

School Landscape Analysis

Investigating the quality and accessibility of Northwest Arkansas schools

Analysis and presentation prepared by the following organizations:



We wanted to understand the quality of schools in Northwest Arkansas, and who had access to high-quality schools.

Using publicly available state data from multiple school years, and 10 years of pre-pandemic data from all public schools in the country, we asked the following questions:

1. **What is the current state of school quality in Northwest Arkansas, and how does this compare to other schools in the state and nation?**
2. **Which students have the most access to high-quality schools?**
3. **Do different groups of students in the same school receive the same high-quality outcomes?**

We found:

Northwest Arkansas schools tend to be significantly higher quality than the rest of the state and compare favorably to similar schools nationwide.

The typical NWA school has higher achievement and produces more growth than other Arkansas schools and, historically, NWA schools have grown students at rates similar to national norms. But the availability of top-performing schools varies by district within the region.

Northwest Arkansas students from lower-income families and students of color typically attended lower quality schools than their peers in the region. But these student groups still tended to have access to higher quality schools than students in the rest of the state and nation.

The typical growth and achievement at schools attended by NWA students facing economic disadvantage were higher than similar students statewide and nationwide.

There were more pronounced differences in quality outcomes *within the same school* – students of color and economically disadvantaged students often experienced lower quality outcomes than their peers in the same school.

But some districts were effective at getting strong results for economically disadvantaged students. The majority of schools provided economically disadvantaged students experiences that were better than average for all students statewide.

We used Arkansas's rich data on school quality collected as part of the Every Student Succeeds Act (ESSA) to compare the region's schools to those in the rest of the state.



Arkansas provides **four sets of school quality metrics** for all schools in the state, as well as an overall score representing a combination of these metrics. All data is publicly available at <https://myschoolinfo.arkansas.gov/>

Achievement Metrics

These represent students' overall performance on the ACT Aspire and are similar to proficiency rates.

Growth Metrics

These represent the extent to which students' state test scores exceed the performance expected for them based on how similar students have performed.

Graduation Metrics

Arkansas reports 4- and 5-year graduation rates.

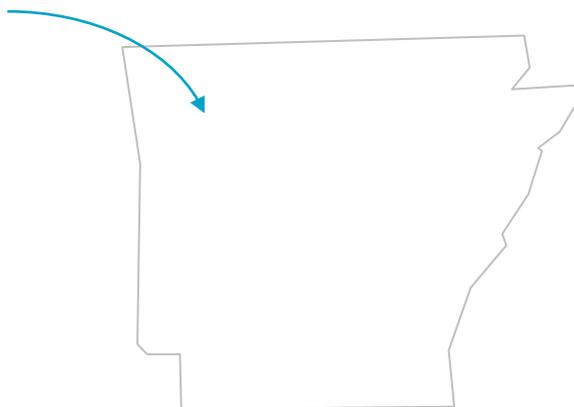
School Quality and Student Success Metrics (SQSS)

These include multiple metrics of quality including performance in science, attendance rates, GPA and course-taking patterns, among others.

Most of our analyses are based on percentiles, which measure how a school's ranking compared to all other schools in the state.

Because each metric used for ESSA is on a different scale, with some difficult to interpret directly, we converted each school's results to a percentile ranking, which indicates the percent of schools in the rest of the state that school outperformed.

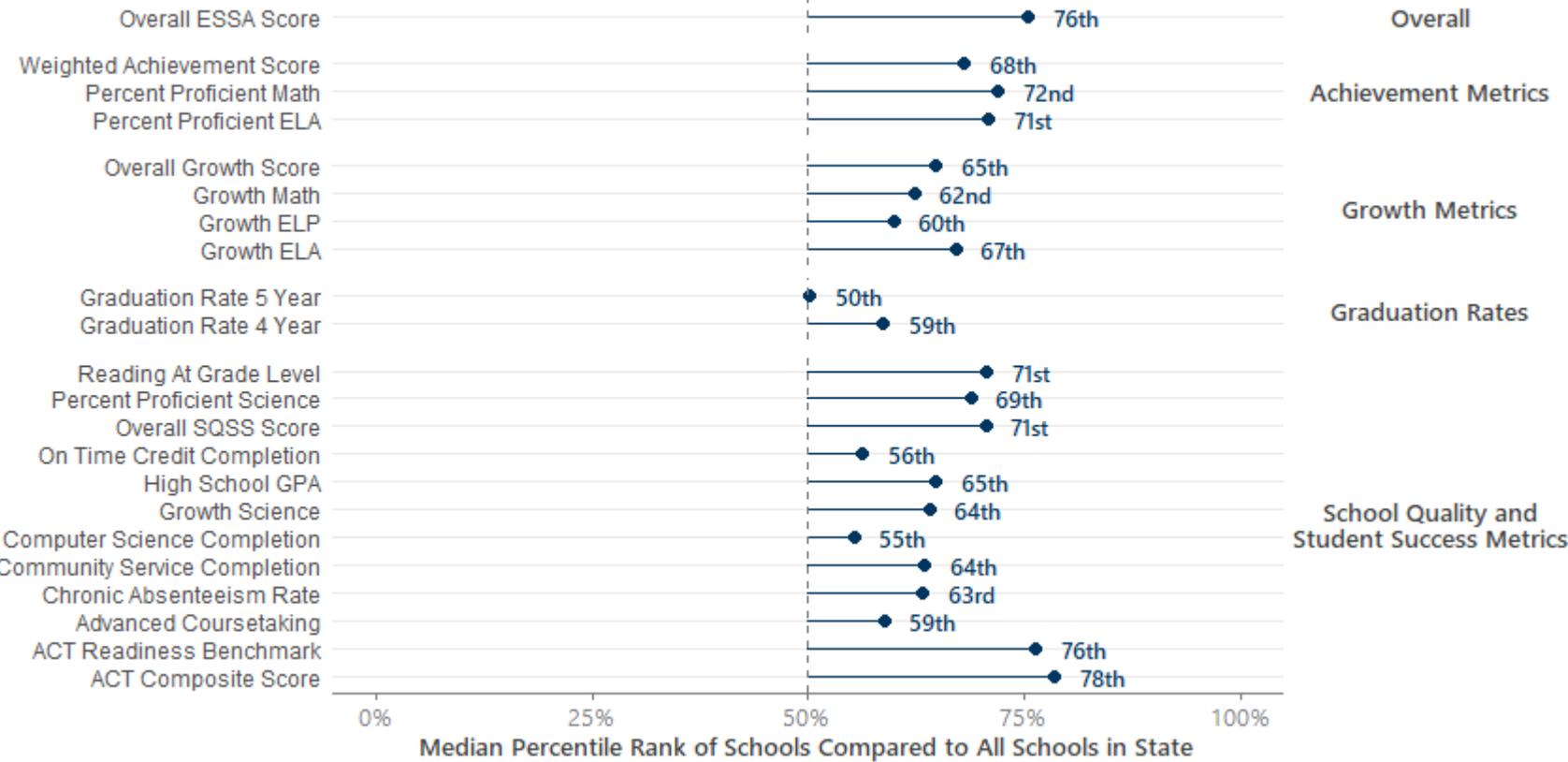
NWA schools in
**Benton and
Washington** counties
are compared to all
other schools in
Arkansas



