



Concentrations of Poverty

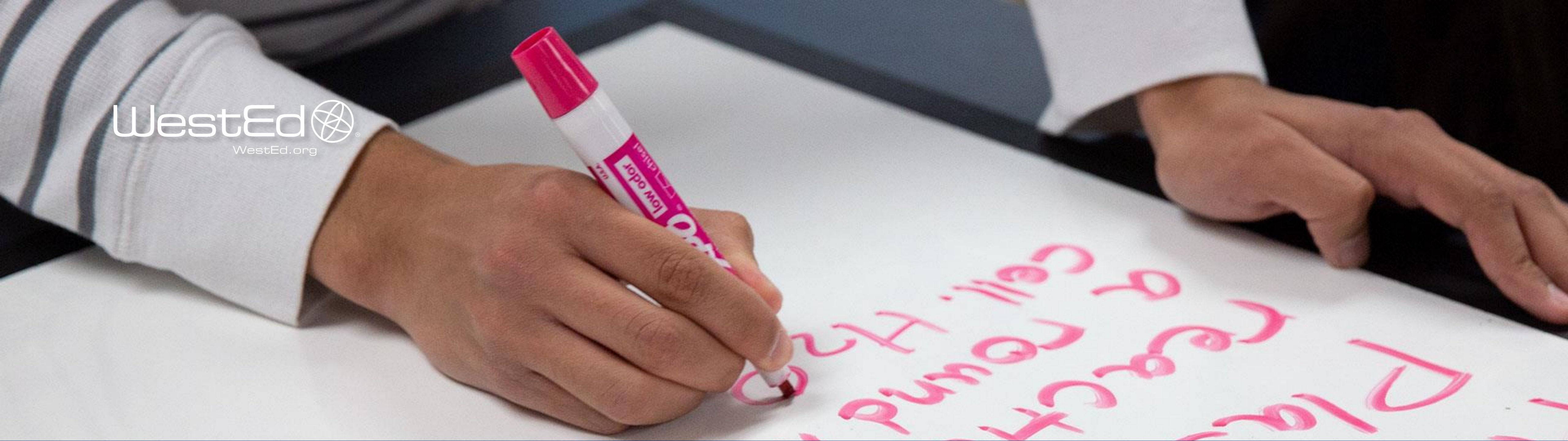
Raifu Durodoye Jr., PhD
Patrick McClellan
Lauren Outlaw
WestEd

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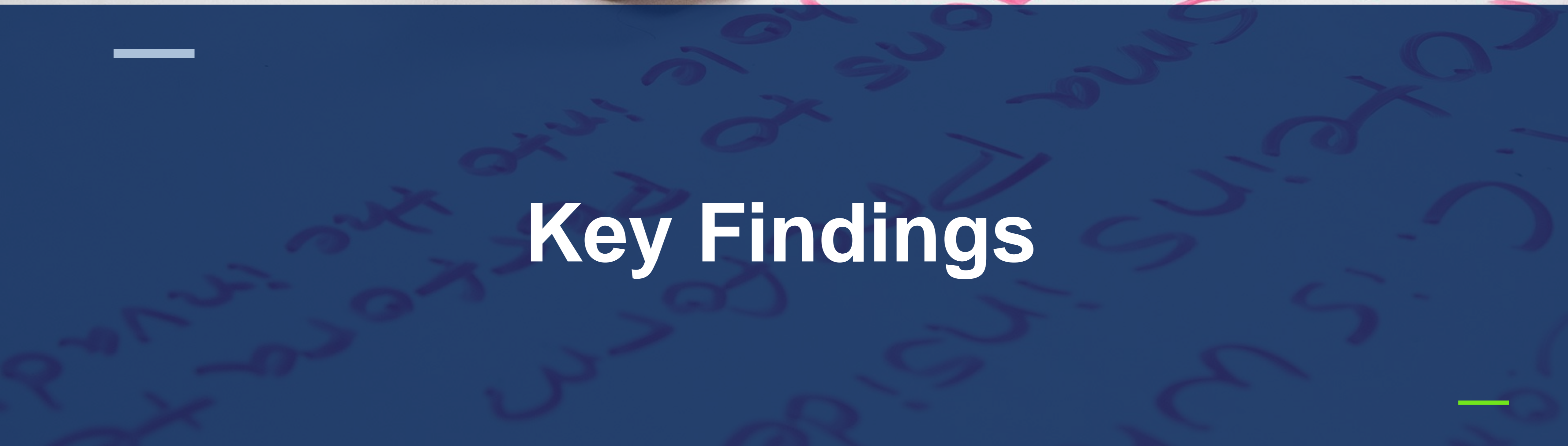


Roadmap

- 1. Key Findings**
- 2. Overview of Data and Methodology**
- 3. Analysis Overview**



Key Findings



Key Findings

- **Concentrations of poverty are highest at elementary schools in remote towns and rural areas.**
 - Schools with high proportions of low-income students tended to be small schools with high proportions of underrepresented minority students.
- **Schools with higher concentrations of poverty had lower math and ELA proficiency and growth rates.**
 - Across all levels of schooling, schools with more low-income students performed worse on ACT Aspire math and ELA exams.
- **Schoolwide poverty had a negative effect on proficiency rates.**
 - Increasing a school's proportion of low-income students was associated with a decline in the school's ELA and math proficiency.
 - A student's own socioeconomic status was more indicative of performance than the school's concentration of poverty.



