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# High Dosage Math Tutoring Model in Union County Public Schools

# About Union County Public Schools



# High Dosage Math Tutoring Model

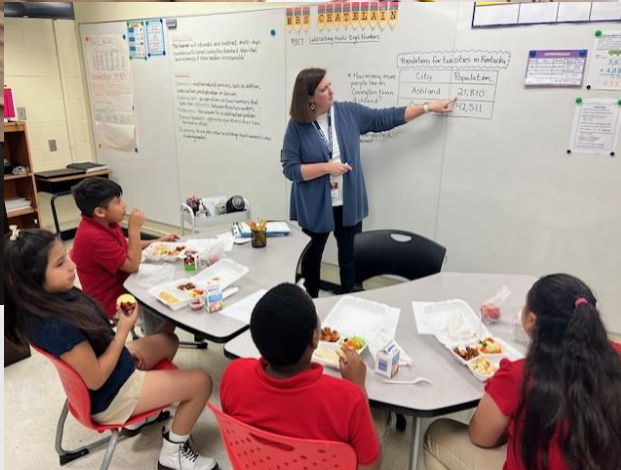
- **2017**
  - Launched to support low-performing schools (6)
- **2020–2024**
  - Expanded to additional schools (13+)
  - Served as a post-pandemic recovery strategy
  - Implemented Targeted Tutoring (TT) and Whole Grade (WG)
- **2022–2023**
  - UNC–Chapel Hill commissioned evaluation (General Assembly initiative)
- **2024–Present**
  - Current model = Whole Grade (WG) only

# Criteria

- Identified grade levels in 4th and 7th
- Implemented daily and during the school day
- All students in a grade level
- Pull out model
- 3:1 ratio
- \$25 per hour (Part Time)



# Math Tutoring in Action



# Curriculum and Tutor Support

- UCPS curriculum
- Prescriptive lessons
- Data driven
- Consistency in all schools
- Non-certified personnel
  - Pass math assessment
  - Robust onboarding
- Monthly training

