



To: Basic Education Funding Commission
From: David Lapp, Director of Policy Research at Research for Action
Date: September 21, 2023
Re: The Upside-Down System: Inequity in Pennsylvania's System of Public Education

Hello, my name is David Lapp, and I serve as the Director of Policy at Research for Action, a 30-year-old Pennsylvania-based education research and evaluation firm with a mission to use field-driven insights to advance equity in opportunities and outcomes for underserved students.

I direct RFA's Pennsylvania Clearinghouse for Education Research project (PACER), which seeks to summarize research and provide original analyses to improve understanding of how Pennsylvania's system of public education is functioning under state policy. With more than two decades of experience studying local, state, and federal education law, policy, and practice, as a teacher, education law attorney, and policy researcher, I am honored to address you today.

I am also a proud parent of three children who have all attended Philadelphia public schools.

I appreciate this opportunity to share with you some critical research findings from Research for Action and from others in the field that speak to the current degree of inequity in Pennsylvania's system of public education.

If nothing else, I hope you take away the following three main points:

1. **Inequity is the defining feature of Pennsylvania's system of public education.** It is what sets Pennsylvania apart from other states in the nation, in the wrong way. It is in many ways, an upside-down system that often operates the opposite of how it should. We see nation-leading inequity in just about every metric of public education in Pennsylvania. As I will illustrate:
 - We see it in school funding gaps.
 - We see it in education opportunity gaps.
 - We see it in achievement gaps.
2. **The state must identify adequacy targets to eliminate inequity in school funding.** It is impossible to eliminate inequity in school funding without identifying school funding adequacy. There are several empirically based, rational approaches and methods for identifying school funding adequacy. (Including one already embedded in state law).
3. **Pennsylvania schools work when they are equitably and adequately funded.** Large parts of the system have been neglected and need repair. But many Pennsylvania communities operate public schools that would be the pride of any state, with state-of-the-art facilities, high teacher/student ratios, experienced, diverse, well-paid educators, challenging and engaging curriculum with rich opportunities in art, music, athletics, STEM, and technical education, and outstanding student achievement. The challenge before you is not to abandon this system, but to ensure every Pennsylvania community has the resources to make schools work for all students.

1. Inequity: The Defining Feature of Public Education in Pennsylvania.

Inequity is what distinguishes Pennsylvania’s public education system. Virtually every meaningful metric consistently tells the same story: Pennsylvania’s public school system boasts relatively high overall average performance (in funding, in opportunity, in outcomes), but these averages are masking nation-leading inequity (gaps in funding, gaps in opportunity, and gaps in student outcomes). While gaps exist in most states, the size and scope of the gaps in Pennsylvania are national outliers. The egregious inequity in Pennsylvania’s public education system is not normal. It is far from ordinary and not acceptable.

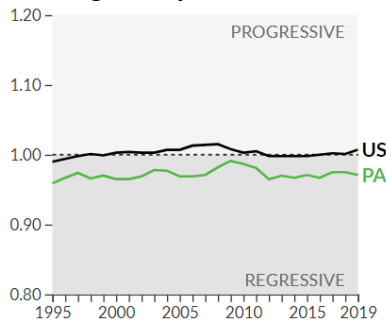
A. Funding Gaps

This Commission’s charge is to recommend a constitutional system, one that will provide maintenance and support of a thorough and efficient system of public education that serves the needs of the Commonwealth, so I would like to provide a brief review of what research has found regarding school funding in Pennsylvania.

Study after study has reached the same basic conclusion—nationally, Pennsylvania ranks on the higher side of overall school funding but ranks near the bottom in terms of school funding equity. The majority of states have progressive public school funding systems, meaning their public schools with high poverty rates receive more funding than public schools with low poverty. But not in Pennsylvania.

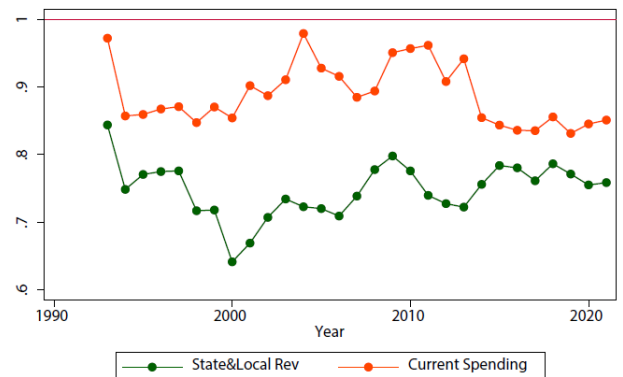
The [School Finance Indicators Database](#) by Baker, Di Carlo, and Weber ranks Pennsylvania 11th in the nation on overall school spending. However, they found Pennsylvania’s school funding “severely unequal,” with districts serving high child poverty areas spending just barely 80% of the per pupil investments of districts with low poverty districts (see Figure 1). The study ranks Pennsylvania #44 in the nation (out of 48 states) in the level of school funding progressivity, indicating that Pennsylvania is one of only eight states with a regressive school funding system. The study also documented profound disparities by student race, finding Pennsylvania has the 4th largest Black/White adequate funding gap in the nation and the 3rd largest Hispanic/White adequate funding gap.ⁱ Similar findings have been reported by the Urban Institute (see figure 2),ⁱⁱ and the Education Law Center located in New Jersey. ELC graded Pennsylvania with an “A” on total funding, but assigned a grade of “F” on funding distribution (see figure 3).ⁱⁱⁱ

Figure 2: Local, State, & Federal Funding Pennsylvania vs. Nation



Source: [The Urban Institute](#), 2022.

