

Persistent Unequal Access to Educational Opportunity in Pennsylvania

For K-12 Students

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Introduction

Pennsylvania's students consistently score above the national average on overall student achievement.¹ However, the state's achievement gaps between White and Black students, and White and Hispanic students are consistently among the worst in the country. While student poverty is a strong predictor of achievement gaps by race or ethnicity, the size of Pennsylvania's racial achievement gaps are larger than would be expected based on disparities by poverty.²

Unequal *access* to educational opportunity likely contributes to Pennsylvania's large achievement gaps³ (see call-out box defining "Access").

To help policymakers and the public further understand educational opportunity in Pennsylvania and across all 50 states, Research for Action has developed the [Educational Opportunity Dashboard](#), a tool that allows users to evaluate how well each state is providing its primary and secondary public school students with access to educational opportunity by using the most recent biennial Civil Rights Data Collection (CRDC) data from 2017-18.⁴ The Dashboard also allows users to compare and rank access for all students, for subgroups of students by race/ethnicity and family income, and by gaps in access between subgroups in all 50 states.

ACCESS: A First Step to Opportunity

In this study, students are presumed to have access to an educational opportunity if they merely attend a school that provides the opportunity. For example, if a student attends a school that offers an Advanced Placement (AP) course or attends a school with a low student/teacher ratio, that student is considered to have access to those indicators of opportunity. Of course, this does not necessarily mean that the student is receiving the opportunity. The student may or may not be enrolled in an AP course or in classroom with a low student/teacher ratio. Some Civil Rights Data Collection (CRDC) indicators are only available at this basic level of access. For consistency we examined all 14 indicators in this way. In addition, by examining this threshold question, we can narrow in on how well policymakers are taking the first step to providing adequate and equitable opportunities to their students regardless of race or poverty.

¹ U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) Assessment.

² Stanford Center for Education Policy Analysis. "The Educational Opportunity Monitoring Project." February 2015. Accessed at <https://cepa.stanford.edu/educational-opportunity-monitoring-project/achievement-gaps/race/>

³ The terms "unequal access" and "inequitable access" are used interchangeably.

⁴ RFA published an earlier version of the Education Opportunity Dashboard in 2020. That version used a similar set of CRDC data representing the 2015-16 school year. The 2020 Dashboard only included secondary schools while the new Dashboard includes

This brief presents findings describing how Pennsylvania compares to other states in providing its students with access to educational opportunity. Following a more detailed discussion of the indicators we use to define educational opportunity, we first examine Pennsylvania's rankings on overall access and then how Pennsylvania compares to other states on gaps in access to educational opportunity between 1) White and Black students, 2) White and Hispanic students, and 3) students eligible for free/reduced price lunch (FRPL) and students who are not eligible (non-FRPL). Finally, we discuss how racial gaps in access to education vary when separately examining subsets of schools characterized as having high-, medium-, or low-concentrations of student poverty.⁵

Key Findings for Pennsylvania

- Overall, students in PA are provided above average access to educational opportunity compared to students in the nation, but disparities by race/ethnicity and income are stark.
- White students in PA are provided greater access to educational opportunity compared to White students in most states.
- In contrast, Black and Hispanic students in PA are provided less access to educational opportunity than Black and Hispanic students in most states.
- PA's gaps in access to educational opportunity are among the largest when it comes to providing equal opportunity across racial and income groups, ranking the state in the bottom two in the nation. On the Average Opportunity Score (described in more detail below), PA's Black students, Hispanic students, and free/reduced price lunch (FRPL) eligible students all experience at least an 11-percentage point gap compared to their White and non-FRPL-eligible peers.
- Two factors contribute to PA's deep racial inequity in access to educational opportunity:
 - First, Black and Hispanic students are disproportionately enrolled in high-poverty schools and those schools provide less access to educational opportunity. Only 4% of enrolled students in low-poverty schools are Black and 5% of enrolled students in low-poverty schools are Hispanic. In contrast, White students are disproportionately enrolled in low-poverty schools, which provide higher access to opportunity.
 - Second, even within schools with medium or high concentrations of poverty, White students are more likely than Black and Hispanic students to be enrolled in those schools that provide greater access to educational opportunity.