Northwest Arkansas schools tend to be significantly higher quality than the rest of the state. The typical Northwest Arkansas school has higher achievement and more growth in math and ELA than roughly two-thirds of all other Arkansas schools.

Where does the typical Northwest Arkansas school rank in their state?

Median percentile ranking of NWA schools on 2021-2022 Arkansas school quality metrics

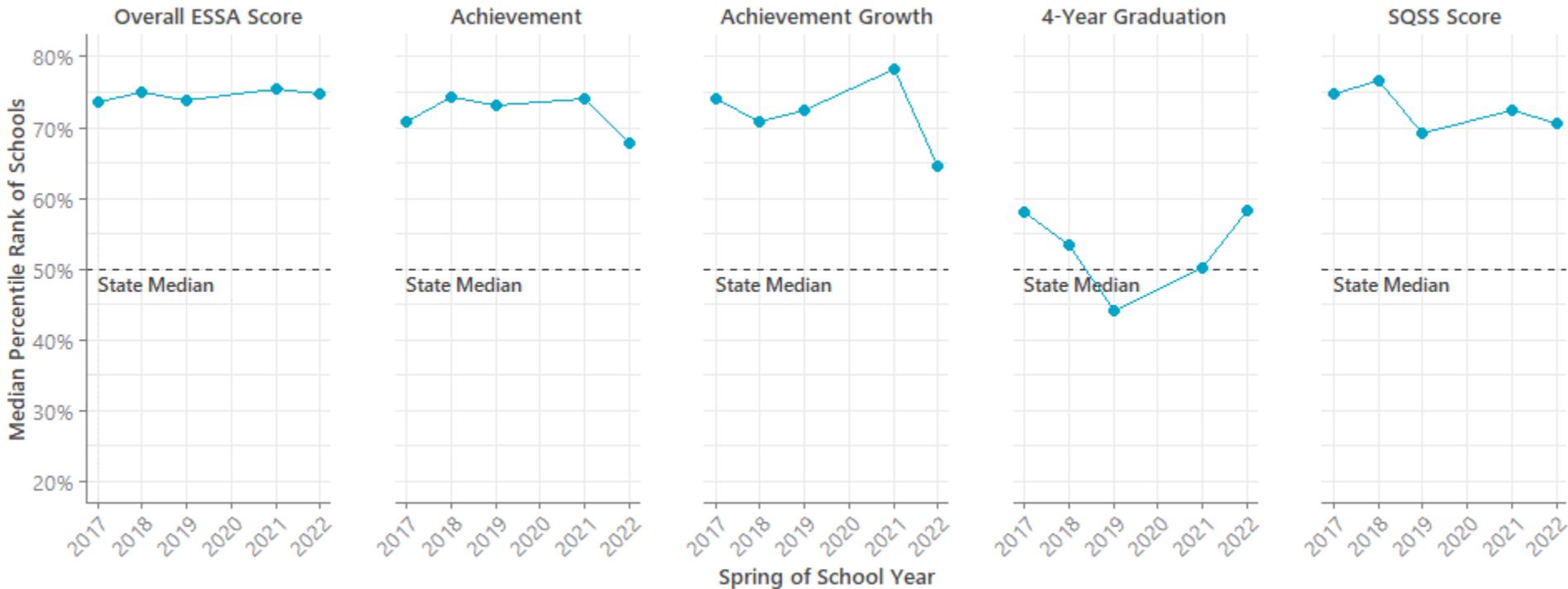


Recent quality metrics reflect longer-standing trends: Northwest Arkansas has historically outperformed the state on most metrics.

Students' achievement and growth in Northwest Arkansas decreased noticeably relative to the rest of the state in 2021-22, but in both cases the typical NWA school still performs much better than the average school statewide.

How has the typical Northwest Arkansas school ranked in the state over time?

