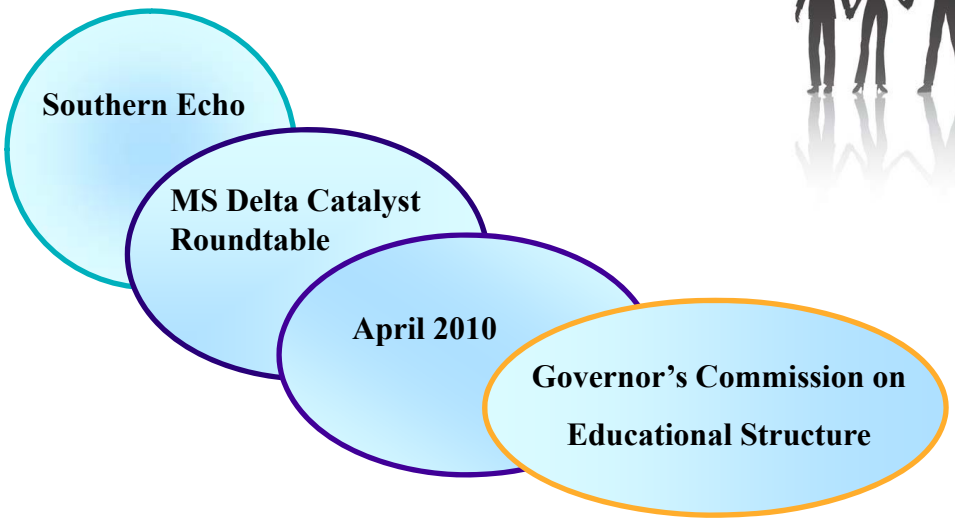

School District Achievement Gaps in Student Performance within the State Accountability Assessment Categories that are Linked to Race, Poverty and Disability

A data-driven research-based analysis by Dr. Jerry Johnson and Shane Shope, M.Ed.

A presentation by Southern Echo, Inc. and the Mississippi Delta Catalyst Roundtable

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Introduction

In this study we analyzed the following question: Can we determine whether achievement gaps exist within the new state school district accountability assessment categories (Failing, At Risk of Failing, Academic Watch, Successful, High Performing and Star) that are linked either to *race*, *poverty* or *disability*?

To analyze this question we used the data provided under No Child Left Behind that breaks down student performance on standardized tests in each school district by a number of different categories. This is called "disaggregated data". In this study we used the breakdown (or "disaggregation") of students by *race*, *socioeconomic status* (referred to as "SES") and *disability status* to identify the presence and extent of achievement gaps within the various categories of the Mississippi Accountability Assessment rating system.

Information gathered for this report utilized the Mississippi Curriculum Test 2 for grades 3-8 in Language Arts and Math. Roughly 250,000 students participated in the language arts and math assessments for 2007-08. African American students comprised 51% of those tested while White students made up 47%. An estimated 10% of all students who were tested are classified as "students with disabilities" while 56% of those tested were economically disadvantaged (i.e., Free and reduced lunch eligible).

Importantly, while these numbers accurately represent the characteristics of the population of students participating in the state assessment tests, they do not appear to match characteristics of the full student population served by Mississippi's public schools. In 2007-08, 67% of all Mississippi K-12 students were "economically disadvantaged" based upon the state's measure, compared to 56% of those who were tested. In 2007-08, 13% of all students qualified as "students with disabilities," compared to 10% of those who were tested.

This disparity between the actual population numbers and the tested population numbers raises an important question: What is the reason for this disparity? We can offer no explanation for the anomaly.

Of note, and in the interests of transparency in our research process, we call attention to another data anomaly—this one involving the number of "non-graded" students included in assessment results reported for grades 3-8 in Language Arts and Math. Specifically, assessment data reports performance results for approximately 253,000 students, while the MDE-reported school enrollment is a little over 226,000 (a difference of more than 10%). A footnote included with the MDE assessment data states that the enrollment numbers are higher because of "non-graded" students. According to enrollment data reported by Mississippi to the U.S. Department of Education, the state had only 8,678 such "non-graded" students in the 2007-08 school year (about 1.7% of all MS students). We can offer no explanation for the anomaly.

Explanation of the Analysis Process

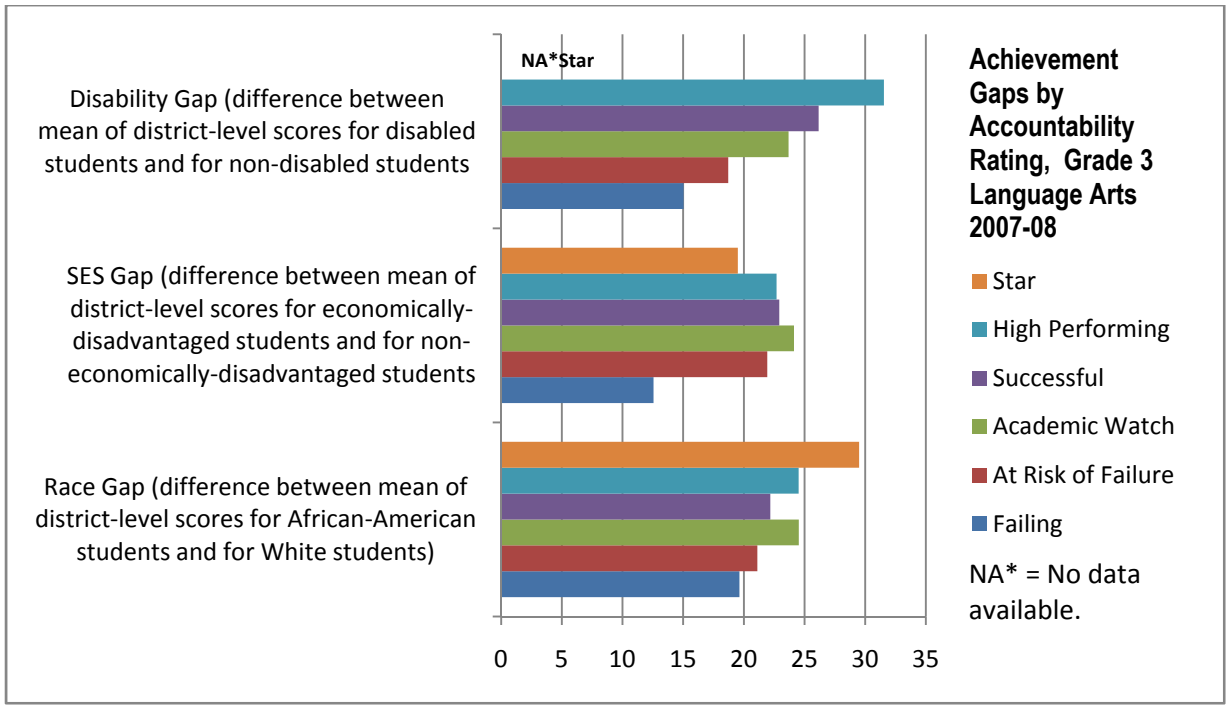
To determine whether such achievement gaps existed in each of the six state school district assessment categories we made three kinds of comparisons: (1) White and African American students; (2) Economically Disadvantaged and Non-Economically Disadvantaged students; and (3) Disabled and Non-Disabled students. We used test data collected from the Mississippi Curriculum Test 2 in grades 3-8 for the 2007-08 school year.

