

Reading Matters and Math Counts:

Exploring The Drivers, Effects, And Outcomes Of Education In Metro Atlanta

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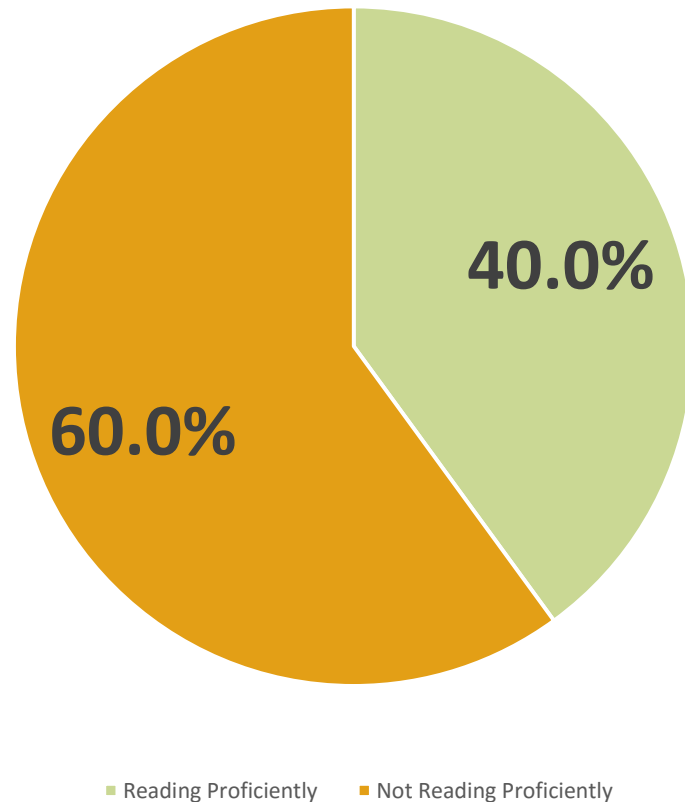
In Sum

- Overall, **only about 40 percent of third graders in the 10-county ARC Region are proficient in reading by the end of third grade.**
- A study commissioned by the Annie E. Casey Foundation shows that **children not reading proficiently by the end of third grade are four times more likely to not graduate high school.**
- Similar to reading outcomes, **only about 38 percent of 8th graders are proficient in math by the end of 8th grade.**
- Naturally, there is a strong correlation between 3rd grade reading proficiency and 8th grade math proficiency. After third grade is when children transition from “learning to read” to “reading to learn.”
- And there is also a **strong correlation between poverty and student achievement**, which is also visible in the spatial distribution of levels of student achievement throughout the region.



So let's talk about 3rd grade reading proficiency...

3rd Grade Reading, 2015: 10-County Atlanta Region
(14 School Districts)



This shows that, overall, roughly 60 percent of 3rd graders are not reading proficiently by the end of 3rd grade in the 10-county Atlanta region. Please note (also footnoted) that we are **defining reading proficiency as: the percent of students who fall into the “proficient and above” category based on 3rd grade English Language Arts Milestone scores.** We will use this definition throughout the report.

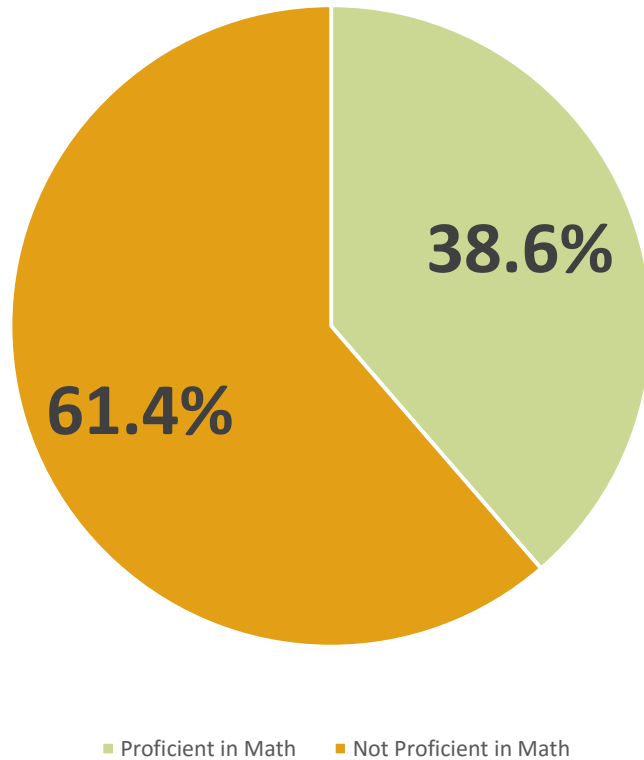
The reason 3rd grade reading is a key benchmark is that, according to recent research sponsored by the [Annie E. Casey Foundation](#), children **who are not reading proficiently by the end of third grade are four times more likely to leave school without a high school diploma.**

Reading Proficiency= % of students who scored “proficient and above” on 3rd grade English Language Arts Milestones test

Math Proficiency= % of students who scored “proficient and above” on 8th grade Math Milestones test

What about 8th Grade Math Proficiency?