Data & Methodology

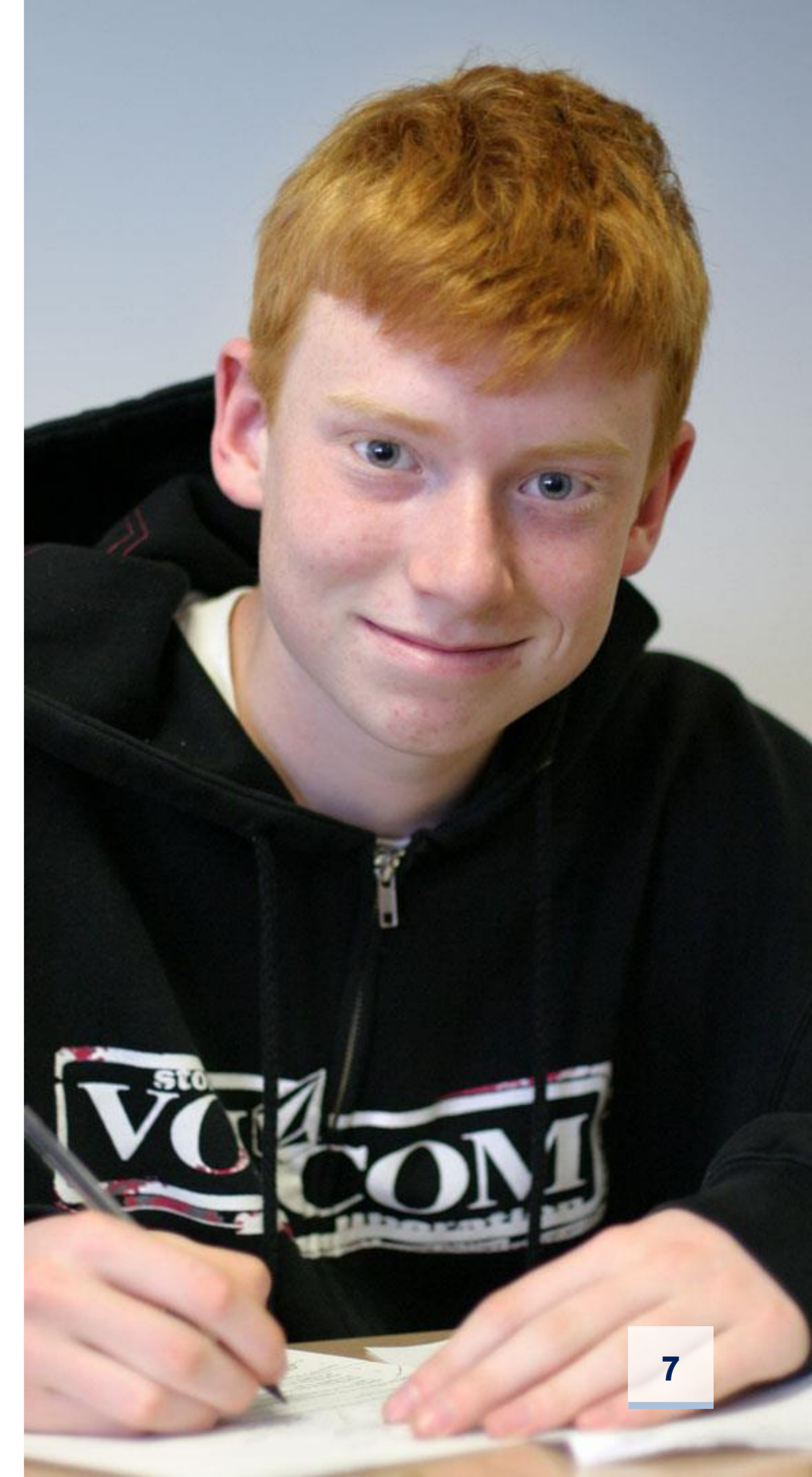
Data Sources

- **Arkansas Department of Education**
 - Student demographic data
 - ACT Aspire Math and ELA Scores
- **National Center for Education Statistics**
 - Locale and geography
- **ADE Data Center**
 - Average class size
- **Office of Education Policy at the University of Arkansas**
 - School VAM measures