These findings are consistent with what RFA found in 2020 with the release of the first version of the Educational Opportunity Dashboard, which was based on 2015-16 data. However, this analysis of the more recent 2017-18 CRDC data shows that Pennsylvania's national rankings on race and income disparities are generally larger than they were two years ago. As we stated then, the following remains true: **While troubling disparities in access to educational opportunity by race and income exist in most states, the size and pervasiveness of PA's gaps are among the most severe in the country.**

both primary and secondary schools when applicable. The 2020 Dashboard is available at <https://www.researchforaction.org/project/educational-opportunity-dashboard/>.

⁵ Following the U.S. Department of Education's definition, high-poverty schools are those with at least 75% of students eligible for FRPL; mid-poverty schools are those with between 25% to 75% of students eligible for FRPL; and low-poverty schools are those with 25% or fewer students eligible for FRPL. The Condition of Education 2019 (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144>.



Pennsylvania’s Student Demographics Compared to the Nation

As shown in Table 1, PA has a smaller percentage of K-12 students of color (specifically, Hispanic, Asian, and other students of color⁶) and free/reduced price lunch (FRPL)-eligible students than does the nation overall.

Table 1: K-12 Students by Race and Income Status in PA vs. Nation, 2017-18

Region	Race/Ethnicity					FRPL-Eligible
	White	Black	Hispanic	Asian	Other	
PA	65%	16%	11%	4%	4%	46%
Nation	47%	16%	27%	5%	5%	51%

Nationwide, over 50% of students are non-White compared to 35% in PA. Among students of color, Hispanic students make up the largest group nationwide (27%), while Black students are the largest group in PA (16%). The share of FRPL-eligible students in PA (46%) is slightly lower than the nation overall (51%).

The Educational Opportunity Dashboard

RFA’s Educational Opportunity Dashboard draws on the 2017-18 federal Civil Rights Data Collection (CRDC), which includes data on virtually every public school in the nation. The Dashboard compares disparities in access to educational opportunity at the state and national levels. All 50 states are ranked on 14 CRDC indicators, which are compiled into an overall “**Average Opportunity Score**” and used to create composite indexes on the following three Access to Educational Opportunity domains:

1. Access to Quality Educators Index
2. Access to a Positive School Climate Index
3. Access to College and Career Readiness Curriculum Index⁷

The Dashboard ranks states on both overall access scores and by the size of gaps in access scores by student race and poverty subgroups. Table 2 provides definitions and explains which indicators comprise each Access to Educational Opportunity index. For a further description and definition of the analytic sample of schools used for this report, please refer to the [Technical Appendix](#).

⁶ Other students of color include students who identified as American Indian or Alaskan Native, Native Hawaiian or Pacific Islander, or two or more races.

⁷ The Access to College and Career Readiness Curriculum Index is only applicable to secondary schools. Please refer to the [Technical Appendix](#) for further description.

