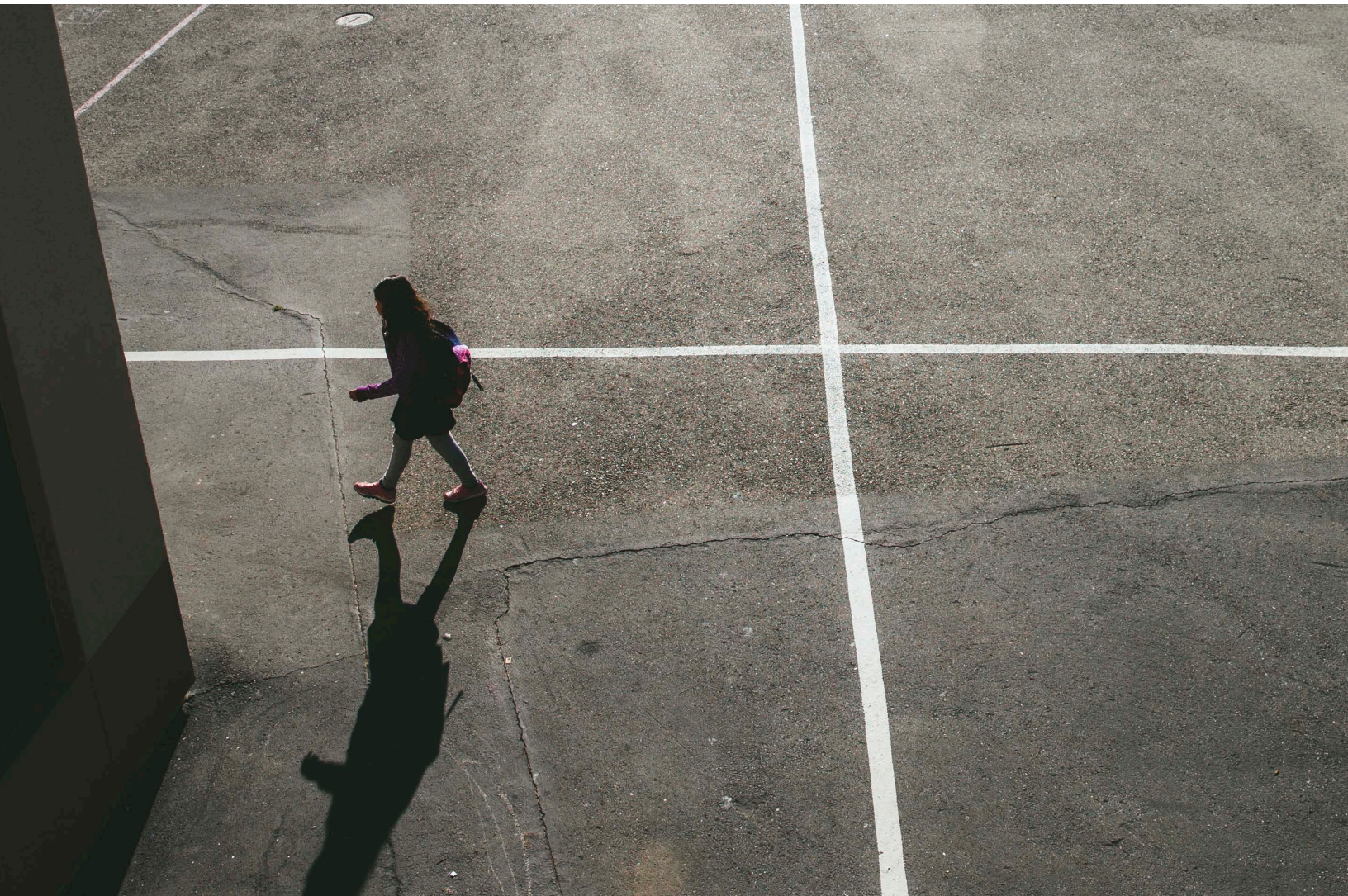


**nwea** RESEARCH

# Evaluating the Relationships Between Poverty and School Performance

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## Introduction

This study examined the relationships between poverty and a school's academic performance (both student achievement and growth). Educators, advocates, and policymakers can use these data to shape how people look at the performance of schools in their communities and to inform education policy (e.g., the effect of evaluating schools based on achievement vs. growth). The results suggest that the use of achievement measures when evaluating school performance in federal education policy and use of achievement by states biases the evaluation against schools who serve vulnerable populations with potentially adverse impacts on students most historically marginalized. Instead, schools and educators serving students living in poverty, experiencing trauma, and facing the greatest educational and economic barriers need to be recognized and supported when doing good work rather than doubly punished. This study also argues that a more accurate picture of what schools are contributing academically is needed for all communities.

To conduct this study, student achievement and growth were examined in about 1,500 schools randomly selected from the user base of the MAP® Growth™ assessment from NWEA®. MAP Growth is a computer adaptive interim assessment used by more than 9,500 schools, districts, and education agencies around the world. The analyses investigated the relationships between student achievement and growth and school-level poverty variables like free and reduced-priced lunch (FRL) status. The results are then presented in ways educators can readily duplicate for their own setting. [Online data visualizations](#) providing interactive ways for people to examine their own questions related to this study (e.g., how are growth and achievement related to poverty in rural schools vs. city schools?) are also available as supplemental material (Hegedus, 2018).

## Purpose of the Study

As an extension of the mission of NWEA, “Partnering to help all kids learn,” the not-for-profit organization has a longstanding commitment to pursuing research about education equity [e.g., the McCall, Hauser, Cronin, Kingsbury, & Houser (2006) research on achievement gaps and the impact of poverty on student achievement and growth]<sup>1</sup>. Much has changed in education in the past decade, including federal education policy. The newly authorized Every Student Succeeds Act (ESSA, 2015) allows states to use multiple measures in their school accountability plans, including student growth. This change in policy offers a better way to measure school effectiveness than prior approaches based solely on achievement (i.e., changes in student proficiency rates). Prior research demonstrates a relatively strong relationship between student achievement and various school demographic variables, such as family income. However, the relationship between academic growth (i.e., the change in achievement over time) and student demographic variables may be considerably weaker (Haretos, 2005; McCall et al., 2006; Reardon, 2016). As a result, academic growth is likely to be more closely related to what the students, educators, and other adults and organizations associated with a school do to create learning, rather than the demographics of the community and student population it serves. Therefore, student growth is expected to be considerably more closely related to school effectiveness than is achievement (Haretos, 2005).

