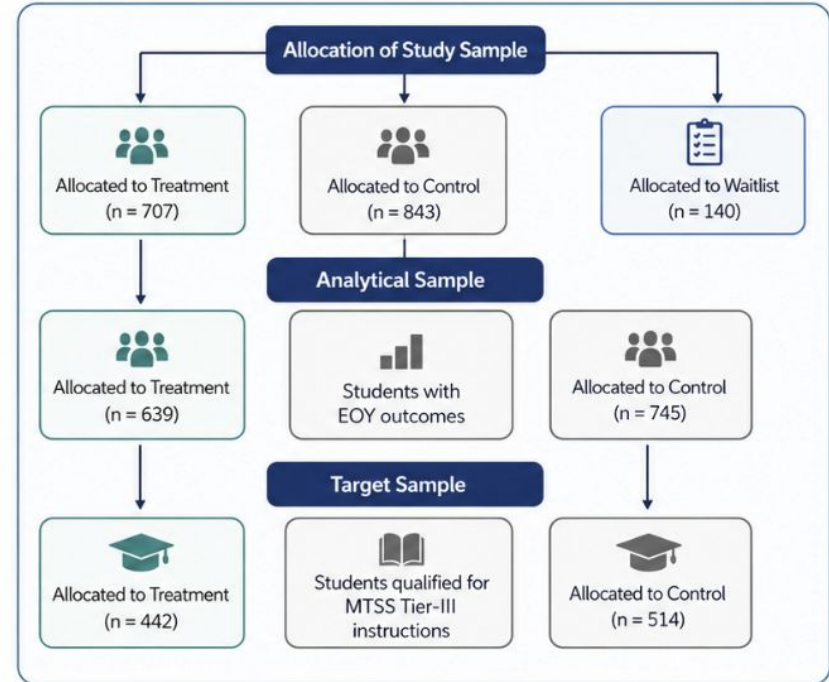
## Randomization

- Student-level; within school-grade-MTSS tier



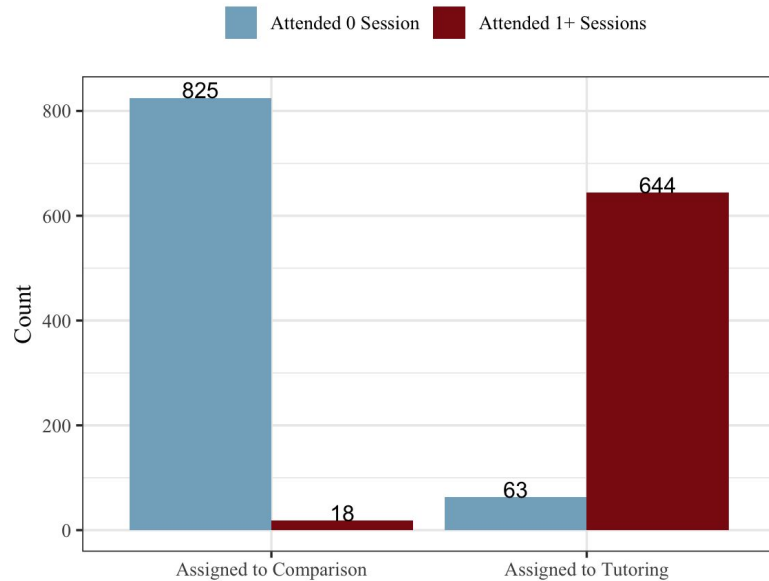
## Primary Outcomes

- **i-Ready Reading Diagnostic Overall Scale Scores**

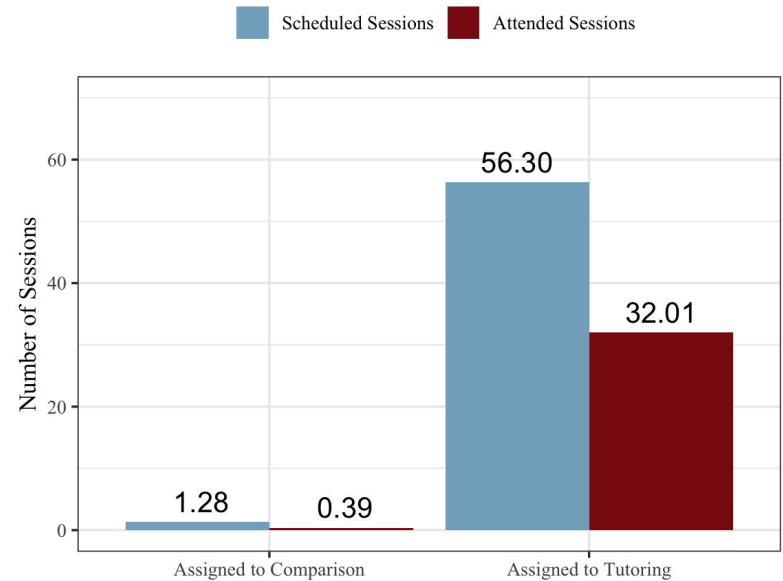