Figure 1: School Finance Progressivity in Pennsylvania



Source: [The School Finance Indicators Database](#), 2023.

investments of districts with low poverty districts (see Figure 1). The study ranks Pennsylvania #44 in the nation (out of 48 states) in the level of school funding progressivity, indicating that Pennsylvania is one of only eight states with a regressive school funding system. The study also documented profound disparities by student race, finding Pennsylvania has the 4th largest Black/White adequate funding gap in the nation and the 3rd largest Hispanic/White adequate funding gap.ⁱ Similar findings have been reported by the Urban Institute (see figure 2),ⁱⁱ and the Education Law Center located in New Jersey. ELC graded Pennsylvania with an “A” on total funding, but assigned a grade of “F” on funding distribution (see figure 3).ⁱⁱⁱ

Figure 3: Difference(%) in per-pupil funding in high-poverty districts relative to low-poverty districts (2020)

Distribution Grade	State	Low-Poverty Districts	High-Poverty Districts	Funding Distribution: Advantage (+) / Disadvantage (-) in High Poverty Districts
F	Pennsylvania	\$19,499	\$15,312	-21%

Source: [The Education Law Center](#), 2022

Every credible study finds consistent results: Pennsylvania’s overall school funding is average or above, but it is unfairly distributed, creating dramatic inequity. This is an upside-down school funding system.

B. Opportunity Gaps

Adequate and equitable school funding matters because it allows schools to provide students with adequate and equitable access to educational opportunities. Conversely, a lack of adequate and equitable funding means a lack of access to these education opportunities.

1. Educational Opportunity Dashboard

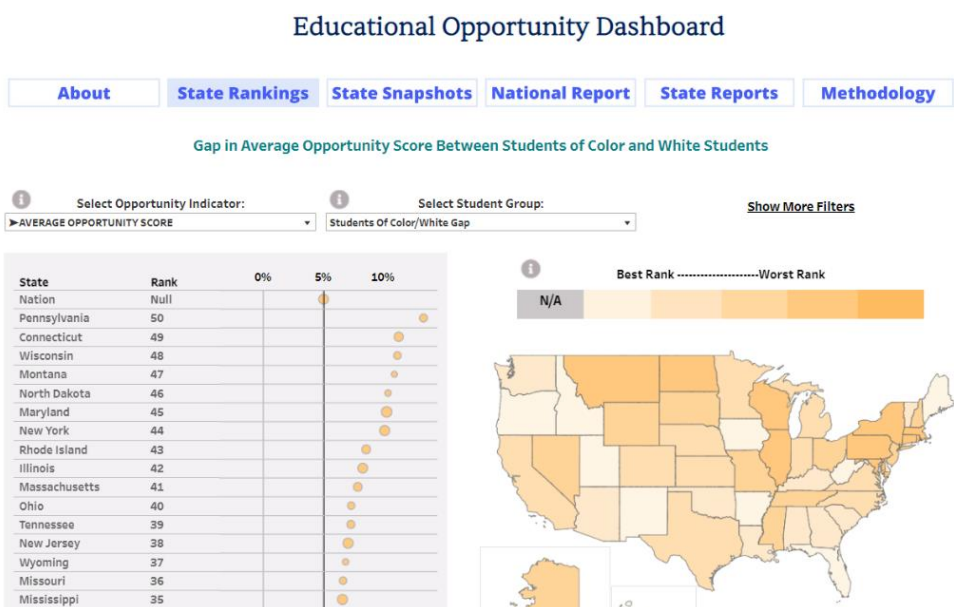
At Research for Action, we have been working to measure school “inputs,” which are indicators of whether states are providing their students access to educational opportunity. Using the federal Civil Rights Data Collection (CRDC),^{iv} we created the [Educational Opportunity Dashboard](#), which ranks the 50 states based on access to 14 indicators from the CRDC that measure access to three essential areas of education opportunity: (1) Quality Educators, (2) Quality School Climate, and (3) a College & Career Ready Curriculum. We also calculated an Average Opportunity Score.

We found that Pennsylvania’s access to educational opportunities mirrors its access to equitable and adequate school funding-- good on average but inequitably distributed. While Pennsylvania ranks 17th overall in average access to opportunity, it ranks 50th, the worst in the nation, in terms of gaps in access to educational opportunity between our White students and students of color.

Students of color in Pennsylvania have less access

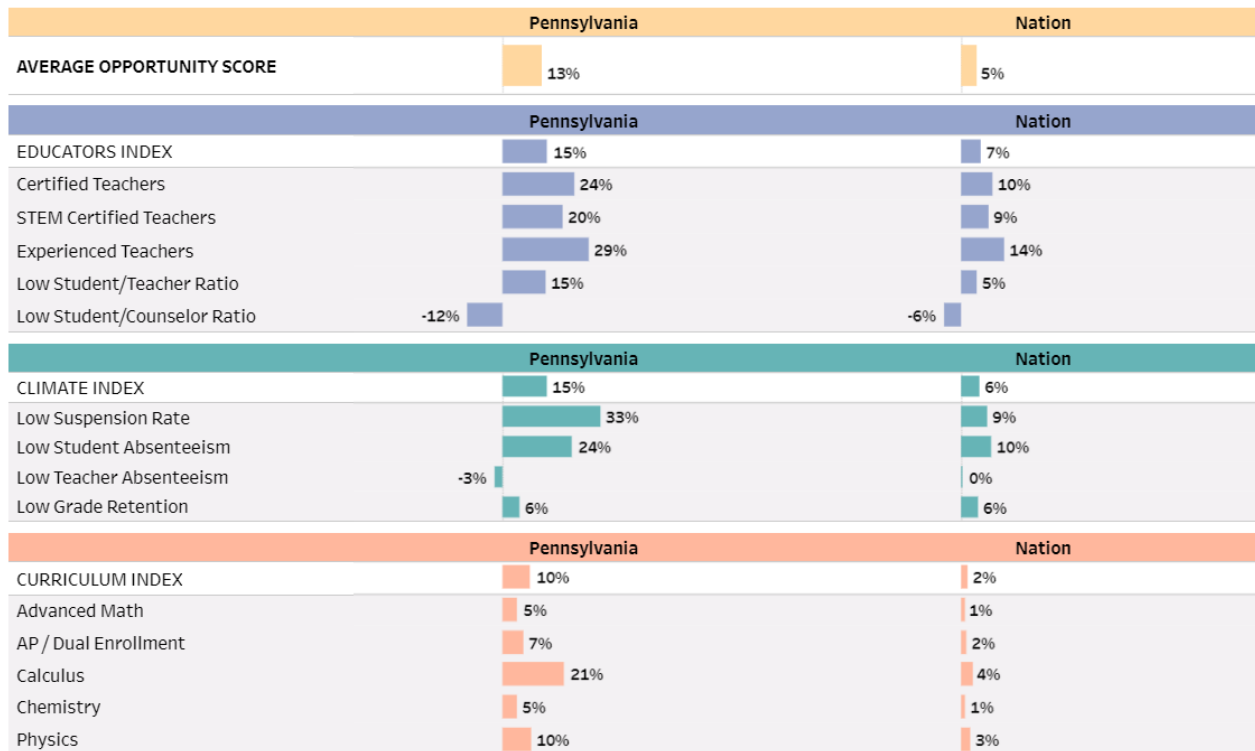
to schools with quality educators, quality school climate, and with a college and career ready curriculum compared to their White peers.

