Identification of Gaps

This brief provides the study team's analytical findings on the following research questions:

1. Do proficiency and growth gaps exist in Arkansas by student demographics?
2. Do student achievement gaps vary by funding level?

Methodology

The study team conducted an exploratory data analysis to identify gap areas in proficiency, growth, and per-pupil spending in Arkansas.[1] The team examined (i) student-level demographic and school-level expenditure data, and (ii) school-level proficiency and value-added (VAM) growth measures on the ACT Aspire state standardized assessment.[2] The team studied proficiency across different student demographics and compared proficiency rates and per-pupil spending levels between high-need students and their peers. These preliminary analyses enabled the team to report on relationships between school demographics and academic outcomes, as well as the approximate magnitude of correlations.

Summary of Key Findings

The statewide proficiency rate on the ACT Aspire for ELA in tested grades was 43.7% in 2019. In math, 46.6% of Arkansas students in tested grades were proficient. Examining subsets of the student population demonstrate that—in both ELA and math—students with disabilities (SPED), students of color, and low-income and limited English proficient (LEP) students all had lower proficiency rates than the state average. Moreover, these students displayed significant gaps in terms of the percentage of students proficient when compared to their counterparts. The table below provides the proficiency rates of at-risk student groups within the state, and compares these students' proficiency rates and gaps. As the table demonstrates, the gaps between disadvantaged students and their peers are substantial.

Student Population	Proficiency Rate	Comparison Group Proficiency Rate	Gap
ELA			
Low-income students	34.6%	63.1% (Non Low-income Students)	28.5%
LEP Students	13.8%	47.1% (Non LEP Students)	33.3%
Students w/ Disabilities	7.2%	49.8% (Non SPED students)	42.6%
URM Students	33.0%	55.4% (White & Asian Students)	22.4%
Math			
Low-income students	38.2%	64.6% (Non Low-income Students)	26.4%
EL Students	22.6%	49.6% (Non LEP Students)	27.0%
Students w/ Disabilities	12.2%	52.5% (Non SPED students)	40.3%
URM Students	32.3%	54.3% (White & Asian Students)	22.0%

[1] The data was provided by the Arkansas Department of Education, the MyADE site, or the Office of Education Policy at the University of Arkansas. Performance data is from the 2019 academic year and expenditure data is from the 2018 academic year.

[2] VAM measures are a broad categorization of statistical techniques used to attribute positive or negative student academic performance to teachers, schools, or districts.

In addition to examining ACT Aspire proficiency rates, the team also analyzed student growth. The results suggested that academic growth in ELA and math decline as the percentage of high-need students within a school increase. One exception was LEP students in ELA; as the percentage of EL students in a school increased, so too did ELA growth as measured by the ACT Aspire. The analysis illustrated that growth along with proficiency decline as school serve larger percentages of high need students. Additionally, we see from the analysis that growth measures are less correlated with student demographics than proficiency measures. That is, growth is less dependent on student demographics and more dependent on the school's ability to academically support student learning. The team also found that while per-pupil funding varied based on student demographic type, it also found that (i) these differences did not amount to more than $800 additional dollars per-pupil, (ii) none of the groups analyzed received more than 9% more in per-pupil funding than any other group, and (iii) racial/ethnic groups that received more per-pupil funds comparatively were disproportionately low-income.