

Connecticut K–8 Educational Achievement Gap

Authors:

Abigail Fleisig
and
Shauna Curran

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INTRODUCTION

Connecticut is a remarkably prosperous state, ranking second in per capita personal income. Its citizens are also highly educated, ranking sixth in educational attainment. There is, however, a very large and disturbing “but:” Connecticut also ranks second in the nation on income inequality (as measured by the Gini Coefficient). And, of critical importance to this study, measures of the “Education Gap” between rich and poor—cut, analyzed, ranked, studied from multiple angles—is consistently among the worst in the U. S.

This is the critical point that bears repeating: Connecticut is a very wealthy, very educated state but also maintains nation-leading income and educational disparities. Moreover, these disparities may well be correlated with certain social pathologies. Only four states report higher levels of teenage alcohol use, for instance. Income and education disparities may also be correlated with poor economic performance: In 2022, forty states enjoyed a higher five-year increase in housing prices and only 16 suffered a higher unemployment rate.

[Table 1](#), summarizes these, and a few other, key findings.

In addition to the state-to-state comparisons shown above, county-to-county or district-to-district comparisons illustrate quite clearly how the state can rank so highly overall but have such a large education gap within the state. The average gap in educational achievement in ELA, math, and science between poor (free lunch) and well off (non-subsidized) students is striking, averaging approximately 20 points across all three subject areas.

Fortunately, there is some good news, some hope. Quite simply, better educational environments lead to better educational outcomes. In this document, three such environmental factors—parental involvement, suspension policies, and teacher support—are shown to have considerable impact on such outcomes. And, each of these environmental factors follow the same depressing path: Poor districts do, well, poorly. Unfortunately, the barriers to addressing those disparities are large.

**Table 1:
Summary of Key Findings**

	Income and Disparity (2021)		Achievement Gap (2022: #1 = Largest Gap)				Economic Performance & Social Dysfunction (2022: #50 = Worst Performance)			
State Rankings	Per Capita Personal Income	Gini Coefficient	Reading/ Grade 4	Reading/ Grade 8	Mathematics/ Grade 4	Mathematics/ Grade 8	5-Year Change in FHFA House Prices	% Teens Reporting Alcohol Use in the Last Year	Unemployment Rate	% Change in Per Capita Personal Income
Highest Ranking State	Maryland	New York	Virginia	Alaska	Massachusetts	California	Idaho	Vermont	California	Florida
2nd Highest Ranking State	Connecticut	Connecticut, Louisiana	Arkansas	Massachusetts	California	Connecticut	Florida	Montana	Nevada	Nevada
Connecticut Rank	#2	#2	#15	#8	#7	#2	#40	#46	#34	#38
2nd Lowest Ranking State	West Virginia	New Hampshire	Indiana	New Hampshire, Nevada, Florida	West Virginia	West Virginia	South Dakota	Hawaii	Nebraska	Alaska
Lowest Ranking State	Mississippi	Utah, Alaska	Wyoming	Wyoming, Oklahoma, Delaware	Wyoming,	Wyoming	Louisiana	Utah	Utah	Vermont

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SECTION I: CONNECTICUT IS A RICH AND HIGHLY EDUCATED STATE

In Sections I through V, the data and analysis will demonstrate that Connecticut is a wealthy and highly educated state but suffers from significantly high levels of income and educational attainment inequality. In fact, on one critical measure of the “education gap,” grade 8 Mathematics, shown later in Figure 7, Connecticut ranks near the bottom—at second-worst. The four other states in the “top (worst) five” on this education gap measure are Maryland, California, Colorado and New Jersey. Throughout the following figures, therefore, Connecticut is shown in blue, while the other “top five” are highlighted in black, with an intent to eyeball potential correlations.

Figure 1:
Per Capita Personal Income in the United States in 2021,
by State (in Thousands of U.S. dollars)¹