Median percentile ranking of NWA schools on Arkansas school quality metrics from 2016-17 to 2021-22

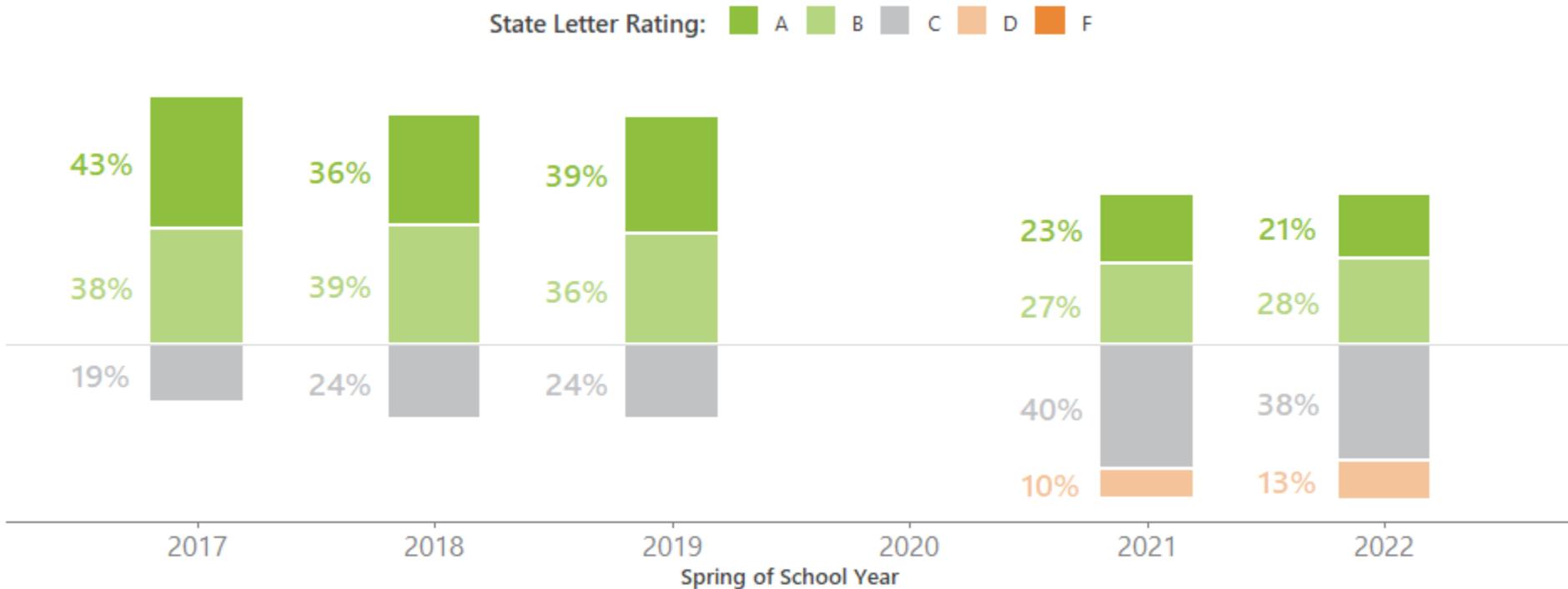


The high quality of Northwest Arkansas schools means most of its schools have earned As and Bs historically.

In 2021-22, about 1 in 5 NWA schools earned As, but only 5% of schools in the rest of the state did so.

How has the typical Northwest Arkansas school been rated over time?

Distribution of state assigned school letter grades from 2016-17 to 2021-22



Letter grade equivalents are based on the ESSA School Index score associated with the ED group in the school and were calculated using the conversion tables provided in appendix A of the Arkansas school rating system rules (https://dese.ade.arkansas.gov/Files/20201214170058_ade_334_-_Rules_Governing_the_School_Rating_System.pdf).

But access to high-quality schools varies by district, with some districts providing few highly rated schools and other districts providing many.

Which districts have top- and bottom-rated schools?

School percentile rankings on 2021-22 ESSA school achievement and growth metrics by district

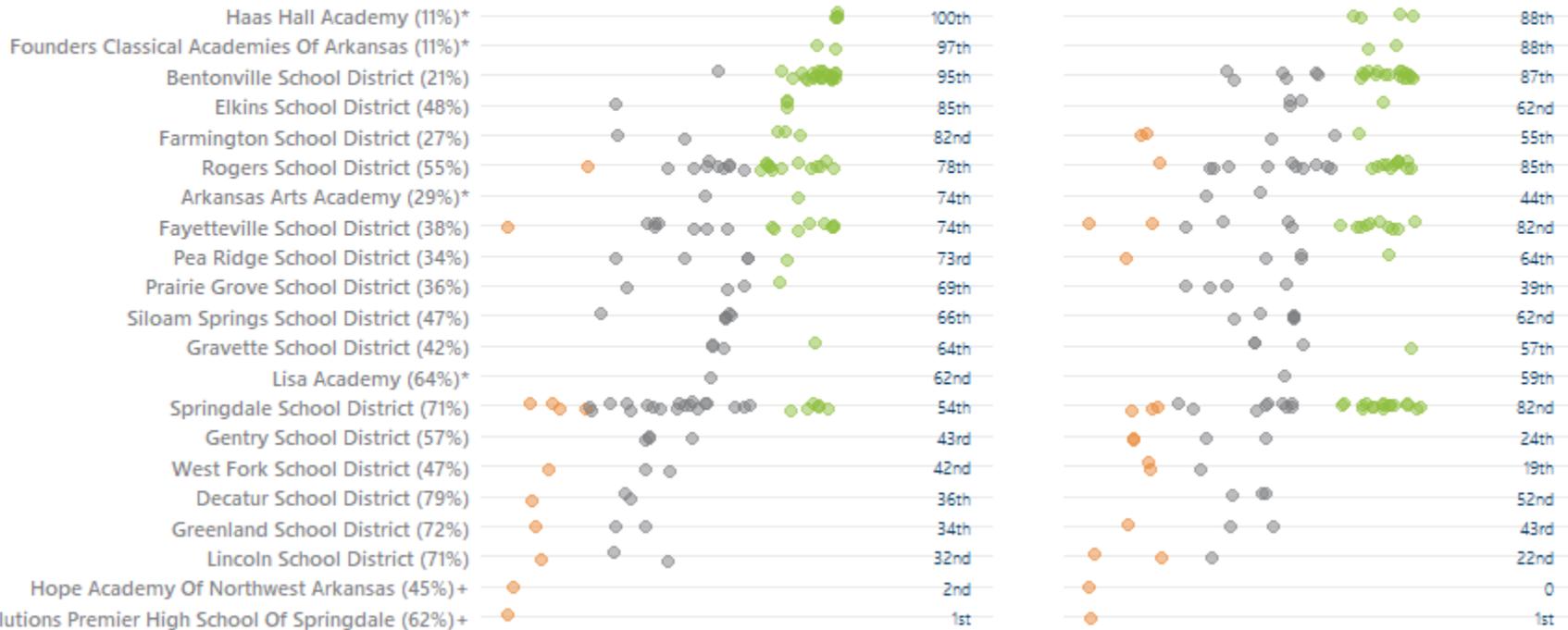
● Bottom Quartile School ● School Ranks in Middle 50% ● Top Quartile School