RFA’s Education Opportunity Dashboard measures race and family income gaps across the nation, but the size of the gaps in Pennsylvania are consistently larger than national comparisons. Figure 4 shows wider gaps by race in Pennsylvania than the nation on 12 of 14 indicators, meaning students of color having less access to certified teachers, certified STEM teachers, experienced teachers, and a low student/teacher ratio; less access to schools with low suspension rates and low student absenteeism; and less access to schools that provide advanced math, AP or dual enrollment courses, calculus, chemistry, physics courses.



Source: Research for Action’s [Educational Opportunity Dashboard](#), 2022

Figure 4: Gaps in Educational Opportunity Between Students of Color and White Students in Pennsylvania

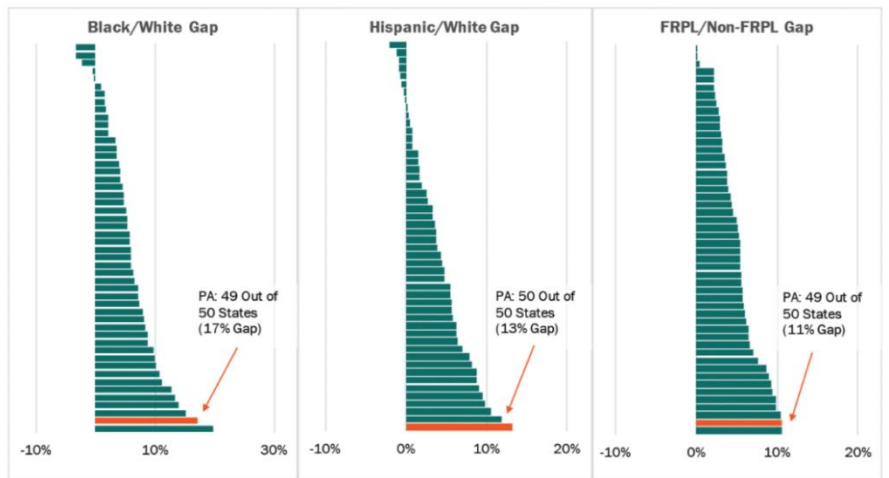


Source: Research for Action’s [Educational Opportunity Dashboard](#), State Snapshot, 2022

We also break down the Average Opportunity Score rankings by the size of gaps between Black/White and Hispanic/White students, and by gaps between students who are eligible for Free/Reduced Price Lunch (FRPL) and students who are not eligible. Pennsylvania ranks 49th, 50th, and 49th respectively in these comparisons (see Figure 5).

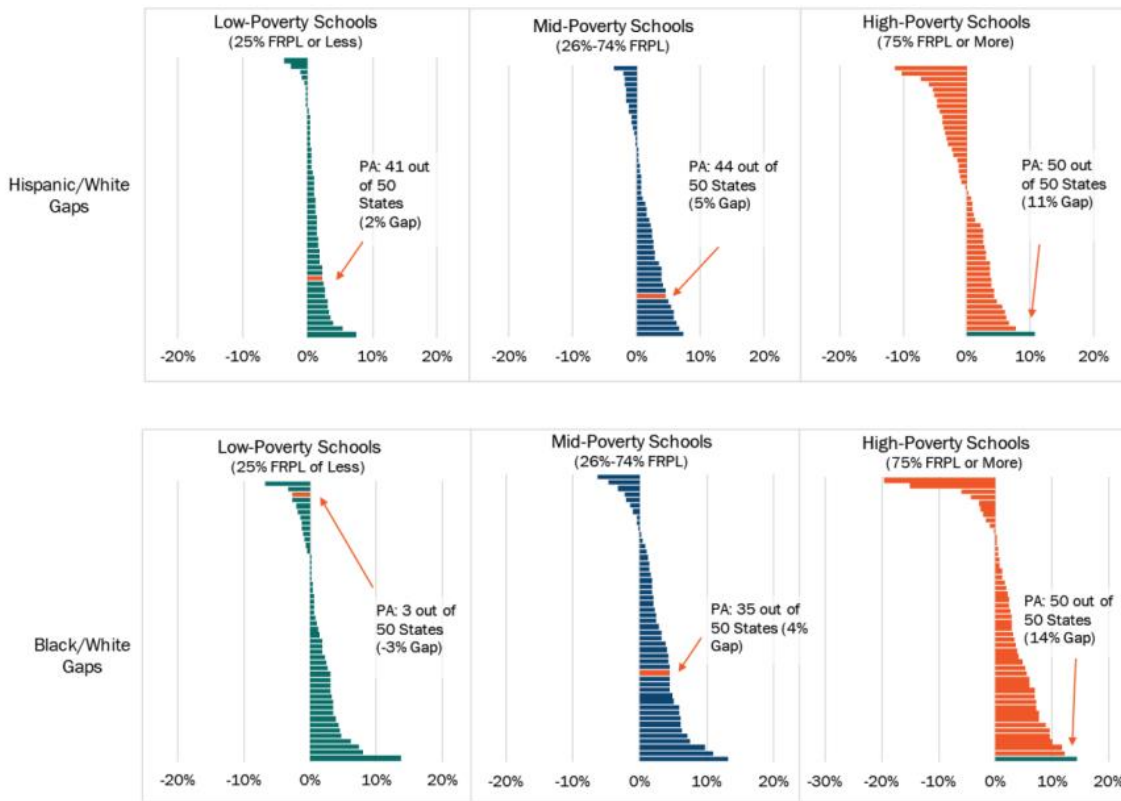
Finally, racial disparities in educational opportunity persist across school poverty. Pennsylvania’s White students who attend high-poverty schools are provided more access to educational opportunity than Pennsylvania’s Black or Hispanic students who attend high poverty schools (see Figure 6).