# Strong Implementation Fidelity: High Compliance and Adequate Dosage

## Ever Tutored



## Average Number of Sessions



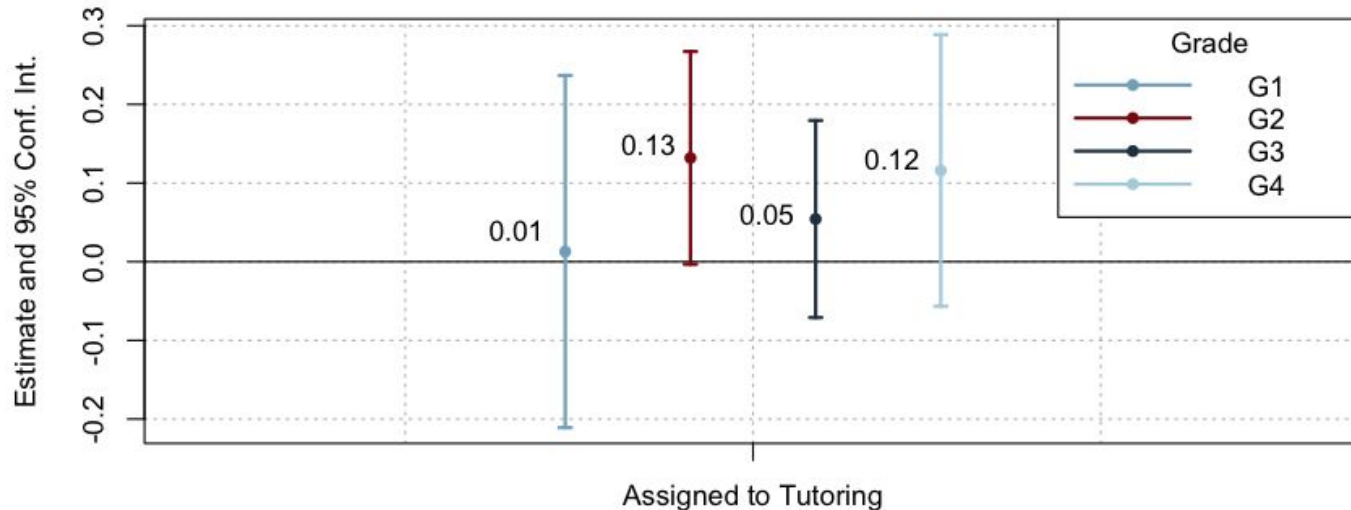
# ITT Results: Positive but Imprecise Effect of the Tutoring Program on All Students; Tier III Students (District Priority) Experience Larger Gains