Methodology

- Descriptive Analyses
 - High-level overview of concentrations of poverty in the state
- Correlational Analyses
 - Identify trends among variables of interest
- Linear Regression Analysis
 - More precise answers to key questions



Analysis Overview

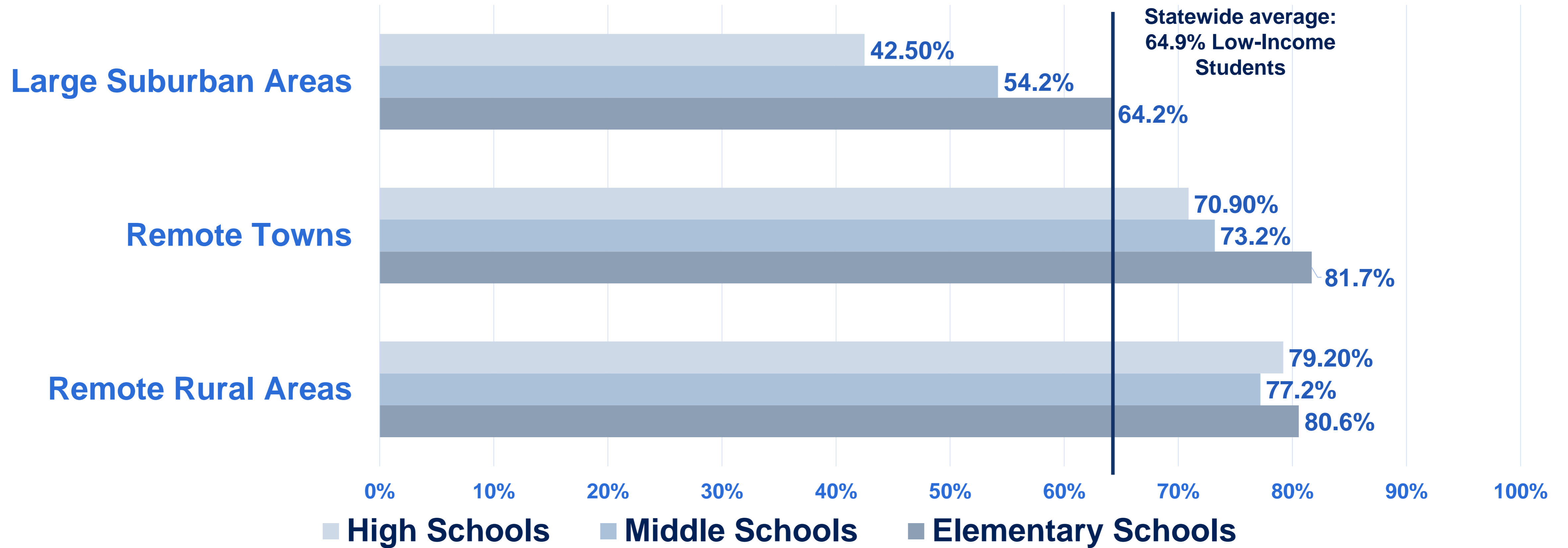
Concentrations of Poverty by Remoteness

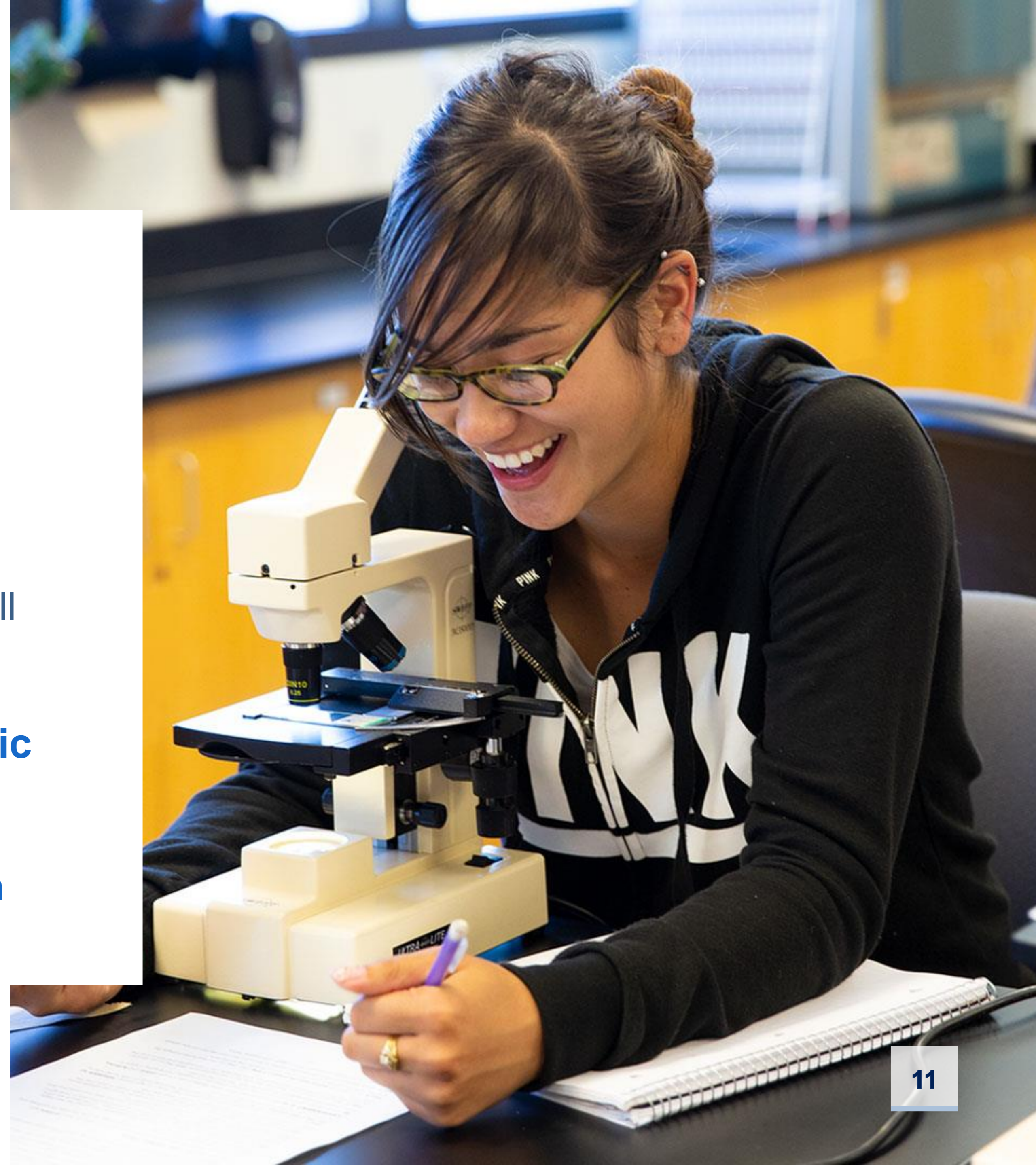
In 2019, 64.9% of public school students were economically disadvantaged

- Schools with the highest concentrations of poverty were in the towns and rural areas furthest away from larger cities.
- On average, 75% to 80% of students at these schools were low-income.
 - Schools in remote areas made up 16.5% of all public schools.
 - Schools in suburban areas had the lowest concentrations of low-income students.



