K–12 Achievement Gap Is a National Problem

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Minnesota is understandably concerned about the statewide gap in achievement between White students and students of color, especially Black students. In fact, every state has such a gap. While Minnesota's gap is large compared to most states, it is often the result of White students performing at levels above the average while Black students score at or near the national average for their races. Some states, such as Massachusetts and New Jersey, have been able to get both Black and White students performing above average; they may provide insights into what Minnesota can do to help close the gap.

The data used in this report are from the National Assessment of Educational Progress (NAEP) program of the U.S. Department of Education. NAEP (pronounced "Nape") conducts biannual testing of math and reading proficiency of 4th and 8th graders in each state. Sufficient numbers of students in each state are tested to represent that state and allow comparisons across states. NAEP also provides comparisons across racial and ethnic groups nationally and across states.

In this brief report, we focus on the test score achievement gap between Black and White students partly because this issue has commanded the most public attention and partly because Black students (including both African Americans and African immigrants) are the largest group of Minnesota students of color—nearly 100,000 students, and 11% of the state's public school K–12 students.

The Black-White Test Gap

The nation as a whole and every state has a Black-White test score gap.[1] Table 1 shows several different ways of looking at the gap issue. The data are for 4th- and 8th-grade Black and White students for 2017 on reading and math tests. For White students all 50 states are included, but only 40 states are counted for Black students because there are too few Black students in the other 10 states to support statistical analysis. Figure 1 is a graphic summary of this data.

Table 1 shows the scores for Blacks and Whites on all four tests and for the gaps between them. Math scores for both races tend to be higher than reading scores at both the 4th- and 8th-grade levels, with a gap of about 25 points between the highest- and lowest-scoring states. Scores for each race move up as they learn more and move from 4th to 8th grade, but the racial gaps remain.

Minnesota's gap between Black and White students is greater than the U.S. average gap on all four tests, and the sizes of the Minnesota gaps rank high compared to other states, especially in math, where White students have high scores relative to other states.

Black students' scores are slightly lower than the national Black student average for reading and are average for the math test. White students are at the national White student average for reading but above average for math. That pattern holds at both the 4th and 8th grades. Those patterns have been

[1] Income differences might explain some of the gap. NAEP scores for those eligible for federal lunch programs and those not eligible have gaps of the same order of magnitude as the average Black-White gaps.

Table 1. 2017 NAEP Data

	4th Grade				8th Grade			
	Reading		Math		Reading		Math	
	Black	White	Black	White	Black	White	Black	White
US Average Score*	205	231	223	248	248	274	260	292
MN Score	197	232	222	256	245	275	259	302
Lowest State Score	188 (IA)	218 (WV)	211 (MI/MN)	237 (WV)	235 (ME)	259 (WV)	248 (AR)	274 (WV)
Highest State Score	219 (MA)	243 (MA)	233 (FL)	258 (VA)	258 (MA)	285 (NJ)	272 (AZ)	303 (NJ)
US Gap	26		25		26		32	
MN Gap	35		34		30		43	
MN Gap Rank	#3		#2		#5		#1	
Other states	1–WI 2–PA		1–IA		1–WI 2–ME 3–CT 4–SC 5–tie NE, OH		Tied with WI	

*The maximum score is 500.

true across time and are the basis of a persistent achievement gap in Minnesota. Figure 2 documents those gaps for 8th-grade reading and math.

Nationally, there are sizable differences between the highest and lowest test scores for each test. A major purpose of this report is to look at test scores in individual states to see if any patterns stand out. Looking at the highest and lowest test scores in Table 1 for each test is one way of looking for patterns. West Virginia students have the lowest scores for White students on all four tests, but there is no obvious pattern for the states with the lowest Black test scores.

Massachusetts has the highest scores on all three tests, and New Jersey on two. We explore the state-by-state differences more fully later in this report.

One important finding in the NAEP score results is that some states' students do consistently well in the tests and others do comparatively poorly. By looking more closely at the higher-performing states, it may be possible for Minnesota to learn more about what works elsewhere and consider applying some of those ideas to the state's educational system.

Table 2 identifies several of the high-performing test score states as well as several where test scores are consistently low.

For the sake of brevity, we will focus on the 8th-grade test scores for the rest of this report. These are important tests—especially math, where there is some evidence that success in 8th-grade math is a strong predictor of high school graduation, going to college, and success in life.[2] By the time students are in the 8th grade most of them will have been in the same school system for some time, are more mature, and are familiar with what school and the tests are all about.