Figure 5: Gaps in Average Opportunity Score in Schools, by Race/Income Gaps and State



Source: Research for Action’s [Educational Opportunity Dashboard](#), [State Report](#), 2022

Figure 6: Gaps in Average Opportunity, by Race and School Poverty Groups



Source: Research for Action's *Educational Opportunity Dashboard, State Report*, 2022

The bottom line is that *no other state ranks so high for White students compared to White students in other states, and yet ranks so low for Black and Hispanic students, compared to other Black and Hispanic students in other states.* The same is true for students eligible for Free/Reduced Price Lunch.^v

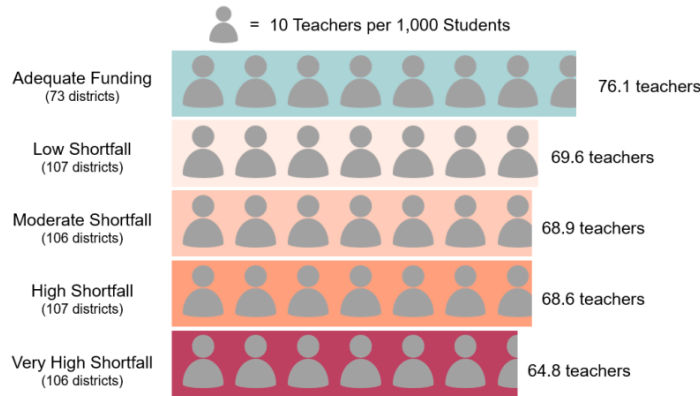
The Dashboard shows Pennsylvania's upside-down funding is matched by upside-down access to educational opportunities. This is the opposite of what it should. But the Dashboard is far from the only source demonstrating these huge inequities in inputs and opportunities.

2. Pennsylvania School Funding and School Staffing Disparities

Recent findings from the Pennsylvania Department of Education have underscored significant disparities in our education system. Pennsylvania Department of Education found that students from low-wealth districts—particularly students of color in those districts—are nearly twice as likely to be taught by inexperienced teachers or by “out of field” teachers, who lack training in the grade or subject they’re teaching.^{vi} Additionally, Dr. Edward Fuller of Penn State University recently documented large disparities in both teacher vacancies and teacher attrition rates by student and teacher race.^{vii} Research for Action has examined these and other teacher and staffing disparities in depth and specifically in relation to school funding adequacy in Pennsylvania schools.^{viii}

Drawing on school funding adequacy calculations from Dr. Matthew Kelly of Penn State University, we compared the number of teachers and other staff per 1,000 students based on the degree of school districts' adequacy shortfalls. We found that students in adequately funded school districts, with no funding shortfall receive more than 11 additional teachers per 1,000 students than students in the highest shortfall districts (see figure 7).

Figure 7: Teachers per 1,000 Student in Pennsylvania Districts by Funding Adequacy Category, 2019-20

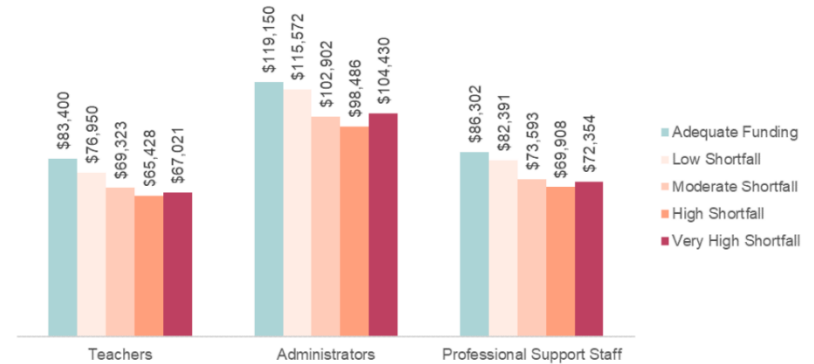


Source: Research for Action, [Staffing Disparities](#), 2023

These disparities are not isolated; they extend across teacher types, including General Education, STEM, Special Education, Arts, Health and Physical Education, Foreign Language, and Specialist teachers. The same trends emerge when examining rates of Administrators and other professional support staff.

Additionally, when comparing average salaries for teachers, administrators, and other professional support staff, our analysis shows districts with the highest shortfalls and lowest numbers of teachers and support staff also offer lower salaries (see Figure 8).