Concentrations of Poverty by Remoteness and School Type

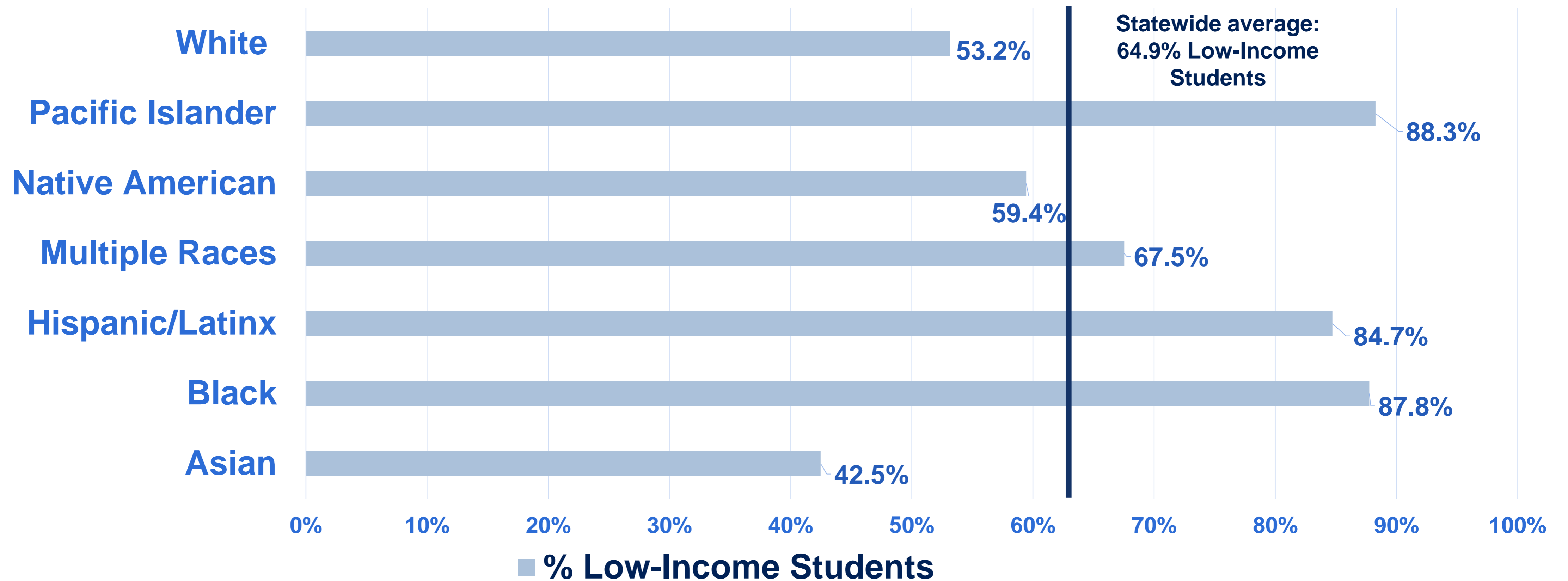




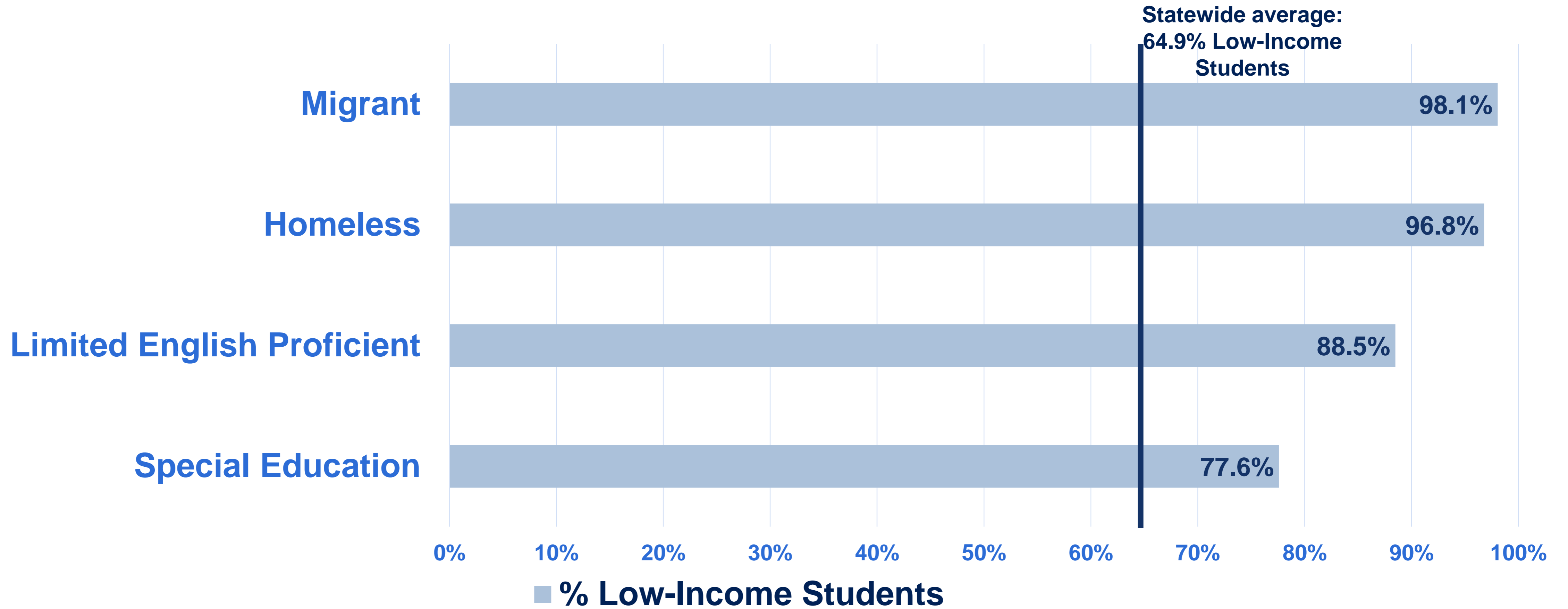
Concentrations of Poverty by Student Demographics

- In 2019, 49.68% and 26.92% of all low-income students were White and Black, respectively.
 - White students made up 60.6% of the student population; Black students made up 19.9% of all students.
- Over 84% of Black, Hispanic/Latinx, and Pacific Islander students were low-income students.
- Rates of poverty were disproportionately high among migrant, homeless, LEP and SPED students.