Table 2: Access to Educational Opportunity Indicators and Definitions

Educational Access Indicators	Definition
Average Opportunity Score	<p>An average score for access to educational opportunity was created by averaging the scores across the three composite indexes, as described below.</p> $\frac{\text{Access to Quality Educators Index \%} + \text{Access to Positive School Climate Index \%} + \text{Access to College and Career Readiness Curriculum Index \%}}{3} = \text{Average Opportunity Score \%}$
Access to Quality Educators Index	A composite index for access to quality educators created by averaging the scores across the five indicators listed below.
Certified Teachers	Percentage of students who attend a school in which all teachers have met all applicable state teacher certification requirements.
STEM Certified Teachers	Percentage of students who attend a school in which all science and math courses are taught by teachers certified in math and science.
Experienced Teachers	Percentage of students who attend a school in which the percentage of teachers with more than two years of experience is at or above the U.S. median of 91.2%.
Low Student/Teacher Ratio	Percentage of students who attend a school with a student/teacher ratio at or below the U.S. median of 14.9:1.
Low Student/Counselor Ratio	Percentage of students who attend a school with a student/counselor ratio at or below the recommended ratio of 250:1.
Access to Positive School Climate Index	A composite index for access to a positive school climate created by averaging the scores across the four indicators listed below.
Low Suspension Rate	Percentage of students who attend a school with a suspension rate that is at or below the U.S. median of 2.3%.
Low Chronic Absenteeism Rate	Percentage of students who attend a school with a chronic absenteeism rate that is at or below the U.S. median of 12.8%.
Teacher Chronic Absenteeism Rate	Percentage of students who attend a school with a teacher chronic absenteeism rate that is at or below the U.S. median of 25.7%.
Low Grade Retention Rate	Percentage of students who attend a school with a grade retention rate that is at or below the U.S. median of 0.3%.
Access to College and Career Readiness Curriculum Index	A composite index for access to college and career readiness curriculum created by averaging the scores across the five curriculum indicators listed below.
Advanced Math	Percentage of students who attend a secondary school that offers Advanced Math (i.e., trigonometry, analytic geometry, probability and statistics, precalculus).
AP Course/Dual Enrollment	Percentage of students who attend a secondary school that offers Dual Enrollment or AP courses.
Calculus	Percentage of students who attend a secondary school that offers Calculus.
Chemistry	Percentage of students who attend a secondary school that offers Chemistry.
Physics	Percentage of students who attend a secondary school that offers Physics.

Note: This table presents, when applicable, the indicator-level median thresholds for all schools in our analytic sample. When analyses are restricted to primary (K-8) or secondary (9-12) schools in the analytic sample, the indicator median thresholds are calculated using only the schools within the respective sample (i.e., primary and secondary schools have their own thresholds). For further discussion and to view the indicator-level median thresholds for primary and secondary schools, please see the [Technical Appendix](#).

Overall Access to Educational Opportunity in Pennsylvania

Our analysis reveals that, for students overall, PA schools provide above average access to educational opportunity. As described above, the Average Opportunity Score on RFA’s Educational Opportunity Dashboard is an average of student access to opportunity across the three indexes: (1) quality educators, (2) positive school climate, and (3) college/career readiness curriculum. In PA, 58% of all school students have access to quality educators, 44% have access to a positive school climate, and 94% have access to college/career readiness curriculum for an **Average Opportunity Score of 65% for all students.** The national Average Opportunity Score was 61%. As shown in Table 3, PA students rank 17th nationwide on overall access to educational opportunity.

Table 3. Average Opportunity Scores and Rankings in PA Schools by Race/Ethnicity and Income, 2017-18

	All students	Race/Ethnicity				Income Status	
		White	Black	Hispanic	Asian	FRPL	Non-FRPL
Average Opportunity Score	65%	70%	53%	57%	65%	58%	68%
How Does Pennsylvania Compare? (Rank Out of 50 States)	17	10	40	34	21	30	16

Note: Each subgroup is ranked against the same subgroup of students in other states, e.g., the opportunity score for White students in PA are ranked against the opportunity scores for White students in the other 49 states, etc.

Yet disparities by race/ethnicity and income are stark. As Table 3 shows, White and Asian students in PA have higher Average Opportunity Scores compared to White and Asian students in most states. In contrast, Black and Hispanic students in PA rank lower on the Average Opportunity Score than do their Black and Hispanic peers in most states. Likewise, students eligible for free/reduced price lunch (FRPL) in PA rank lower than their FRPL-eligible peers in most states, while students in PA who are not eligible for FRPL rank higher than non-eligible FRPL students in most states.

No other state in the nation provides such high access to educational opportunity to its White students and students from higher-income families while providing such low access to educational opportunity for its Black and Hispanic students, and students from low-income families. This explains why PA has among the largest gaps in access to educational opportunity by student race and income. We explore these relative gaps in more detail in the next section.