ESSA Math and ELA Achievement

District Median:

ESSA Math and ELA Growth Score

District Median:



* Signifies an open enrollment or district conversion charter. + Signifies Alternative Learning Environment (ALE) or targeted student population. Value in parentheses is total district %FRL in 2021-2022, regardless if the student contributed to ESSA scores.

To understand how Northwest Arkansas schools compare to schools across the country, we used state testing data from the Stanford Educational Data Archive (SEDA).

SEDA uses **pre-pandemic** grade 3-8 state achievement data from 2008–09 through 2017-18 and puts different states' test scores on a common scale by using how states performed on the National Assessment of Educational Progress (NAEP). This allows us to compare schools and districts across state lines.

SEDA has developed three metrics of school performance:

Overall Achievement in Math and ELA

From 2009 to 2018, what was the average achievement relative to all students in the same grade and subject?

Typical Growth Made by Students Each Year

Relative to the typical student in the country, how much more or less are students growing as they progress from one grade to the next, e.g., from 4th to 5th grade?

Growth in Achievement Over Time

Compared to schools across the country, how much more or less is the overall achievement of the school improving from one year to the next, e.g., from 2010-11 to 2011-12?

Note: SEDA data are from The Educational Opportunity Project at Stanford University (SEDA; <https://edopportunity.org/get-the-data/seda-archive-downloads/>). The national average is actually a reference cohort of NAEP test takers who were in 4th grade in spring of 2009, 2011, 2013, or 2015. For more information on how the achievement measures are constructed, see https://stacks.stanford.edu/file/druid:db586ns4974/seda_documentation_4.1.pdf.

The typical Northwest Arkansas school has historically outperformed the national average and tended to have more student growth.

Overall Achievement in Math and ELA

The typical:

Northwest Arkansas school ranks in the

63rd percentile

nationally, which is 0.37 grade levels above average.

Typical Growth Made by Students Each Year

The typical:

Northwest Arkansas school ranks in the

56th percentile

nationally, which is a growth rate of 1.08 grade levels per year.

Growth in Achievement Over Time

The typical:

Northwest Arkansas school ranks in the

46th percentile

nationally, which is an annual change in overall performance that is 0.002 grade levels less per year than the national average.

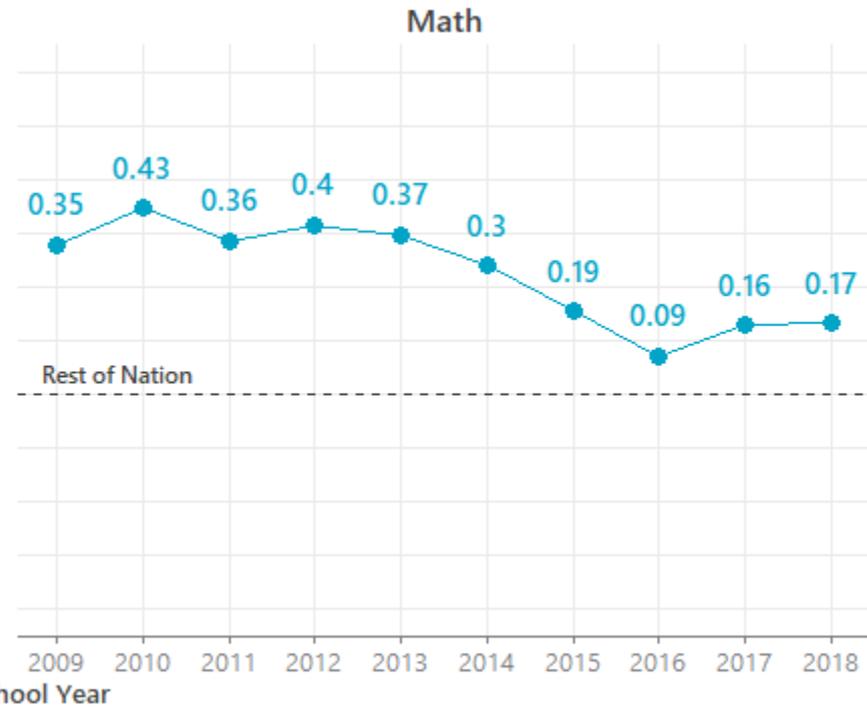
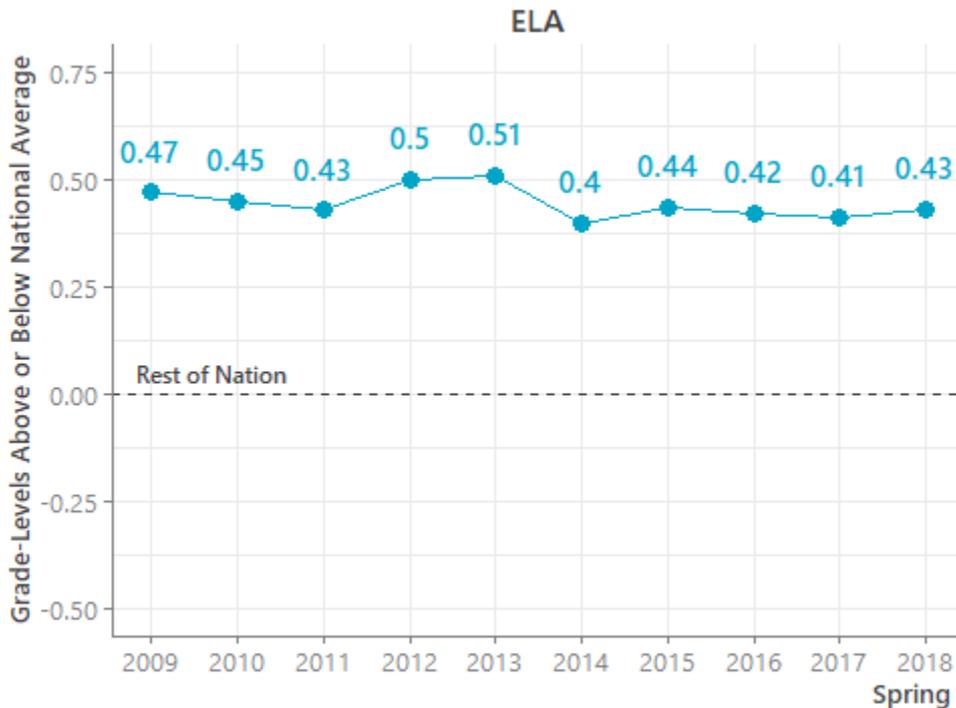
Note: SEDA data are available at <https://edopportunity.org/get-the-data/seda-archive-downloads/> and include all Northwest Arkansas schools for which state achievement scores are available and within-cohort growth can be calculated. For more information on how the different SEDA measures are constructed, see https://stacks.stanford.edu/file/druid:db586ns4974/seda_documentation_4.1.pdf. Values in text represent medians.

