# Unequal Access to Educational Opportunity in the United States 

Anna Shaw-Amoah and David Lapp • October 2022

## Introduction

High-quality schools can be critical tools for local, state, and national policymakers to break cycles of wealth inequality and systemic racism. However, as documented in this report and the associated Educational Opportunity Dashboard project, schools across the nation do not provide the same educational offerings to all students. Gaps in access to opportunities, both in schools and out of schools, continue to drive disparities in educational outcomes. ${ }^{1}$

Research for Action's Educational Opportunity Dashboard is an interactive web-based tool first developed in 2020 that allows users to explore data across the nation and pinpoint how states are succeeding or failing at providing their students with access to educational opportunities. (See ACCESS: A First Step to Opportunity). The Dashboard—based on data from the Civil Rights Data Collection ${ }^{2}$ (CRDC) and newly updated in 2022—allows users to break apart 14 indicators of educational opportunity, either by highlighting snapshots of individual states or by ranking states by overall access or by gaps in access by student race, ethnicity, income status, and grade level.

This report provides a summary of national findings from analyses of the Educational Opportunity Dashboard, synthesizing the multitude of national- and state-level data available to provide a highlevel understanding of inequities in access to educational opportunity throughout the nation. The report is structured according to the three overall indexes of educational opportunity as provided on the Dashboard:

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

We first describe national student demographics, highlighting differences in student race or ethnicity within high-, mid-, and low-poverty schools, which partly account for racial or ethnic disparities in access to educational opportunity. Then we examine in turn each of the three indexes of educational opportunity presented on the Dashboard. We begin each section by defining the index and all indicators that fall within it. (See Appendix A for a full description of all the indicators and indexes in one place). We next discuss disparities by student race and income status for that index, including state comparisons and a deeper look at inequities by race that persist within schools with varying levels of student poverty. Where possible, we further detangle access to educational opportunity within primary and secondary schools separately.

[^0]
## Key Findings

Below are the main national findings from the report:

- Disparities by Student Race/Ethnicity: Black and Hispanic students had less access compared to White and Asian students on all three domains of educational opportunity: (1) Quality Educators, (2) Positive School Climate, and (3) College/Career Readiness Curriculum.
- Students of color ${ }^{3}$ overall had the greatest disparity in access to quality educators compared to White students (7\% gap), followed by access to a positive school climate ( $6 \%$ gap) and access to curriculum (2\% gap).
- Students of color had less access compared to White students to 13 of the 14 individual indicators that comprise the indexes, while White students had less access to one indicator (Low Student/Counselor Ratio).
- Disparities by Student Income Status: Students eligible for Free/Reduced-Price Lunch (FRPL) had less access to the educational opportunities captured by this analysis compared to students not eligible for FRPL on each of the three indexes.
- The greatest disparity was in access to a positive school climate ( $11 \%$ gap), followed by access to the curriculum index ( $5 \%$ gap) and access to the educators index ( $3 \%$ gap).
- Students eligible for FRPL had less access than non-FRPL students to 12 of the 14 individual indicators that comprise the three educational opportunity indexes, while students not eligible for FRPL had less access to 2 of the 14 indicators.
- Disparities within Low-, Mid-, and High-Poverty Schools: The concentration of Black and Hispanic students in high-poverty schools appears to be a primary factor driving gaps in access to educational opportunity; however, racial disparities often exist within levels of school poverty.
- Within low-, mid-, and high-poverty schools, Black students had less access to quality educators compared to White students (ranging from a $4 \%$ to $8 \%$ gap), less access to a positive school climate ( $7 \%$ to $8 \%$ gap), and roughly equal access to college/career readiness curriculum.
- Hispanic students had less access to quality educators compared to White students across every level of school poverty; however, Hispanic students had equal or more access to curriculum and a positive school climate across each level of school poverty.
- Differences between Primary and Secondary Schools: Inequities by race/ethnicity and student income status are seen within subsets of both primary and secondary schools, with larger race and income gaps in access to quality educators and school climate in secondary schools. (The college/career readiness curriculum index only applies to secondary schools).