Calculating the achievement gap percentage: To calculate the achievement gap within each of the performance categories (for example, 3rd Grade Math in each of the six school district assessment categories), we combined the proficiency and advanced achievement scores (i.e., percent proficient and percent advanced) from the state assessment tests for 2007-08. Then we subtracted the average proficiency + advanced achievement score of the lower-performing subgroup from the average proficiency + advanced achievement score of the higher-performing subgroup. For example, to calculate the race-based achievement gap, we subtracted the average proficiency + advanced achievement rate for African-American students from the average proficiency + advanced achievement rate for White students. The resultant difference between the two rates is the size of the achievement gap between African-American and White students for a specific test (for ex. math) in a specific grade (for ex. 3rd Grade) in each of the six school district assessment categories (Star, High Performing, Successful, Academic Watch, At Risk of Failing and Failing). This is the process we used to calculate the data in the charts below.

The results of these calculations provided a measure of the size of each of the three achievement gaps (i.e., race-based, socioeconomic status, and disability status) for districts comprising each of the performance categories (i.e., *Star*, *High Performing*, *Successful*, *Academic Watch*, *At Risk of Failing*, and *Failing*).

The following charts illustrate the (average) size of the achievement gap within each of the performance categories.

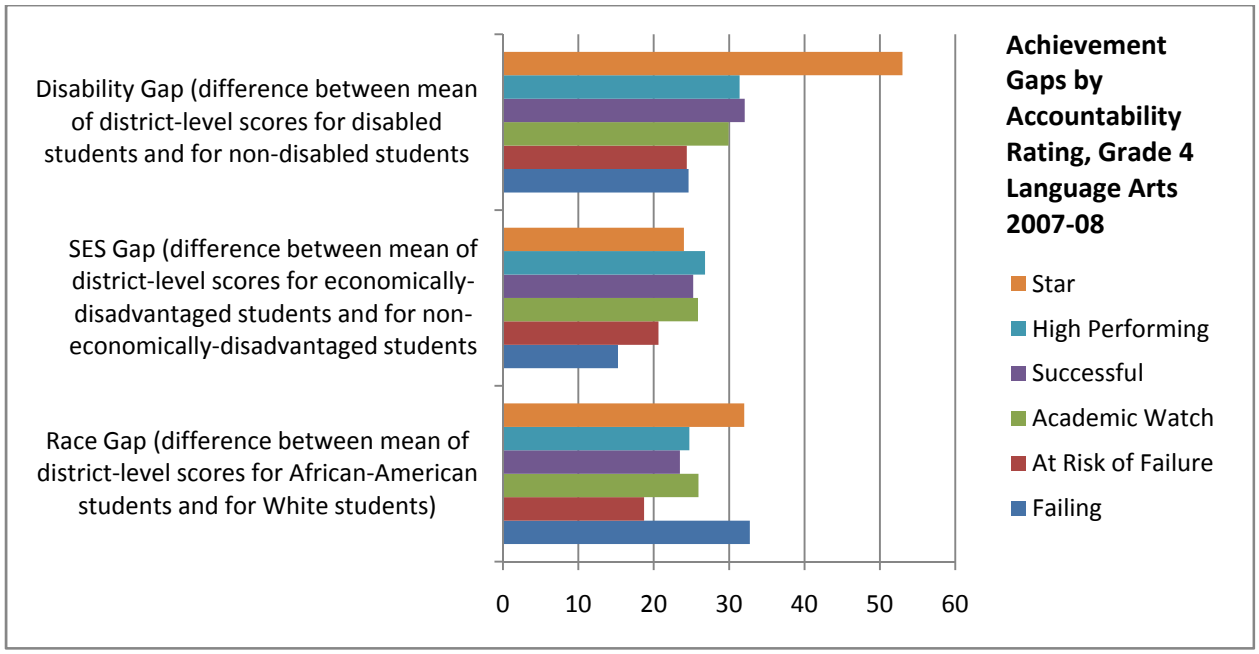
*Note that that in cases where there was no data available for calculating a particular gap, we report a value of *NA* (in instances where there are no students in a particular category, or when the number of students tested in a category is between 1 and 9, the data are suppressed for reasons of reporting reliability and/or student confidentiality).
See http://orshome.mde.k12.ms.us/Account/RC5A/DATA/FILEDEF5.HTM