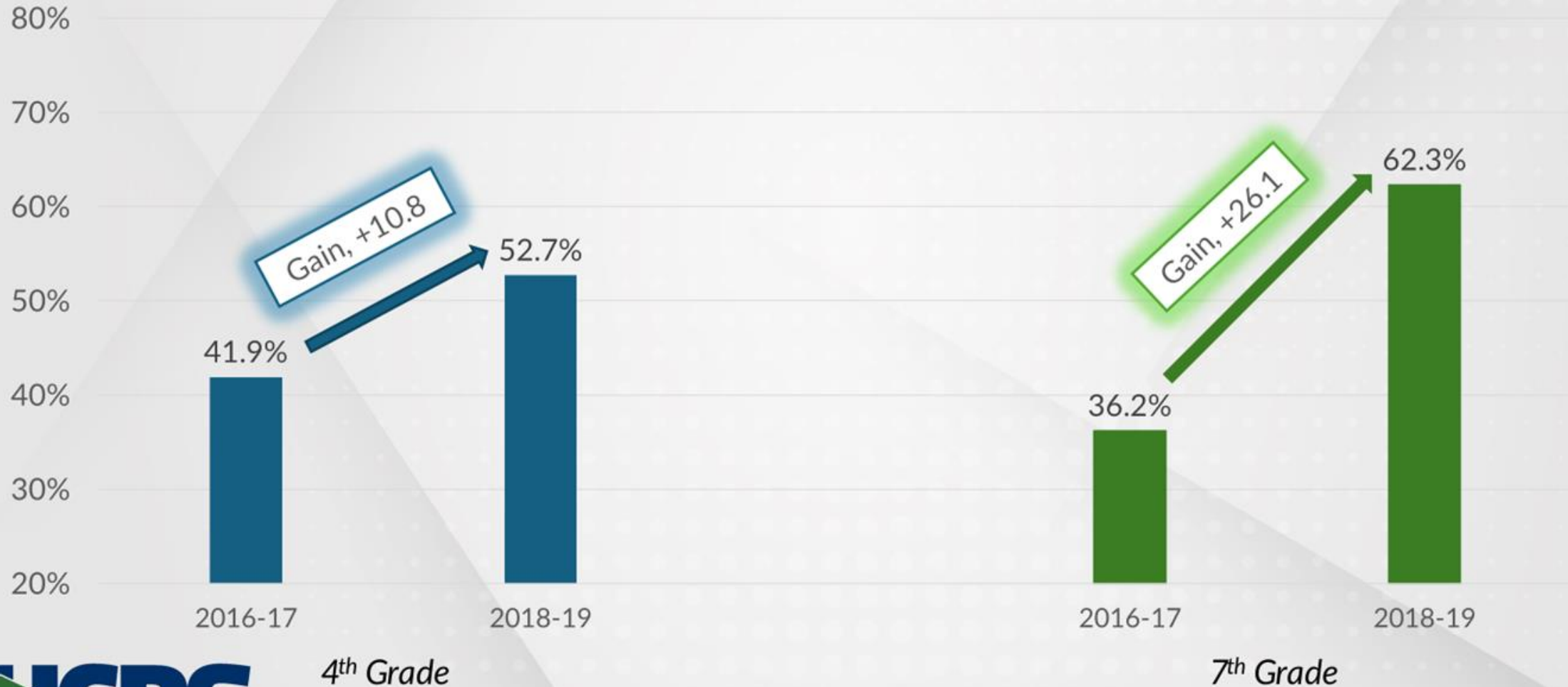
# Non-Negotiables

- Use of the provided curriculum binders
- Each school must identify one “champion” to support the tutoring initiative
- Designate space for tutoring
- 30 minute session
- Maintain 3:1 ratio
- Schedule must not impact core instruction
- School provides tutors with instructional materials and resources