[^1]
## Unequal Access to Educational Opportunity in the United States

National Student Demographics ..... 4
National Disparities in Educational Opportunity ..... 4

1. Access to Quality Educators Index ..... 5
2. Access to Positive School Climate Index ..... 9
3. Access to College/Career Readiness Curriculum Index ..... 13
Conclusion ..... 17
About Research for Action ..... 17
Acknowledgments. ..... 17
Appendix A: About the Educational Opportunity Dashboard ..... 18

## National Student Demographics

Overall, 41.6 million students attended the nation's public schools in 2017-18, with 10.4 million attending high-poverty schools where over 75\% of students were from families earning below $185 \%$ of the federal poverty level (the threshold to be eligible for Free/Reduced-Price Lunch, or FRPL). Just under half (47\%) of the overall student population was White, 27\% Hispanic, 16\% Black, $5 \%$ Asian, and $4 \%$ multiracial or belonging to other race/ethnic groups. Additionally, $51 \%$ of students were eligible for FRPL. Figure 1 compares the student racial/ethnic composition in schools overall to that of high-, mid-, and low-poverty schools. ${ }^{4}$

Figure 1: Race/Ethnicity of Students Attending Low-, Mid-, and High-Poverty Schools in the Nation


- Hispanic and Black students are overrepresented in high-poverty schools (comprising 49\% and $28 \%$ respectively compared to $27 \%$ and $15 \%$ in all schools).
- Meanwhile, White and Asian students are overrepresented in low-poverty schools (69\% and $10 \%$ respectively compared to $47 \%$ and $5 \%$ in all schools).

As discussed below, high-poverty schools offer students the least overall access to educational opportunities as measured by each index in the analysis, with more access within mid-poverty schools, and the most access in low-poverty schools. These demographic enrollment disparities are a primary factor, though not the only factor, driving gaps in students' access to educational opportunity by race or ethnicity.

## National Disparities in Educational Opportunity

Analysis of 2017-18 data reveals that race and income disparities exist in each of the three indexes of access to educational opportunity: (1) access to quality educators, (2) access to a positive school climate, and (3) access to a college/career readiness curriculum. These findings are consistent with RFA's prior analysis of 2015-16 data, though we note slight changes. We discuss each index in the following sections.

[^2]
## 1. Access to Quality Educators Index

Effective, experienced teachers can transform a student's educational experience, and have been shown to improve student attendance, achievement, and long-term outcomes. ${ }^{5}$ For students with instability in their home lives, a stable relationship with a teacher or counselor can be a lifeline; school counselors have a positive effect on students' academic outcomes as well as social and emotional development. ${ }^{6}$ Disparities in access to these resources can place systemically disadvantaged students' educational futures in jeopardy and give them a steeper path to educational success.

The Access to Quality Educators Index primarily focuses on teachers and includes factors relating to qualifications, experience, and ratio. Indicators include whether students had access to teachers with experience and certifications in the subjects they teach, as students taught by teachers with higher levels of experience, national board certification, or certification in the subject they teach achieve at higher levels. ${ }^{7}$ While similar indicators are not available relating to school counselors, the student/counselor ratio is considered.

## Defining the Access to Quality Educators Index

The Access to Quality Educators Index was developed using available indicators in the Civil Rights Data Collection (CRDC) dataset relating to teacher ratio, experience, and certification. Table 1 shows the five indicators that comprise the Access to Quality Educators Index and how they are defined in this analysis, including applicable thresholds.

Table 1. Defining the Access to Quality Educators Index

| Access to Quality <br> Educators Index | A composite index for access to quality educators created by <br> averaging the scores across the five indicators listed below. |
| :--- | :--- |
| Certified Teachers | Percentage of students who attend a school in which all teachers have met <br> all applicable state teacher certification requirements. |
| STEM Certified | Percentage of students who attend a school in which all science and math <br> courses are taught by teachers certified in math and science. |
| Teachers | Percentage of students who attend a school in which the percentage of <br> teachers with more than two years of experience is at or above the U.S. <br> median of 91.2\%. |
| Experienced <br> Teachers | Percentage of students who attend a school with a student/teacher ratio at <br> or below the U.S. median of 14.9:1. |
| Low Student/Teacher <br> Ratio | Percentage of students who attend a school with a student/counselor ratio <br> at or below the recommended ratio of 250:1. |
| Low Student/ <br> Counselor Ratio | Ratar |

Note: For additional information including how indicators are calculated for primary and secondary schools, please see the Technical Appendix.

[^3]
## Disparities in Access to Quality Educators by Student Race and Income Status

The Access to Quality Educator Index is calculated by averaging the five individual indicators. Gaps by race/ethnicity and income status in each of these indicators are shown in Table 2 below.