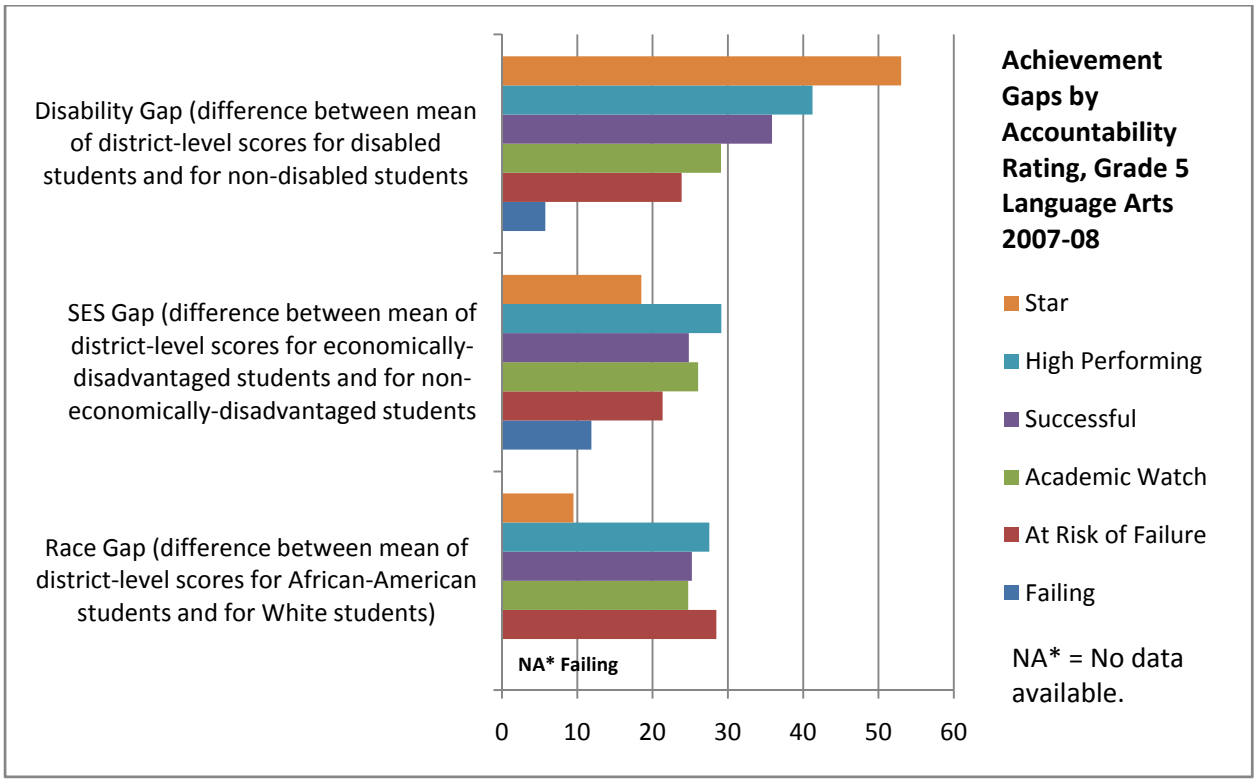


The above graph depicts achievement gaps (Race, Disability and SES) on the grade 3 language arts assessment within the six accountability ratings designated by the Mississippi Department of Education. The data reveal that gaps exist across the rating continuum. Simply stated, on average, the achievement gaps have not been closed in any of the school district assessment categories.

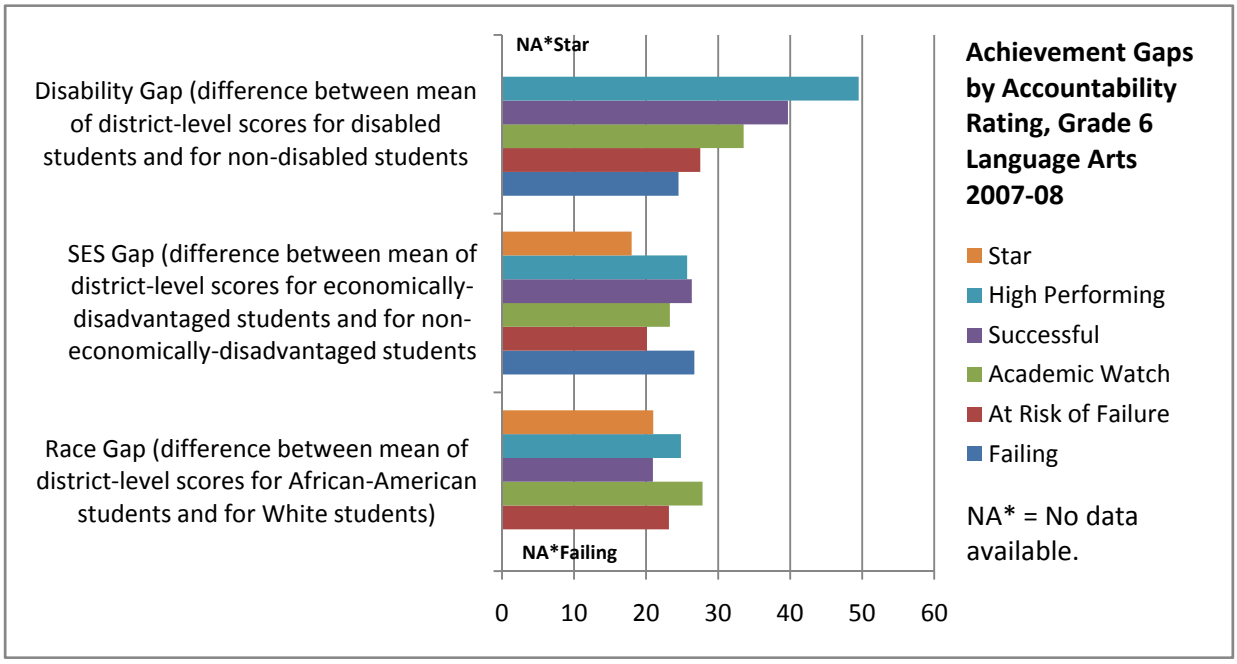
The analysis of the data by race and socio-economic status demonstrates that *lower-rated school district*s (i.e. those designated as *at risk of failing or failing*) have narrower, or smaller, achievement gaps across the board than do higher-rated school districts. For example, when we consider the difference between *Star* school districts and *Failing* school districts, on average the *Failing* school districts exhibit less of a gap between African-American and White student proficiency rates. Specifically, *Failing* districts exhibit an achievement gap that is 11 percentage points smaller that the *Star* districts. In other words those school districts identified as *Failing* did better in terms of narrowing achievement gaps than districts identified as the best.