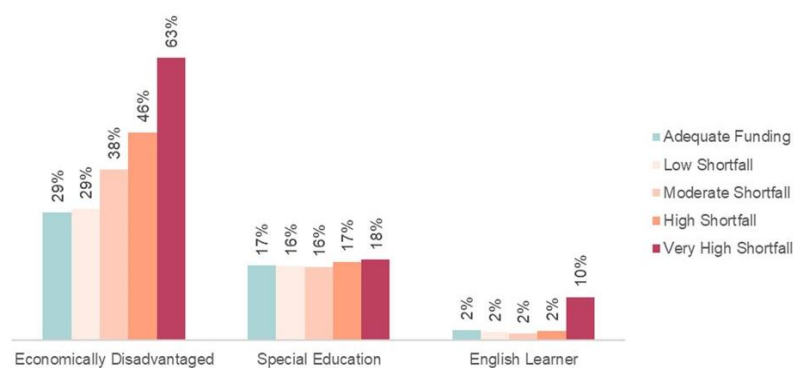
Figure 8: Average Salaries by Pennsylvania District Funding Adequacy Per Pupil, 2019-20



Source: Research for Action, [Staffing Disparities](#), 2023

Further, these districts with the fewest staff and lowest salaries also tend to serve a higher percentage of students facing economic disadvantage, students with special education needs, and English learners, as illustrated in Figure 9.

Figure 9: Student Characteristics by Pennsylvania District Funding Adequacy Per Pupil, 2019-20



Source: Research for Action, [Staffing Disparities](#), 2023

To address these glaring disparities, it is essential to acknowledge the significant resource gap this represents. Our calculations demonstrate that inadequately funded districts in Pennsylvania would collectively need to hire more than 11,000 additional teachers, 1,000 administrators, and 1,600 professional support staff, and pay an additional \$2.6 billion in salaries alone, merely to match the staffing rates and salaries in adequately funded districts.^{ix}

3. Many Other Forms of Additional Educational Inequity

Unfortunately, we do not yet as a nation or state have a comprehensive database that measures the multiple kinds of educational opportunity that schools provide and we are not yet able to draw a clear causal link between funding and each kind of opportunity. But research has identified many other forms of inequity in our state’s education system and many of these are clearly related to school funding and access to resources. We lack time to examine all of these, but I wish to mention several briefly.

Segregation

Research consistently finds Pennsylvania, public schools in particular, ranks as among the nations most segregated states and home to some of the country’s most segregated school systems.^x Research has also found strong correlations between segregation and school funding disparities.^{xi} Improving school funding equity and adequacy is key to reducing segregation as families with means are less incentivized to leave communities with adequately funded schools.

Facilities

Funding school facilities is an enormous topic and one in great need of attention in Pennsylvania’s school funding policy. Judge Renée Cohn Jubelirer’s voluminous opinion outlined dramatic evidence of inequity in Pennsylvania’s school infrastructure.^{xii} And Research for Action outlined the dearth of publicly available data on school facilities in Pennsylvania while also documenting that Pennsylvania’s new Maintenance Project Grant Program could function similarly to programs in our neighboring states, if properly funded. Several of Pennsylvania’s neighboring states base the local share of school facilities maintenance costs, at least in part, on the wealth of the local district.^{xiii}

Out of School Time

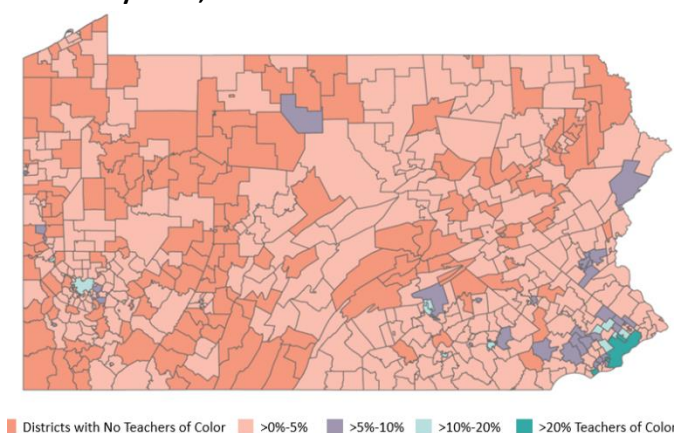
Research has found that, for as extensive the disparities are for educational opportunity in-school, disparities are even greater for opportunities for extracurricular activities and out-of-school time.^{xiv} RFA recently found that Pennsylvania is again an outlier compared to our neighboring states in our failure to provide dedicated state funding in support of out of school time.^{xv}

Educator Diversity

For several years Research for Action has been compiling data providing analysis of the state of teacher diversity in Pennsylvania, and consistently found that Pennsylvania is a national outlier for the degree of disparity between our student diversity and our teacher diversity.^{xvi} In 2022-23, over 1,358 Pennsylvania schools (46% of all schools) and 155 entire school districts (31% of all districts) employed zero teachers of color (see Figure 10).

There were 596,852 students (including 103,621 students of color) enrolled in PA schools that only had White teachers.

Figure 10: Concentration of Teachers of Color by District in Pennsylvania, 2022-23



Source: Research for Action, [PA Educator Diversity Presentation](#), 2023

Meanwhile, the dearth of teacher diversity is not merely attributable to state demographics. We found the ratio of students of color compared to teachers of color to be consistently the highest or second highest in the nation (see Figure 11). And Pennsylvania’s disparities have been growing (see Figure 12).