Table 2. Percentage of Students by Race/Ethnicity and FRPL Status with Access to Quality Educators

|  | Access to Quality Educators Index | Certified Teachers | STEM Certified Teachers | Experienced Teachers | Student/ Teacher Ratio | Low Student// Counselor Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All | 44\% | 63\% | 52\% | 49\% | 38\% | 19\% |
| By Race: |  |  |  |  |  |  |
| White | 48\% | 69\% | 57\% | 57\% | 41\% | 17\% |
| Black | 40\% | 51\% | 42\% | 38\% | 45\% | 25\% |
| Hispanic | 41\% | 60\% | 50\% | 42\% | 31\% | 22\% |
| Asian | 42\% | 64\% | 52\% | 51\% | 30\% | 14\% |
| American Native | 48\% | 67\% | 55\% | 48\% | 44\% | 26\% |
| Hawaiian/ Pacific Islander | 39\% | 51\% | 36\% | 40\% | 34\% | 37\% |
| Multiracial | 44\% | 65\% | 52\% | 50\% | 35\% | 17\% |
| By Income Status: |  |  |  |  |  |  |
| FRPL | 43\% | 60\% | 49\% | 44\% | 39\% | 23\% |
| Non-FRPL | 46\% | 66\% | 55\% | 55\% | 37\% | 17\% |
| Red = Worse Access than All Students |  | Yellow = Acc | hin $\pm 1$ of $A$ | tudents Blue | tter Acce | All Students |

Note: Students eligible for Free/Reduced Price Lunch (FRPL) are from families earning below 185\% of the federal poverty level.

- Black and Hispanic students had the least access to quality educators of the student groups examined here. Meanwhile, White students had the most access.
- A lower share of students eligible for FRPL had access to quality educators compared to students not eligible for FRPL.
- White students had better than average access to four indicators (certified teachers, STEM certified teachers, experienced teachers, and low student/teacher ratio), while Black, Hispanic, and Asian students had better than average access to only one to two indicators.
- Students not eligible for FRPL (non-FRPL) had better than average access to three indicators (certified teachers, STEM certified teachers, and experienced teachers), while students eligible for FRPL had better access to only one indicator, low student/counselor ratio.

[^4]
## Disparities Across Schools of Varying Poverty Status

Above we discuss gaps in access to quality educator based on student race and ethnicity in schools overall. Figure 2 below demonstrates that student race or ethnicity gaps in access to quality educators are also found within subsets of low-, mid-, and high-poverty schools, indicating that racial or ethnic disparities are not entirely explained by differences in student poverty.

Figure 2. Access to Quality Educators Index Among Students Attending Low-, Mid-, and HighPoverty Schools, by Student Group


Note: 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.

- Students of all races/ethnicities in high-poverty schools have the least access to quality educators compared to students attending low-poverty schools.
- At all levels of school poverty, White students have more access to quality educators than any other race/ethnicity group shown here.
- As discussed above, Black and Hispanic students are overrepresented in high-poverty schools and Asian and White students are overrepresented in low-poverty schools.


## Spotlight on Primary and Secondary Schools

Figure 3 below compares inequities between White students and students of color in primary and secondary schools. Overall, students attending both primary and secondary schools had similar access to quality educators, but within these groups, we found gaps in access between students of color and White students.

Figure 3: Gap in Access to Quality Educators Between Students of Color and White Students: Primary vs. Secondary Schools


Note: $>0 \%$ means White students have more access and $<0 \%$ means students of color have more access.

## Access to Quality Educators Index Across the 50 States

Student access to quality educators varies across the nation. Data below are provided for all 50 states by percent of all students with access on the Quality Educators Index and by the size of gaps between the percent of students of color and the percent of White students with access. These and other visualizations can be created on the Educational Opportunity Dashboard.

Figure 4: Percent of All Students with Access on the Quality Educators Index


Figure 5: Gap in Access on the Quality Educators Index Between Students of Color and White Students


[^5]
## 2. Access to Positive School Climate Index

A positive school climate involves healthy and constructive relationships between students, teachers, their classmates, and administrators, ${ }^{8}$ and is associated with less chronic absenteeism and student suspensions. ${ }^{9}$ Research has shown that school climate can affect individual students' academic achievement and behavior. For example, students in schools with high levels of disciplinary incidents are more likely to be involved in a disciplinary incident themselves, ${ }^{10}$ and transferring to a school with a higher suspension rate has been linked to students performing poorer academically while being involved in more disciplinary incidents. ${ }^{11}$ Meanwhile, when students transfer to a school with more high-achieving classmates, their academic performance increases. ${ }^{12}$

## Defining the Access to Positive School Climate Index

The Access to Positive School Climate Index was developing using four indicators from the CRDC related to suspensions, student absenteeism, teacher absenteeism, and grade retention. Table 3 defines each indictor and provides applicable thresholds.