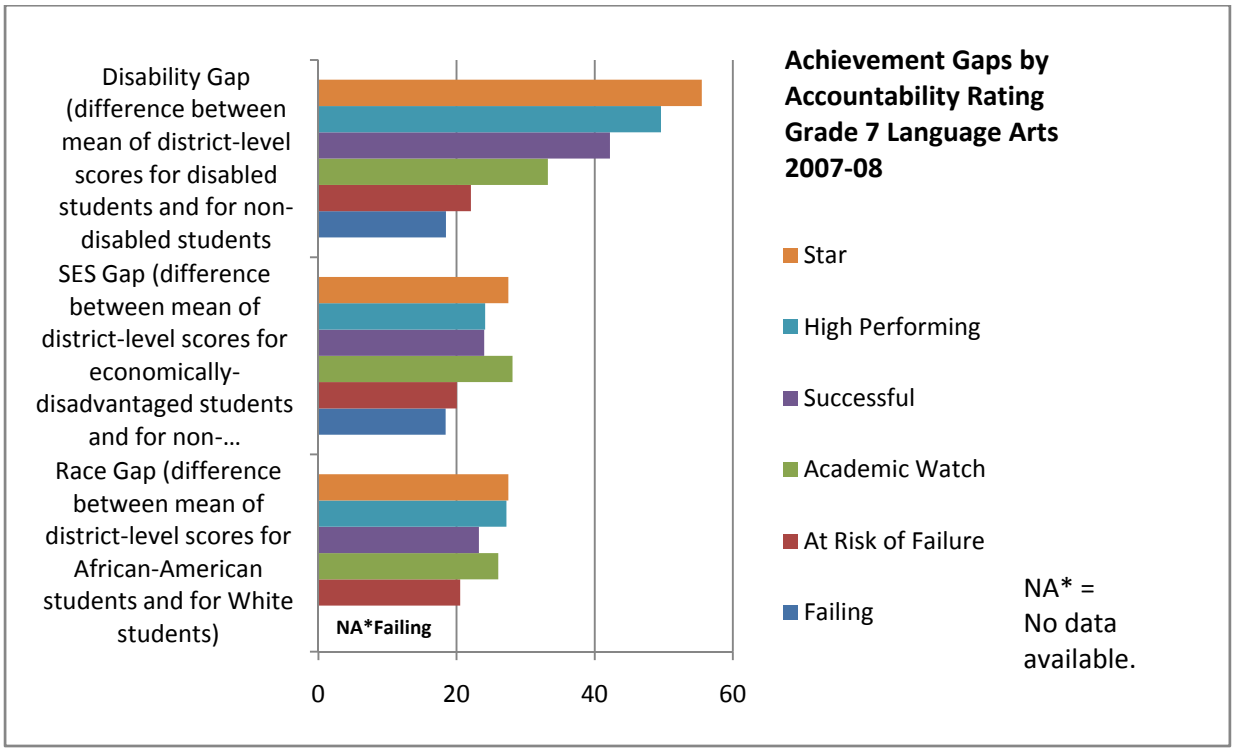
Additional charts below further illustrate the same patterns for 4th and 5th grade language arts achievement. Arguably, the top rated school districts should demonstrate narrower achievement gaps, which would suggest that higher-rated districts are *more* effective at meeting the needs of all children than are lower rated school districts. However, the data suggest the opposite: that *higher-performing school districts are less effective than lower-achieving districts when it comes to meeting the needs of all students.*