8th Grade Math, 2015: 10-County Atlanta Region
(14 School Districts)

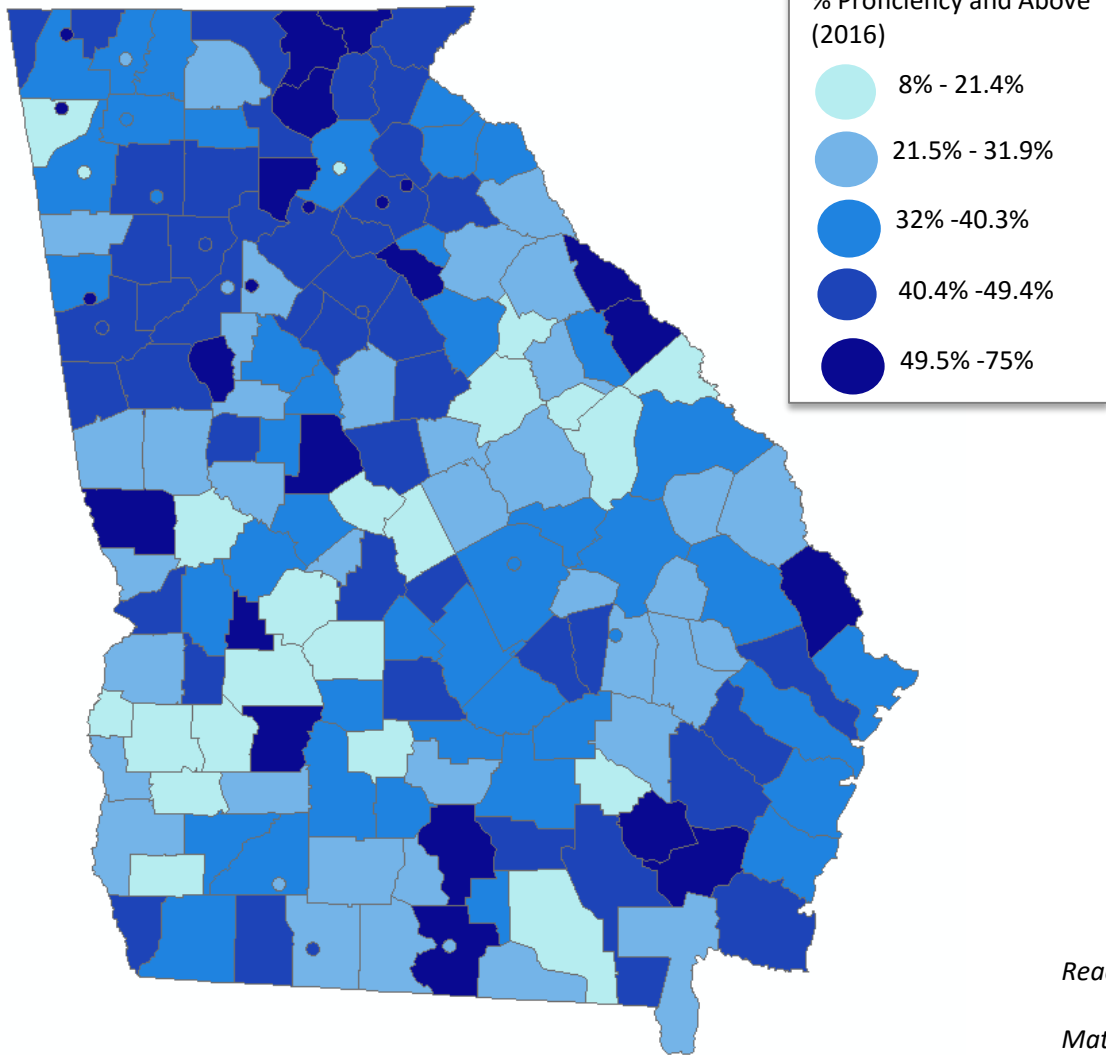


This shows that, overall, roughly 61 percent of 8th graders in the 10-county Atlanta region are not proficient in math by the end of their 8th grade year. Please note (also footnoted) that we are **defining reading proficiency as: the percent of students who fall into the “proficient and above” category based on 8th grade Math Milestone scores.** We will use this definition throughout this report.

Reading Proficiency= % of students who scored “proficient and above” on 3rd grade English Language Arts Milestones test

Math Proficiency= % of students who scored “proficient and above” on 8th grade Math Milestones test

So let's talk about 3rd grade reading proficiency...



