

# A-GAME AEC School Data Project



## NWEA Study

The Impact of Rapid Guessing on AEC's School-Level NWEA Results



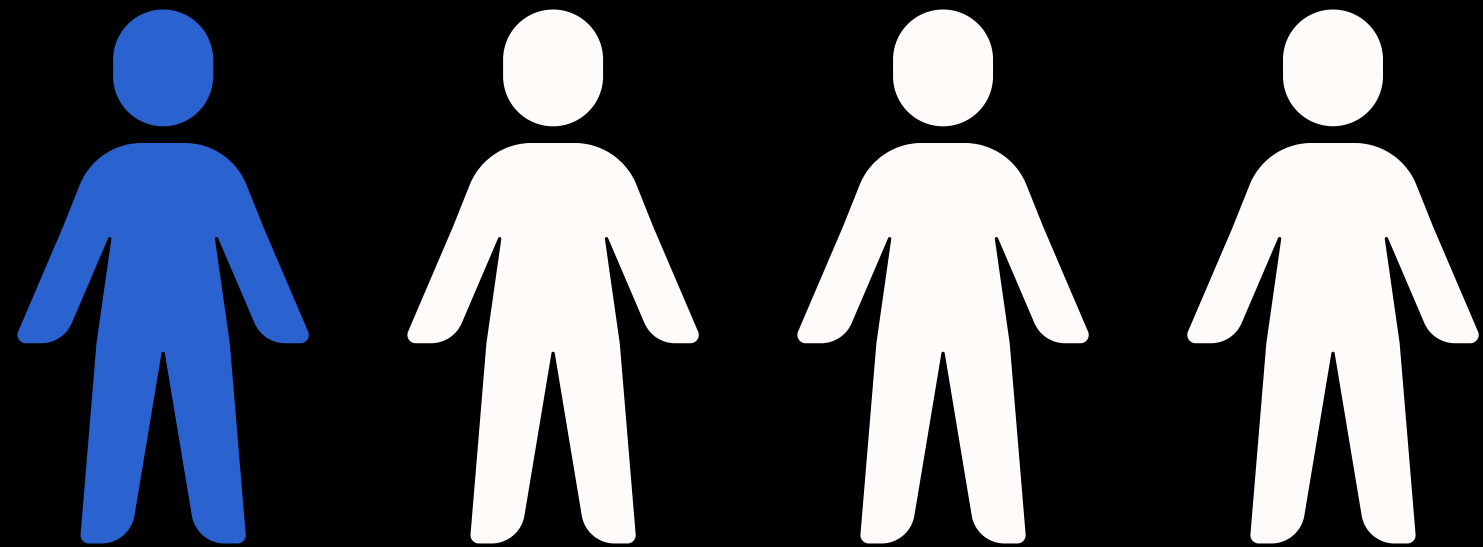
# 2021 NWEA Study

## Sample:

- 9 alternative schools contributed data for the 2020-2021 school year
- 1706 students for reading
- 1649 students for math
- 3 states: CA, CO, and NY
- Students in grades 9-12