Table 3. Defining the Access to Positive School Climate Index

$$
\begin{array}{|l|l|}
\hline \begin{array}{l}
\text { Access to Positive } \\
\text { School Climate Index }
\end{array} & \begin{array}{l}
\text { A composite index for access to a positive school climate created } \\
\text { by averaging the scores across the four indicators listed below. }
\end{array} \\
\hline \text { Low Suspension Rate } & \begin{array}{l}
\text { Percentage of students who attend a school with a suspension rate that is } \\
\text { at or below the U.S. median of } 2.3 \% .
\end{array} \\
\hline \begin{array}{l}
\text { Low Chronic } \\
\text { Absenteeism Rate }
\end{array} & \begin{array}{l}
\text { Percentage of students who attend a school with a chronic absenteeism } \\
\text { rate that is at or below the U.S. median of } 12.8 \% .
\end{array} \\
\hline \begin{array}{l}
\text { Teacher Chronic }
\end{array} & \begin{array}{l}
\text { Percentage of students who attend a school with a teacher chronic } \\
\text { absenteeism rate that is at or below the U.S. median of } 25.7 \% .
\end{array} \\
\hline \text { Absenteeism Rate } & \begin{array}{l}
\text { Percentage of students who attend a school with a grade retention rate } \\
\text { Low Grade Retention } \\
\text { that is or below the U.S. median of } 0.3 \% .
\end{array} \\
\hline \text { Rate } & \begin{array}{l}
\text { Lhe }
\end{array} \\
\hline
\end{array}
$$

Note: For additional information including how indicators are calculated for primary and secondary schools, please see the Technical Appendix.

[^6]Disparities in Access to Positive School Climate by Student Race and Income Status To further understand inequity within the index, the following table displays access to each indicator by race/ethnicity group and income status.

Table 4. Percentage of Students by Race/Ethnicity and FRPL Status with Access to Positive School Climate

|  | Access to Positive School Climate Index | Low Suspension Rate | Low Chronic Absenteeism Rate | Low Teacher Absenteeism Rate | Low Grade Retention Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All | 46\% | 49\% | 48\% | 45\% | 44\% |
| By Race: |  |  |  |  |  |
| White | 50\% | 53\% | 54\% | 45\% | 47\% |
| Black | 34\% | 33\% | 32\% | 43\% | 29\% |
| Hispanic | 46\% | 49\% | 45\% | 46\% | 44\% |
| Asian | 58\% | 63\% | 66\% | 47\% | 56\% |
| American Native | 39\% | 38\% | 26\% | 53\% | 40\% |
| Hawaiian/Pacific Islander | 41\% | 57\% | 31\% | 32\% | 44\% |
| Multiracial | 50\% | 58\% | 51\% | 42\% | 48\% |
| By Income Status: |  |  |  |  |  |
| FRPL | 41\% | 41\% | 40\% | 44\% | 40\% |
| Non-FRPL | 52\% | 54\% | 58\% | 46\% | 49\% |

Note: Students eligible for Free/Reduced Price Lunch (FRPL) are from families earning below 185\% of the federal poverty level.

- Students who are White and Asian had more than average access to schools with low suspension rates, low chronic absenteeism rates, and low grade retention rates, while students who are Black and American Native had less access than average.
- Income-based gaps were also seen in three of the four indicators, with students eligible for FRPL having less access to schools with low suspension rates, low chronic absenteeism rates, and low grade retention rates compared to students not eligible for FRPL.


## Disparities Across Schools of Varying Poverty Status

Figure 6 provides rates of access to positive school climate by race in low-, mid-, and high-poverty schools. Across all bands of school poverty, Black students had the least access, while Asian students had more access compared to other race groups.

Figure 6: Access to Positive School Climate Index Among Students Attending Low-, Mid-, and HighPoverty Schools, by Student Group


Note: 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.

- Across all student race groups, students in high-poverty schools have the least access to positive school climate, followed by students in mid-poverty schools, while students in lowpoverty schools have the most access.
- At all levels of school poverty, White, Asian, and Hispanic students have more access to a positive school climate than Black students.
- Within each level of school poverty, Hispanic students have equal or more access to a positive school climate compared to White students. However, as previously discussed, Hispanic students are concentrated in high-poverty schools which explains why Hispanic students have less access to a positive school climate in schools overall.
- Black students are overrepresented in high-poverty schools and also have less access than White students to a positive school climate within each subgroup of schools.


## Spotlight on Primary and Secondary Schools

Figure 7 shows gaps in access to a positive school climate between all students of color and White students in both primary and secondary schools. As shown here, both levels of school see racial gaps in access to a positive school climate.

Figure 7. Gap in Access to Positive School Climate Between Students of Color and White Students, by Indicator


Note: $>0 \%$ means White students have more access and $<0 \%$ means students of color have more access.

- Both primary and secondary schools saw gaps in access to a positive school climate between students of color and White students. In the index overall, primary schools saw a $13 \%$ gap while secondary schools saw a 14\% gap.
- Access to low grade retention was substantially more inequitable in secondary schools at $11 \%$ compared to no gap in primary schools.