Differences Across the States

Figure 3 on page 26 shows scatterplots of the 40 states that had a sufficient number of Black test takers in 8th-grade reading and math tests. Black test scores for each state are shown on the horizontal axis; White scores on the vertical axis.

Each scatterplot identifies the average scores for Black and White students. The bold horizontal line on Figure 3a at 274 is the national average for 8th-grade White students on the 2017 reading test. States with scores above that line have above-average scores. The vertical line at 248 is the average for Black students; states to the right of that line have above-average scores and to the left, below-average scores. Similarly, the bold horizontal line at 292 on Figure 3b separates the states with above- and below-average math test scores for White students and the bold vertical line divides the state scores

Figure 1. 2017 NAEP Data (see Table 1 for details)

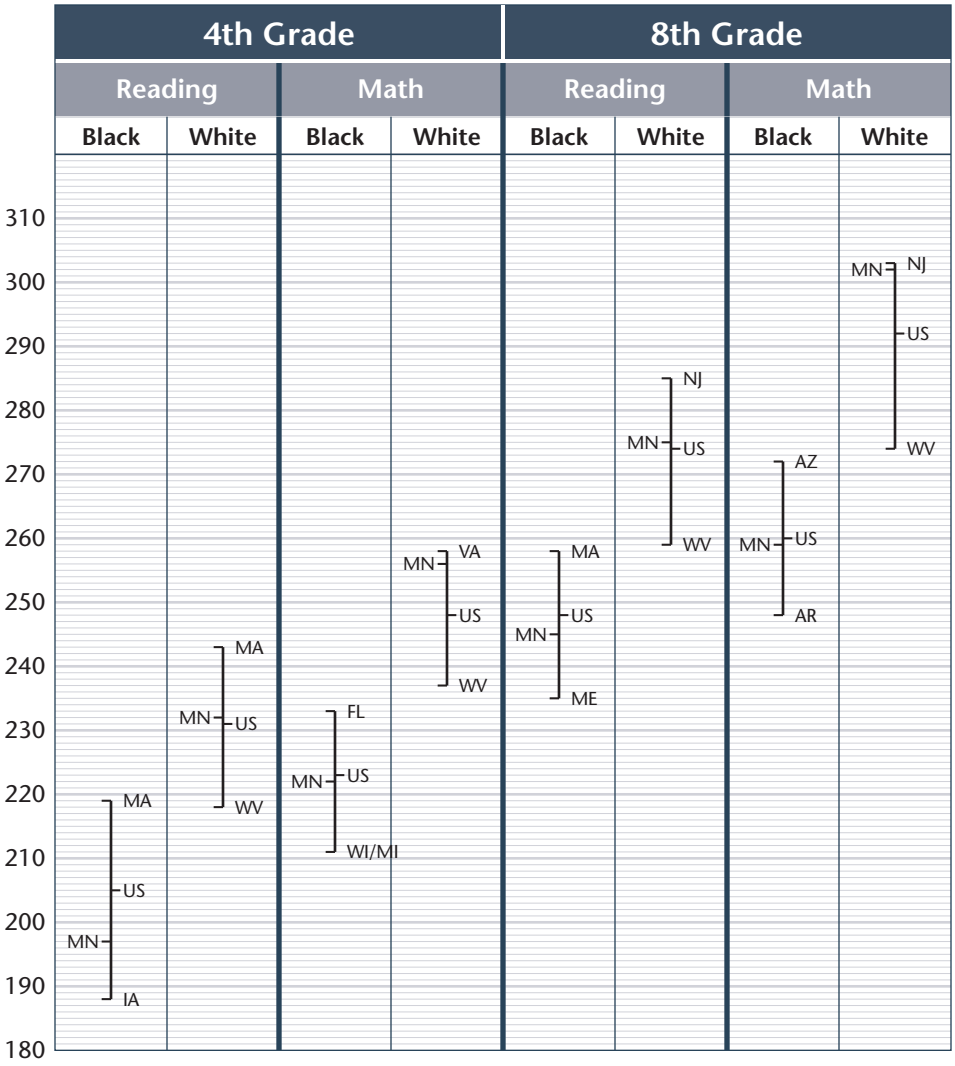


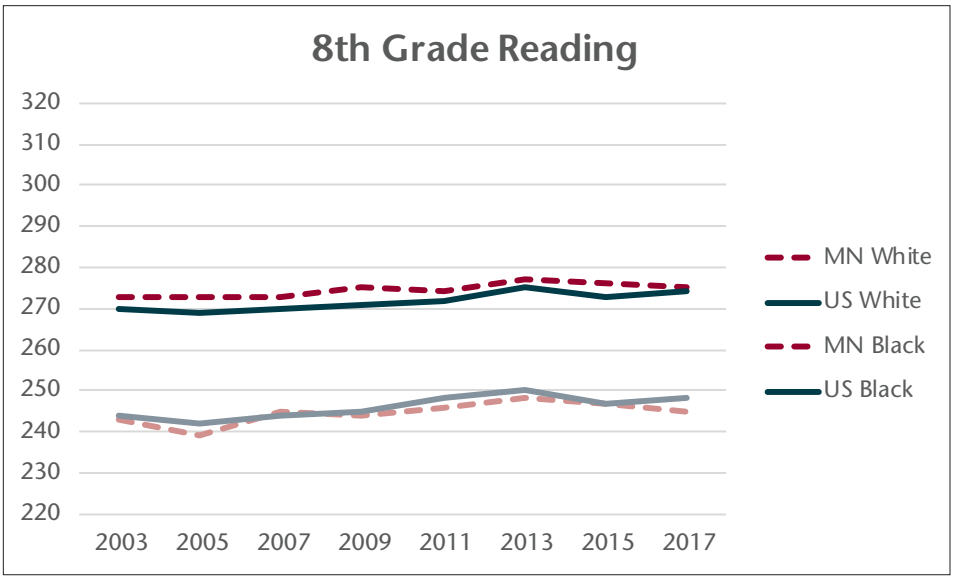
Table 2. Exemplary States for Both Races
These states had both races, Black and White, with scores significantly* different from the national average on at least three of the four tests we looked at: 4th-grade reading, 4th-grade math, 8th-grade reading, and 8th-grade math. (Numbers in parentheses are the number of tests with above- or below-average scores for both races.)

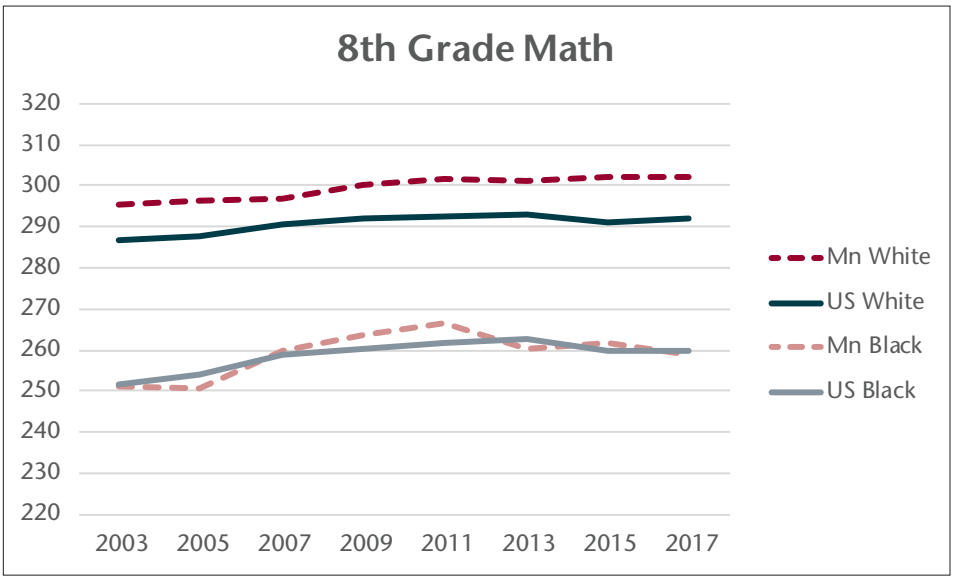
Consistently Good Scores	Consistently Poor Scores
Massachusetts (4)	Alabama (4)
New Jersey (3)	Arkansas (4)
Maryland (3)	Louisiana (4)
Virginia (3)	South Carolina (4)
	Michigan (3)

*90% confidence level

[2] For example, see G.C. Duncan et al., "School Readiness and Later Achievement," *Developmental Psychology,* 2007.