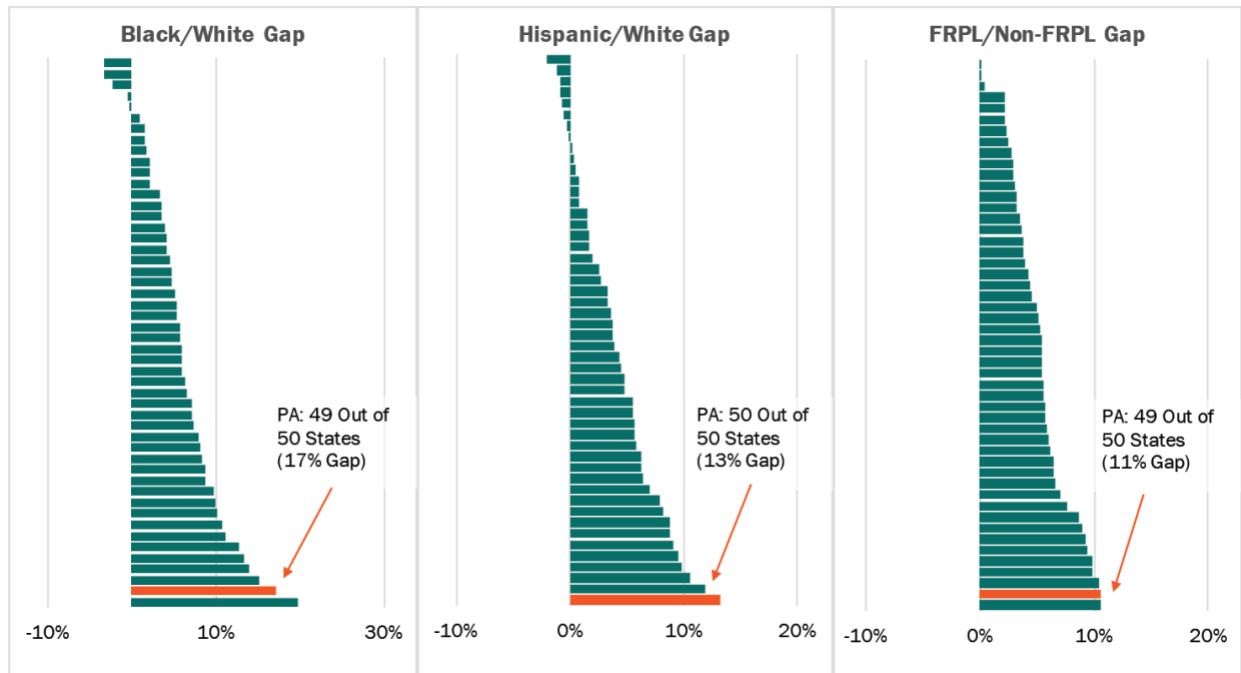
Gaps in Access to Educational Opportunity

The Educational Opportunity Dashboard also measures and ranks states by the size of the gaps in access to educational opportunity between students of different races and income groups. Here we first examine and compare Pennsylvania’s gaps on the Average Opportunity Score, followed by a more detailed analysis of gaps on each of the three educational opportunity indexes, as well as on the individual indicators that comprise each domain.

Pennsylvania's Gaps in Average Opportunity Score Are Among the Most Inequitable in the Country

Overall gaps in access to educational opportunity between racial and income groups in PA schools are consistently among the largest nationally. Figure 1 shows the gaps in Average Opportunity Score between Black and White, Hispanic and White, and free/reduced price lunch (FRPL)-eligible and non-FRPL-eligible students in all states.

Figure 1. Gaps in Average Opportunity Score in Schools, by Race/Income Gaps and State



Schools in PA have the largest gap in Average Opportunity Score between Hispanic and White students in the nation, the second largest between Black and White students, and the second largest between students eligible and not eligible for FRPL.

Pennsylvania is the only state that ranks among the bottom three on each type of gap. Other states with low rankings relating to these gaps include Connecticut, New York, Wisconsin, Maryland, Massachusetts, and Illinois.