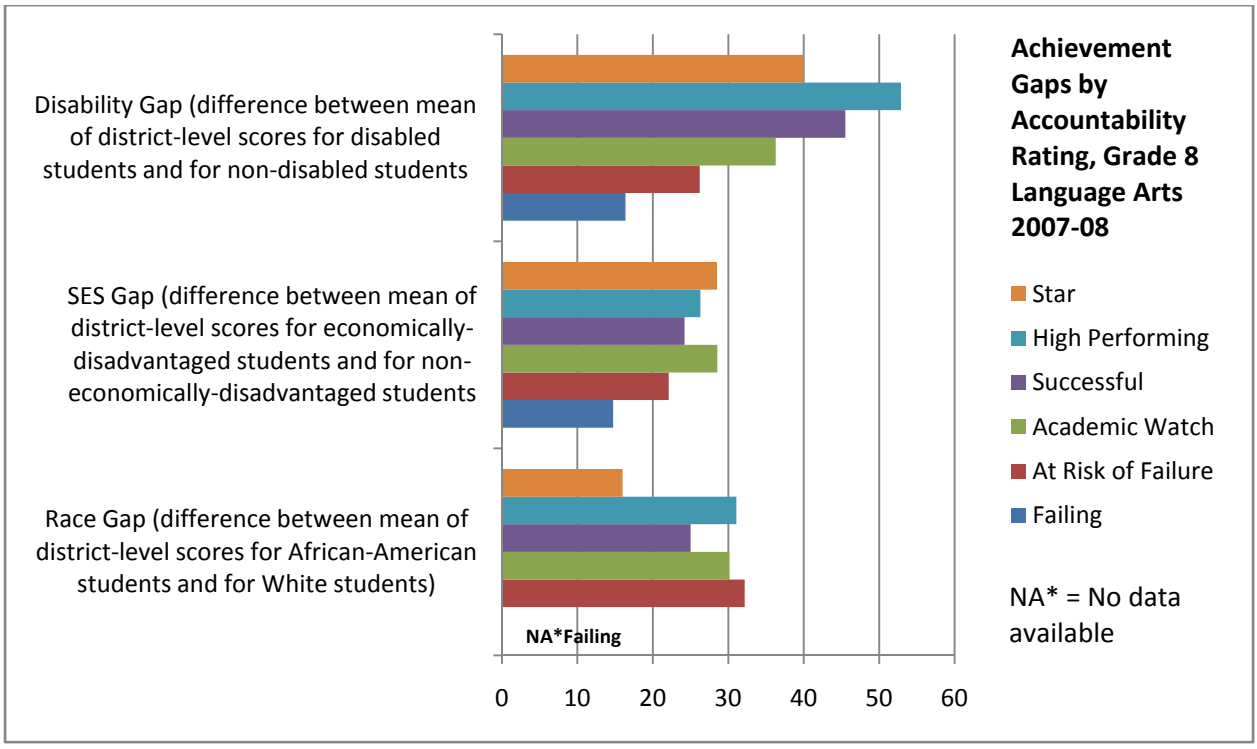




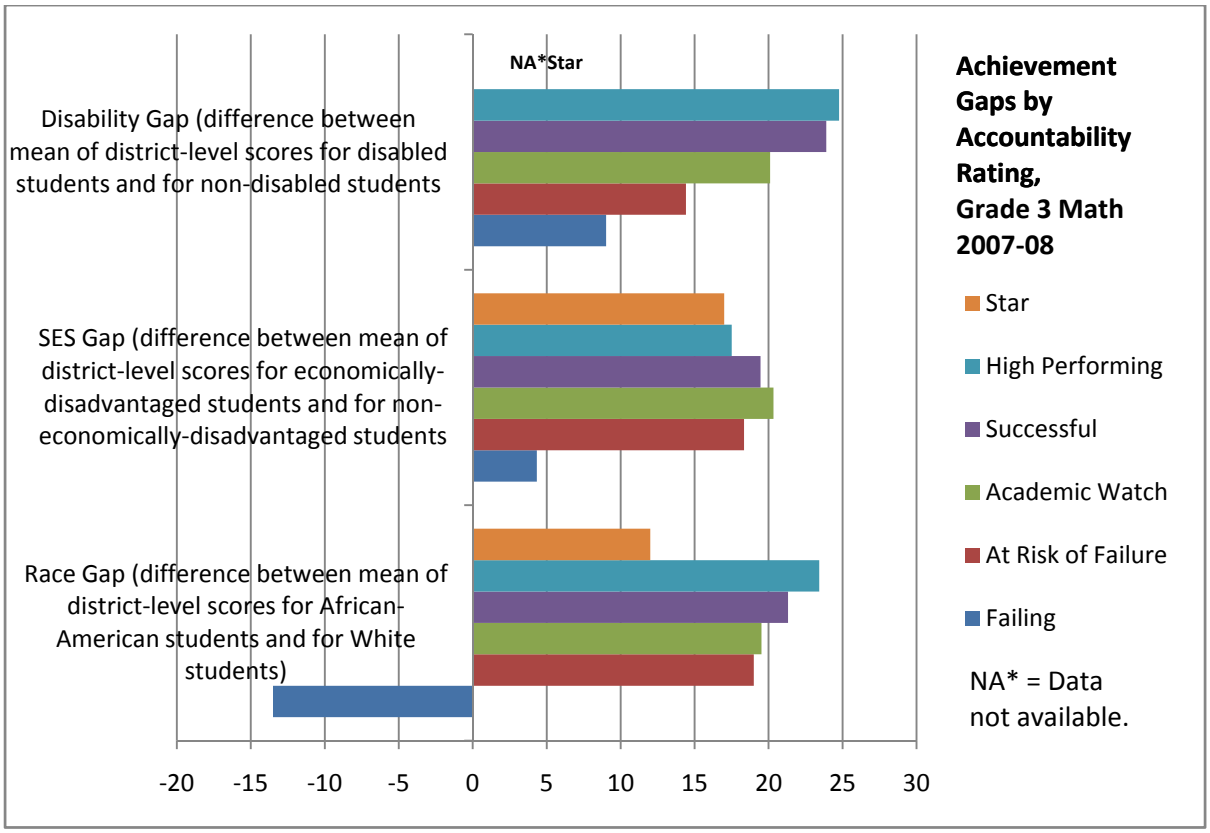
Analysis of 6th, 7th and 8th grade language arts achievement further supports these findings. Similar to the lower grades, data in the following charts illustrate the ineffectiveness of *higher-performing* school districts to close the achievement gaps. The *higher-performing* school districts did slightly better within the 6th grade (Race and SES); however, the *lower- performing* school districts did better overall.