## Access to Positive School Climate Index Across the 50 States

Student access to a positive school climate varies across the nation. Data below are provided for all 50 states by percent of all students with access on the Positive School Climate Index and by the size of gaps between the percent of students of color and the percent of White students with access. These and other visualizations can be created on the Educational Opportunity Dashboard.

Figure 8: Percent of All Students with Access on the Positive School Climate Index

| State | Rank | ¢ 0\% 20\% 40\% | 60\% 80\% |
| :---: | :---: | :---: | :---: |
| Nation | Null |  |  |
| West Virginia | 50 |  |  |
| Mississippi | 49 |  | Interpret: 17\% of |
| Nevada | 48 |  | all students in |
| Florida | 47 |  | West Virginia |
| Alabama | 46 | - | have access on |
| Arkansas | 45 | - | the positive |
| Kentucky | 44 | $\bigcirc$ | school climate |
| Maryland | 43 | $\bigcirc$ | school climate |
| Virginia | 42 |  | index. |
| Hawaii | 41 | - |  |
| Louisiana | 40 | - |  |
| Connecticut | 39 | - |  |
| North Carolina | 38 | - |  |
| Maine | 37 | $\bigcirc$ |  |
| Alaska | 36 | - |  |
| Washington | 35 | - |  |
| Rhode Island | 34 | - |  |
| New Jersey | 33 | - |  |
| Montana | 32 | - |  |
| New York | 31 | - |  |
| Georgia | 30 | - |  |
| South Carolina | 29 | - |  |
| New Hampshire | 28 | - |  |
| Illinois | 27 | - |  |
| Tennessee | 26 | - |  |
| Pennsylvania | 25 | - |  |
| Ohio | 24 | - |  |
| Indiana | 23 | , |  |
| Colorado | 22 |  |  |
| Michigan | 21 |  |  |
| Massachusetts | 20 |  |  |
| Arizona | 19 |  |  |
| Delaware | 18 |  |  |
| lowa | 17 |  |  |
| Oklahoma | 16 |  | - |
| Missouri | 15 |  | - |
| Oregon | 14 |  | - |
| Texas | 13 |  | - |
| North Dakota | 12 |  | $\bigcirc$ |
| Minnesota | 11 |  | $\bigcirc$ |
| Vermont | 10 |  | - |
| Wisconsin | 9 |  | - |
| New Mexico | 8 |  | - |
| Kansas | 7 |  | - |
| Utah | 6 |  | - |
| California | 5 |  | - |
| South Dakota | 4 |  | - |
| Nebraska | 3 |  | - |
| Wyoming | 2 |  | - |
| Idaho | 1 |  | - |

Figure 9: Gap in Access on the Positive School Climate Index Between Students of Color and White Students:

| State | Rank | -5\% 0\% | 5\% | 10\% 15\% 20\% |
| :---: | :---: | :---: | :---: | :---: |
| Nation | Null |  | ¢ |  |
| Montana | 50 |  |  | - |
| Ohio | 49 |  |  |  |
| Wisconsin | 48 |  |  |  |
| North Dakota | 47 |  |  |  |
| Wyoming | 46 |  |  | $\bullet$ |
| Nevada | 45 |  |  | - |
| Pennsylvania | 44 |  |  | $\bullet$ |
| New Jersey | 43 |  |  | - |
| Nebraska | 42 |  |  | $\bullet$ |
| Alaska | 41 |  |  | - |
| Colorado | 40 |  |  | $\bullet$ |
| Minnesota | 39 |  |  | $\bullet$ |
| Connecticut | 38 |  |  | - |
| South Dakota | 37 |  |  | $\bullet$ |
| Massachusetts | 36 |  |  |  |
| Rhode Island | 35 |  |  | - |
| Indiana | 34 |  |  | $\bullet$ |
| Missouri | 33 |  |  | $\bullet$ |
| Illinois | 32 |  |  | - |
| Texas | 31 |  |  | - |
| New Hampshire | 30 |  |  | - |
| California | 29 |  |  | - |
| North Carolina | 28 |  |  | - |
| Kansas | 27 |  |  | $\bullet$ |
| Maryland | 26 |  |  | - |
| Hawaii | 25 |  |  | - |
| South Carolina | 24 |  |  | $\bullet$ |
| Georgia | 23 |  |  | - |
| Tennessee | 22 |  |  | - |
| Delaware | 21 |  | - |  |
| Utah | 20 |  | - |  |
| Washington | 19 |  | ¢ |  |
| Vermont | 18 |  | ${ }^{\circ}$ |  |
| Kentucky | 17 |  | $\cdot$ |  |
| Arizona | 16 |  | d |  |
| Oklahoma | 15 |  | d |  |
| lowa | 14 |  | - |  |
| Virginia | 13 |  | - |  |
| Michigan | 12 |  | $\bullet$ |  |
| New York | 11 |  | - |  |
| Louisiana | 10 |  | - |  |
| Idaho | 9 |  |  |  |
| Mississippi | 8 |  |  |  |
| Alabama | 7 | - |  |  |
| West Virginia | 6 | - |  |  |
| New Mexico | 5 | - |  |  |
| Florida | 4 | - |  |  |
| Oregon | 3 | $\bullet$ |  |  |
| Arkansas | 2 | $\bullet$ |  |  |
| Maine | 1 | - |  |  |