Figure 2. Minnesota 8th-grade NAEP Scores Compared to U.S. Scores, 2003–2015 by Race





for Black students; below average to the left and above average to the right. In both cases, the farther from the bolded/average lines a state score lies, the more it departs from the national averages.

From the Minnesota perspective, it is interesting to note that for 8th-grade math (Figure 3b), Minnesota's White student scores are exceeded only by Massachusetts and New Jersey. Black students' scores are close to the average and better than 22 of 40 states. States in the upper-right quadrant, where both Black and White scores are well above national averages, are Massachusetts, New Jersey, Virginia, Arizona, Texas, and Colorado.

Many of the states in the lower-left quadrant, where test scores are below average for both Black and White students, are in the South or mid-South: Arkansas, Louisiana, Alabama, Kentucky, South Carolina, and West Virginia. A major exception is Michigan,[3] a northern state with low scores for both Black and White students. Michigan scores well below average for both races on all four of the tests.[4]

The diagonal lines on each scatterplot show the gap between White and Black scores on that test. West Virginia has the smallest gap on both tests, primarily because of low test scores for White students. Wisconsin has the highest gap on both tests, driven by low test scores by its Black students. By themselves, gaps are not an indication of overall school performance. Massachusetts and New Jersey, with the best performing schools for both races, have gaps near the national average.

Why Are Some States Doing Well?

Some states, such as Massachusetts and New Jersey, seem to be doing better than the rest of us for both races. Table 2 lists four states whose Black and White students are significantly above the national average on at least three of our four tests. Figure 3 shows additional states that are performing well on 8th-grade reading and math tests. In this section we look at a variety of factors that might explain their success. We look at demographics, school funding, and strength of teacher unions without finding a firm determining factor. Ultimately, we look at public policies, which seem to have made the difference.

A mix of demographic factors offers a possible explanation for school performance differences. Most of the states where Black students do poorly on the tests have poverty levels for Blacks that are worse than the national average. They also have higher-than-average rates of one-parent families and lower-than-average education levels for Black women.[5] The states that are doing well academically tend to have demographic profiles that are better suited to student success, but this is not always true. For example, in Massachusetts, Black women have lower-than-average rates of high school graduation, and one-third of Massachusetts' Black population is foreign-born and comes from Latin American countries where English is not the native language.