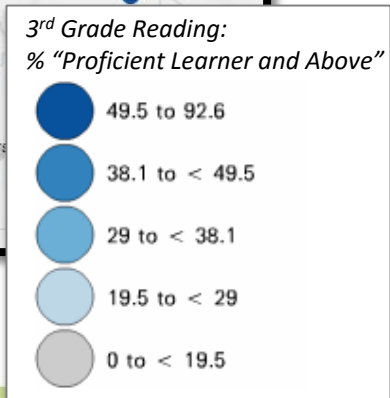
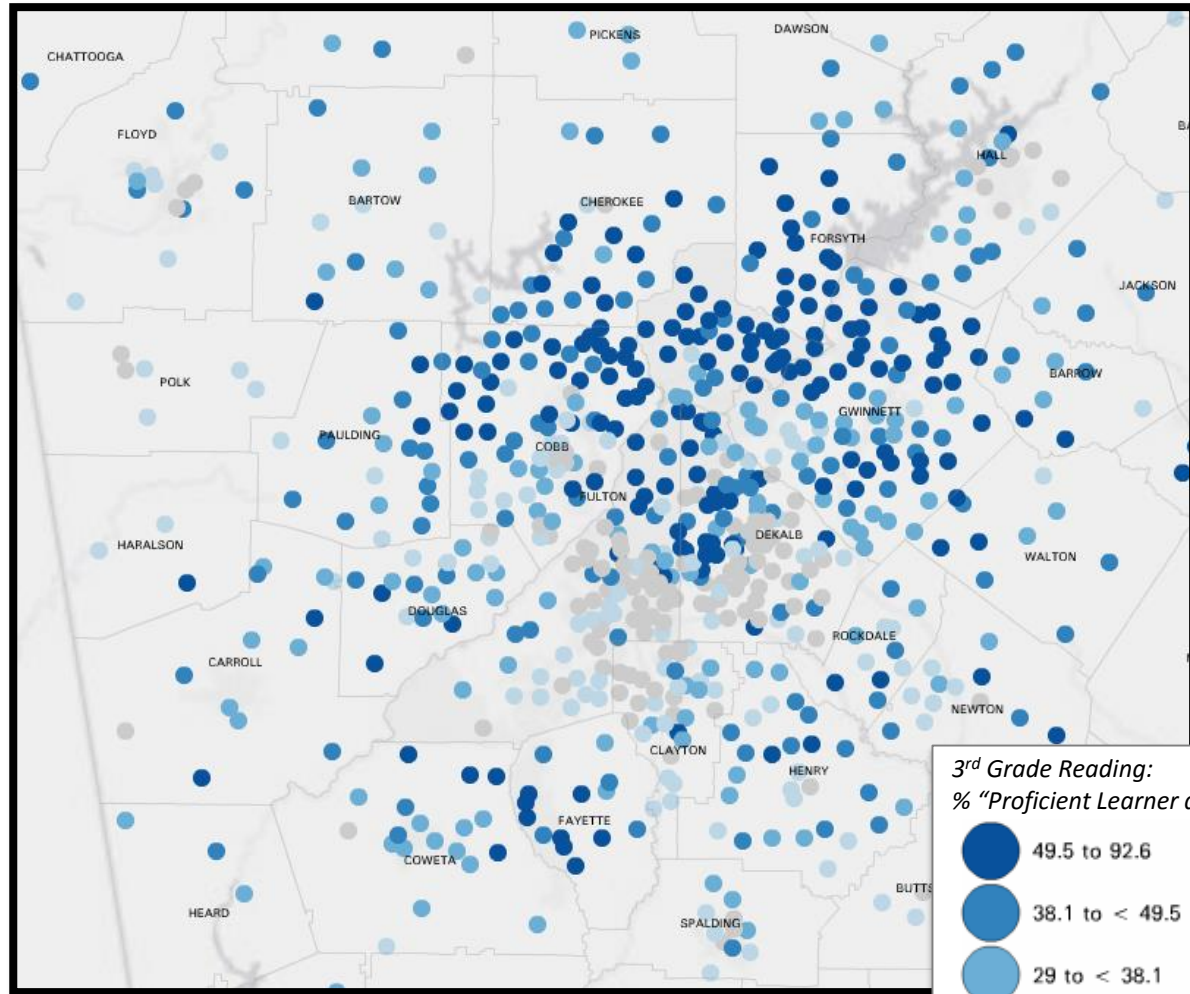
This explores 3rd grade reading proficiency by district *for the entire state*. Please note (also footnoted) that we are **defining reading proficiency as: the percent of students who fall into the “proficient and above” category based on 3rd grade English Language Arts Milestone scores.**

The darker blues represent higher reading proficiency and light blues represent the lower proficiencies. All metro Atlanta districts seem to have decent proficiency when compared to areas in the southern half of Georgia, but **Clayton, Spalding, and Gainesville City school districts stand out with the lowest proficiency rates in the metro area.**

Reading Proficiency= % of students who scored “proficient and above” on 3rd grade English Language Arts Milestones test

Math Proficiency= % of students who scored “proficient and above” on 8th grade Math Milestones test

So what does 3rd grade reading proficiency look like in metro Atlanta?