While it is important to measure and publicly report achievement to create urgency and provide benchmarks against other standards such as college readiness, a school should focus on generating high levels of learning for every student. High levels of growth over time lead to higher levels of achievement. However, the effects of even one year of ineffective teaching (i.e., not creating growth) linger (Sanders & Rivers, 1996). Even with high growth there will still be meaningful differences in achievement among students, and a high-growth school’s overall achievement level may remain relatively low since low-achieving students continually enter in lower grades and higher-achieving students graduate.

Even if growth is a better measure of school effectiveness, the impact of using growth to identify the “Comprehensive Support and Improvement” (CSI) schools per ESSA is still unclear. NWEA is uniquely positioned to refine prior research and study the differential impact of identifying CSI schools using achievement and growth because of the following factors:

- The MAP Growth partner base is approximately 20% of the nations’ public schools.

- The adaptive design of MAP Growth produces an accurate measurement of all students regardless of their achievement level.
- The MAP Growth scale is designed to track student progress over time in a simple manner.
- The unique student achievement and growth norms from NWEA are nationally representative, are explicitly designed to be aggregated, and support comparisons across subjects and grades.

With a very large sample, precise measurement of all students, and a simple yet rigorous way to explore relationships between school variables and student performance, this study adds to the national dialogue about equity and fairness in the evaluation of schools.

## ESSA Requirements

Both No Child Left Behind (NCLB, 2002) and ESSA contain a requirement to identify the “lowest-performing Title I schools.” Under NCLB, these “priority schools” were determined as the lowest performing 5% of Title I schools based on their performance on the state assessment. ESSA still requires the 5% lowest-performing Title I schools in each state to be identified as CSI schools. While ESSA provides flexibility for states to decide how they will determine the lowest-performing schools, some criteria must still be met, including a measure of achievement (CCSSO, 2016). In the ESSA plans submitted to the U.S. Department of Education, states are complying with this requirement by weighting achievement in the evaluation of a school from 15% to 50% (Achieve, 2017). In current practice under ESSA, achievement plays a significant role in identifying the lowest-performing schools.

## Relationship Between Poverty and Achievement

Over the last century, the link between a student’s academic achievement and their level of poverty was established (Holley, 1916; Lynd & Lynd, 1929; Harwell, Maeda, Bishop, & Xie, 2017). It was brought to mainstream thought in education over 50 years ago by “The Coleman Report” (Coleman et al., 1966). Recent studies have shown that the link is more modest than initially thought but is still present (White, 1982; Sirin, 2005; Harwell et al., 2017). Researchers also investigated the impact of the amount of collective poverty in a school and district on student achievement. For example, a recent study by Stanford University shows that the relationship between collective poverty and achievement is larger than prior research typically found (Ewijk & Slegers, 2010; Reardon, 2016). The *New York*

<sup>1</sup> For more information on research from NWEA, please visit our website at <https://www.nwea.org/research-data-galleries/poverty-and-school-performance>

*Times* also reported on the Stanford study and provided [useful visualizations](#) that show the impact of district poverty on achievement (Rich, Cox, & Bloch, 2016). As shown in the visualizations, the level of achievement decreases as the level of poverty in districts increases.

At a school level, the magnitude of the impact of poverty is somewhat unclear because of limitations in poverty measures used for research in education, particularly those that require students to self-identify or are dichotomous variables, such as eligibility for FRL (i.e., a student is either qualified or is not qualified). FRL does not provide as much information as a student’s level of poverty being measured on a continuous scale or as multiple measures of family socioeconomic status would provide (Harwell & LeBeau, 2010; Ewijk & Slegers, 2010). However, FRL is the measure used most often in school districts (e.g., to allocate Title I funds to schools), is readily available, and seems to be easily understood. Therefore, FRL measures are used in this study to make the results easier to understand and communicate.

## Evaluating Schools

The use of achievement measures in school accountability has been discussed in education research literature for decades (Haretos, 2005; Downey, von Hippel, & Hughes, 2008). Such literature describes numerous problems when a school accountability system implements a design in which school performance is judged on metrics that primarily reflect the demographics of the students that the schools serve rather than the learning taking place within a school (Haretos, 2005; Di Carlo, 2017). John Hattie, a well-known education researcher from New Zealand, summed up his view on this topic well when stating what he would change immediately if given control of the United States educational system: “I’d change the narrative about what a good school is from a school that has high test scores to a school that can demonstrate the greatest progress” (Riddell, 2016).

## Study Design and Results

### Indicators of Collective Student Poverty in a School

The analyses conducted for this study were based on the percent poverty in schools (%FRL) and a more sophisticated metric called the School Challenge Index (SCI). As part of the 2011 norms development, NWEA researchers created the SCI to consistently measure the level of challenge a school faces across the United States. The SCI is primarily based on the percentage of students eligible for FRL, but is moderated by other factors, such as location, school level, Title I eligibility, and school type, such as magnet or charter. The SCI was updated and used again to create the latest nationally

representative norms, rather than norms that only reflect the NWEA partner base (Thum & Hauser, 2015).

## School Sample

A random sample was drawn from all the public schools in the United States that are in the NWEA partner base and tested at least 50 students with MAP Growth in both Fall 2015 and Spring 2016. This process resulted in a sample of about 1,500 schools for both reading and mathematics. This sample of schools was then connected to the associated National Center for Education Statistics (NCES) school-level information.

This sample had about 95 schools in each subject where the NCES demographic information for the school needed to be inferred because the associated “NCES school” was an aggregation of what the district or charter school operator considered multiple schools. For example, one NCES school ID is for an intermediate school that the district considers two schools (West Intermediate and South Intermediate). The largest impact of inferring this data for these specific schools is expected to be on their NCES school level and school size information. Other impacts, and the impacts on this study, are judged to be minimal.

The entire study sample was compared to demographic data compiled annually by NCES, as shown in Table 2.1 and Table 2.2. The samples are mostly similar. However, the study sample population contains a larger concentration of white students (56.7% vs. 49.5%) and Title I eligible schools (78.6% vs. 70.7%) and a lower concentration of Hispanic students (17.4% vs. 25.4%) than the NCES population.

**Table 2.1. U.S. Public Schools vs. Study Sample**

	Mathematics	Reading
Total #U.S. public schools*	91,430	
#Public schools using MAP Growth in 2015–2016	19,960 (21.8% of total)	19,820 (21.7% of total)
#Public schools using MAP Growth with at least 50 fall to spring growth events in 2015–2016**	15,500 (17.0% of total)	15,387 (16.8% of total)
#Public schools in study sample	1,494	1,514
%MAP Growth public school partner base	7.5%	7.6%
%Total U.S. public schools	1.6%	1.7%

Sources: Glander (2016) and NCES (2017)

\*Based on the latest available 2014–2015 data from NCES.

\*\*About 77% of NWEA partners assess in fall and spring.