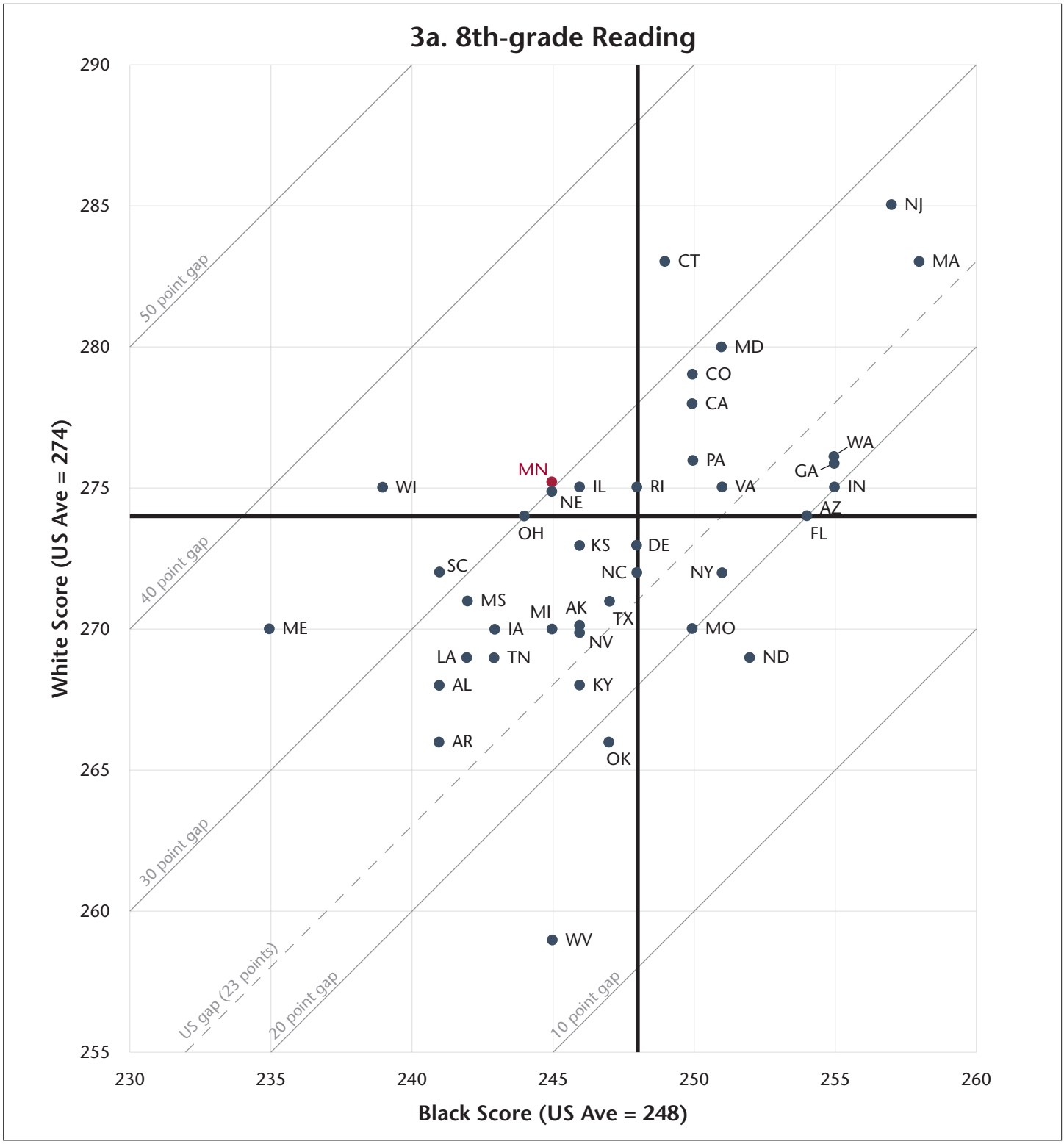
Funding levels are often given as an explanation for achievement levels, but results are mixed on that question. Sometimes high performance can be tied to high funding: New Jersey's

[3] Maine is another northern state doing badly compared to national averages. An insufficient number of Black students took the 8th-grade math test for those results to be published, but both Black and White students scored below the national average on all other tests.

[4] The deficits are significantly different for seven of the eight possible tests. Eighth-grade reading scores for Black students are below average, but not significantly so.

[5] National rates for Blacks according to the 2016 American Community Survey were: 26% living below poverty, 65% of families with children under 18 are headed by a single parent, and 87% of women with a high school degree. Research has shown that the academic success of children is strongly rated to the mother's educational attainment.