Low-Income Status by Race & Ethnicity

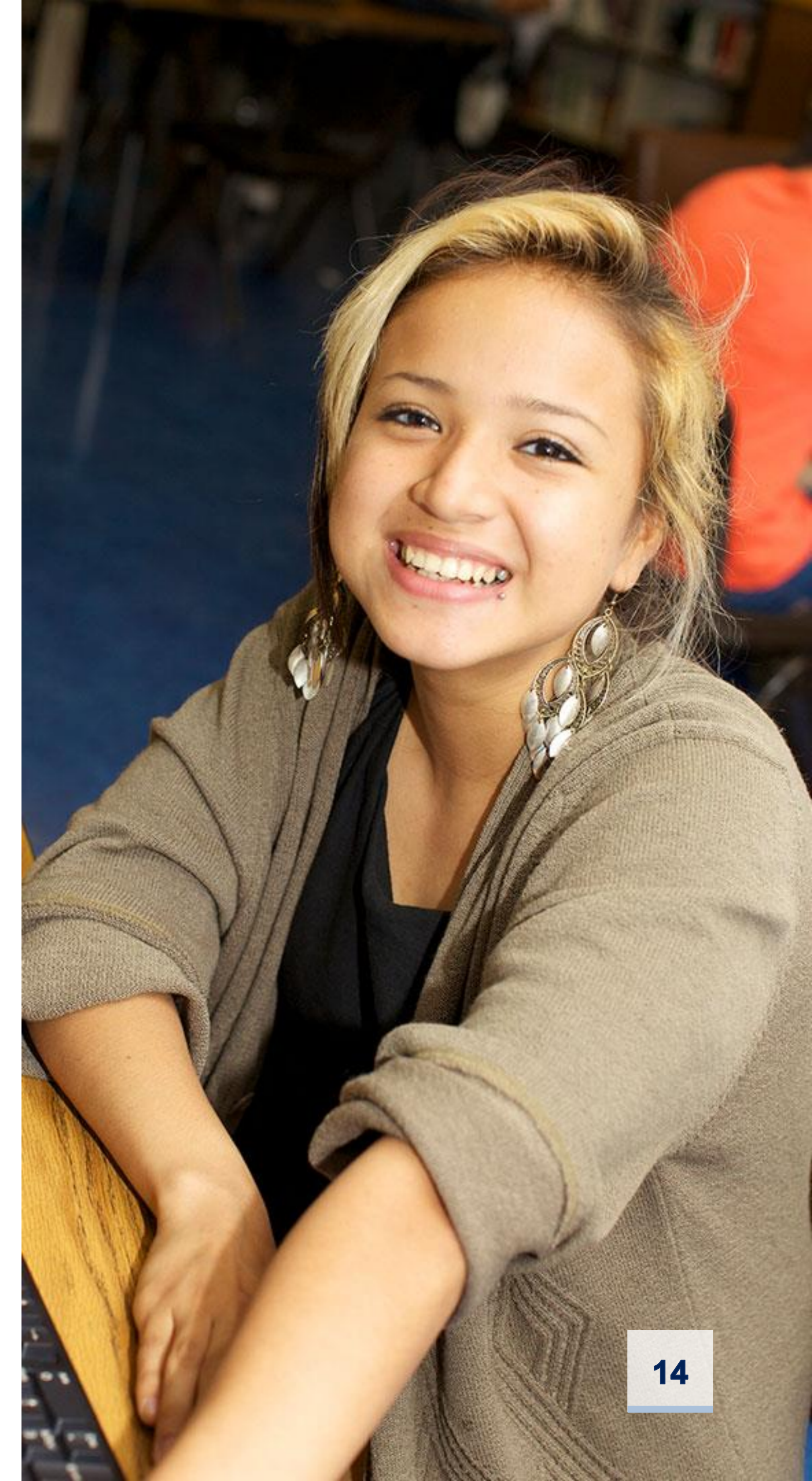


Low-Income Status by Migrant, Homeless, LEP, SPED status

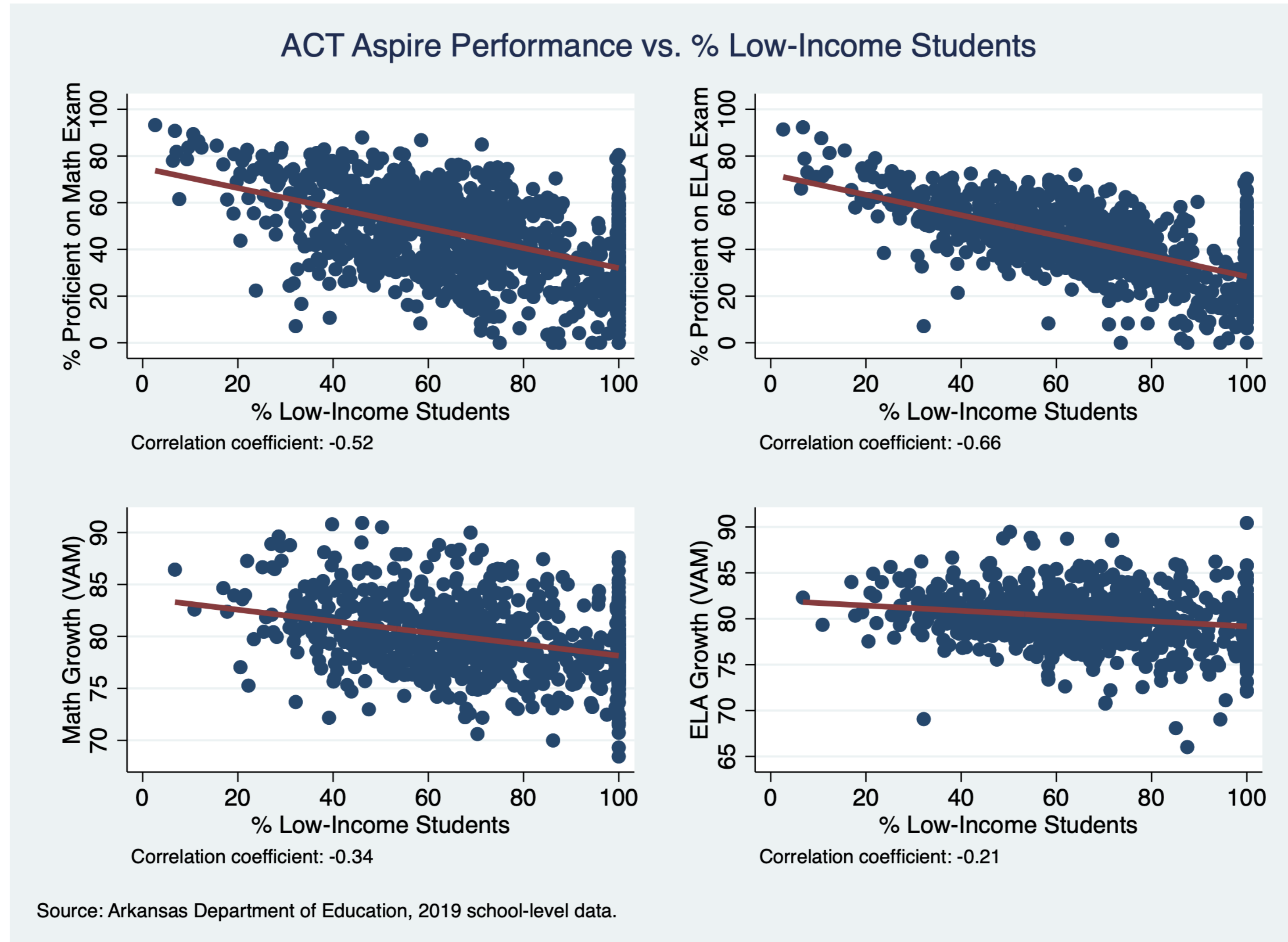


Correlations Between School Poverty and ACT Aspire Outcomes

- **Low-income students had lower scores and proficiency rates than their wealthier peers on ACT Aspire exams**
- **At schools with higher rates of poverty, students' performance on the ACT Aspire suffered**
 - There was a significant negative correlation between a school's proportion of low-income students and that school's math and ELA scaled scores and proficiency rates.
 - A school's proportion of low-income students was also negatively correlated with that school's math and ELA growth.