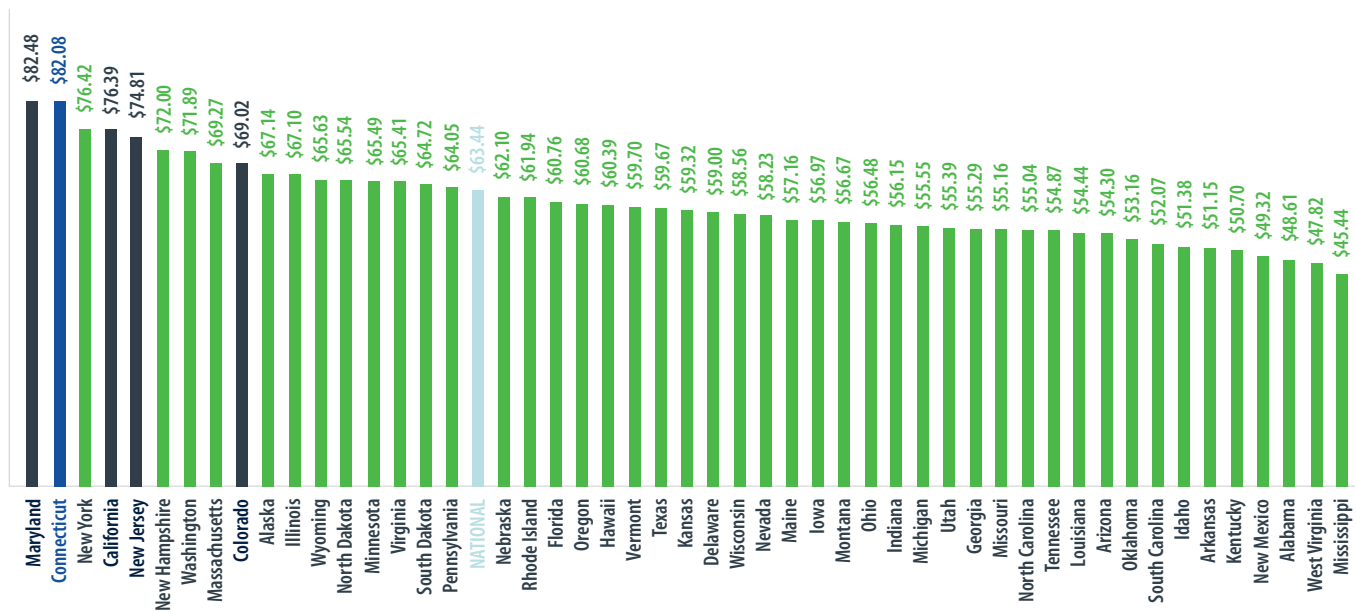


Figure 1, above, illustrates the Bureau of Economic Analysis’ (BEA) report on 2021 per capita personal income in thousands of U.S. dollars by state. The states highlighted in black represent the four with the widest educational achievement gap in grade 8 mathematics between low-income and high-income students in 2022, with Connecticut in blue, from Figure 7.

Figure 1 shows that Connecticut is a high-income state. According to the BEA, Connecticut had the second-highest per capita personal income in the U.S. in 2021. Maryland tops the states with the highest per capita personal income, at \$82,47 with Connecticut at \$82,082. The states with the top five highest per capita personal income in 2021 are the following: Maryland, Connecticut, New York, California and New Jersey. Meanwhile, Mississippi has the lowest per capita personal income in the United States at \$45,438. Furthermore, West Virginia, Alabama, New Mexico and Kentucky are alongside Mississippi as the states with the lowest per capita personal income.

Definitions of these terms, as provided by the BEA are as follows:

“Personal income is the income that a worker receives from all sources, including salary, wages, bonuses, income from self-employment, dividends from investments, and receipts from real estate investments. Because of this, total personal income is different from the average wage, as personal income takes more factors into account than just salary and compensation.”

“Wages and salaries in the United States can vary greatly depending on the profession a person is in, and the rise (or fall) of wages is seen as a key economic indicator as to the financial health of the country’s residents. In recent years, the increasing gap between CEO compensation and the compensation of the average worker has brought the issue of stagnating wages to the forefront of the national conversation.”

Figure 2:
Connecticut K – 8 Educational Achievement Indicators^{2,3,4,5,6,7,8}

Educational Achievement Indicators	Education	Pre K-12	Preschool Enrollment (2022)	High School Graduation Rate (2018)	College Readiness (2019)	Naep Reading Grade 4 (2022)	Naep Reading Grade 8 (2022)
CT Rank Out Of U.S. States	#6	#3	#3	#13	#1	Tied #8	Tied #4

Figure 2, above, illustrates that Connecticut performs well in overall, average educational achievement, ranking sixth, according to U.S. News & World Report. Much of the analysis in this section is drawn from the U.S. News & World Report rankings.

Connecticut is ranked #6 for the state with the best education in the nation. “New Jersey is the top state for education. It’s followed by Massachusetts, Florida, Washington, and Colorado to round out the top five.”⁹ Furthermore, “... six of the 10 states with the best education systems also rank among the top 10 Best States overall.” These six states are Washington, Utah, Nebraska, Wisconsin, Massachusetts and Florida. Therefore, there appears to be a positive correlation between states with the best education ratings and states rated the best overall.