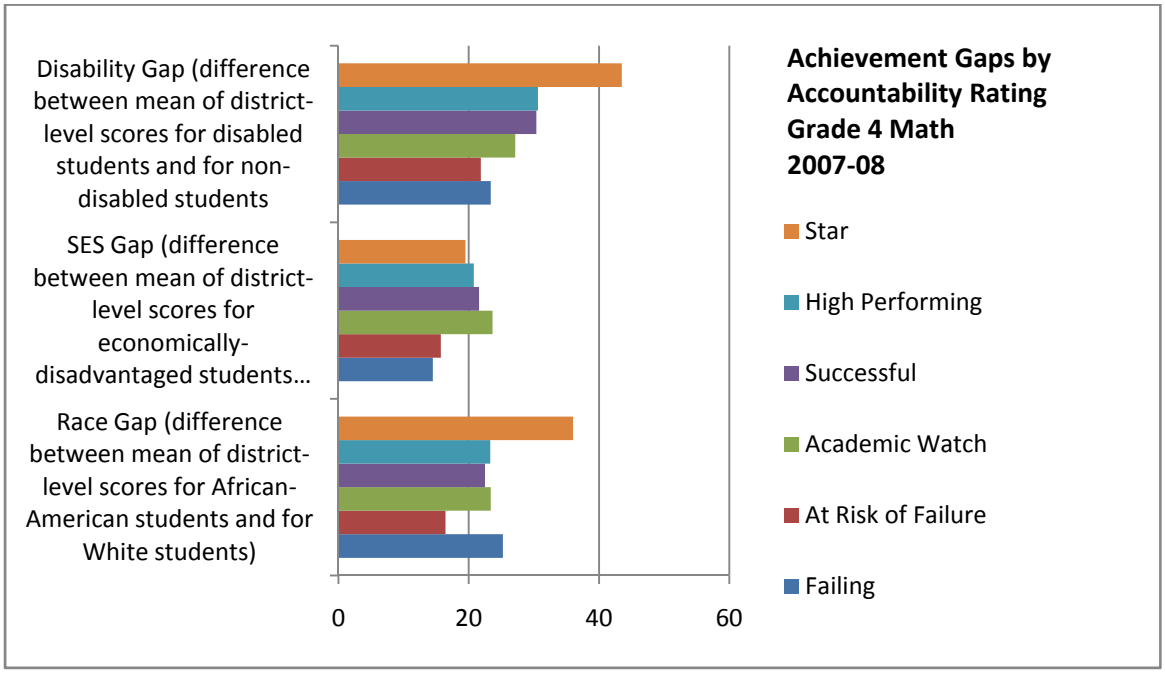

NA*Star
Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students and for non-economically-disadvantaged students
Race Gap (difference between mean of district-level scores for African-American students and for White students)
NA*Failing
0
10
20
30
40
50
60
Achievement Gaps by Accountability Rating, Grade 6 Language Arts 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing
NA* = No data available.

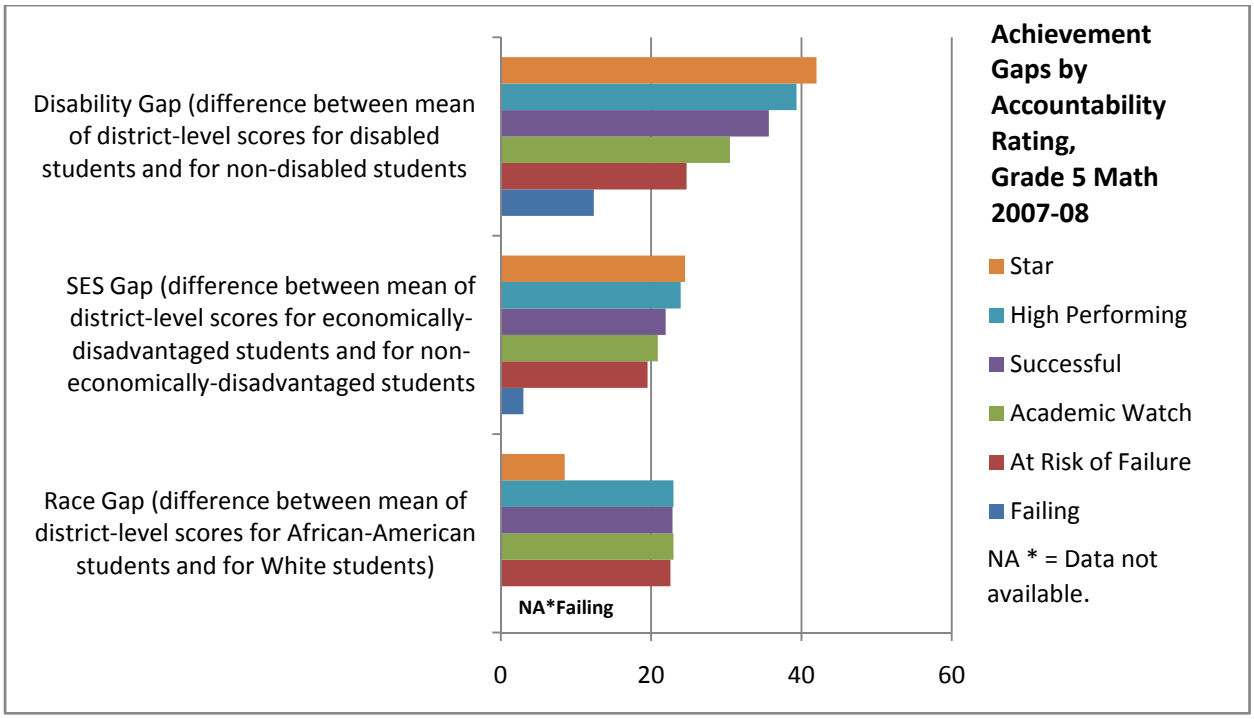

Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students and for non-…
Race Gap (difference between mean of district-level scores for African-American students and for White students)
NA*Failing
0
20
40
60
Achievement Gaps by Accountability Rating Grade 7 Language Arts 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing
NA* = No data available.