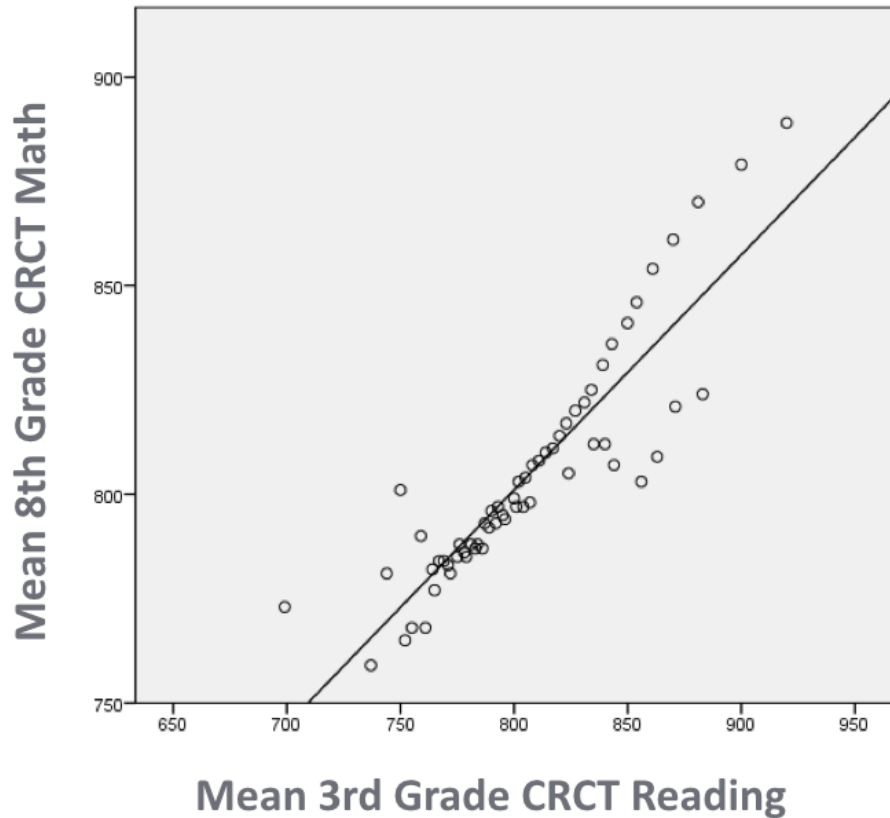
Narrowing our focus to metro Atlanta, this map shows 3rd grade reading proficiency at the school level. Darker blue indicates schools with higher reading proficiency rates and gray represents the lowest. Highest performing schools are largely clustered in the northern parts of the region. ***There is a clear pattern, as I-20 geographically divides the northern and southern half of the region in terms of student achievement for 3rd grade reading.***

Reading Proficiency= % of students who scored "proficient and above" on 3rd grade English Language Arts Milestones test

Math Proficiency= % of students who scored "proficient and above" on 8th grade Math Milestones test



Why Does 3rd Grade Reading Matter?



$$R^2 = .806$$

The scatterplot shows the relationship between 3rd grade reading and 8th grade math by showing how the same group of students performed on the 8th grade math test after taking the 3rd grade reading assessment five years earlier. The dots, representing students for the whole state, show strong correlation between 3rd grade reading and 8th grade math proficiency.

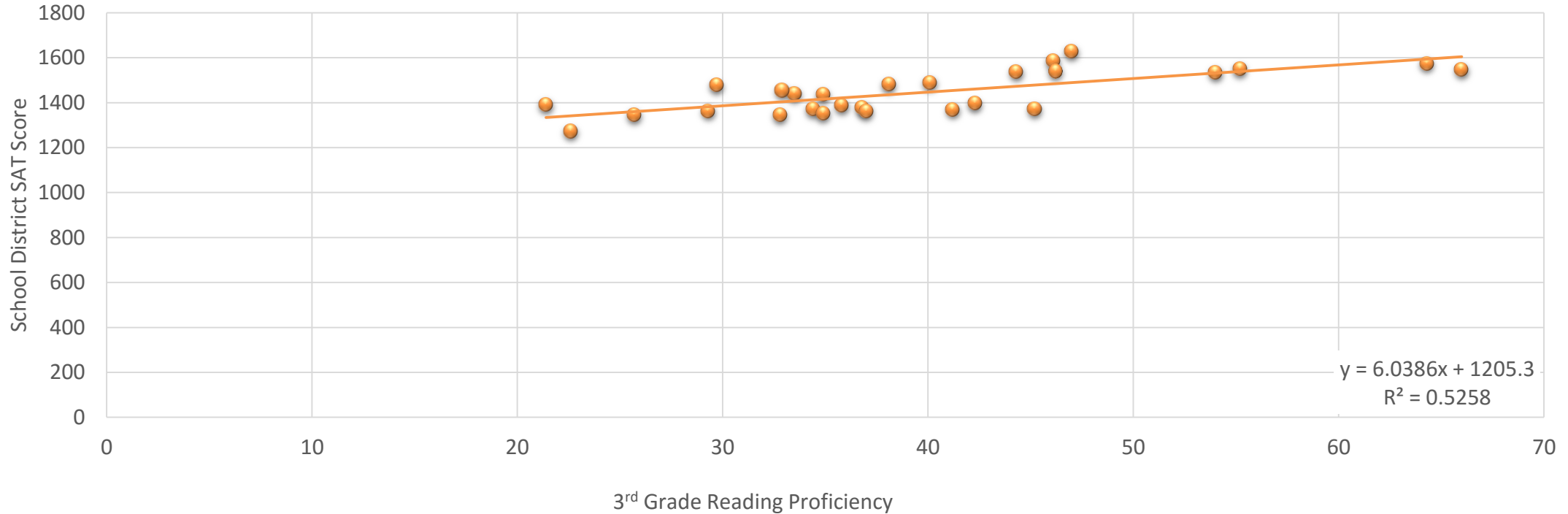
Experts agree that 3rd grade is when the student makes the transition from “learning to read” to “reading to learn,” (See the Get Georgia Reading Campaign’s Website [here](#)) they will carry this ability with them through middle school and beyond. If a child can’t accurately read directions or read a textbook, they are significantly more likely to fall behind in later grades.