**Table 2.2. School Demographic Comparisons: Study Sample vs. NCES**

	Study Sample	Nation (NCES 2014–2015)	Difference (Study- NCES)
<b>Public Schools Characteristics (%)</b>			
Charter schools	10.5	6.9	3.6
Magnet schools	3.9	3.3	0.6
Title I eligible	78.6	70.7	7.9
Title I schoolwide programs	58.7	55.5	3.2
<b>School Location (% of total public schools)</b>			
City	26.8	26.6	0.2
Suburban	32.3	31.9	0.4
Town	14.4	13.1	1.3
Rural	26.5	28.3	-1.8
<b>School Ethnicity (average %)</b>			
Asian	3.3	5.3	-2.0
Black	16.9	15.5	1.4
Hispanic	17.4	25.4	-8.0
Native American	1.3	1.0	0.3
White	56.7	49.5	7.2
<b>School Poverty Indicators (% concentration of Public School Students Eligible for Free or Reduced-Price Lunch)</b>			
Students attending low-poverty schools*	18.7	20.4	-1.7
Students attending high-poverty schools**	24.9	24.3	0.6
School FRL (average %)	53.1	--	--
<b>School Level (%)</b>			
Primary/elementary school	68.7	--	--
Middle school	18.1	--	--
High school	9.4	--	--
Other	3.9	--	--

Sources: Glander (2016) and NCES (2017)

\*Low-poverty schools are defined as public schools where 25% or less of students are eligible for FRL.

\*\*High-poverty schools are defined as public schools where more than 75% of students are eligible for FRL.

## School Achievement and Growth Determination

To accurately assess the growth of all students, assessments need to provide a precise measure of achievement across the entire achievement distribution on a scale with equal interval properties (e.g., an equal interval achievement scale makes it act like measuring height: growing one inch has the same meaning regardless of how tall you are when initially measured). These two factors support the accurate determination of growth for all students (i.e., growth is the change in achievement between multiple achievement measurements). Adaptive tests, such as MAP Growth, select test items that are appropriately difficult for a student as the student progresses through an assessment. This enables the tests to be more

accurate and informative because high-performing students do not see clusters of items that are far below their achievement level, and low performers do not see clusters of items that are so difficult that they do not provide meaningful information to the measurement. With precise achievement measurement in the fall and spring on an equal interval scale, the amount of learning that has occurred can be quantified within a reasonable standard error of measure. Having a precise measurement across the entire achievement distribution translates to a better understanding of the impact of schools on students who are at the ends of the achievement spectrum.

If student achievement or growth is to be used to evaluate a school's performance, it is important to adjust comparisons to accommodate for factors

beyond a school's or educator's control that influence student achievement or growth. For example, low-performing students generally show higher growth on equal interval scaled measures than high-performing students, and students in lower grades generally show greater growth than students in the upper grades. NWEA has developed unique nationally representative normative metrics for achievement and growth in Grades K-10. The NWEA achievement norms are based on grade and subject and are adjusted for the number of instructional weeks into the school year the assessment was taken. This corrects for additional instruction that a student who tests two months into the school year receives beyond a student who tests in the first week of school. This correction enables better apples-to-apples achievement comparisons between students in a given term.

NWEA growth norms were developed accounting for the two terms in which a student tests, along with a student's grade, subject, starting achievement level, and number of instructional weeks between testing. Because NWEA recognized that the difficulty to grow a given amount changes depending on a student's grade and starting achievement as mentioned above, this difficulty difference was also accounted for in the growth norms. For each student, NWEA reports conditional growth index (CGI) and conditional growth percentile (CGP) metrics that are explicitly designed to compare the relative growth of different students (i.e., the growth of high-achieving students to low-achieving students or the growth of students in one grade to students in another). In other words, the growth of low-achieving students who tend to grow more and high-achieving students who tend to grow less are compared fairly by the conditional growth metrics.

To keep with the intent of this study, a school's student achievement and growth in reading and mathematics were represented by calculating the median achievement and growth percentile for all students who tested with MAP Growth. This describes each school's performance as the normative achievement and growth of a school's hypothetical middle student by subject. Since an individual student's normative growth is corrected to allow comparisons, comparisons of median percentiles to represent a school is appropriate, as well. Using growth percentiles also permits the comparison of schools with different grade configurations. Using another metric like aggregating scale scores would not allow comparisons because of the variability in the grade levels schools serve. The simplicity of this analysis may not account for the impact of relationships that exist between students or between students and

other measures of the school environment. However, this simple approach is adequate for understanding the relationships being investigated in this study. Other analyses were then conducted to evaluate the impact of various school demographic variables on school achievement and growth. Results are graphically displayed for reading unless otherwise noted. The [online data visualizations](#) that accompany this study allow comparisons for mathematics, as well (Hegedus, 2018). The results for the two subjects are similar except as noted below.

## Results

### *Median Student Achievement and Growth vs. School Poverty*

A strong negative relationship between median student achievement in a school and school poverty was found, whether the SCI or the school's FRL rate was used. The analysis determined that about 50% of a school's achievement is accounted for by the percentage of students eligible for FRL in a school, as shown in Figure 2.1. This is consistent with research that shows that school poverty has a larger impact on student achievement than individual student poverty (Perry & McConney, 2010; Tienken et al., 2016). A best-fit line shows that in the lowest income schools where all students are eligible for FRL, the typical median student achievement was the 29th percentile nationally.<sup>2</sup> In the highest income schools where no students are eligible for FRL, the typical median student achieved at the 73th percentile. This is also consistent with other findings analyzed at the student level (Lacour & Tissington, 2011). In general, schools that serve students from higher-income families educate significantly higher-achieving students than schools that serve high concentrations of students in poverty.

Growth was different. As shown in Figure 2.2, there is a weak negative relationship between %FRL and median student growth in a school (about 1% of median growth is accounted for by %FRL). The difference in median student growth between the schools at either end of the %FRL continuum is about 4 percentile points, meaning student growth is minimally associated with the level of poverty in a school. This suggests that growth provides a measure of learning that is less biased by the income of the population that a school serves.

### *Student Growth for Schools at the Income Extremes*

To investigate how different student growth is in schools with either very low or very high %FRL rates,

<sup>2</sup> Analyses were conducted using linear outcome variables (e.g., normal deviates for achievement and CGI for growth). All results presented based on correlations (e.g., 50% of a school's achievement is accounted for by the percentage of students eligible for FRL in a school) or regressions (e.g., best-fit lines show... 30th percentile nationally) were developed using the separate analyses. The results were then converted to percentiles and lines were drawn, when appropriate, for presentation purposes.