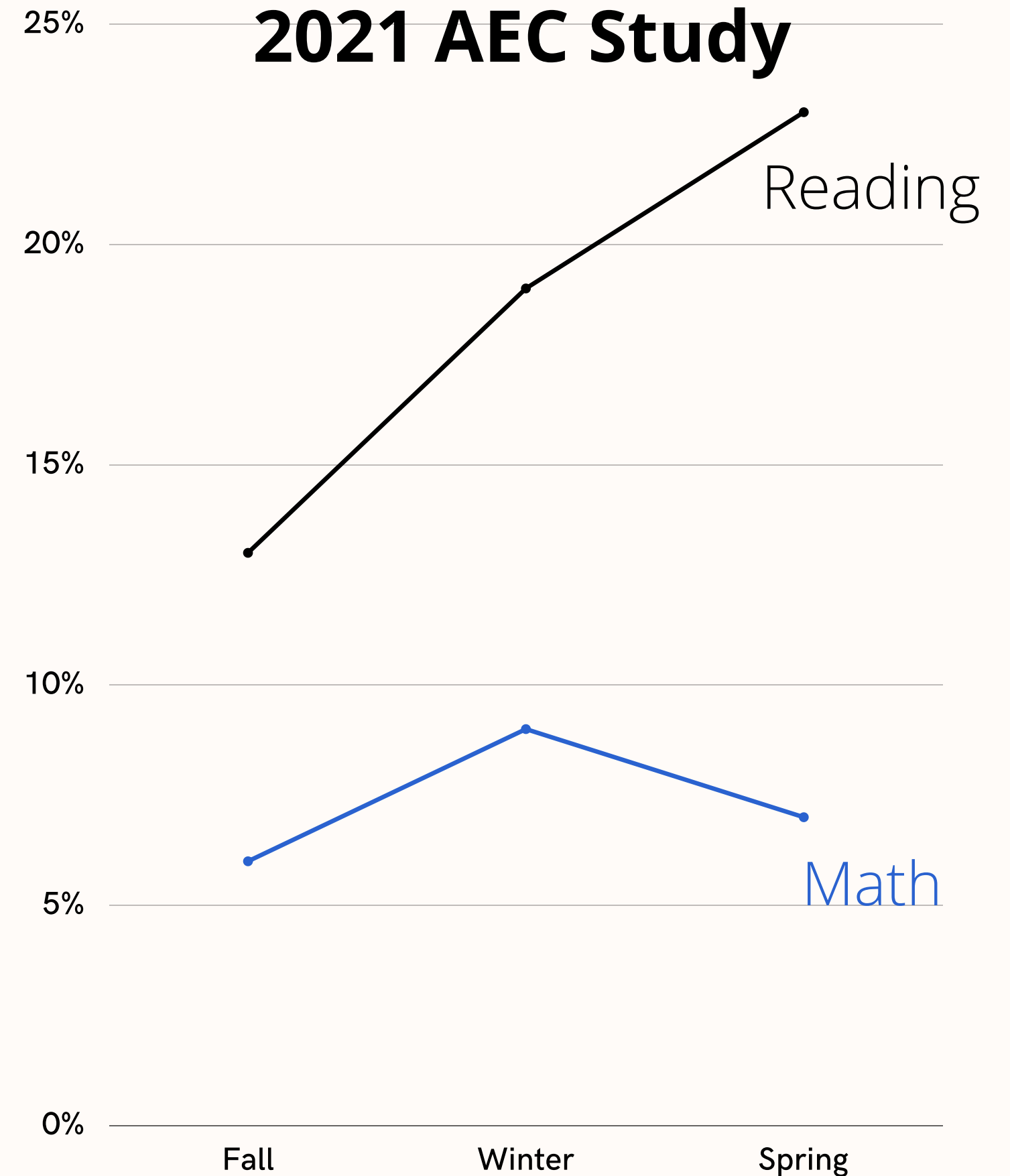
# 2021 AEC Study

Not all Students are Engaged  
in the Assessments



Nearly 1 in 4  
students guessed on more  
than 10% of items on the  
spring 2021 reading test