*The R^2 here, a statistical measure that determines the strength of a relationship between variables, is **.806**. An R^2 of 1 indicates a perfect correlation and an R^2 of 0 indicates no correlation. With an R^2 this high, it is likely that the two variables are closely associated.*

* Note this particular analysis was done with CRCT scores which have now been replaced with Milestones.

Can early reading levels help predict high school outcomes?

School District Average SAT Score and 3rd Grade Reading Proficiency

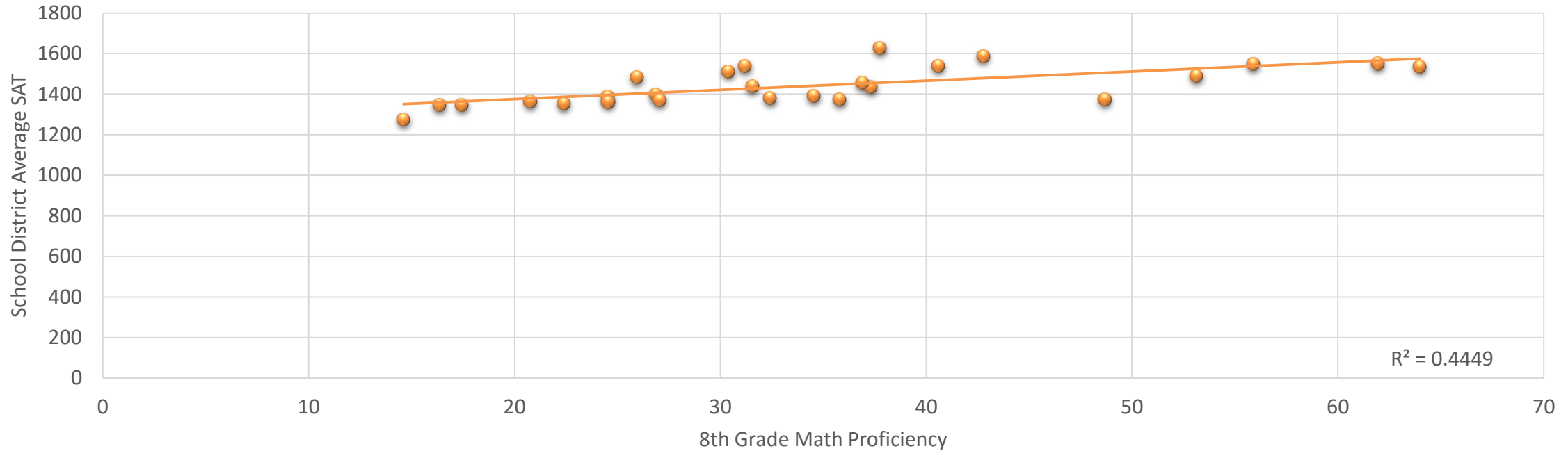


This shows the correlation between 3rd grade reading proficiency and average SAT scores at the district level. In essence, the scatterplot shows that districts that do well in 3rd grade reading proficiency are more likely to do well in the SAT scores. The districts, represented by orange dots, are clustered closely to the trend line, which also shows a correlation.