Figure 2.1. Median Student Achievement Percentile in a School vs. School %FRL

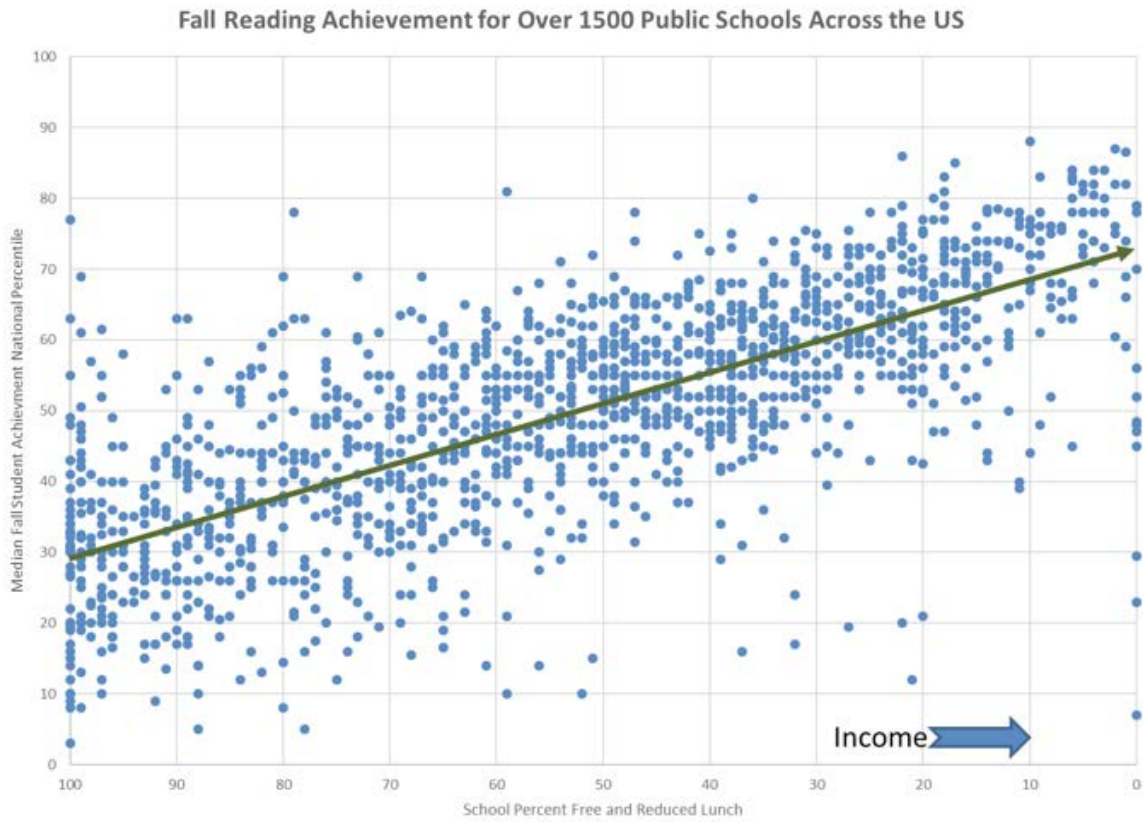
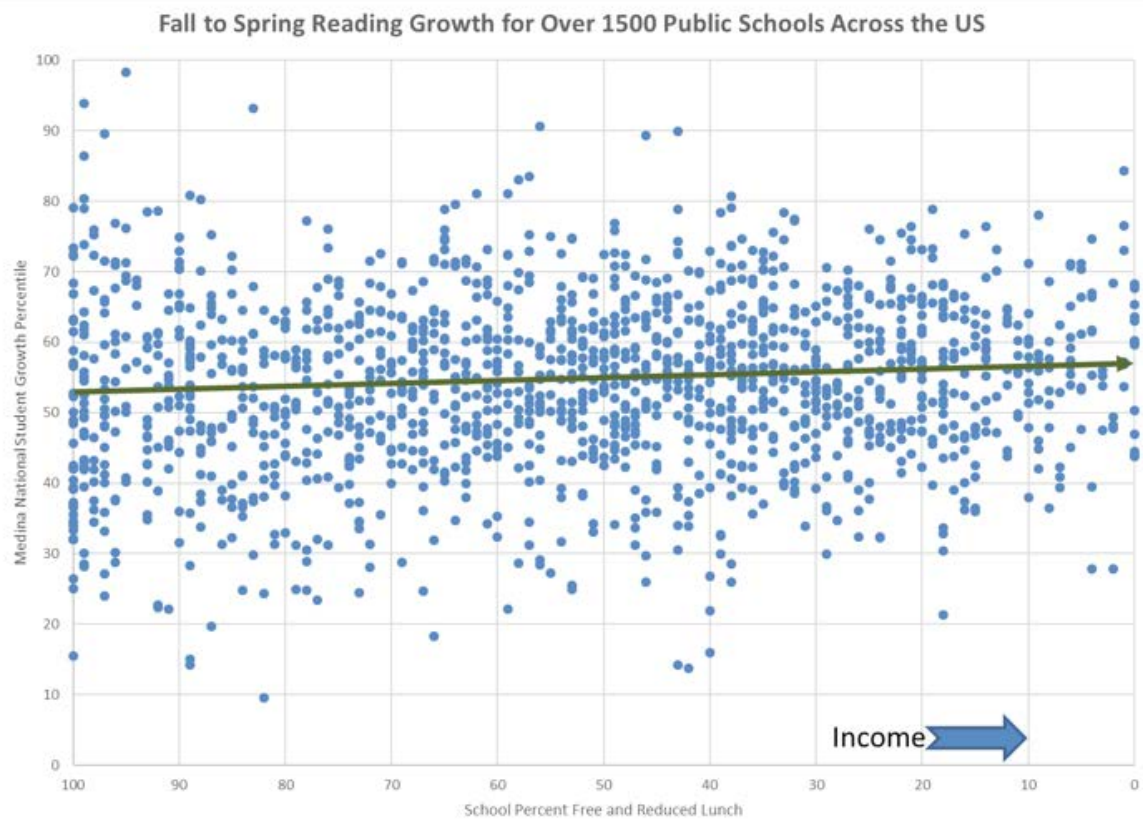
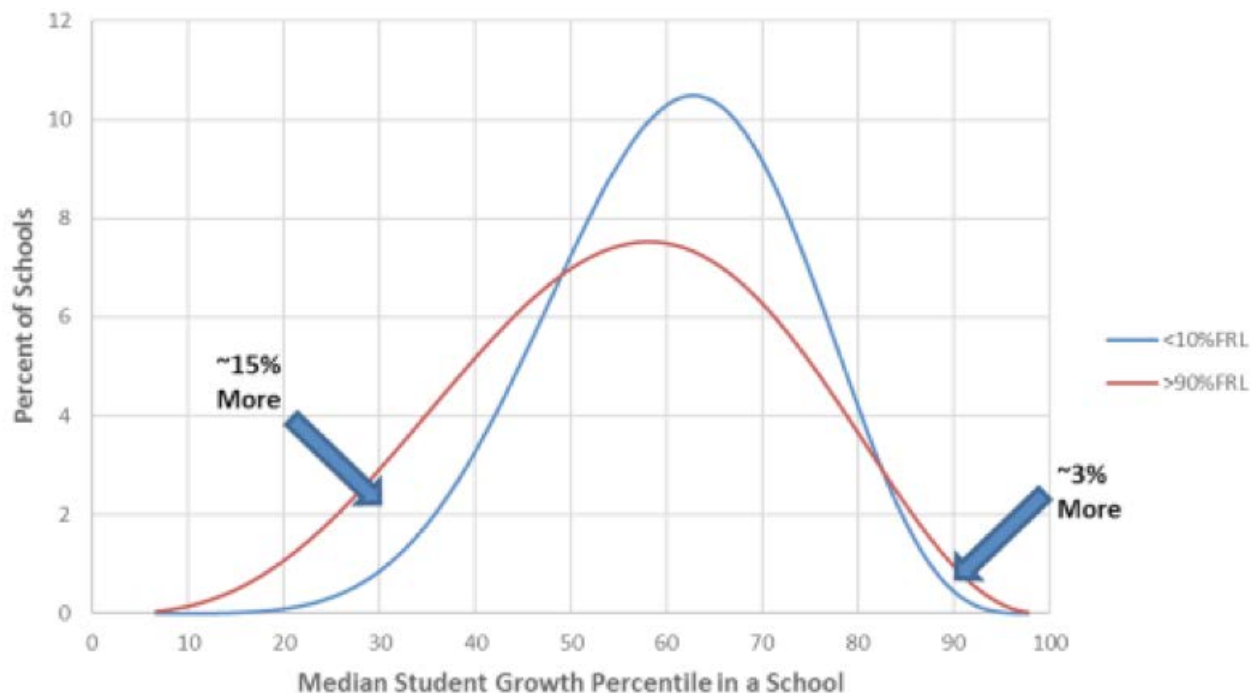