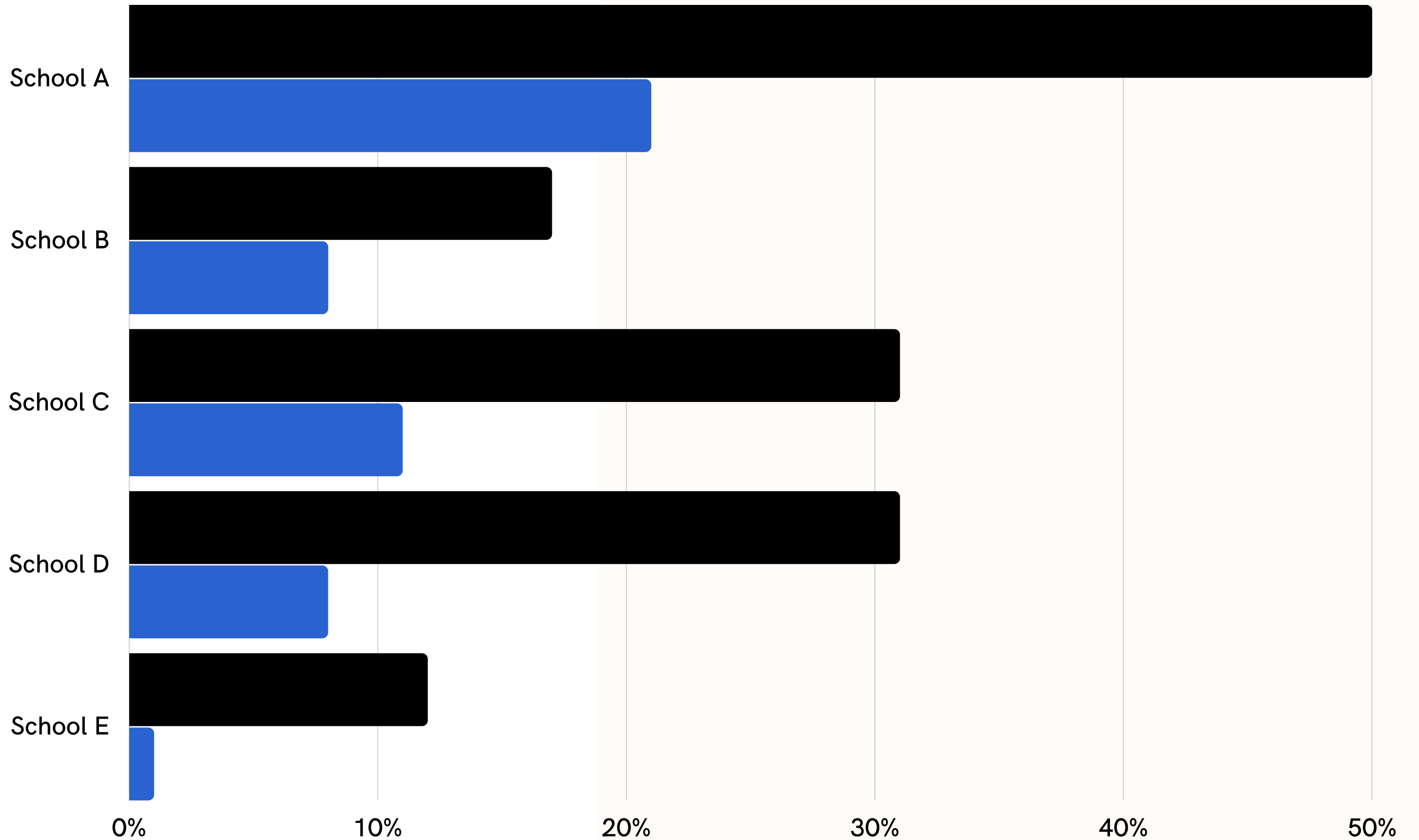
## Percent Rapid Guessers in 2021 AEC Study



# Percent of Rapid Guessers in the Spring, by School, in Reading and Math

**The percentage of rapid guessers differed across schools**

The percent rapidly guessing was higher for reading than math across all schools.