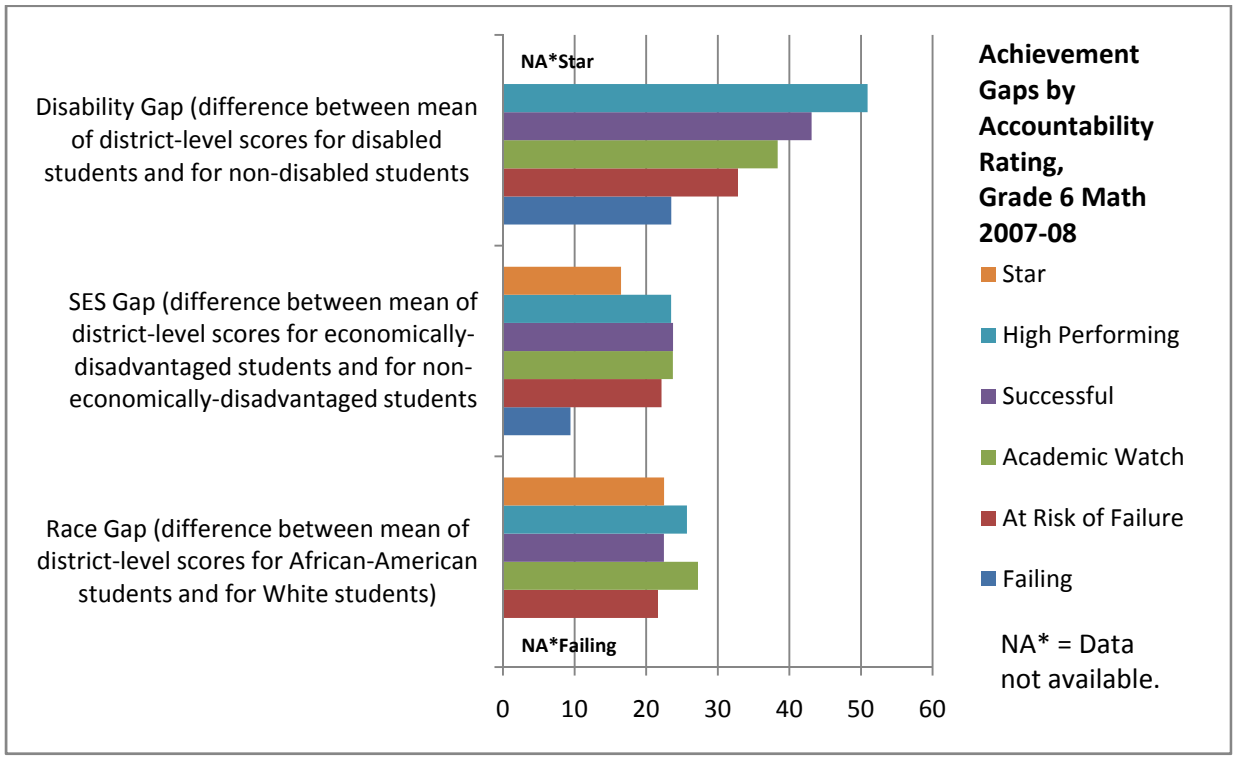
In the graphs below for 3rd, 4th and 5th grades math achievement, the data exhibits the same pattern found earlier in the language arts data, Again, results suggests that *"better"* rated school districts are not any more effective in closing the achievement gaps that their *"lower"* performing counterparts. In fact, the data actually supports the notion that *"lower"* rated districts may actually do a better job at serving students from historically underserved groups. For example, 3rd grade math achievement for the Race category actually shows a reverse of the norm. In this particular case, African-American students outperform the White students among districts rated as *Failing*.

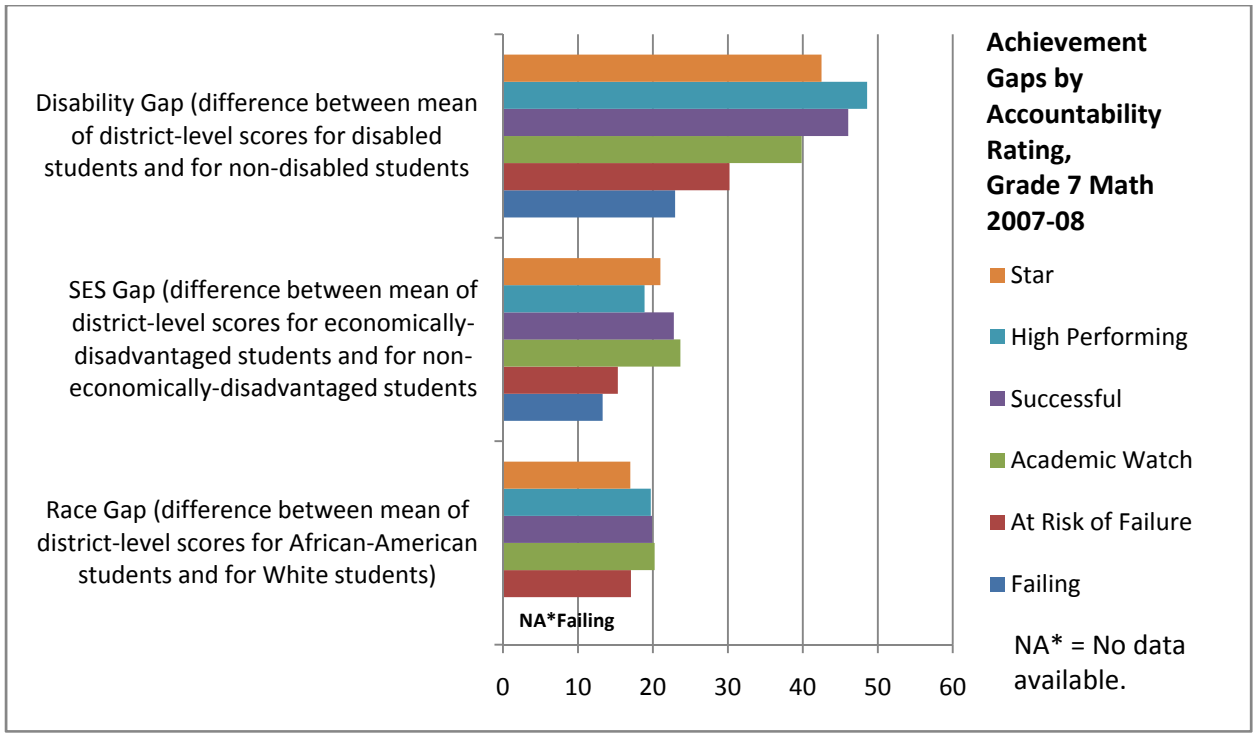

NA*Star
Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students and for non-economically-disadvantaged students
Race Gap (difference between mean of district-level scores for African-American students and for White students)
-20
-15
-10
-5
0
5
10
15
20
25
30
Achievement Gaps by Accountability Rating, Grade 3 Math 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing
NA* = Data not available.