Figure 2.2. Median Student Growth Percentile in a School vs. School %FRL





**Figure 2.3. Percent of Schools at Various Median Student Growth Percentiles Comparing Schools Who Serve the Lowest and Highest Income Students**



the growth in schools whose %FRL is less than 10% and greater than 90% was analyzed. Figure 2.3 shows that the distribution of schools based on the median student growth percentile is different for schools with the most or least poverty. The lowest income schools (>90%FRL) show more schools that grow at both lower and higher median student growth percentiles than the highest income schools (<10%FRL). The highest income schools tend to cluster more toward the average growth of their schools. The lowest income schools have 15% more schools whose median student growth is below the 50th percentile and 3% more whose growth is above the 82nd percentile. This suggests that some schools that serve the lowest income students grow students well with a non-trivial number growing students slightly better than the highest income schools.

***Student Growth for the Top vs. Bottom 5% Achieving Schools***

To further understand the policy implications of using achievement or growth in a school accountability system, the top and bottom 5% of schools were identified based on Spring 2016 MAP Growth achievement, as shown in Figure 2.4. The green represents the top 5% achieving schools, and the red represents the bottom 5% (i.e., the potential CSI schools per ESSA). The figure shows schools that would currently be rewarded or punished due to their achievement under federal and state policies. Because

of the strong correlation between a school’s %FRL and achievement, it is expected that the top 5% achieving schools serve a significantly wealthier population than the lowest achieving schools. Figure 2.4 confirms this relationship.

The growth in the top and bottom 5% achieving schools were then compared in Figure 2.5. Based on spring achievement data, the top 5% achieving schools tend to grow students more than the bottom 5% achieving schools. Intuitively, this makes sense since how well a school achieves in the spring is influenced by how much students in the school grew from fall to spring. Even so, while the top 5% achieving schools grow students better than the bottom 5% achieving schools, some overlap can be seen. This was examined further, as shown in Figure 2.6. The growth distributions reveal that about 46% of schools at the lowest end of the spring achievement distribution have the same growth as schools at the highest end. This suggests that students grow the same amount in 46% of schools that current federal policy labels as low-performing while not addressing or rewarding other schools that create similar growth.

Assuming the intent of ESSA is to provide comprehensive support to schools and students where little learning is going on, 77% of the lowest 5% achieving schools based on spring reading achievement grow their typical student better than the 30th percentile (about 0.5 standard deviations below the mean).