Gaps in Access to Educational Opportunity by Domain

A more detailed look at the three domains of educational opportunity included in this analysis reveals the breadth of inequity for PA's students in access to (1) quality educators, (2) a positive school climate, and (3) college and career readiness curriculum. This section describes disparities in access according to these three indexes of educational opportunity and examines gaps across each of the individual indicators within each index. Table 4 provides PA's national ranking on race and income gaps on each index and indicator.

Table 4. PA State Ranking on Race/Income Gaps in Access to Educational Opportunity, by Index and Indicators (lower rank = larger gap)

Educational Access Indicators	How Do Pennsylvania Schools Compare? (Rank Out of 50 States)		
	Black/White Student Opportunity Gap	Hispanic/White Student Opportunity Gap	FRPL/Non-FRPL Student Opportunity Gap
Average Opportunity Score	49	50	49
Quality Educators Index	46	46	48
Certified Teachers	50	48	47
Experienced Teachers	50	49	48
Low Student/Counselor Ratio	15	7	22
Low Student/Teacher Ratio	49	46	49
STEM Certified Teachers	44	47	49
Positive School Climate Index	44	49	31
Low Grade Retention	38	28	42
Low Student Absenteeism	47	41	44
Low Suspension Rate	46	48	17
Low Teacher Absenteeism	5	20	26
College/Career Readiness Curriculum Index	48	49	44
Advanced Math	44	43	33
AP Course/Dual Enrollment	49	50	48
Calculus	50	50	49
Chemistry	48	46	43
Physics	47	47	36

Note: Darker shades of orange represent lower national rankings.

Table 4 demonstrates that, in addition to the low rankings on gaps by race and income on the Average Opportunity Score, **PA ranks low on race and income gaps on each of the three indexes and on most of the individual indicators.**

Across all three indexes, PA's Black/White gap ranks among the bottom **seven** states. PA's Hispanic/White Average Opportunity Score gap is the largest in the nation. Among the indexes, PA's gaps are especially troubling on College/Career Readiness Curriculum index.

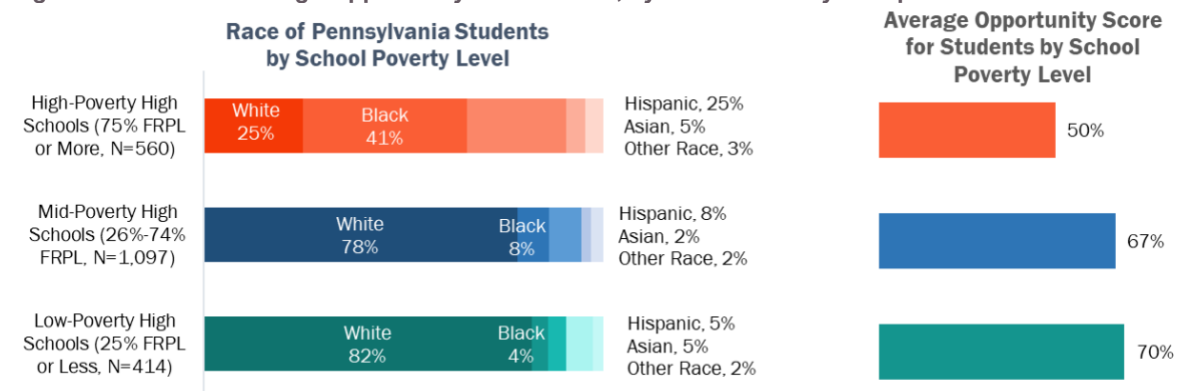
Are Gaps in Access to Educational Opportunity Attributable to Poverty?

To better understand the compounding impacts of student race and student poverty, we also compared gaps by student race within subsets of schools with similar levels of student poverty: low-, mid-, and high-poverty schools.⁸ Even when controlling for school poverty in this way, stark racial inequities in access exist and are driven by at least two factors: (1) racial disparities in rates of enrollment in low-, mid-, and high-poverty schools which provide, respectively, high, mid, and low levels of access to educational opportunity; and (2) substantial racial inequality even within mid- and high-poverty school groups. Below we discuss how each factor reveals that **disparities in access to educational opportunity in PA are not merely attributable to poverty.**

Factor 1: Disparities in Enrollment and Access to Opportunity between Low, Mid, and High Poverty Schools

As shown in Figure 2, Black and Hispanic students in PA are disproportionately enrolled in high-poverty schools, and those schools provide less access to educational opportunity. Conversely, White students make up a disproportionate share of students in low-poverty schools, which provide higher access to opportunity than high-poverty schools.