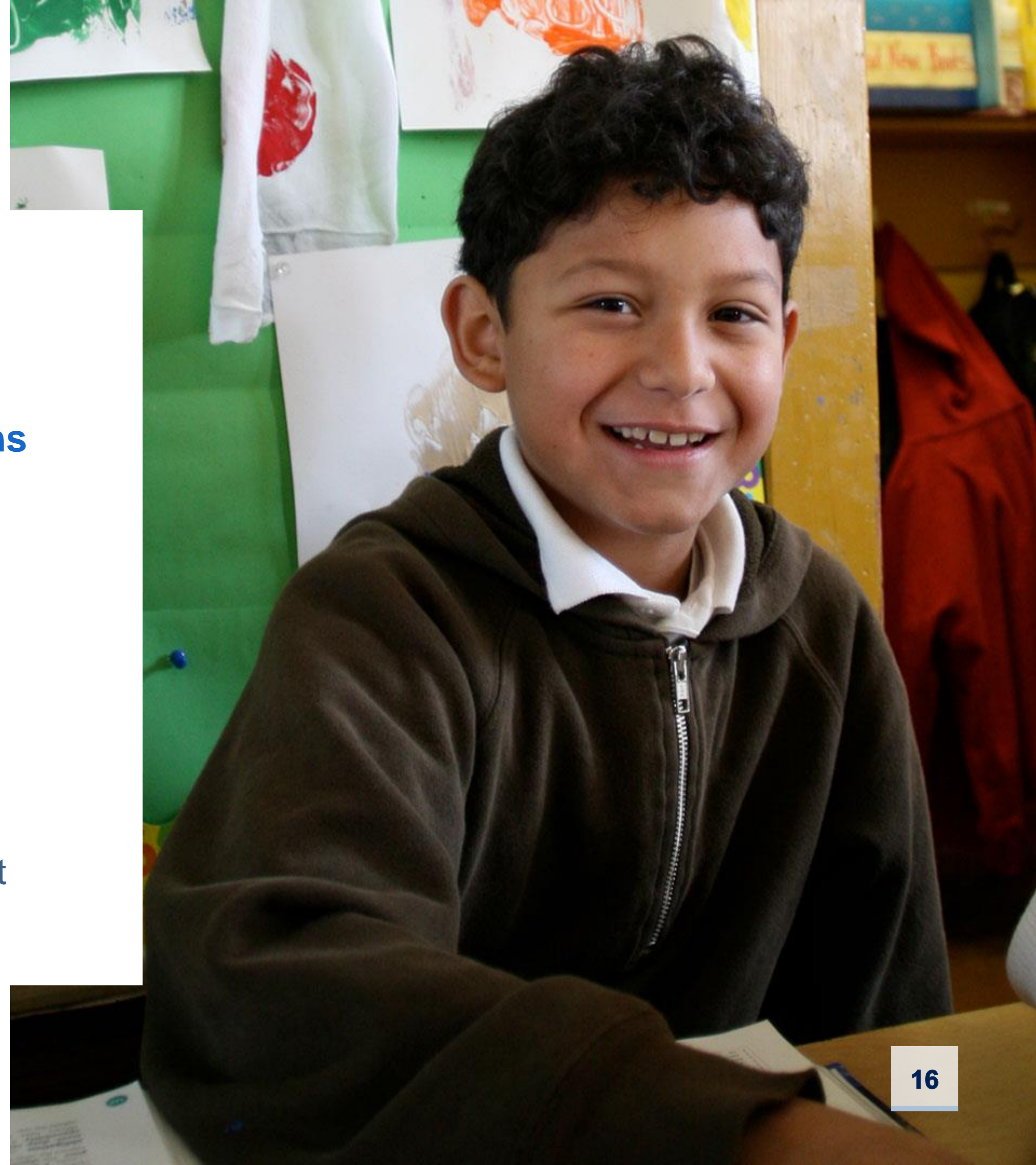


Correlations Between ACT Aspire Performance and Concentrations of Poverty



Regression Analysis

- **Framework to estimate the effect of concentrations of poverty on testing outcomes**
 - Student-level models estimate the effect of school poverty on students' scaled assessment scores, likelihood of achieving proficiency, and growth
 - School-level models estimate the effect of school poverty on a school's average scaled assessment scores, proficiency rates, and growth
 - Models control for a student's demographic and that student's performance in the prior year



Summary

- **High poverty rates had negative effects on student academic performance.**
 - A higher schoolwide poverty rate had a slight negative effect on an individual student's growth year-over-year.
 - Low-income students were 7.9 and 7.3 percentage points less likely than non low-income students to achieve proficiency in math and ELA, respectively.
- **A student's performance in the previous year was predictive of that student's performance the following year.**
 - Students who achieved proficiency on ACT Aspire Math or ELA exams in one year were more likely to do so the following year.
- **Individual student demographics mattered more than a school's concentration of poverty.**
 - Low-income, SPED, and LEP students were between **6- and 16-percentage points** less likely to achieve Math or ELA proficiency.
 - The concentration of poverty did not have the same magnitude of effect as school demographics.
 - Black and Hispanic/Latinx students achieved proficiency less often than their White peers.

Appendix A: Terms and Definitions

Descriptive Analysis: Analyses to summarize or describe data to find patterns. Descriptive analyses may entail univariate analyses that describe the distribution of variables.

Locale: A measure of a local area's population and proximity to urbanized areas, as defined by the National Center for Education Statistics. A complete list of classifications and criteria for each locale can be found [at this link](#).

LEP Students: Students with limited English proficiency

SPED Students: Students who receive individualized education to address their disability or disabilities

Proficient: A student categorized as level 3 or level 4 on an ACT Aspire assessment.

Growth: Gain in assessment scaled score between two regularly scheduled test administrations.

Correlation Coefficients: A numerical value quantifying the statistical relationship between two variables.

Linear Regression Analysis: A statistical method used to isolate the effect of one variable on another. Unlike correlational analyses, regression analyses estimate the effect of one variable (e.g. the percent of low-income students at a school) on another (a school's ACT Aspire proficiency), *while holding all other variables constant*.

Appendix B: Concentrations of Poverty by Locale and School Type



Graphs by locale

Appendix C: Correlations Between Concentrations of Poverty and Selected Demographics