	iReady EOY Overall Scale Scores (Std.)							
	All STUDENTS				MTSS TIER-II STUDENTS		MTSS TIER-III STUDENTS	
	(1)		(2)		(3)		(4)	
	Est.	<i>p</i>	Est.	<i>p</i>	Est.	<i>p</i>	Est.	<i>p</i>
Assigned to Tutoring	0.08+	.068	0.05	.116	-0.02	.712	0.08*	.032
	(0.04)		(0.03)		(0.06)		(0.04)	
FE: Strata	YES		YES		YES		YES	
BOY std scores			YES		YES		YES	
Student-covariates			YES		YES		YES	
Control Mean	0.00		0.00		0.816		-0.367	
Student Observations	1384		1384		428		956	
R <sup>2</sup> / R <sup>2</sup> adjusted	0.390 / 0.359		0.666 / 0.647		0.490 / 0.439		0.558 / 0.536	

Notes. Student covariates include demographic variables (gender, Black, Asian, White, Hispanic, EL, IEP, and SNAP); BOY iReady overall scale scores are standardized by grade level and benchmark periods; Fixed effect (FE) is on the strata level (i.e., school-grade-MTSS, n=66). Robust standard errors in parentheses. +*p* < 0.1, \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001

# Heterogeneity: Effects on MTSS-Tier III Students Driven by 2nd- and 4th-Graders

## Treatment Effects by Grade on iReady Std. Overall Scale Scores for MTSS Tier III Students



# Year 2 MOY ITT Follow-Up: Treatment effect is maintained (and even grows) 6 months after the intervention

	iReady Y2 MOY Overall Scale Scores (Std.) > 6 Months Post-Intervention							
	All STUDENTS				MTSS TIER-II		MTSS TIER-III	
	(1)		(2)		(3)		(4)	
	Est.	<i>p</i>	Est.	<i>p</i>	Est.	<i>p</i>	Est.	<i>p</i>
Assigned to Tutoring	0.10+	.080	0.08+	.083	.01	.848	0.12*	.038
	(0.06)		(0.04)		(0.07)		(0.06)	
FE: Strata	YES		YES		YES		YES	
BOY std scores			YES		YES		YES	
Student-covariates			YES		YES		YES	
Control Mean	-0.002		-0.002		0.602		-0.386	
Student Observations	931		931		351		580	
R <sup>2</sup> / R <sup>2</sup> adjusted	0.352 / 0.305		0.596 / 0.562		0.523 / 0.463		0.481 / 0.439	

Notes. Student covariates include demographic variables (gender, Black, Asian, White, Hispanic, EL, IEP, and SNAP); BOY iReady overall scale scores are standardized by grade level and benchmark periods; Fixed effect (FE) is on the strata level (i.e., school-grade-MTSS, n=66). Robust standard errors in parentheses. +*p* < 0.1, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

# Takeaways: Virtual tutoring improves literacy outcomes, especially for the most struggling students



Teacher-led virtual tutoring improves literacy outcomes—particularly for Tier III students—and effects persist over time.

## Short-Term Effects (End of Intervention)



### Tier III Students

Improved on their literacy assessment by

**+0.08**  
SD



### Tier II Students

Did not experience the same gains

**No**  
measurable impact



6 Months  
Later

## Sustained Impact (6-Month Follow-Up)



### All Tutored Students

Positive impact on literacy scores

**+0.08**  
SD



### Tier III Students

Still scoring higher than comparison peers 6 months later

**+0.12**  
SD



Virtual tutoring is most effective for students with the greatest need—and benefits persist beyond the intervention.



# Takeaways: Virtual HIT can be core literacy strategy within MTSS



Integrating high-impact tutoring within MTSS improves student outcomes while making better use of existing resources.



## What District Leaders Should Do



Align tutoring with existing MTSS structures



Target support based on student need (Tier II / Tier III)



Leverage existing staff, schedules, and systems



## Why It Works



Improves student **outcomes**



Reduces implementation **complexity**



Strengthens instructional **coherence**



Increases **cost-effectiveness**



When tutoring is embedded within MTSS, districts can deliver targeted support more efficiently and sustainably.



## Thank you!



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Check out the report.

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