Northwest Arkansas schools have historically outperformed the nation, especially in ELA.

Though math performance was declining slightly prior to the pandemic, the typical NWA school still tended to perform more than a tenth of a grade level better than the national average.

How has achievement changed over time?

Median ELA and Math school performance in grade levels relative to national average from 2008-09 to 2017-18



Note: SEDA data are available at <https://edopportunity.org/get-the-data/seda-archive-downloads/> and include all Northwest Arkansas schools for which state achievement scores are available and within-cohort growth can be calculated. Medians reported. Grade-Level scale used and centered on median of all schools not in either region for each year and subject.

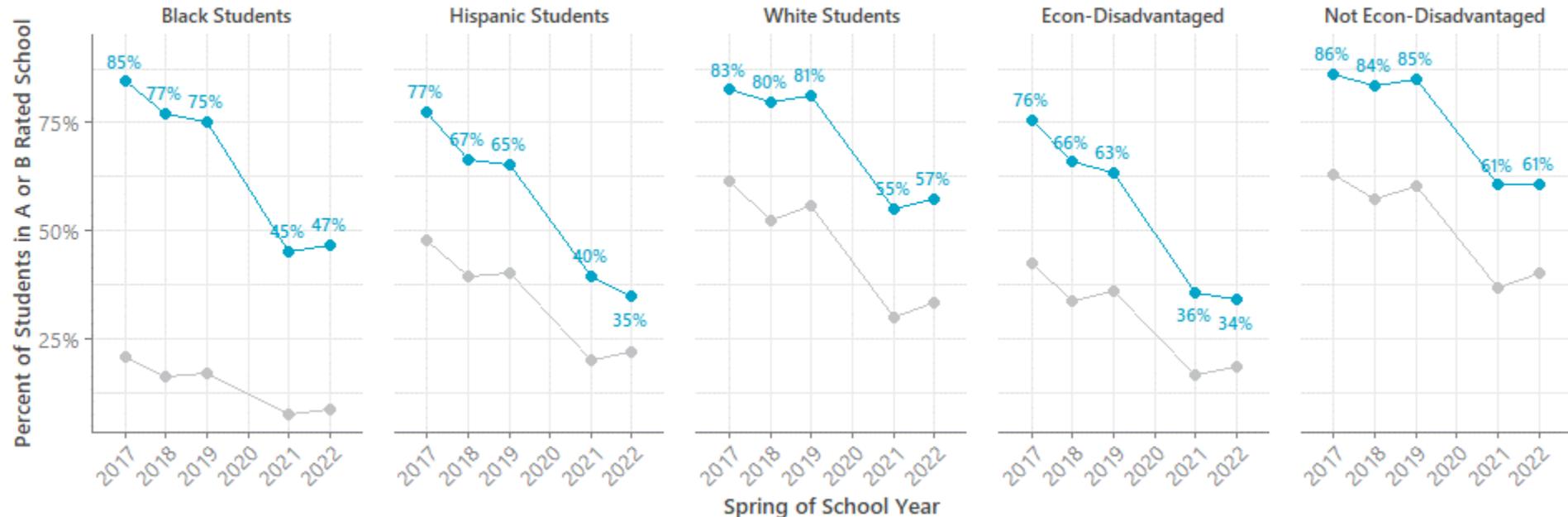
Within Northwest Arkansas, students of color and students from low-income families had less access to top-rated schools, especially recently.

Although students of color and students from low-income families had less access than their white or more affluent peers in the region, they had substantially more access than demographically similar students in the rest of the state.

Who has access to A- or B-rated schools?

Percentage of students in region attending an A or B-rated school from 2016-17 to 2021-22

● Northwest Arkansas ● Rest of Arkansas



Letter grade equivalents are based on the ESSA School Index score associated with the ED group in the school and were calculated using the conversion tables provided in appendix A of the Arkansas school rating system rules (https://dese.ade.arkansas.gov/Files/20201214170058_ade_334_-_Rules_Governing_the_School_Rating_System.pdf).

To understand how different student groups actually *experienced* their school, we calculated school quality metrics separately for students in each demographic category and then looked at how they differed.