[^7]
## 3. Access to College/Career Readiness Curriculum Index

For secondary school students, having rigorous course selections available in the school is a basic first step to college or career readiness. Enrolling in these courses increases student achievement and the likelihood that students will graduate and attend college. ${ }^{13}$ Unfortunately, students of color are seriously underrepresented in courses with more advanced curricula, ${ }^{14}$ often a result of tracking within schools. ${ }^{15}$ However, the curriculum index indicates that student race and income disparities in the availability of college/career readiness curriculum are also found across schools.

## Defining the College/Career Readiness Curriculum Index

As shown in Table 5, five curriculum indicators from the CRDC data were used to develop the access to college/career readiness curriculum index. Only secondary schools are included in this analysis.

Table 5: Defining the Access to College/Career Readiness Curriculum Index

```
Access to College/
Career Readiness
Curriculum Index
```


## Advanced Math

AP / Dual Enrollment

## Calculus

## Chemistry

Physics

A composite index for access to college/career readiness curriculum created by averaging the scores across the five curriculum indicators listed below.

Percentage of students who attend a secondary school that offers Advanced Math (i.e., trigonometry, analytic geometry, probability and statistics, precalculus).

Percentage of students who attend a secondary school that offers Dual Enrollment or AP courses.

Percentage of students who attend a secondary school that offers Calculus.

Percentage of students who attend a secondary school that offers Chemistry.

Percentage of students who attend a secondary school that offers Physics.

[^8]Disparities in Access to Curriculum by Student Race and Income Status
Table 6 provides gaps by race/ethnicity and income status on each of the five indicators in the curriculum index.

Table 6. Percentage of Students by Race/Ethnicity and FRPL Status with Access to College/Career Readiness Curriculum

|  | Access to <br> Curriculum <br> Index | Advanced <br> Math | AP/Dual <br> Enrollment | Calculus | Chemistry | Physics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All | $\mathbf{9 2 \%}$ | $93 \%$ | $96 \%$ | $85 \%$ | $97 \%$ | $90 \%$ |
| By Race: |  |  |  |  |  |  |
| White | $\mathbf{9 3 \%}$ | $93 \%$ | $97 \%$ | $86 \%$ | $97 \%$ | $91 \%$ |
| Black | $\mathbf{8 8 \%}$ | $91 \%$ | $94 \%$ | $76 \%$ | $96 \%$ | $84 \%$ |
| Hispanic | $\mathbf{9 1 \%}$ | $92 \%$ | $95 \%$ | $85 \%$ | $96 \%$ | $89 \%$ |
| Asian | $\mathbf{9 7 \%}$ | $97 \%$ | $98 \%$ | $93 \%$ | $99 \%$ | $96 \%$ |
| American <br> Native | $\mathbf{7 9 \%}$ | $82 \%$ | $89 \%$ | $67 \%$ | $88 \%$ | $69 \%$ |
| Hawaiian/Pacific | $\mathbf{9 3 \%}$ | $95 \%$ | $97 \%$ | $87 \%$ | $97 \%$ | $91 \%$ |
| Islander |  |  |  |  |  |  |

Red $=$ Worse Access than All Students $\quad$ Yellow $=$ Access within $\pm 1$ of All Students Blue $=$ Better Access than All Students
Note: Students eligible for Free/Reduced Price Lunch (FRPL) are from families earning below 185\% of the federal poverty level.

- Asian secondary school students had the most access (97\%) to college/career readiness curriculum, while just 88\% of Black students and 79\% of American Native students had access.
- A lower share of students eligible for FRPL (90\%) had access to a college/career readiness curriculum compared to students not eligible for FRPL (94\%).
- As seen in the red boxes, Black students, American Native students, and those eligible for FRPL had less than average access in almost every indicator, while Asian and non-FRPL students had more access in almost every indicator.


## Disparities Across Schools of Varying Poverty Status

In addition to gaps in access to curriculum based on student race and ethnicity in schools overall, the data also reflect gaps in access within subsets of low-, mid-, and high-poverty schools (see Figure 10).