Figure 2.4. Top and Bottom 5% Achieving Schools Based on Spring Achievement

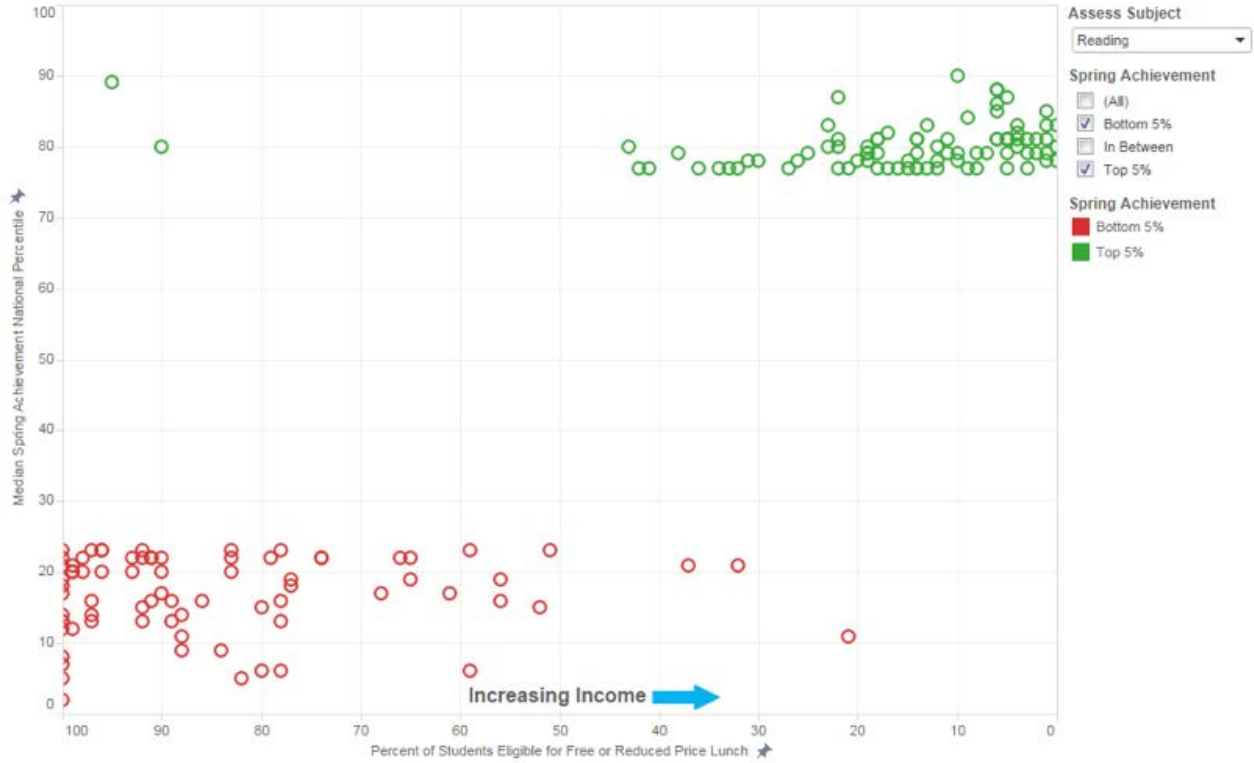
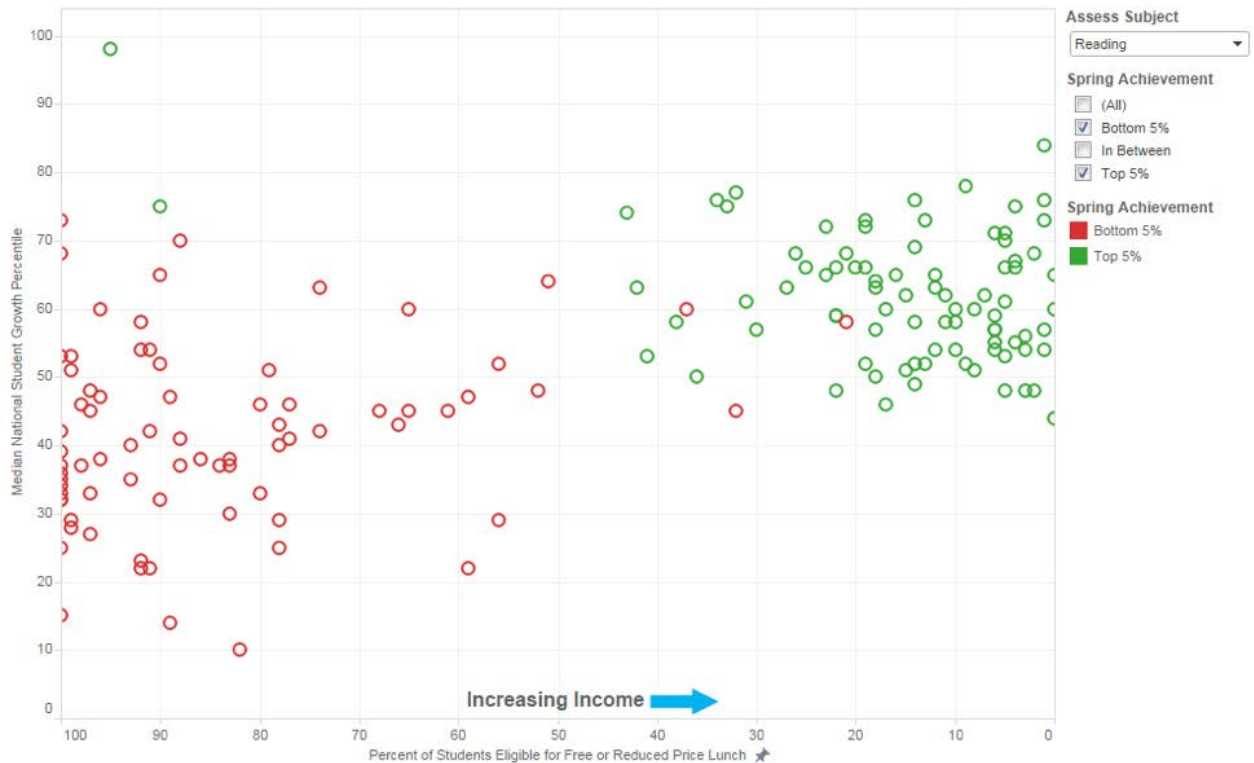
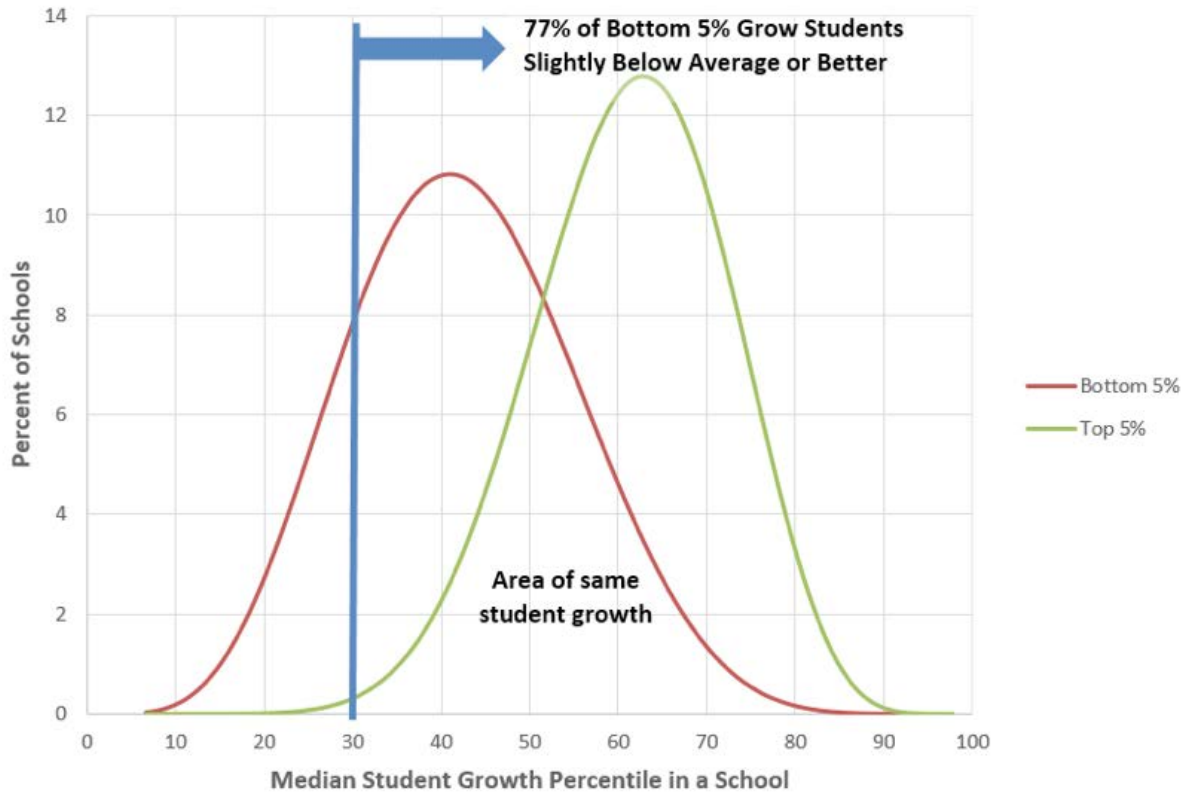