“The Best States ranking of U.S. states draws on thousands of data points to measure how well states are performing for their citizens. In addition to health care and education, the metrics take into account a state’s economy, its roads, bridges, internet and other infrastructure, its public safety, the fiscal stability of state government, and the opportunity it affords its residents.”¹⁰

Figure 2 shows that Connecticut is ranked as the #3 state for “best childhood education (pre-kindergarten through grade 12).” “Half the weighting in evaluating education goes to metrics measuring pre-K through 12th grade... Along with high school graduation rates, this subcategory measures preschool enrollment, standardized test scores in math and reading among eighth-graders and college readiness based on SAT and ACT scores... New Jersey ranks first in

the nation for this subcategory, as well as in the overall education category. Massachusetts places second, followed by Connecticut, New Hampshire, and Vermont.”¹¹

Connecticut is also ranked #3 on the preschool enrollment metric in 2019, which “...accounts for the percentage of children under age 5 in any state enrolled in a nursery school or preschool program in 2019, according to the U.S. Census Bureau American Community Survey. New Jersey led the nation in preschool enrollment, with nearly 68% of kids aged 3-4 signed up.”¹² The importance of the preschool enrollment metric falls on the early start that children gain from pre-K education. Vermont ranked #2 in preschool enrollment in 2019, followed by Connecticut, Mississippi, Massachusetts and New York.

Continuing to assess the data in Figure 2, Connecticut is ranked thirteenth-best on “high school graduation rate in 2018.” High school graduation rates contribute to the “Best States” education ranking. This metric evaluates graduating students from public high school through “...a longitudinal look at a graduating class, starting with students who enter the ninth grade and counting how many graduate from the 12th grade... According to the National Center for Education Statistics, Iowa led the nation in high school graduation for the class of 2018 cohort, with 91.4% of the state’s public high-schoolers obtaining diplomas. The national average was 85.3%.”¹³ Immediately below Iowa in high school graduation rate in 2018 are New Jersey, Kentucky, West Virginia and Texas. Iowa, Kentucky, West Virginia and Texas.

Connecticut is ranked #1 on the metric “best state for college readiness” in 2019. “This metric measures the approximate percentage of high school graduates from the class of 2019 who have passed the SAT, the ACT, or both.”¹⁴ The SAT is a standardized test that assesses students in math and evidence-based reading and writing. Meanwhile, the ACT is a standardized college-readiness test that measures student achievement in English, math, reading and science. The SAT and the ACT are used in college admissions. States following Connecticut on the college readiness ranking are Illinois, New Jersey, Massachusetts and Idaho.

The final two columns in Figure 2 indicate that Connecticut has high educational achievement in 2022 grade 4 and grade 8 reading. These two columns contain data from a separate source, the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). In NAEP’s 2022 grade 4 reading assessments, Connecticut was tied with Pennsylvania, Nebraska, Hawaii, Montana and Ohio with the eighth highest educational achievement, following Maryland, Florida, Wyoming, Colorado, New Hampshire, New Jersey and Utah. The states with the highest Grade 4 educational achievement were Maryland, Wyoming, Florida, New Jersey, New Hampshire and Colorado.

In NAEP’s grade 8 rankings, Connecticut is tied for fourth with Vermont and Idaho, following New Jersey, Maryland and Utah.

SECTION II: CONNECTICUT HAS HIGH INCOME AND EDUCATION INEQUALITY

Figure 3, below, depicts the U.S. Census Bureau’s report on household income distribution inequality in 2021 by state. The U.S. Census calculated the Gini coefficient for each state in 2021, representing income distribution inequality between rich and poor households. Again, the U.S. states highlighted in black are the four with the widest educational achievement gap in grade 8 mathematics between low-income and high-income students in 2022, with Connecticut in blue, from Figure 7: California, Maryland, Connecticut, Colorado and New Jersey. Even a casual, “eyeball,” assessment indicates a potential relationship between income inequality and educational achievement gaps.