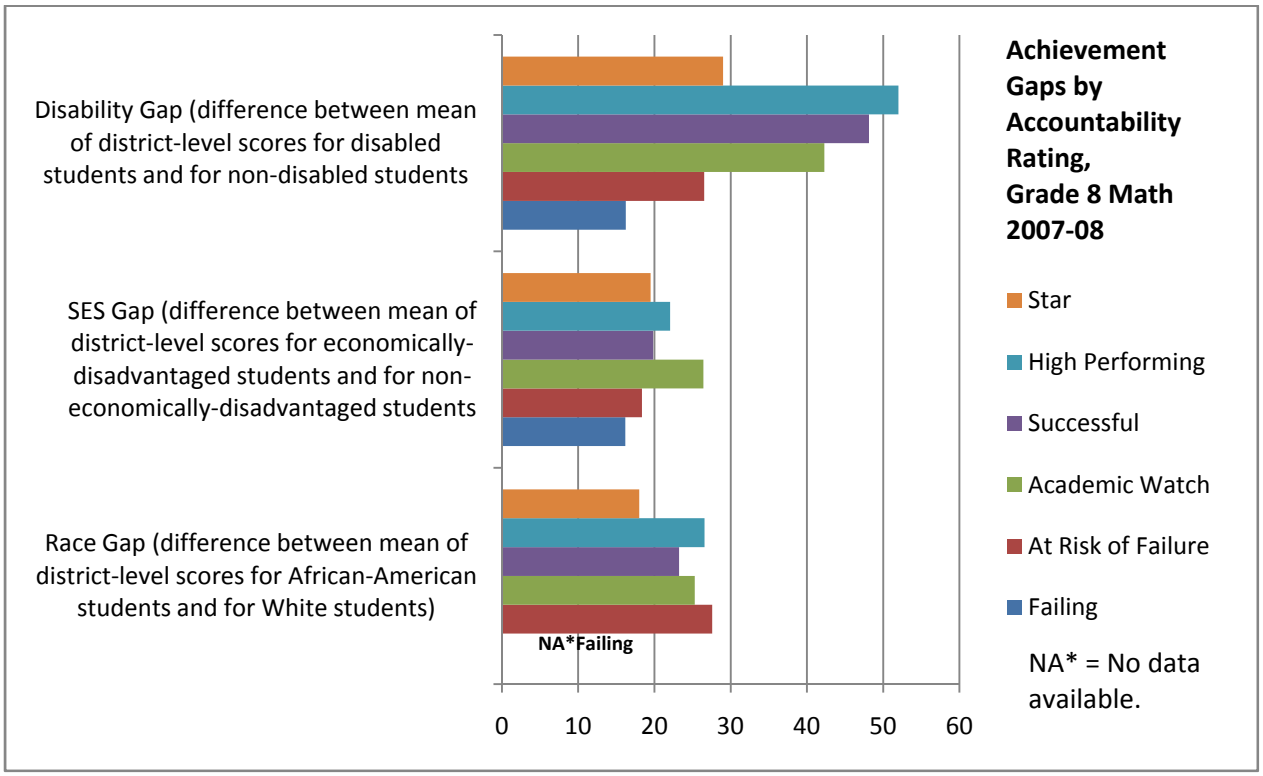

Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students...
Race Gap (difference between mean of district-level scores for African-American students and for White students)
0
20
40
60
Achievement Gaps by Accountability Rating Grade 4 Math 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing



For math assessments at grades 6th, 7th and 8th, again we see that higher rated districts are not more successful than lower rated districts in terms of closing achievement. While there is some variation, there are no significant patterns. By and large, no category of districts appears to be meeting with much success regarding closing achievement gaps.




Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students and for non-economically-disadvantaged students
Race Gap (difference between mean of district-level scores for African-American students and for White students)
NA*Failing
0
10
20
30
40
50
60
Achievement Gaps by Accountability Rating, Grade 7 Math 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing
NA* = No data available.


Disability Gap (difference between mean of district-level scores for disabled students and for non-disabled students
SES Gap (difference between mean of district-level scores for economically-disadvantaged students and for non-economically-disadvantaged students
Race Gap (difference between mean of district-level scores for African-American students and for White students)
NA*Failing
0
10
20
30
40
50
60
Achievement Gaps by Accountability Rating, Grade 8 Math 2007-08
Star
High Performing
Successful
Academic Watch
At Risk of Failure
Failing
NA* = No data available.

Conclusion

Findings from this analysis undermine any notion that achievement gap issues are exclusively a problem of school districts designated as less effective by the state of Mississippi. Even the highest performing districts in the state are ineffective at meeting the needs of historically underserved populations. Indeed, findings here raise the question as to whether the school districts designated as "failing" or "at risk of failing" are in this position primarily because they serve student populations with higher proportions of students of color, or who are low-wealth, or who have a disability. The needs of these students are not being met anywhere across the state. The analysis clearly demonstrates that the higher rated school districts have the same dilemmas regarding closing student achievement gaps that lower rated districts have.

Closing these lower-performing school districts will not have the desired effect of helping those marginalized groups of students even if they are reassigned to a higher rated district.

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Dr. Jerry Johnson is an assistant professor in the Department of Educational Studies at Ohio University, where he teaches courses in educational administration, directs the doctoral program in educational leadership, and serves as co-director of the Institute for Democracy in Education.

A former K-12 educator, Johnson served 8 years as a high school teacher and principal and has taught in principal and superintendent preparation programs for 9 years. Dr. Johnson has published more than 40 research articles, policy papers, and book chapters on rural education, educational equity and achievement gap issues, the effects of school and district size on student achievement, and organizational leadership.

Formerly the research director for the Rural School and Community Trust, a national non-profit organization addressing the crucial relationship between good schools and thriving communities, Dr. Johnson's research has been cited in state school finance litigation and legislation, and he has testified before state legislative committees and presented research briefings on Capitol Hill.

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