Figure 11: Students and Teachers of Color: The Nation vs. Pennsylvania

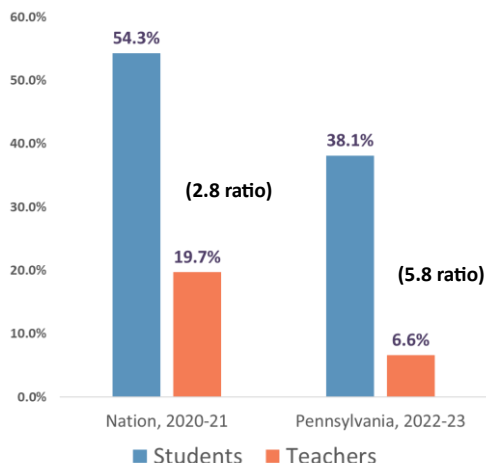
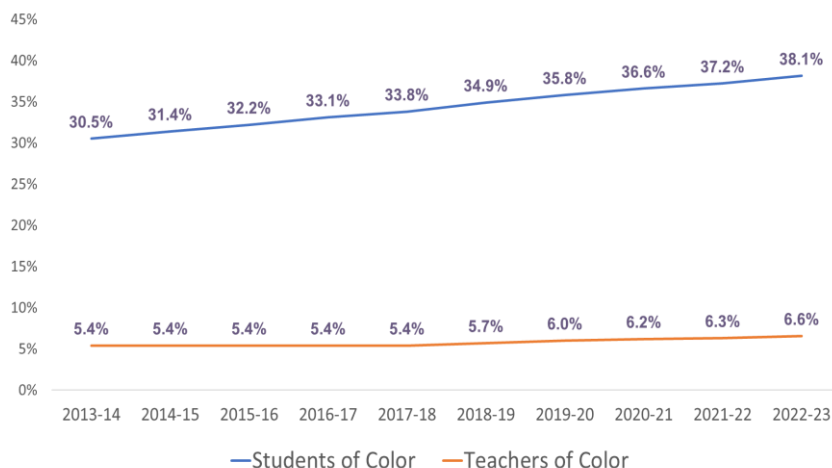


Figure 12: Change in Percentage of Students and Teachers of Color in Pennsylvania, 2013-14 to 2022-23



Source: Research for Action, [PA Educator Diversity Presentation](#), 2023

We have also found that our system’s educators of color are heavily concentrated in our most underfunded school districts, which undoubtedly contributes to more challenging working conditions and higher attrition rates.^{xvii}

C. Achievement Gaps

These inequities in funding and opportunity are reflected in student achievement outcomes. While Pennsylvania’s students score at or above the national average on standardized tests,^{xviii} the achievement gaps in Pennsylvania are consistently among the nation’s largest.^{xix}

Figure 13: NAEP – Hispanic/White Scaled Score Gaps: Nation vs Pennsylvania, 2013-2022

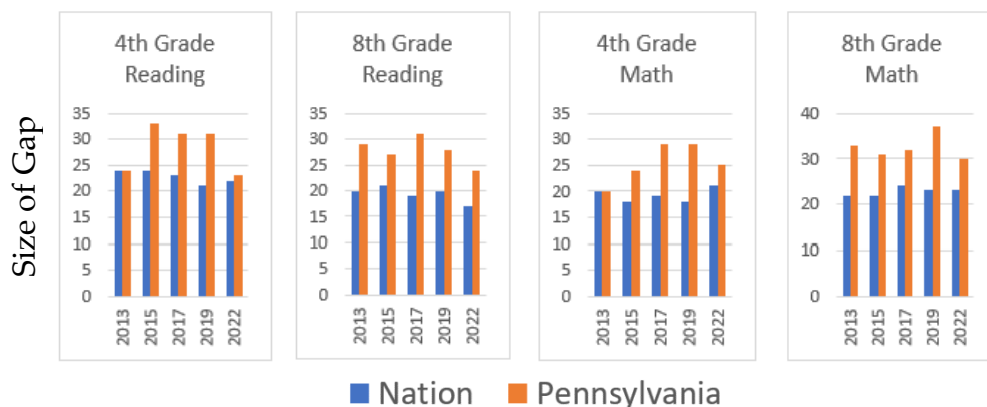
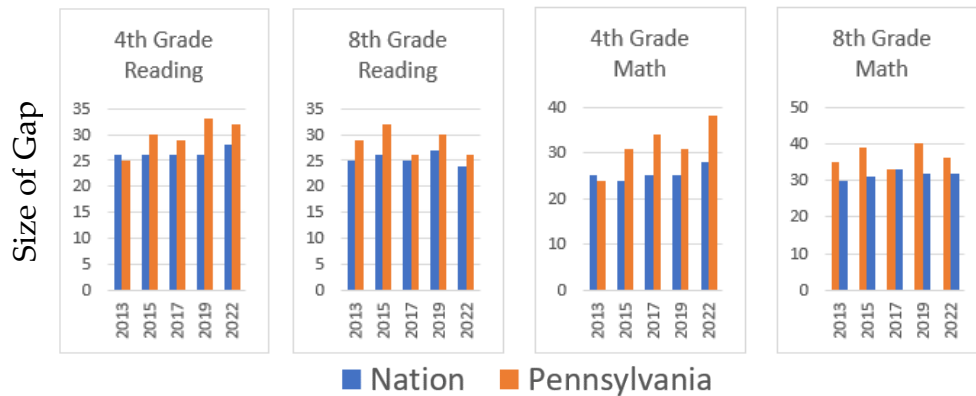


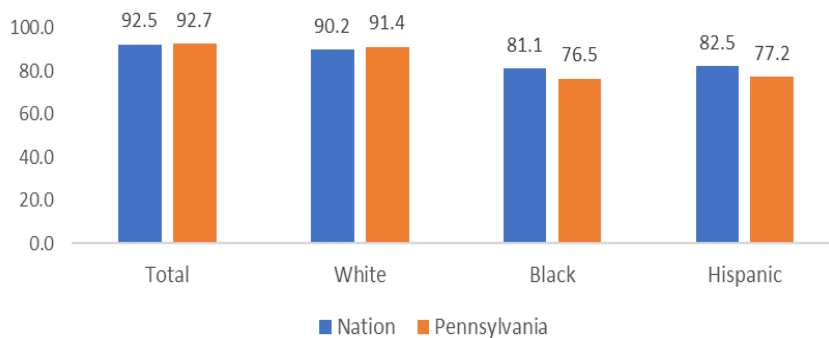
Figure 14: NAEP – Black/White Scaled Score Gaps: Nation vs Pennsylvania, 2013-2022



Source: Figures by Research for Action, Data from The Nation’s Report Card, [Achievement Gap Dashboard](#), 2023