To illustrate this, consider the following school:



The school's overall ESSA achievement score was **83.7**



Students **not** facing economic disadvantage had an achievement score of 89.3. This translates to about the **97th percentile** relative to all schools in the state.*



Students facing economic disadvantage had an achievement score of 56. This translates to about the **55th percentile** relative to all schools in the state.*

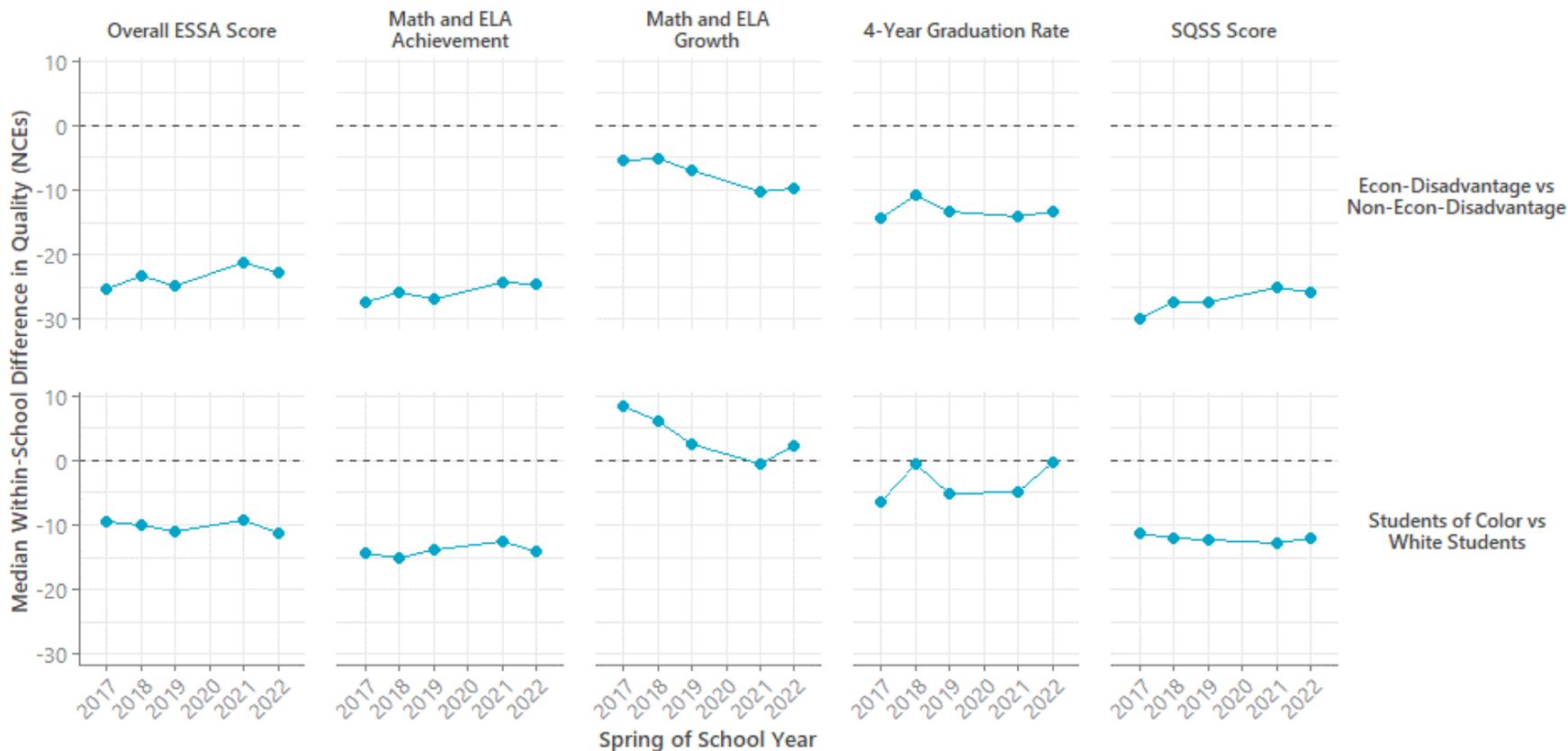
This is a difference of **42 percentile points***. Zero would represent equity. So though both groups had access to an A-rated school, their outcomes and experiences were very different.

Note: * For all calculations to follow, we used translated scores to Normal Curve Equivalents (NCEs) based on the distribution of school-level quality metrics across the entire state. NCEs are the version of the score scale that transforms scores to a distribution that scores of 1, 50 and 99 align to the same respective percentile rankings; this scaling system allows for the conversion of each metric to a common—and therefore comparable—scale.

The outcomes of economically disadvantaged students and students of color often ranked 10 to 25 percentile points lower than their peers *in the same school*. However, growth outcomes were more equitable.

What were the typical differences in quality outcomes *within the same school*?

Median school-level difference between the ESSA quality metrics of different student groups in the same school, by year