Figure 10: Access to Curriculum Index Among Students Attending Low-, Mid-, and High-Poverty Schools, by Student Group


Note: 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.

- Within low- and mid-poverty schools, over $90 \%$ of students across race groups had access to a college/career readiness curriculum, with Asian students having the highest scores in each group.
- In high-poverty schools, all race/ethnicity groups had substantially less access to a college/career readiness curriculum. Asian and Hispanic students had a 5\% to 6\% lower score than their counterparts in low- and mid-poverty schools, while both Black and White students had a lower score than their counterparts by over $10 \%$.

As discussed above, Black and Hispanic students are overrepresented in high-poverty schools and Asian and White students are overrepresented in low-poverty schools.

Student access to college/career readiness curriculum varies across the nation. Data below are provided for all 50 states by percent of all students with access on the College/Career Readiness Curriculum Index and by the size of gaps between the percent of students of color and percent of white students with access. These and other visualizations can be created on the Educational Opportunity Dashboard.

Figure 11: Percent of All Students with Access on the Curriculum Index

| State | Rank | F | 20\% 40\% 60\% | 80\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nation | Null |  |  |  |  |
| Alaska | 50 |  |  |  |  |
| Louisiana | 49 |  |  |  |  |
| Oklahoma | 48 |  | Interpret: 78\% of all students in Alaska have access on the curriculum index. |  |  |
| Mississippi | 47 |  |  |  |  |
| Michigan | 46 |  |  |  |  |
| Alabama | 45 |  |  |  |  |
| Arkansas | 44 |  |  |  |  |
| Idaho | 43 |  |  |  |  |
| Arizona | 42 |  |  |  |  |
| North Dakota | 41 |  |  |  |  |
| South Dakota | 40 |  |  |  |  |
| Oregon | 39 |  |  | - |  |
| Tennessee | 38 |  |  |  |  |
| New Mexico | 37 |  |  |  |  |
| Utah | 36 |  |  |  |  |
| Washington | 35 |  |  |  |  |
| New York | 34 |  |  |  |  |
| Minnesota | 33 |  |  |  |  |
| North Carolina | 32 |  |  |  |  |
| Missouri | 31 |  |  |  |  |
| California | 30 |  |  |  |  |
| Wyoming | 29 |  |  |  |  |
| Colorado | 28 |  |  |  |  |
| Rhode Island | 27 |  |  |  |  |
| Ohio | 26 |  |  |  | + |
| South Carolina | 25 |  |  |  | D |
| Montana | 24 |  |  |  | - |
| Delaware | 23 |  |  |  | P |
| Florida | 22 |  |  |  | P |
| Kansas | 21 |  |  |  | P |
| Indiana | 20 |  |  |  | P |
| Pennsylvania | 19 |  |  |  | - |
| Wisconsin | 18 |  |  |  | - |
| Kentucky | 17 |  |  |  | P |
| Illinois | 16 |  |  |  | P |
| Nebraska | 15 |  |  |  | - |
| Georgia | 14 |  |  |  | - |
| Massachusetts | 13 |  |  |  | - |
| West Virginia | 12 |  |  |  | - |
| Texas | 11 |  |  |  | - |
| lowa | 10 |  |  |  | - |
| Maine | 9 |  |  |  | - |
| Maryland | 8 |  |  |  | - |
| Nevada | 7 |  |  |  | - |
| Connecticut | 6 |  |  |  | - |
| Hawaii | 5 |  |  |  | - |
| Vermont | 4 |  |  |  | - |
| New Jersey | 3 |  |  |  | - |
| New Hampshire | 2 |  |  |  | - |
| Virginia | 1 |  |  |  | $\bigcirc$ |

Figure 12: Gap in Access on the Curriculum Index between Students of Color and White Students


[^9]
## Conclusion

For students across the nation, inequities in access to educational opportunities based on race, ethnicity, and income status are stark. Black, American Native, Hispanic, and students who are low income do not have the same access to educational opportunities as students who are White, Asian, and not low income. This pattern is true across various indicators of academic opportunities collected by the federal government as part of the biennial Civil Rights Data Collection, including indicators related to access to quality educators, access to a positive school climate, and access to a college/career readiness curriculum-all critical components of an adequate education.

While students attending high-poverty schools overall have less access to educational opportunities than students attending low-poverty schools, race and ethnicity gaps still exist in every level of school poverty, indicating that racism and poverty have compounding impacts on educational disparities. Until policymakers at local, state, and national levels eliminate inequity in public education, these gaps in access to opportunity will continue to feed race and income-based gaps in achievement among the nation's students.