Research has also found that Pennsylvania's achievement gaps are larger than expected even when controlling for poverty.^{xx}

Figure 15: Average Graduation Rates: Pennsylvania vs. Nation, 2010-11 to 2019-20



As shown in Figure 15, data on graduation rates tell the same story: average or better graduation rates in Pennsylvania than most states, but with larger than average gaps in graduation rates.^{xxi}

Source: Figure by Research for Action, Data from the [National Center for Education Statistics](#), 2023

2. The state must identify adequacy targets to eliminate inequity.

Where does this leave us? With such clear evidence that educational inequity (in funding, in opportunity, and in student outcomes) is the defining characteristic of public education in Pennsylvania, the main question must be, how do we fix it? How do we know what amount of school funding is equitable? How do we know what schools need to effectively serve their students? To answer these questions, we must define and calculate adequacy targets.

Adequacy and equity are inextricably linked; they are two sides of the same coin. Achieving equity requires *fairness*, ensuring that every school system receives what it *needs* (i.e., what is adequate) to effectively educate students.^{xxii} This is different from equality, because equity requires more resources for schools serving students with greater needs.

The current special and basic education funding formulas enacted in 2014 and 2016 respectively, were a move in the right direction. The weights for student headcounts and accounting for differences in district characteristics are all supported by research and best practices used in states with strong funding systems. But the failure to identify adequacy targets limits the impact of these formulas.

This moment presents an opportunity for the Commission to fulfill its mission and finish what it started. By refining the existing formulas to incorporate adequacy targets and subsequently allocate resources proportionally to districts with the largest shortfalls, we can achieve school funding fairness. I reviewed the compelling "successful schools" model presented by Dr. Matthew Kelly. The Commission would be wise to endorse such an approach. If this model were enacted into state law and used to progressively distribute state resources to districts with the most significant adequacy gaps, it would be pivotal to provide equitable access to educational opportunities, ultimately narrowing achievement gaps.

Closing thoughts

In closing, I want to reiterate that our public education system is invaluable and deserving of preservation and enhancement. We have witnessed the success of adequately funded public schools, serving as beacons of excellence within Pennsylvania communities. The path before us is clear: we must address the inequities in our system, beginning with equitable and adequate school funding.

I urge caution against diverting focus from this vital path. Recent proposals for vouchers and diverting tax revenues to private schools pose risks to the commitment to educational equity, as observed in other states. The research on vouchers has largely been unfavorable.^{xxiii} RFA's analysis reveals that Pennsylvania's proposed voucher districts are already among the most underfunded, and they struggle to provide an adequate number of teachers, despite serving students with the greatest needs. ^{xxiv} These are the districts in dire need of your support.

Pennsylvania already has too many policies that drive inefficient use of resources and improperly drain funds from needy districts, including the negative fiscal impact from underperforming cyber charter schools,^{xxv} or the perverse incentives in special education funding for all charter schools.^{xxvi} Before we create new systems, we should focus on fixing existing inefficiencies and on meeting the constitutional mandate to provide equitable and adequate school funding to all public schools.

I appreciate your consideration of this testimony and welcome any future opportunity to share research, data, and analysis with the Commission.

David Lapp – Director of Policy
dlapp@researchforaction.org

Endnotes

- ⁱ Baker, B. D., Di Carlo, M., & Weber, M. (2023). School Finance Indicators Database. <https://www.schoolfinancedata.org/>
- ⁱⁱ The Urban Institute. (2022, April). Which Students Receive a Greater Share of School Funding? <https://apps.urban.org/features/school-funding-trends/>
- ⁱⁱⁱ Farrie, D., & Sciarra, D. G. (2022, December). Making the Grade: How Fair is School Funding in Your State? Education Law Center. <https://edlawcenter.org/research/making-the-grade-2022.html>
- ^{iv} The federal Civil Rights Data Collection (CRDC) is one of the only data sources with multiple indicators of educational inputs that are collected and reported the same way for every school in the entire nation.
- ^v Freeman, J., & Bamat, D. (2022). Persistent Unequal Access to Educational Opportunity in Pennsylvania for K-12 Students. Research for Action. <https://www.researchforaction.org/wp-content/uploads/2022/10/RFA-PersistentUnequalAccessToEducationalOpportunityinPennsylvaniaForK-12Students.pdf>
- ^{vi} Falk, M. (2021, December 4). Ex-Pa. Education official: Student Achievement Gap Won't be Closed Without Funding Changes. WHY? <https://why.org/articles/ex-pa-education-official-student-achievement-gap-wont-be-closed-without-funding-changes/>
- ^{vii} Fuller, E. (2023, May). Exacerbating the Shortage of Teachers: Rising Teacher Attrition in Pennsylvania from 2014 to 2023. University Park, PA. Center for Education Evaluation and Policy Analysis. <https://ed.psu.edu/sites/default/files/inline-files/ceepa-research-brief-2023-6--exacerbating-the-shortage-of-teachers-ed-fuller-1.pdf>; Fuller, E. (2022). Teacher Supply and Demand in Pennsylvania: Center for Evaluation and Education Policy Analysis. Pennsylvania State University. https://ed.psu.edu/sites/default/files/inline-files/CEEPA_report_V2.pdf
- ^{viii} Lapp, D., & Shaw-Amoah, A. (2023, June 1). Pennsylvania School Funding and School Staffing Disparities. Research for Action. <https://www.researchforaction.org/research-resources/k-12/pennsylvania-school-funding-and-school-staffing-disparities/>
- ^{ix} This only includes matching salaries of existing and additional staff. This does not include additional costs to match pensions or other benefits or funding to match disparities in other district expenses, such as non-professional support staff, contracted staff, transportation, facilities, etc. In addition, to provide students an opportunity to meet state standards districts with high rates of vulnerable students require not merely *equal* funding, but rather *equitable and adequate* funding.
- ^x EdBuild. (2020). Fault Lines: America's Most Segregating School District Borders. EdBuild. <https://edbuild.org/content/fault-lines> (finding that Pennsylvania has 62 school district borders that mark a poverty divide of at least twenty percentage points “serving a stunning 29% of Pennsylvania students”); Frankenberg, E., et al. (2019, May). Harming Our Common Future: America's Segregated Schools 65 Years After Brown. Center for Education and Civil Rights. <https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/harming-our-common-future-americas-segregated-schools-65-years-after-brown> (finding that Black students in Pennsylvania have the seventh highest likelihood of the 50 states to attend at least 90% same race schools and that Hispanic students in Pennsylvania have the 12th highest likelihood); Other research found Pennsylvania to be home to some of most segregated cities in the nation by race and income. See Potter, H. (2022). School Segregation in U.S. Metro Areas 2022. The Century Foundation. <https://tcf.org/content/report/school-segregation-in-u-s-metro-areas/> Note: This project is a collaboration between The Century Foundation and the Segregation Index, led by A. Owens (Department of Sociology, University of Southern California) and S. F. Reardon (Professor of Poverty and Inequality in Education and Sociology, Stanford University). Another study ranked Pennsylvania as 43rd in the nation regarding overall racial integration. McCann, A. (2023). 2023's States with the Most Racial Progress. WalletHub. <https://wallethub.com/edu/states-with-the-most-and-least-racial-progress/18428#rankings-integration>
- ^{xi} See Baker, Bruce D., Di Carlo, Matthew, and Green III, Preston C. (2022). *Segregation and School Funding: How Housing Discrimination Reproduces Unequal Opportunity*. Albert Shankar Institute. Retrieved from <https://www.shankarinstitute.org/sites/default/files/2022-05/SEGreportfinal.pdf>.