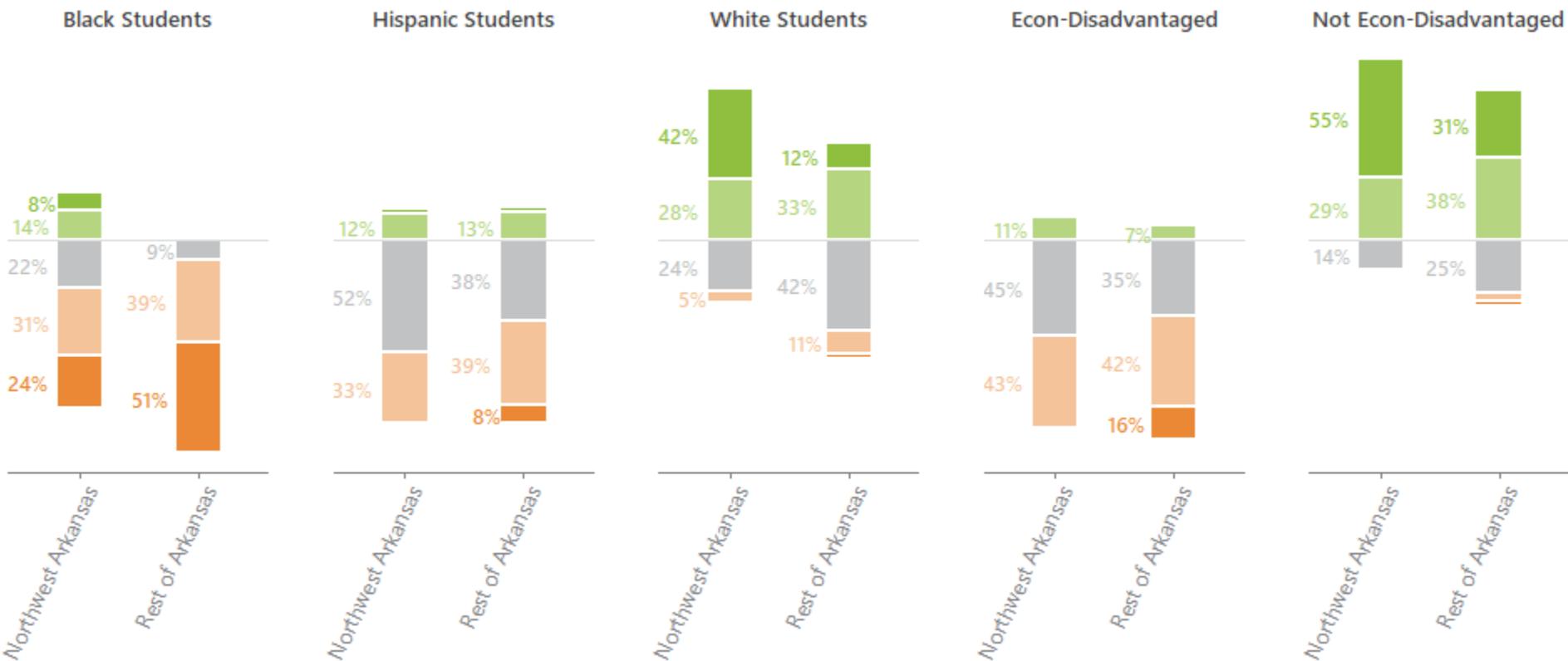


Note: For all calculations, we translated the median scores for economically disadvantaged students in a school and non-economically disadvantaged students in a school to Normal Curve Equivalents (NCEs) based on the distribution of school-level quality metrics across the entire state. NCEs are the version of the score scale that transforms scores to a distribution that scores of 1, 50 and 99 align to the same respective percentile rankings. Points on the plot represent the median difference between these two NCEs across all schools. Only schools that had at least 25 economically disadvantaged students and 25 non-economically disadvantaged students are included. We repeated this process for white students and students of color. Students of color are all students not classified as white.

This means that in Northwest Arkansas, few students of color or students from low-income families *experienced* an A- or B-rated school. However, they were still more likely to have these experiences than demographically similar peers statewide.

Who *experienced* A- or B-rated schools in 2021-22?

Percentage of students with school letter grade associated with given demographic group



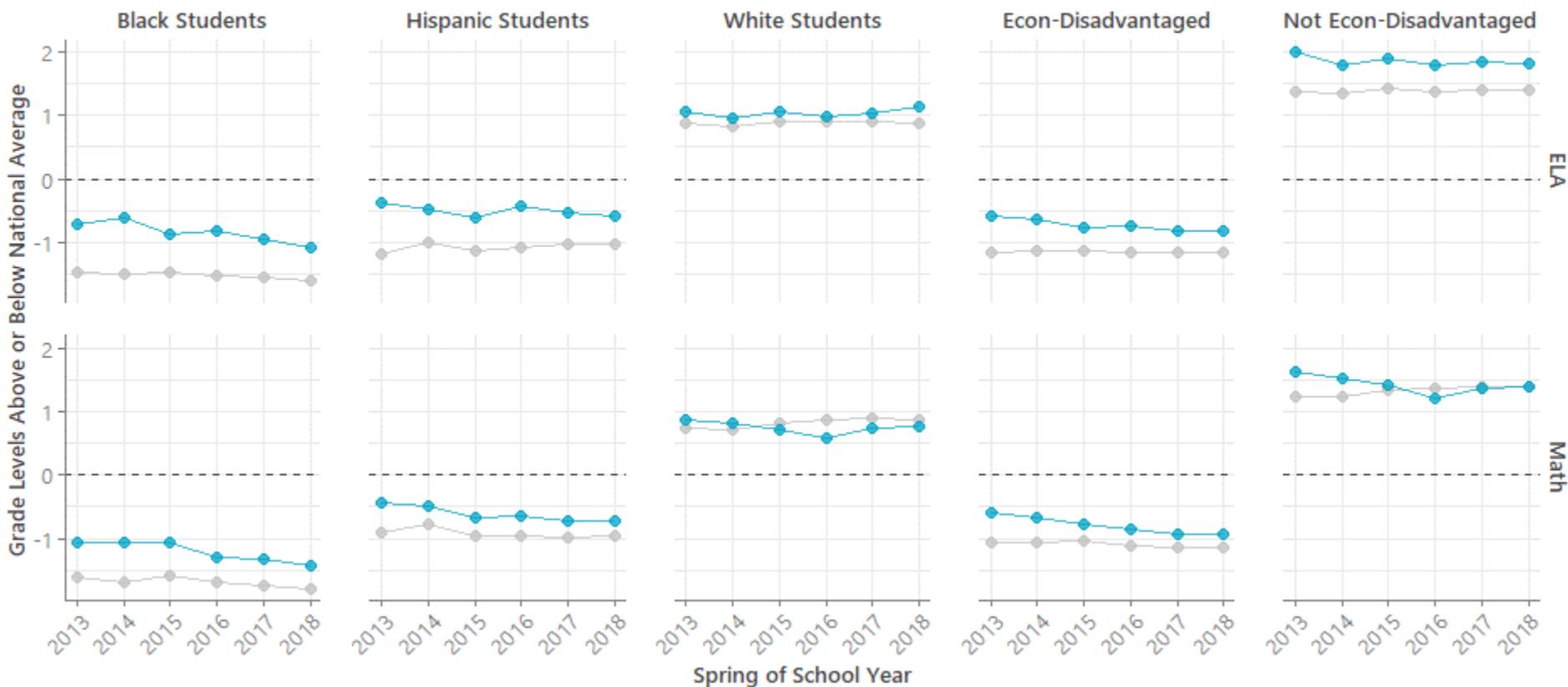
Note: Letter grades based only on scores from students in each given demographic category.