## About Research for Action

Research for Action (RFA) is a Philadelphia-based nonprofit education research organization. We seek to use research to improve equity, opportunities, 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.

## Acknowledgments

This project was funded with generous support from the William Penn Foundation and The Heinz Endowments. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the funders. Thank you to the many members of the RFA team who contributed to this report, including Samantha Slade, Justis Freeman, David Bamat, Saxon Nelson, and Rayane Alamuddin. In addition, appreciation to Dae Kim and Jason Fontana whose analysis on the original version of the Dashboard served as a basis for the renewed analysis.

## Appendix A: About the Educational Opportunity Dashboard

Using the 2017-18 federal Civil Rights Data Collection (CRDC) data on virtually every public school in the nation, RFA's Educational Opportunity Dashboard compares disparities in access to educational opportunity at the state and national level. 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/Career Readiness Curriculum Index

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 A1 provides definitions and explains which indicators comprise each educational opportunity index.

Table A1: Access to Educational Opportunity Indicators and Definitions

| Educational Access Indicators | Definition |
| :---: | :---: |
| Average Opportunity Score | An average score for access to educational opportunity was created by averaging the scores across the three composite indexes, as described below. |
| Access to Quality Educators Index | A composite index for access to quality educators created by averaging the sc 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 S | 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. |  |


[^0]:    ${ }^{1}$ Carter, P. L., \& Welner, K. G. (2013). Closing the opportunity gap: What America must do to give every child an even chance. Oxford University Press.
    ${ }^{2}$ The Dashboard uses the newest available data from the Civil Rights Data Collection (CRDC), a federally mandated survey that collects information about access to and participation in educational opportunities for virtually every public school across the nation; uniquely, indicators are disaggregated by student race/ethnicity, income status, and special education or disability status.

[^1]:    ${ }^{3}$ In this analysis, the term students of color includes all students who were not defined as White according to the National Center for Education Statistics (NCES).

[^2]:    ${ }^{4}$ 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.

[^3]:    ${ }^{5}$ Gershenson, S. (2016). Linking teacher quality, student attendance, and student achievement. Education Finance and Policy, 11(2), 125.; Chetty, R., Friedman, J. N., \& Rockoff, J. E. (2014). Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood. American economic review, 104(9), 2633-79.
    ${ }^{6}$ American School Counselor Association. (2019). Empirical Research Studies Supporting the Value of School Counseling. Alexandria VA: American School Counselor Association.

[^4]:    ${ }^{7}$ Kini, T and Podolsky, A. (2016). Does Teaching Experience Increase Teacher Effectiveness? A Review of the Research. Learning Policy Institute; Clotfelter, C., Ladd, H., \& Vigdor, J. (2010). Teacher Credentials and Student Achievement in High School: A Cross-Subject Analysis with Student Fixed Effects. The Journal of Human Resources, 45(3), 655-681.; Papay, J. P., \& Kraft, M. A. (2015). Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career improvement. Journal of Public Economics, 130, 105-119.

[^5]:    * On Figure 5, size of dot represents share of students of color in the state.

[^6]:    ${ }^{8}$ Bryk, A. S. (2010). Organizing schools for improvement: Lessons from chicago. Chicago: University of Chicago Press.
    ${ }^{9}$ Thapa, A., Cohen, J., Guffey, S., \& Alessandro, A. H. (2013). A review of school climate research. Review of Educational Research, 83(3), 357-385.
    ${ }^{10}$ Billings, S. B., Deming, D. J., Ross, S. L. (2019). Partners in Crime. American Economic Journal: Applied Economics, 11(1), 126-150.
    ${ }^{11}$ Bacher-Hicks, A., Billings, S. B., \& Deming, D. J. (2019). The School to Prison Pipeline: Long-Run Impacts of School Suspensions on Adult Crime (No. w26257). National Bureau of Economic Research.
    ${ }^{12}$ Steinberg, M. P., \& MacDonald, J. M. (2019). The effects of closing urban schools on students' academic and behavioral outcomes: Evidence from Philadelphia. Economics of Education Review, 69, 25-60.

[^7]:    * On Figure 9 size of dot represents share of students of color in the state.

[^8]:    ${ }^{13}$ Long, M., Conger, D., \& latarola, P. (2012). Effects of High School Course-Taking on Secondary and Postsecondary Success. American Educational Research Journal, 49(2), 285-322.
    ${ }^{14}$ College Board. (2014). The 10th Annual AP Report to the Nation. Retrieved from https://research.collegeboard.org/programs/ap/data/ nation
    ${ }^{15}$ Tyson, K. (2011). Integration interrupted: Tracking, black students, and acting white after brown. New York: Oxford University Press.

[^9]:    * On Figure 12 size of dot represents share of students of color in the state.