Blue=Math

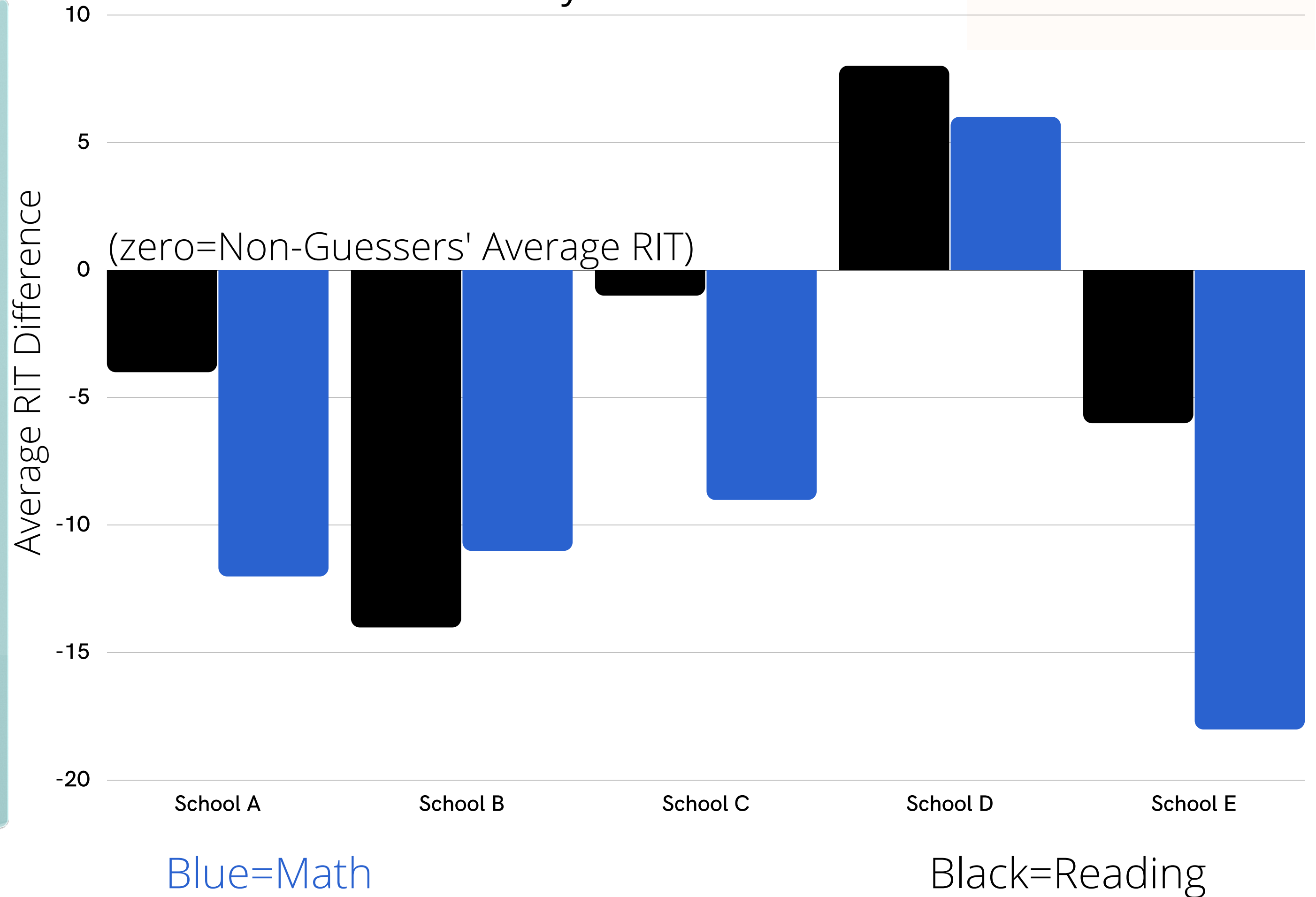
Black=Reading



# HOW DO RAPID GUESSERS IMPACT SCHOOL-LEVEL SPRING ACHIEVEMENT OUTCOMES

A look at how Rapid Guessers differ from the Sample Average on End of Year NWEA Test Scores

# Difference in Average Reading and Math RIT Scores for Guessers, by School: Fall 2021



**Average RIT for Guessers tend to be lower than for Non-Guessers**

School D is an exception!

"Guessers" are students who rapidly guessed on more than 10% of test items (as reported by NWEA)



# HOW DO RAPID GUESSERS IMPACT SCHOOL-LEVEL GROWTH OUTCOMES

A look at how School-Level Growth Outcomes Change when Guessers' are removed from the analysis

# 2021 NWEA Study

## Percent of students with a pre- and a post-test:

- Reading
  - 33% of students had a pre- and a post-test
- Math
  - 37% of students had a pre- and post-test
- COVID likely impacted participation rates on all assessment and, therefore, limited the number of students with a pre- and a post-test more than in a "normal" year