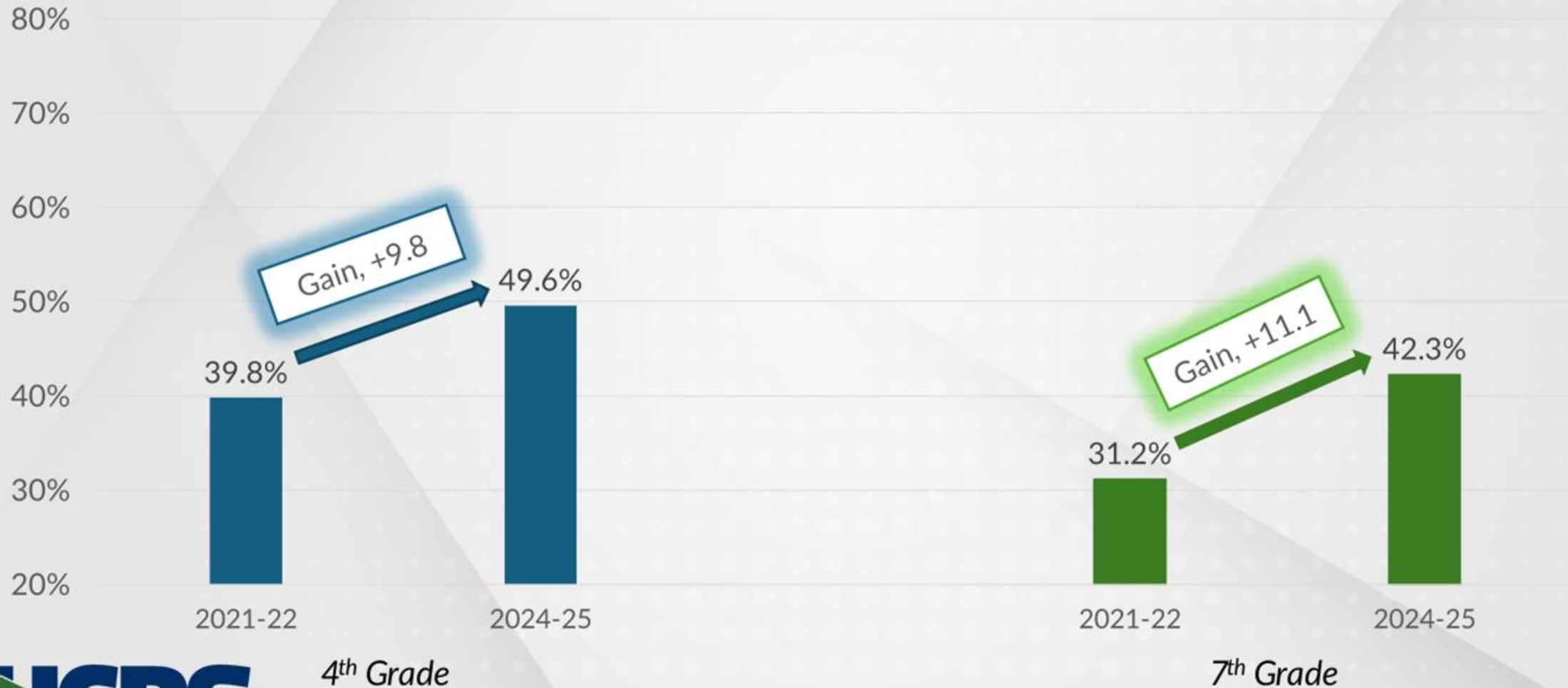
# Pre-Pandemic Tutoring

## Math EOG Proficiency (GLP) at UCPS Schools With an Intensive Tutoring Program



# Post-Pandemic Tutoring

## Math EOG Proficiency (GLP) at UCPS Schools With an Intensive Tutoring Program



# UNC Chapel Hill Research

## Findings

[4th Grade Research Report](#)

[7th Grade Preliminary Brief](#)

- The impact of the whole grade tutoring model was positive and robust for both 4th and 7th grade models.
- The tutoring program was cost effective relative to other tutoring programs and educational interventions.

# UNC Chapel Hill Research Summary Findings

The impact of **whole grade** tutoring In **4th grade** was positive and robust (indicating results that are statistically significant):

- The average effect across six years of the program was 0.31 standard deviations, equivalent to a 12 percentile point increase in math test scores.
- This effect is comparable to the effect of two years in a smaller class size in the Tennessee class size experiment.
- Positive effects lasted into 5th grade, boosting both math and science test scores.

The impact of **whole grade** tutoring In **7th grade** was positive and robust (indicating results that are statistically significant):

- Statistical analysis indicates a similar standard deviation for the 7th grade model as compared to the 4th grade model.
- The average effect across six years of the program was 0.324 standard deviations.



# UNC Chapel Hill Research Summary

## Cost Analysis

Whole grade tutoring program was cost effective

- Annual costs were \$750-\$2,500 per pupil depending on assumptions.
- Cost-effectiveness ratios are comparable or superior to many interventions including lengthening the school day, increasing teacher salaries, and class size reduction.

# Scalability Considerations

- Identification and allocation of recurring state funds
  - Competitive Grant?
  - Program Code?
- Partnership between Lead District (UCPS) and Participating Districts
- Equitable distribution of funds to Lead and Participating Districts
- Ongoing regional collaboration and training opportunities

# Scalability Considerations

Approximate cost for current UCPS programming model = \$2,750,000

- Elementary cost per school (using average 4th grade enrollment of 100 students) = \$170,500
- Middle cost per school (using average 7th grade enrollment of 350 students) = \$352,500
- District Tutoring Champion (Facilitates assessments, onboarding, and monthly PD) = \$125,000/year
- Professional development modules and materials = \$100,000

# District Commitments

## UCPS

- Provide 4th and 7th grade curriculum
- Train PSUs with fidelity
- Provide assessments for hiring tutors
- Provide training presentations

## Participating PSUs

- Follow tutoring model with fidelity (e.g Non-Negotiables)
- Implement whole grade model
- Fully utilize materials
- Identify and allocate start-up resources
- Progress monitor and evaluate annually





UNION COUNTY PUBLIC SCHOOLS

*Thank You*