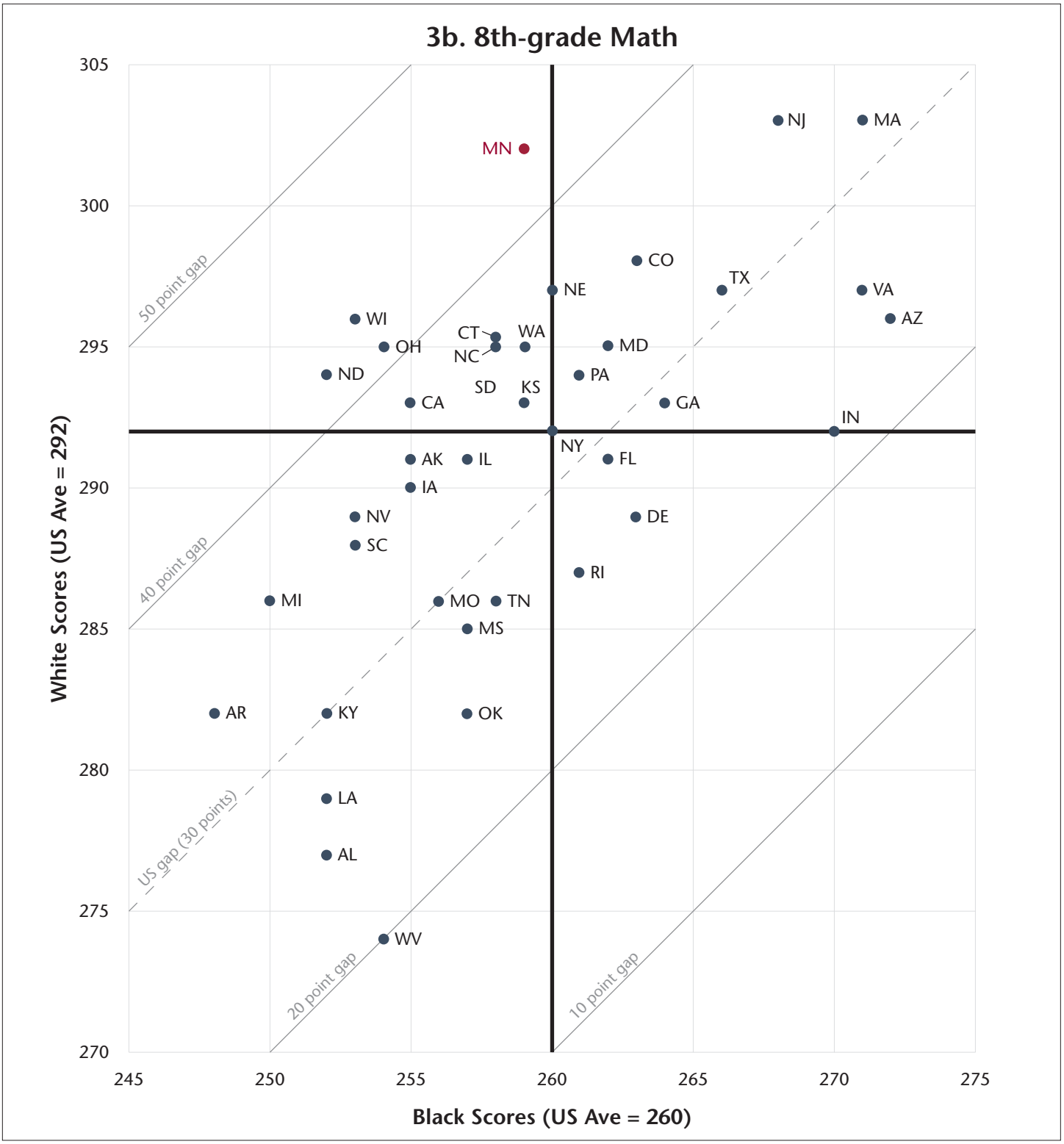
Figure 3. State White and Black Scores on 2017 8th-grade Tests



spending for K–12 education in fiscal year 2013 was $17,500 per student, 64% above the national average of $10,700.[6] And low funding can be tied to failure: Oklahoma spent only $7,700 per student and has quite low NAEP scores. But money is not the complete answer. Texas spent only $8,300 per student yet has some of the best scores for both Black and White students. West Virginia, like Minnesota, spends slightly more than the national average, yet it has very low NAEP scores. Connecticut and New York spend as much as New Jersey yet have significantly lower outcomes.

Teacher union strength does not seem to be a factor in performance. The conservative Thomas B. Fordham Institute's rating of teacher union strength shows most of the consistently poor scoring states have weak unions, but the

[6] Public Education Finances: 2013, United States Census Bureau, 2015, Table 11.



consistently good scoring states run the gamut from New Jersey with a strong union to others with weak unions. The conservative American Education Exchange Council's *Report Card on American Education* rates states on their ability to control teacher qualifications, rewards, and dismissals—things unions usually oppose. The overall grades for the four above-average states range from B– to D+ and the five poor states' grades range from B to D+. There seems to be nothing definitive in these measures.

Texas students of both races outperformed the nation on both math tests—a surprise to us because the state spends so little on education. Some of its success comes from its economic vitality, which has attracted middle-class families of all colors to a warm climate. But public policies also seem to be making a difference in Texas. The state created a "Robin Hood" tax in 1993, which moves revenue from districts

with high property tax revenues to poorer districts to equalize funding for education.[7] In 1997 the state adopted a policy that provides guaranteed admission to any Texas state-funded university for students graduating in the top 10% of their class. Like many states, Texas is pushing competency testing. And, as might be expected in the Longhorn state, schools have become quite competitive; schools stress the tests and results are broadcast widely. In contrast, Minnesota identifies Reward Schools that do exceptionally well with low-income students, but those schools are not celebrated as they would be in Texas.[8]

Georgia is doing better with each race than most other states in the Deep South, especially for its Black students. Like Texas, it rewards students who are doing exceptionally well through its Helping Outstanding Pupils Educationally (HOPE) program created in 1993 to act as an incentive to Georgia's better students. The program pays college tuition for students who have excelled in high school, regardless of race or family income. The program is funded by the Georgia Lottery.