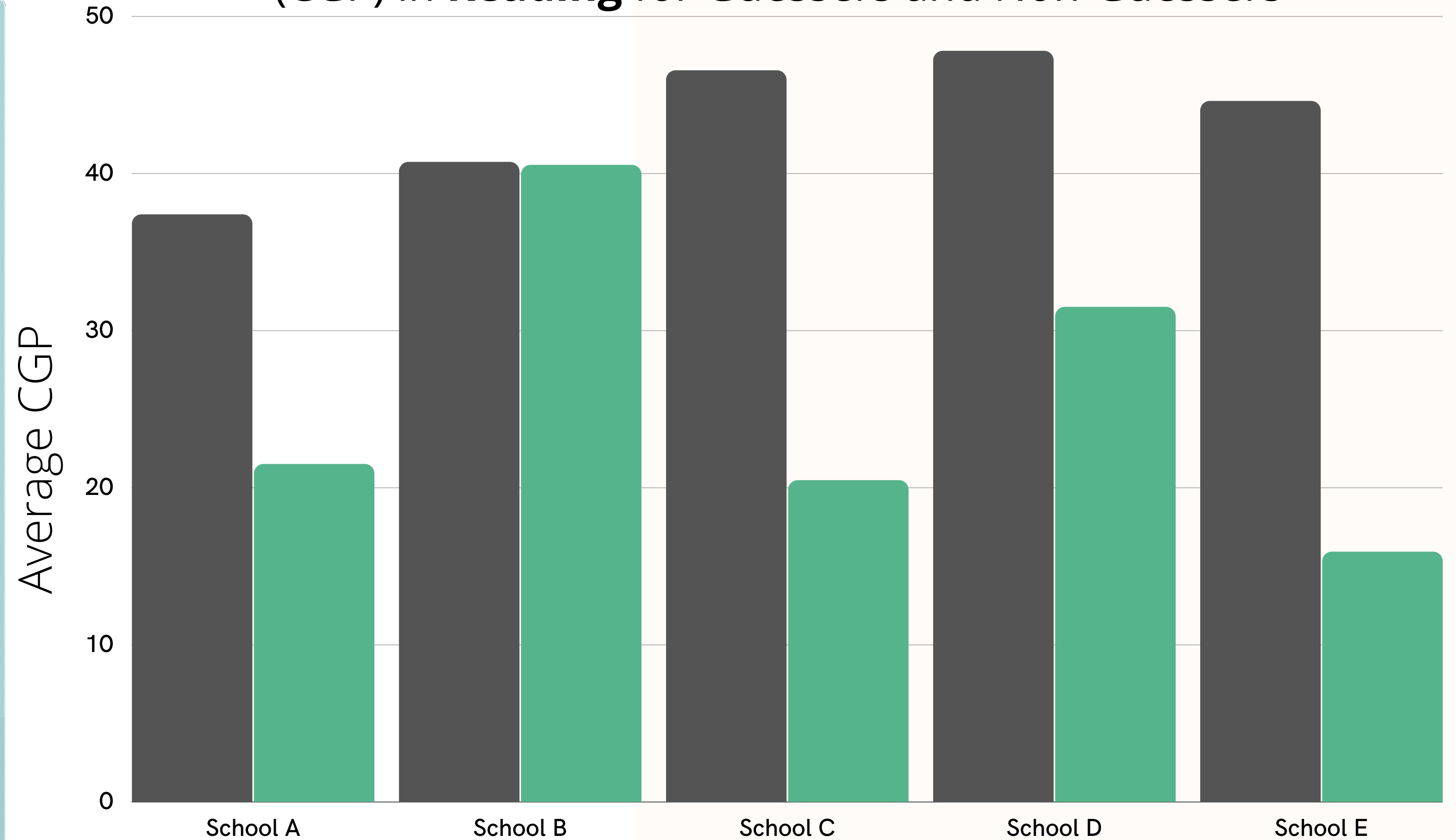


# School-Level Average Fall to Spring Conditional Growth Percentile (CGP) in **Reading** for Guessers and Non-Guessers

**Non-Guessing students tend to show more growth in reading**

As measured by Condition Growth Percentiles

"Guessers" were reported by NWEA as having guessed on more than 10% of items

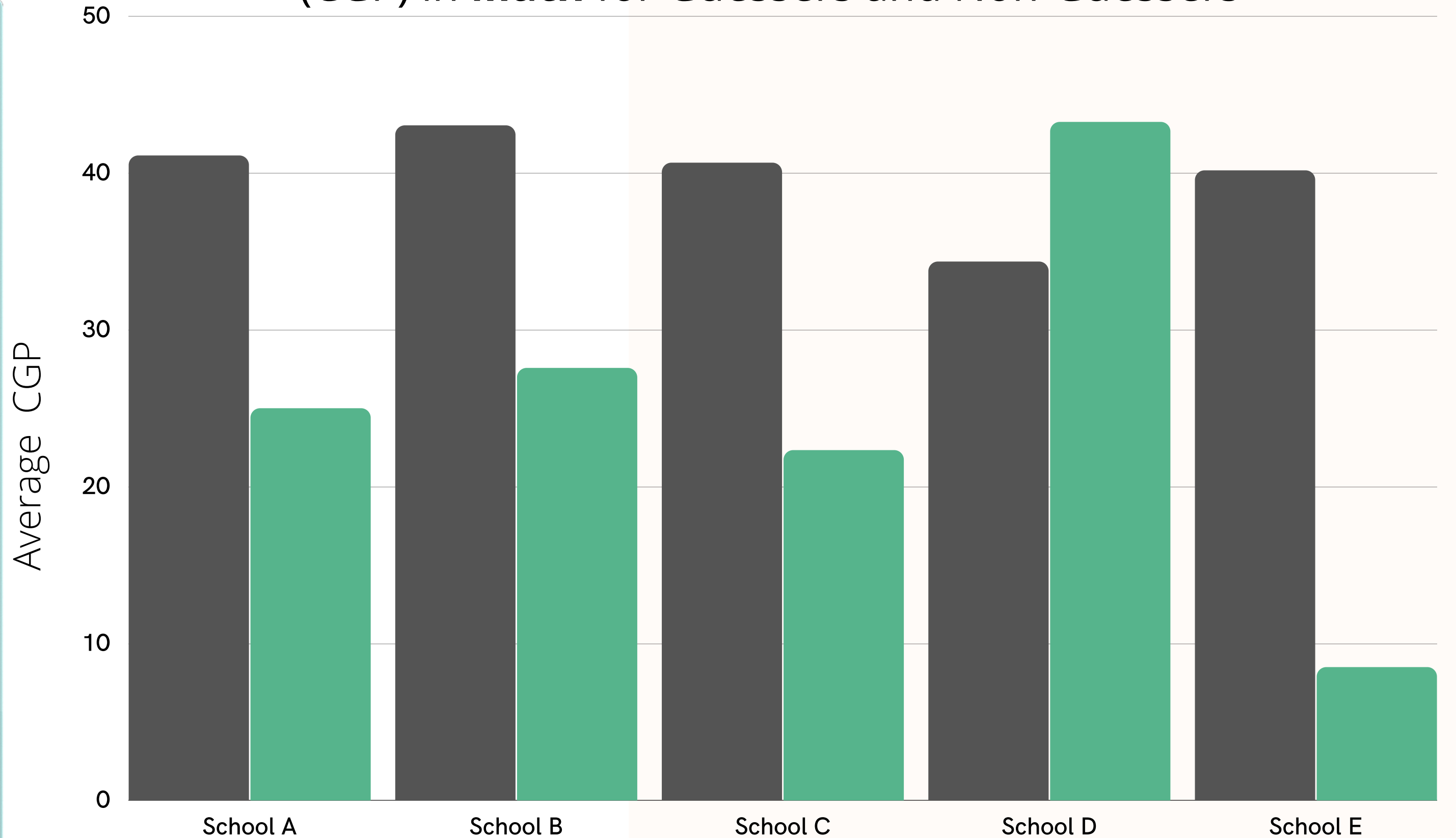


Grey= Non-Guessers, Green= Guessers

# School-Level Average Fall to Spring Conditional Growth Percentile (CGP) in **Math** for Guessers and Non-Guessers

**Non-Guessing students tend to show more growth in math**  
As measured by Condition Growth Percentiles

"Guessers" were reported by NWEA as having guessed on more than 10% of items



Grey= Non-Guessers, Green= Guessers

# Summary

1

While guessers were found across each subject and assessment window, the largest percentage occurred in the spring, and was more prevalent in reading than in math.

2

The proportion of students reported as Guessers varied considerably across the five schools in the study, suggesting schools can impact these proportions.

3

The inclusion of Guessers in the school-level analysis showed that 1) Guessers do impact school-level outcomes and 2) the average outcomes of schools with higher percentages of Guessers are more impacted than those with lower percentages of Guessers.

# Recommendations

1

Schools need to be well trained on testing protocols and the use of NWEA pauses, when rapid guessing is detected, and authorizers/districts need to allow students to be retested if their guessing behavior impacts more than 10% of items.

2

Authorizers/districts need to decide whether students guessing on more than 10% of items should be considered as a valid academic assessment result, or a measure of a student's test motivation

## **Options for use of the Rapid Guesser data:**

- Include in the summative report the proportion of rapid guessers; or
- Remove guessers from school average but count guessers as non-participants when calculating the participation rate; and
- Whether removing or leaving guessers in the academic averages, use the proportion of guessers as a separate measure of student engagement.