Figure 2. Race and Average Opportunity Scores in PA, by School Poverty Groups

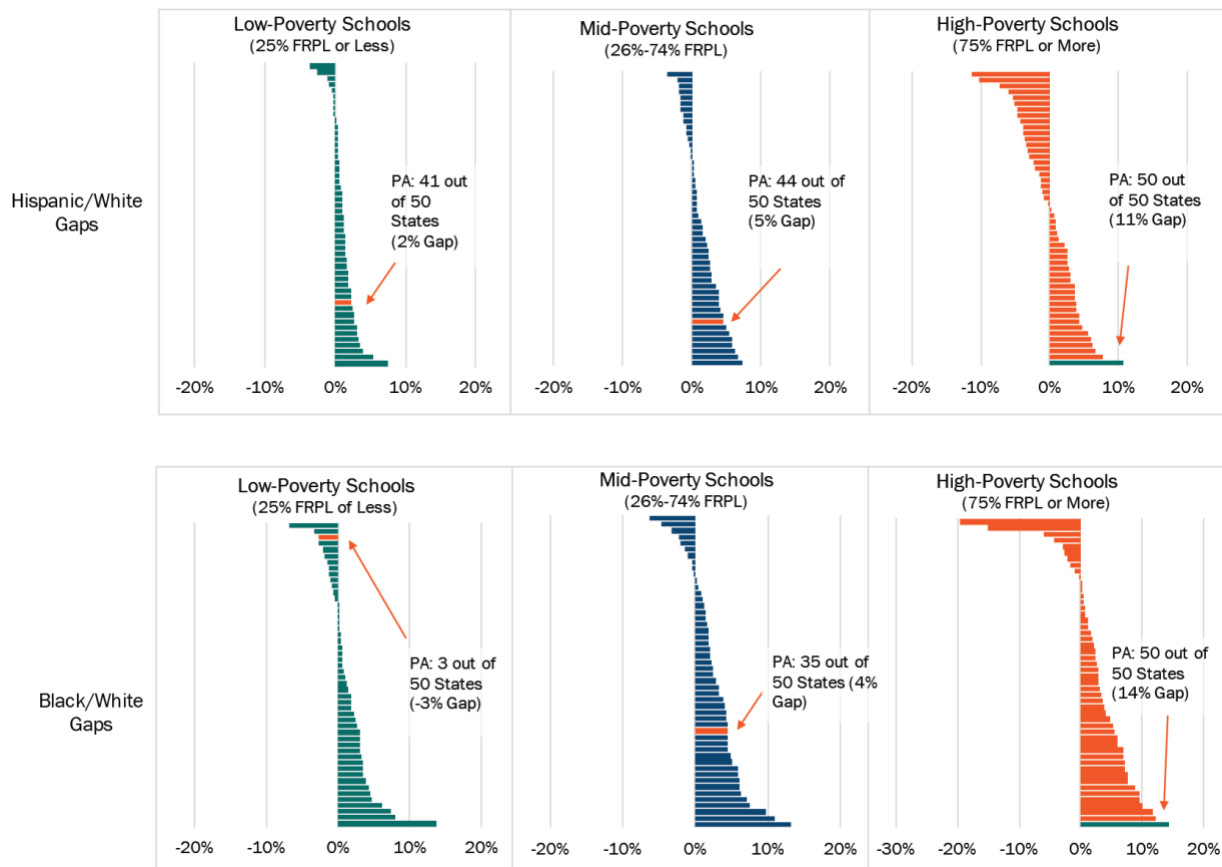


Factor 2: Racial Disparities in Access to Educational Opportunity Within Mid- and High Poverty Schools

Figure 3 shows that, even within schools with mid and high levels of poverty (where Black and Hispanic students are overrepresented), White students are more likely than Black and Hispanic students to be enrolled in schools that provide increased access to educational opportunity. The gaps in access to educational opportunity between Black and White students in low- and high-poverty schools in PA are stark; the gap is -3% in low-poverty schools but increases to 14% in high-poverty schools.