The Massachusetts Education Reform Act of 1993 is credited with making a difference in that state.[9] More money was provided for education, especially to poorer districts; on average the state spent $14,400 per student in 2013, about 35% above the national average but lowest of the New England states. A common core curriculum was created, along with rigorous state-level tests that must be passed to graduate in addition to any local requirements. It was that combination of carrots and sticks that seems to have worked. Other states have created similar packages, but while partisan priorities sometimes shift in other places, Massachusetts Republicans and Democrats alike have stayed with this approach.[10]

New Jersey has targeted preschool programs serving 3- and 4-year olds in distressed districts. A series of state supreme court cases, collectively called *Abbott v. Burke*, has forced New Jersey to provide a more "thorough and efficient" system of education by providing additional resources to the state's 31 poorest school districts. This included funding for new universal preschool programs in those schools and focused funding to another 96 districts in which 20% to 40% of children qualify for free or reduced-price lunches. Since the 1998 *Abbott v. Burke* (V) decision, Black 8th-grade math and reading scores have jumped from average to among the best in the United States. Classes have a maximum of 15 students and are taught by certified teachers provided with helpers and an appropriate curriculum.[11]

Summary and Recommendations

Minnesota's infamous achievement gap is the result of high NAEP test scores for White students, especially in math, compared to average scores for Black students. Black students are doing nearly as well as the national average, but not as well as White students or Black students in some other states. Our White students are doing very well in math, and that fact should be celebrated. We clearly need to do better in the education of our Black students.

A look at other states provides ideas for improving our situation. Massachusetts, New Jersey, and Texas add funding to schools that have lower property values (Minnesota already does this). Those other states require students to prove their competency in a range of core areas before they can graduate (Minnesota focuses on curriculum, not rigorous testing). Texas and Georgia reward their highest-performing students with admission and financial support in postsecondary education. Texas widely publicizes schools that have the best test scores. Minnesota could try one or more of these policies, which seem to be working.

Minnesota[12] and other states have dabbled with programs that reward high teacher performance, support teachers who struggle, and remove those who fail. None of those programs are proven, but they may have the potential to improve the education of students.

New Jersey's early childhood education efforts are being tested in Minnesota. This approach has proven results.[13] Minnesota is starting to do this with 7,000 scholarships across the state for low-income families—a fraction of the kids at-risk. Minnesota is behind other states in implementing this strategy.

The Black-White education test gap is a national problem, not specific to Minnesota. Every state has a gap. That fact is particularly relevant in Minnesota, because only 36% of our Black population was born here. Most Blacks have migrated to Minnesota from elsewhere looking for a better opportunity. If they come to the state with children behind educationally, the gap continues regardless of local success. We need to do everything we can to improve the educational outcomes of our state, but other states need to do the same so all our children succeed. It will take a nationwide effort to solve this problem. Minnesota could move to become a leader in this important task.

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Tom Scott served as CURA's director for more than 30 years, before stepping down in June 2009. He is professor emeritus in the Department of Political Science.

7 Texas has no state income tax so accomplishes equalization by transferring property tax revenues from rich districts. The Minnesota Miracle of equalizing school funding dates from 1971 and uses money from the state General Fund.

8 The list of Reward Schools appears on the state Department of Education website. We could find no other mention of Reward Schools in the media, print or electronic.

9 K. Chang, "Expecting the Best Yields Results in Massachusetts," *New York Times,* September 2, 2013.

10 R. Wilson, "Best State in America: Massachusetts, for Its Educational Success," *Washington Post*, July 11, 2014.

11 "Issue Brief: Early Childhood Education in New Jersey," New Start New Jersey, undated.

12 E. Mykerezi, A. Sojourner, and K. West, "Reforming Teacher Contracts: A Look at the Impact of Q Comp on Student Achievement in Minnesota," *CURA Reporter* 45,1 (2015):3-9.

13 A.J. Rolnick and R. Grunewald, "Early Intervention on a Large Scale," *Quality Counts, 2007*. Education Week's annual report of exemplary state and local K–12 efforts.