These results echo trends seen pre-pandemic: students of color and students from low-income families in NWA tended to score below national norms, but students in these groups performed markedly better than demographically similar students nationwide.

How did achievement compare to the nation for different groups of students?

Mean achievement in grade levels away from SEDA national norm by year

● Northwest Arkansas ● Same Demographic Nationwide

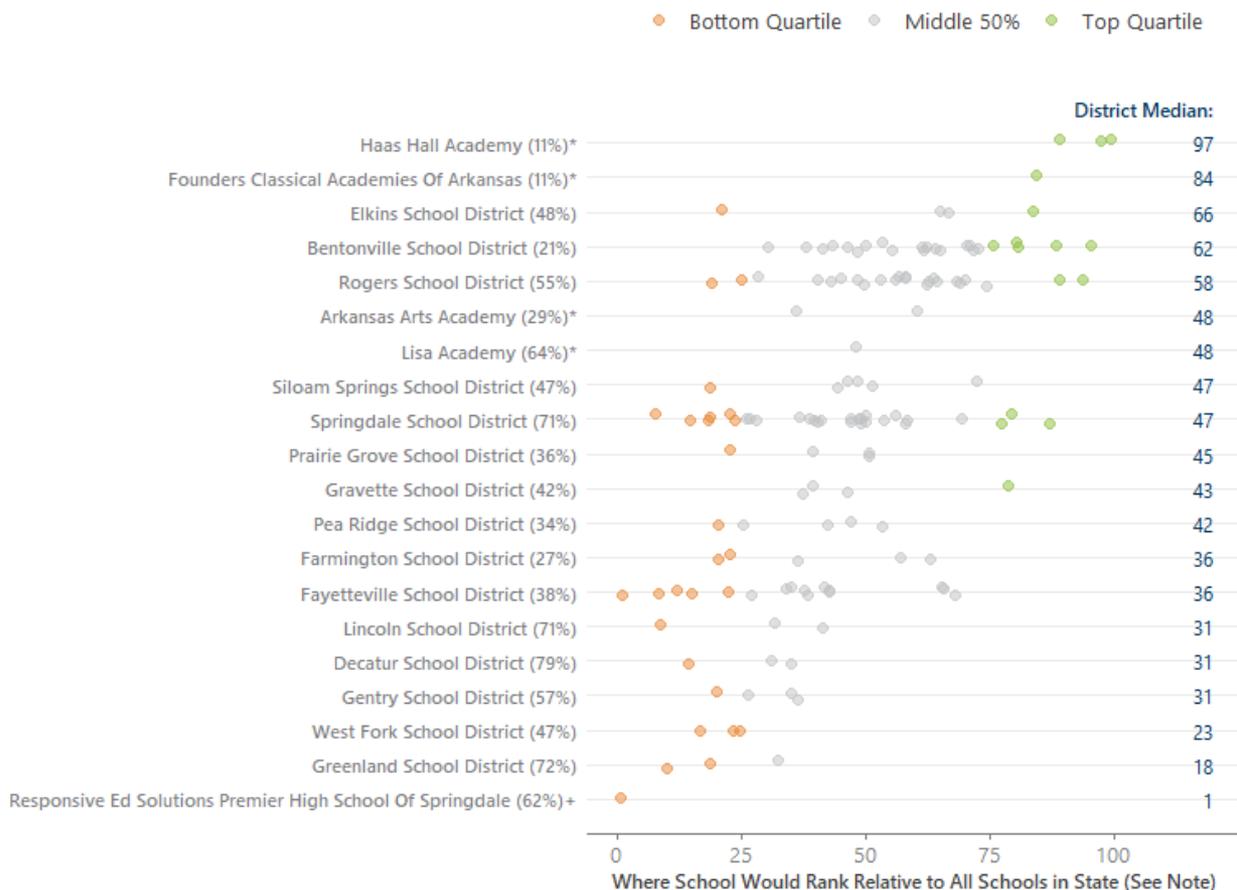


Data Source: SEDA. Annual estimates based on weighted mean of each grade-level average, where weights were the number of students represented in the demographic group.

But some districts are more effective at getting better results for historically marginalized students.

Which districts get the best results for economically disadvantaged students?

2021-22 ESSA school quality metric percentile rankings based only on economically disadvantaged students by district



Note: Percentiles are based on ranking score based only on economically disadvantaged students to all school and ED-group combinations across the state. In other words, each school in Arkansas contributes two data points on which to rank: one for their ED students and one for their non-ED students. Thus, ED students in the figure are ranked against all schools' ED scores as well as their non-ED scores. Only schools with at least 25 ED students are included. Economically Disadvantaged (ED) students are those who receive free or reduced-price lunch. My School Info separately provides information for ED students and all students in the district or school. To estimate these metrics for students not considered ED, we identified the metric score needed among non-ED students so that when combined with ED students, the result is equal to the district-wide or school-wide metric values. * Signifies an open enrollment or district conversion charter. + Signifies Alternative Learning Experience (ALE) or targeted student population. Value in parentheses is total district %FRL in 2021-2022, regardless if student contributed to ESSA scores.