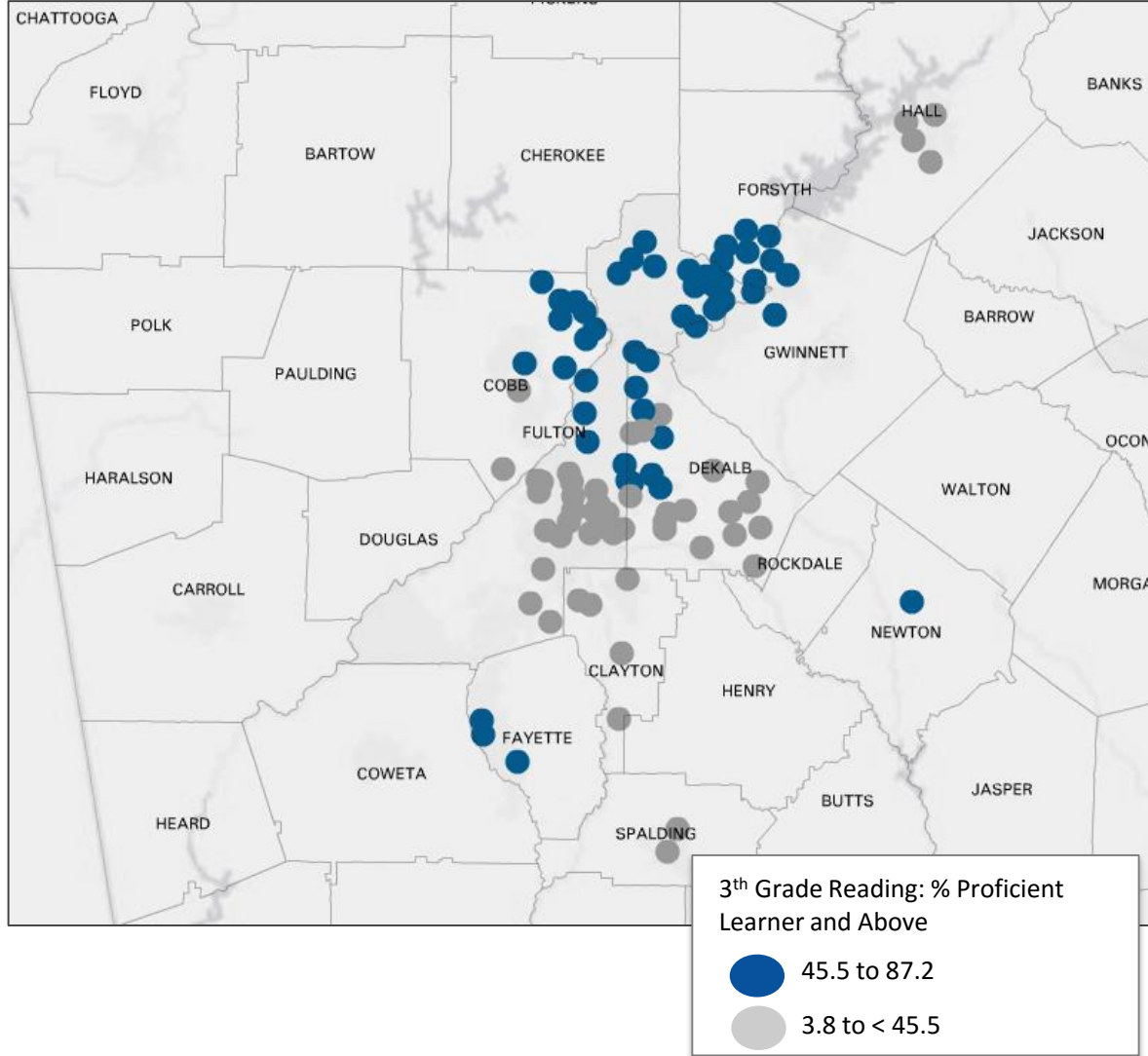
What about 8th grade math and high school outcomes?

School District Average SAT and 8th Grade Math Proficiency



So let's take the same analysis and apply it to 8th grade math proficiency and SAT scores by school district in Georgia. It shows the same basic pattern - the districts that do well on 8th grade math are more likely to do well on the SAT test.

Comparing reading proficiency among schools...