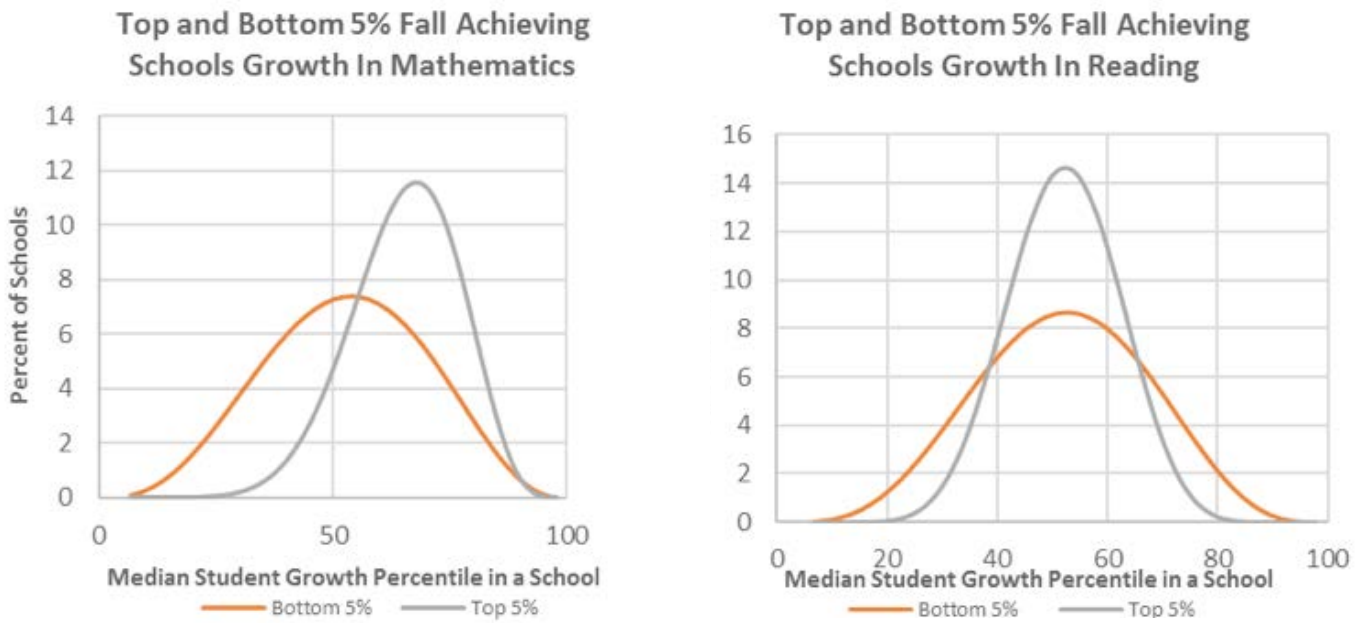
Figure 2.5. Median Student Growth of Top and Bottom 5% Achieving Schools Based on Spring Achievement



**Figure 2.6. Student Growth Distributions of Top and Bottom 5% Achieving Schools Based on Spring Achievement**



**Figure 2.7. Student Growth Distributions of Top and Bottom 5% of Schools Based on Fall Achievement**





This suggests that more than three quarters of schools labeled as “low-performing” are really growing students the same, or better, than what is generally considered as “slightly below average.”

To further investigate the relationship between achievement and growth, the top and bottom 5% of schools were reselected based on fall achievement. In mathematics, students in the bottom 5% achieving schools tended to grow worse, as shown in Figure 2.7. The average growth between the top and bottom 5% was similar in reading, with more bottom 5% schools growing students significantly better or worse than the top 5% achieving schools. This may support a belief that learning mathematics is more affected by schools than reading. This question will be investigated further in the future.

### ***Achievement of the Lowest Growth Schools***

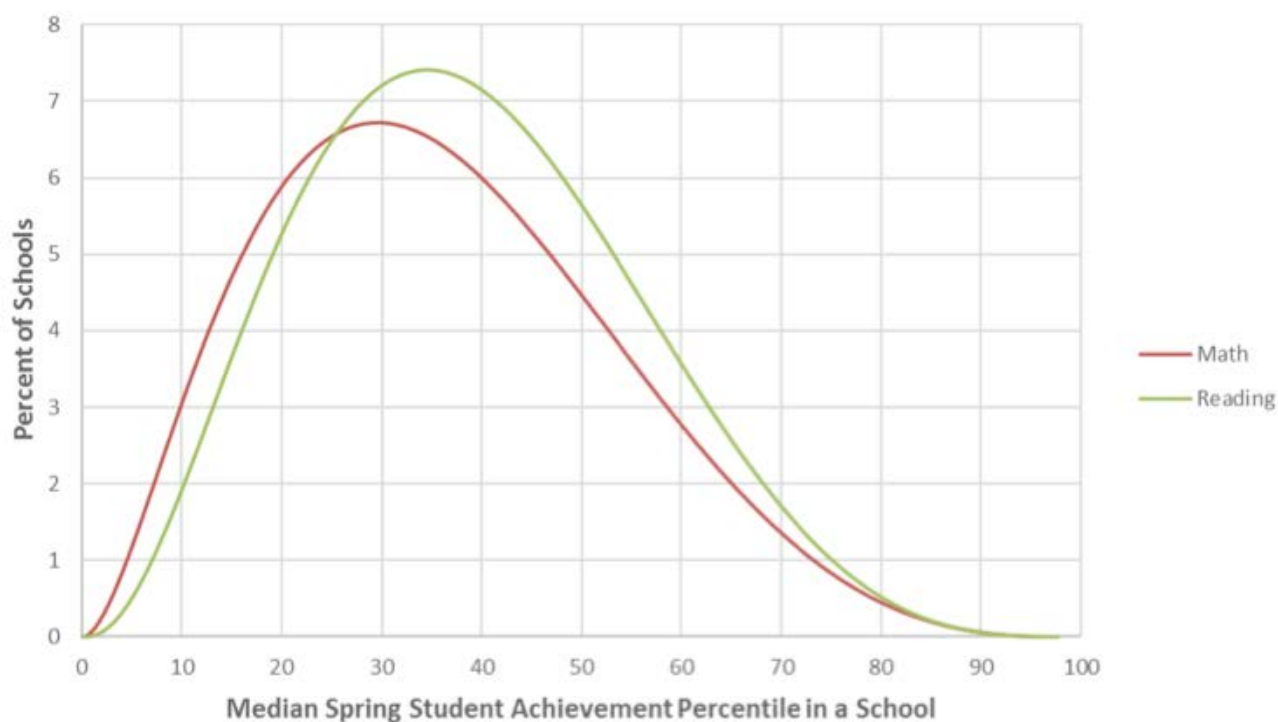
To compare the achievement of the lowest growth schools (5% of schools) in the sample by subject, schools whose growth percentile was equal to or below the 37th percentile in mathematics and the 33rd percentile in reading were selected. The achievement of these schools varied dramatically, as shown in Figure 2.8. This shows that if schools are identified as “low-performing” based on growth, their achievement levels vary greatly. This is another indication that achievement in schools does not provide meaningful amounts of information about how much students are learning in the same schools.