⁸ Following the U.S. Department of Education's definition, high-poverty schools are those with at least 75% of students eligible for FRPL; mid-poverty schools are those with between 25% to 75% of students eligible for FRPL; and low-poverty schools are those with 25% or fewer students eligible for FRPL. The Condition of Education 2019 (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144>.

Figure 3. Gaps in Average Opportunity Score, by Race and School Poverty Groups



Racial gaps in access to opportunity are present in low- and mid-poverty schools, but are most severe in high-poverty schools, positioning PA as the worst state in the nation on racial gaps in high-poverty schools. Notably, gaps between Black and White students, as well as gaps between Hispanic and White students are minimal in PA’s low-poverty schools, though relatively few Black or Hispanic students are enrolled in those schools (4% of enrolled students in PA’s low-poverty schools are Black; 5% of enrolled students in PA’s low-poverty schools are Hispanic).

Key Differences Between 2015-16 and 2017-18:

RFA’s original version of the Educational Opportunity Dashboard was published in January 2020 and based on data reflecting the 2015-16 school year. The original dashboard only included secondary school students, whereas K-8 students are now included in the updated Dashboard, with the exception of the Curriculum Index which is only applicable to secondary schools. Below we compare rankings and scores on the original Dashboard to the updated Dashboard for secondary schools. We find that on the Average Opportunity Score and each of the three main indexes, PA’s national ranking dropped or remained the same on race and income gaps in access to educational opportunity:

- The Average Opportunity Score for all secondary school students in PA in 2015-16 was 64%, ranking PA 15th best among the 50 states. The score stayed the same in 2017-18, but PA’s national ranking dropped to 16th.

- The Black/White opportunity gap was large among PA secondary school students in 2015-16 (14.9% gap), and became even worse in 2017-18 (18.4% gap) compared to other states. PA's Black/White gap ranked fourth-to-last (47th) in 2015-16 and second-to-last (49th) in 2017-18. Only Wisconsin ranked worse in 2017-18.
- Similarly, relative to other states, PA's Hispanic/White opportunity gap became worse from 2015-16 (11.6% gap) to 2017-18 (14.2% gap). While PA ranked fourth-to-last (47th) in 2015-16, it ranked last (50th) in 2017-18.
- Finally, PA's ranking on the free/reduced price lunch (FRPL)-eligible/non-FRPL-eligible Average Opportunity Score also dropped from ranking fifth-to-last (46th; 10% gap) in 2015-16 to last (50th; 12.9% gap) in 2017-18.

Conclusion

This deeper dive into Pennsylvania's data reveals that, even amidst persistent national inequity among race and income groups, the degree of inequity that exists in access to educational opportunity in Pennsylvania stands among the worst in the nation. Few states provide so much opportunity to their White students and yet so little for their Black and Hispanic students. Few states provide so much less to their poor students compared to their non-poor students. Policymakers and the education community should prioritize closing these gaps to ensure that race and income do not continue to dictate access to high-quality educational opportunity for Pennsylvania's youth.

Meanwhile, RFA's Educational Opportunity Dashboard provides a unique opportunity to examine inequity in access to educational opportunity in schools across all 50 states based on indicators from the Civil Rights Data Collection published by the U.S. Department of Education Office of Civil Rights provides. Further analyses using the Dashboard can be conducted to examine how other states provide either high or low overall access to opportunity, or that provide equal or unequal access based on student race, ethnicity, or income.

About Research for Action

Research for Action (RFA) is a Philadelphia-based nonprofit education research organization. We seek to use research to improve equity, opportunity, and outcomes for students and families. Our work is designed to strengthen early education, public schools, and postsecondary institutions; provide research-based recommendations to policymakers, practitioners, and the public; and enrich civic and community dialogue. For more information, please visit our website at www.researchforaction.org.

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