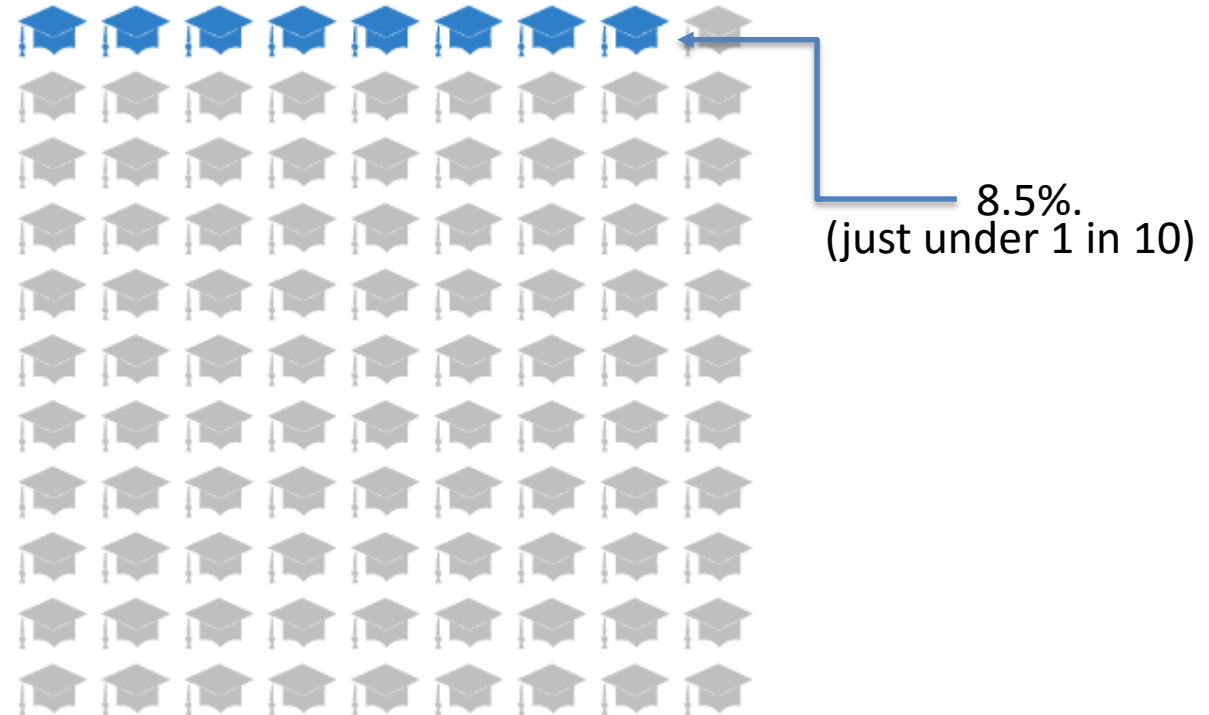
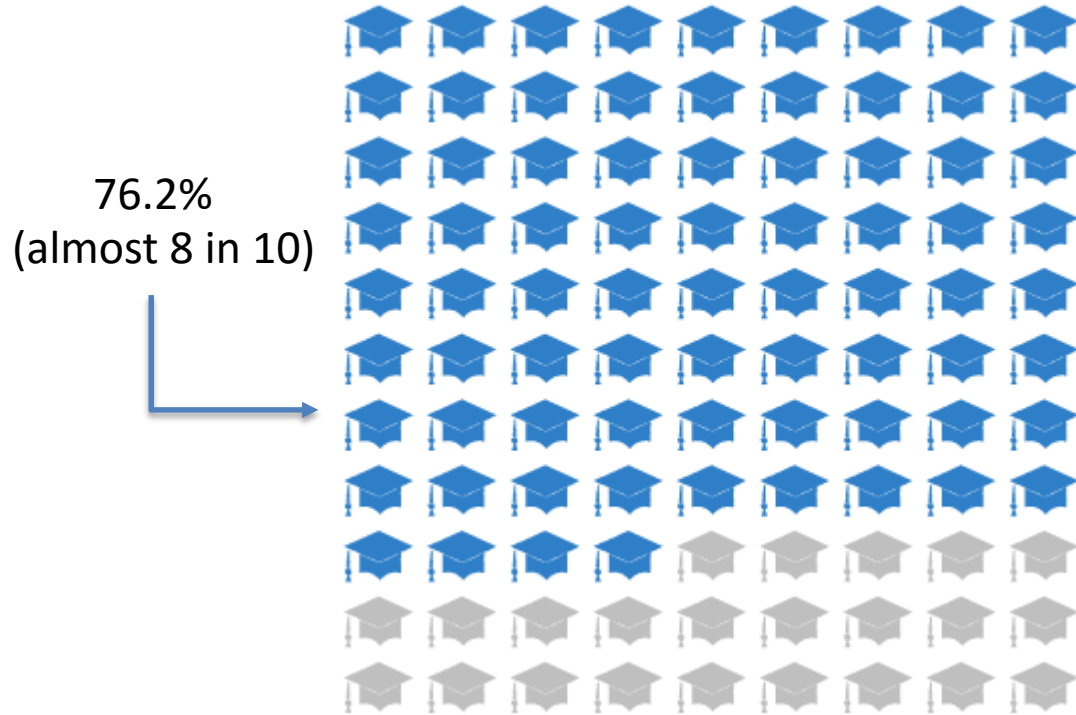
Now we are looking at the 50 *schools* with the highest reading proficiency (in blue) and the 50 schools with the lowest reading proficiency (in gray) in metro Atlanta.

With the exception of schools in Fayette County and a couple of schools in northern DeKalb, Gainesville City, and Cobb, there is a distinct spatial pattern in school performance among the highest and lowest performing schools. The highest performing schools are found in north Atlanta and north Fulton.

Comparing reading proficiency among schools...

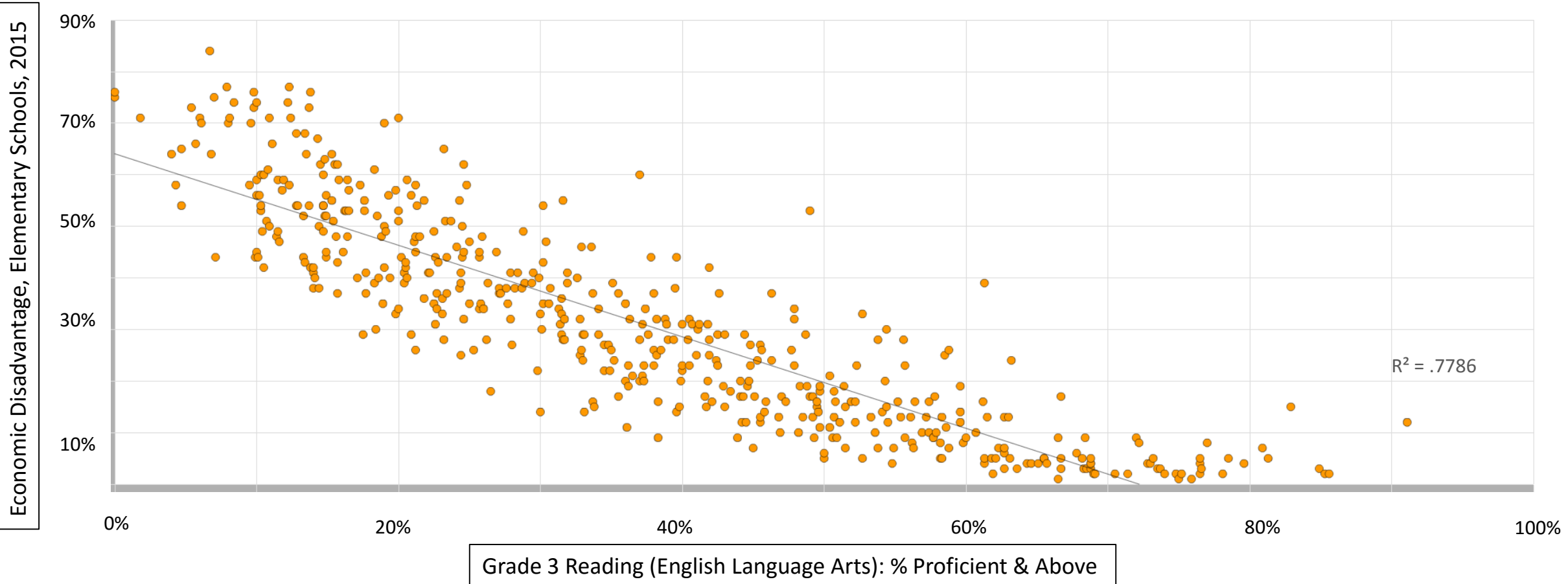
Average reading proficiency of the 50 highest performing schools