This is also confirmed through correlations of growth and achievement. For example, about 80% of spring achievement is accounted for by fall achievement, with about 14% of spring achievement accounted for by fall-to-spring growth. Spring achievement is not independently impacted much by other factors besides those that have already impacted fall achievement (e.g., %FRL explains a significant portion of lower fall achievement, but does not seem to independently also impact spring achievement).

### ***Analysis Including School Demographic Variables***

To determine if this study would produce comparable results based on other school demographic variables, similar analyses were conducted for schools in city, suburban, town, and rural locations; for charter schools; for Title I schools; and for primary, middle, and high schools. Additionally, the impact of the percentage of various school-level ethnic/racial categories on the relationships between achievement and growth were reviewed. While there are some variations in the strength of the relationships for different demographic variables, the overall relationships between achievement, growth, and poverty discussed above remain. The impacts of these school demographics on achievement and growth, as well as their relationship to poverty, will be investigated further in the future.

**Figure 2.8. Median Student Achievement of the 5% Lowest Growing Schools**



## Conclusions

Important conclusions from this study include the following:

- 01** The negative relationship between the level of poverty in a school and student achievement identified in other research is supported (i.e., the higher the poverty, the lower the achievement). However, this study finds that the relationship is stronger than typically identified (Ewijk & Slegers, 2010).
- 02** Due to the strong negative relationship between achievement and poverty at the school level, using achievement to evaluate school performance biases the evaluation system against schools who serve large percentages of students from poverty and rewards schools with wealthy populations. Since half of a school's achievement can be accounted for by the percentage of low-income students, using achievement in the evaluation of schools introduces this bias.
- 03** Sixty percent of schools with the highest percentages of students from impoverished communities also have above-average levels of student growth. A slightly larger percentage of high-poverty schools are creating substantial growth (i.e., growth beyond the 82nd percentile) than schools from wealthy communities.
- 04** Students attending the lowest-achieving schools are at risk of having lower growth than students attending top-achieving schools. If students are both low-achieving and low-growing, it is likely they are not being served well.
- 05** There is a broad distribution of growth across the entire school achievement distribution. There are both low- and high-achieving schools where students learn a lot compared to others across the nation, and there are schools where they do not. If public reporting emphasizes student achievement, the transparency of how well high-achieving schools are educating students is a bit clouded.

## Recommendations

It is important to measure and transparently report the achievement of individual students and students within a school. Through measuring achievement, people better understand whether individual students are reading well, are on-track for success in college, need increased support, or might be considered for a gifted and talented program. When looked at collectively, low achievement should spur increased energy and

focus to support a school and its students. Even with more energy and focus, there is only one real way to fix low achievement: have students learn at high rates and allow time for the desired achievement level to be attained.

Learning is the only path to addressing achievement deficits. Still, the current dynamics of education accountability policy in the United States are often biased against schools serving a significant population of low-income students and students of color because accountability plans are seldom sufficiently focused on the fundamental function of schools: improving the learning of all students. While ESSA now allows plans to include growth and other measures, it still requires achievement to be included in the evaluation of schools. In many states, achievement is weighted heavily. Heavily weighting achievement fails to adequately recognize schools that are producing excellent growth. Designating low-achieving/high-growth schools as "Improvement Schools" and mandating comprehensive supports may force changes in schools' personnel, curriculum, or programs where students are already learning a lot. It creates a risk that hard-earned improvements and successful cultural changes implemented in these schools may lose momentum or be scuttled and replaced by untested new initiatives. Educators, and the schools in which they work, should have their success judged without an undue bias introduced because they work in the most challenging environments with the most historically marginalized populations.

Traditionally, the state has a regulatory role to ensure that minimum standards of performance are met to protect people from undue harm. For schools with low achievement levels where the future life success of students may be in jeopardy (e.g., schools that serve substantial low-income populations), the accountability focus should be on whether the schools are producing learning growth that is addressing these gaps and at a rate better than would be expected from the normal alternatives. Public policy in education also tends to require transparency for important factors that are in the public interest (e.g., achievement levels, teacher qualifications, financial expenditures). For all schools, transparency is needed about both how much students know when they come to school and how much it changes once they are there. This transparency can help move a school and its community further toward excellence. Given these functions, an equitable policy should require:

- Use of appropriate measures of growth to judge the "effectiveness" of low-achieving schools for ESSA accountability purposes without a significant bias introduced from using measures of achievement. Using growth metrics to determine a

school's ability to create high levels of achievement over time and to close achievement gaps is a more accurate measure of school performance and a fairer practice.

- Public reporting of measures of overall and within sub-group achievement and growth using well-constructed measures and appropriate analytical methodologies. Publicly reporting low achievement can trigger attention and action. Knowing that students are not achieving as well as desired can create urgency, galvanize a community around a school, and force conversations about improvement. Knowing how students are growing helps parents and the public understand how well the school is serving students and whether the school is becoming more effective over time. This information, and the resulting action, hopefully generate more learning for students. More learning, when sustained over time,

will produce the desired higher level of achievement as students progress through the school.

Ideally, schools generate high rates of learning for each student. Public reporting of well-designed metrics of growth and achievement provide the public an opportunity to understand the effectiveness of a school and take actions they believe are appropriate. If schools are to be held accountable using academic measures to determine their effectiveness, the measures should be based on how much students learn without being significantly biased by the population the school serves. Using student growth, rather than achievement, as the primary indicator of school effectiveness better and more fairly reflects the quality and impact of that school on student learning for the population it serves. What more can we ask of any school than to ensure that all of its students are learning substantial amounts?





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