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- ^{xii} William Penn School District et al. v. Pennsylvania Department of Education et al., No. 587 M.D. 2014. Memorandum opinion by President Judge Renée Cohn Jubelirer, filed February 7, 2023. [PDF file]. <https://pubintlaw.org/wp-content/uploads/2023/02/02.07.23-Memorandum-Opinion-Filed-pubintlaw.pdf>
- ^{xiii} Duffy, M., & Lapp, D. (2020, October). State Funding to Ensure Safe and Healthy Facilities: Lessons for Pennsylvania. Research for Action. <https://www.researchforaction.org/research-resources/k-12/state-funding-to-ensure-safe-and-healthy-facilities-lessons-for-pennsylvania/>
- ^{xiv} Park, Julie J., et al. (2023). *Inequality Beyond Standardized Tests: Trends in Extracurricular Activity Reporting in College Applications Across Race and Class*. (EdWorkingPaper: 23-749). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/jkcy-x822>.
- ^{xv} Duffy, M., & Hartman, T. (2023). State Funding to Support OST Programming in Pennsylvania. Research for Action. <https://www.researchforaction.org/research-resources/out-of-school-time/state-funding-to-support-out-of-school-time-programming-in-pennsylvania/>
- ^{xvi} A repository of Research for Action’s Pennsylvania Educator Diversity Research is available at <https://www.researchforaction.org/pennsylvania-educator-diversity-research/>
- ^{xvii} Lapp, D., & Shaw-Amoah, A. (2023, May). Pennsylvania School Funding and School Staffing Disparities. Research for Action. <https://www.researchforaction.org/research-resources/k-12/pennsylvania-school-funding-and-school-staffing-disparities/>
- ^{xviii} National Assessment of Educational Progress. (n.d.). The Nation's Report Card: NAEP Data Explorer. <https://www.nationsreportcard.gov/ndecore/xplore/NDE>
- ^{xix} National Assessment of Educational Progress. (n.d.). The Nation's Report Card: Achievement Gaps Dashboard. https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx
- ^{xx} Stanford Center for Education Policy Analysis. (2015, February). The Educational Opportunity Monitoring Project. <https://cepa.stanford.edu/educational-opportunity-monitoring-project/achievement-gaps/race/> (Note section entitled, “Some states’ achievement gaps are higher or lower than would be predicted by their socioeconomic conditions alone.”)
- ^{xxi} National Center for Education Statistics. (n.d.). Table 219.46. Digest of Education Statistics. https://nces.ed.gov/programs/digest/d21/tables/dt21_219.46.asp
- ^{xxii} See, [National Equity Project](#) (“Educational equity means that each child receives what they need to develop to their full academic and social potential”); [Center for Public Education](#) (“Equality in education is achieved when students are all treated the same and have access to similar resources. **Equity** is achieved when all students receive *the resources they need* so they graduate prepared for success after high school”); [Annenberg Institute for School Reform at Brown University](#) (“Equity does not mean that every child in a district receives equal dollars. Instead, we look for horizontal and vertical equity as appropriate measures. i. Horizontal equity: Do students with similar characteristics receive equal resources? ii. Vertical equity: Do students with dissimilar characteristics receive **appropriately** dissimilar resources?”); [Picus Odden](#) (“School finance equity addresses the degree to which dollars per pupil vary across districts for any reasons, as well as the degree to which differences in dollars per pupil are linked to local measures of fiscal capacity”); [Pennsylvania School Board’s Association](#) (“Equity is the just and fair distribution of resources based upon each individual student’s needs. Equitable resources include funding, programs, policies, initiatives and supports that target each student’s unique background and school context to guarantee that all students have equal access to a high-quality education”); [Pennsylvania Department of Education](#) (“In a vacuum, equity simply means ‘the quality of being fair and impartial.’”).
- ^{xxiii} Barnum, M. (2017, July 12). Do school vouchers 'work'? As the debate heats up, here's what research really says. Chalkbeat. Updated 2023, May 31. <https://www.chalkbeat.org/2017/7/12/21108235/school-choice-vouchers-system-pros-and-cons-research>.
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