Average reading proficiency of the 50 lowest performing schools



Following up on the previous slide's display of the 50 highest and lowest performing schools in metro Atlanta, the chart on the left side shows the average reading proficiency of the **highest** performing schools. The chart on the right shows average reading proficiency among the lowest performing schools. The difference in average reading proficiency among school groups is immense. And as we now know how correlated third grade reading can be to middle and upper school performance (and beyond), **what then can reasonably be expected (v.v. achievement) for over 90 percent of students in these lower performing schools?**

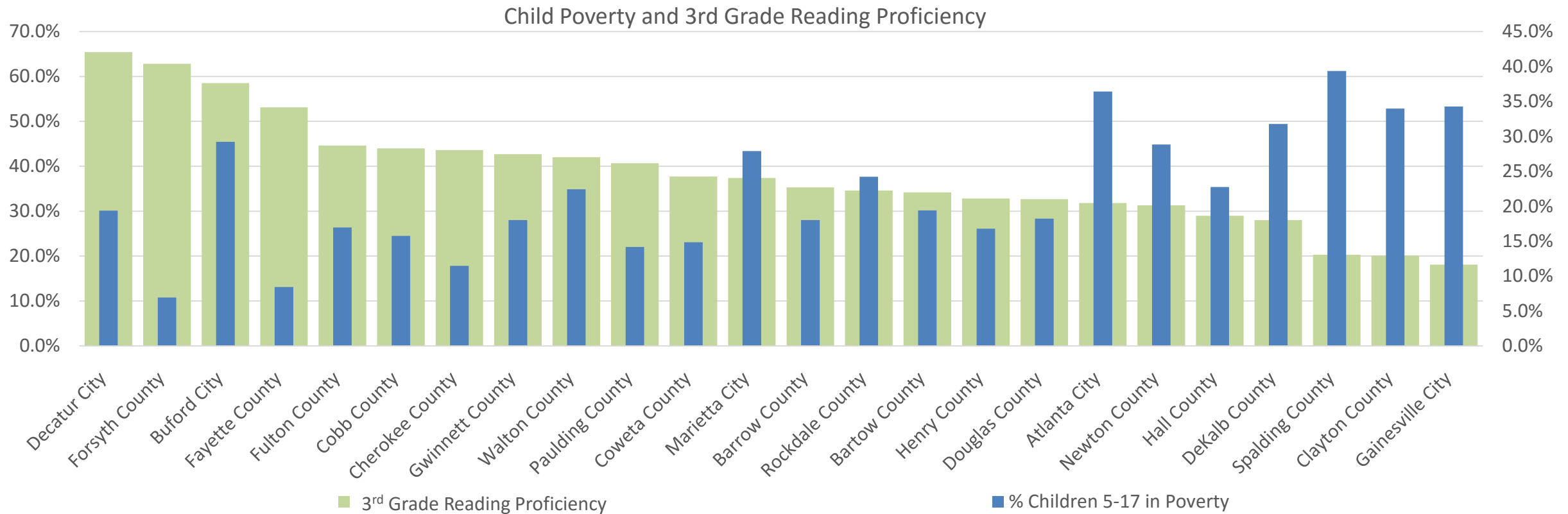
Q: What is one of the strongest predictors of Student Success? A: Poverty



So what could be linked to poor reading proficiency? This scatterplot shows the relationship between economic disadvantage and 3rd grade reading. Each dot represents an elementary school. The schools that have the highest levels of students considered to be “economically disadvantaged” tend to have the lowest levels of reading proficiency. This shows that poverty is actually one of the strongest predictors of student achievement.



Poverty and 3rd grade reading proficiency...



Taking a closer look at poverty, we are now going to examine how poverty and 3rd grade reading correlate in metro Atlanta school districts. The blue bars represent percent of children in poverty (measured on the right axis) and the green bars represent 3rd grade reading proficiency. In general, school districts with the highest reading proficiency tend to have the lowest poverty rates, and vice versa.

For more information on the importance of 3rd grade reading...Check out the Get Georgia Reading Campaign!



www.getgeorgiareading.org