**Figure 3:
Gini Coefficient As A Measure For Household Income Distribution
Inequality In The United States 2021, By State¹⁵**

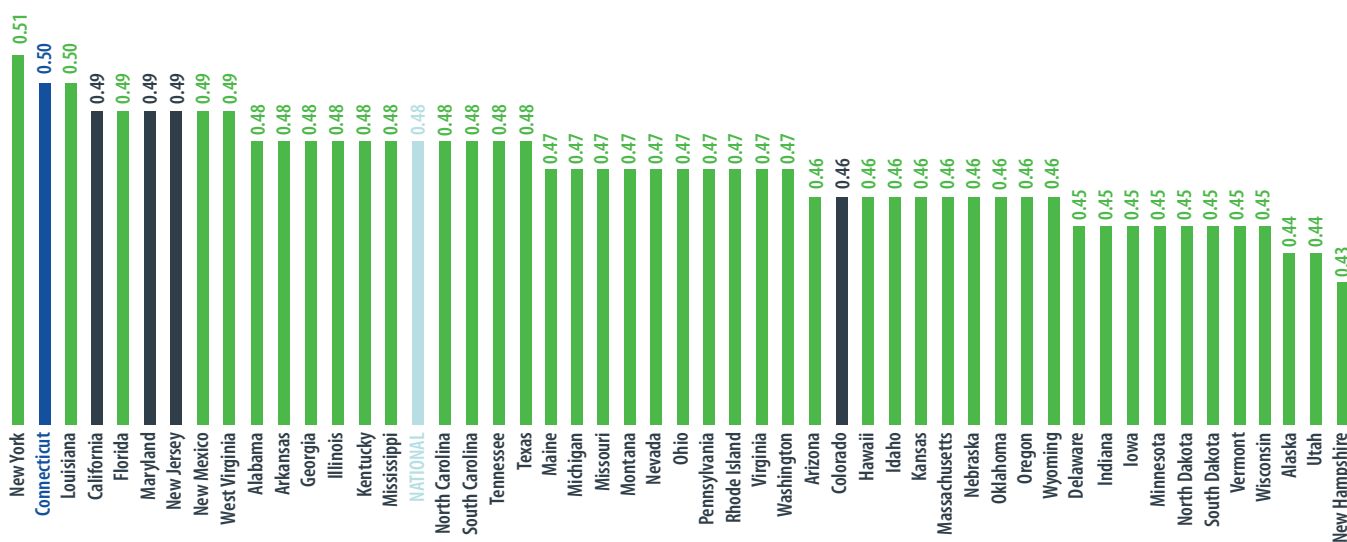


Figure 3 shows that Connecticut is tied with Louisiana for the state with the second-highest household income distribution inequality in the United States in 2021, with a Gini coefficient score of 0.50. Additionally, referencing Figures 1–3, although Connecticut has high per capita personal income in 2021 and high education rankings in the U.S., Connecticut also has high household income distribution inequality.

The states with the highest Gini coefficient score (i. e., highest income disparity) in 2021 are as follows: New York, Connecticut, Louisiana, California, Florida, Maryland, New Jersey and New Mexico. “New York was the state with the greatest gap between rich and poor with a Gini coefficient score of 0.51 in 2021.” Furthermore, “New Hampshire was considered the most equal of all states with a Gini index of 0.43, the lowest of any state.” Following New Hampshire, the states that are considered to have the least household income distribution inequality than most states in the U.S. in 2021 are Utah, Alaska, Vermont, South Dakota, Wisconsin, Indiana, Iowa, Minnesota, North Dakota and Delaware.

“The Gini coefficient is calculated by looking at average income rates. A score of zero would reflect perfect income equality and a score of 1 indicates a society where one person would have all the money and all other people have nothing.”¹⁶

Defining the “Educational Achievement Gap”

This report depicts and provides analysis of educational achievement gaps between two groups: high income students and low-income students.

According to the National Center for Educational Statistics (NCES), “Achievement gaps occur when one group of students (e.g., students grouped by race/ethnicity, gender) outperforms another group and the difference in average scores for the two groups is statistically significant (i.e., larger than the margin of error).”¹⁷

Educational achievement gaps can change over time. “Whether a gap narrows depends on the amount of change in the average scores for the two student groups... In each state, changes in the sizes of gaps could be affected by demographic or population changes, as well as policy changes in the school, district, and state. When reading the results, it is important to consider these factors.”¹⁸

The NCES uses the National Assessment of Educational Process (NAEP) data to “...identify gaps and report on trends over time but cannot explain why gaps exist or why they change. The NAEP assessments are designed to measure student performance, not to identify or explain the causes of differences in student performance.”

Defining the Proxy for Educational Achievement, Applicable to Figures 4-7

In Section IV, Figures 4, 5, 6 and 7, use average scale scores on a 0–500-point scale to indicate educational achievement.

“The National Assessment of Educational Progress (NAEP) presents assessment results of student performance in two ways in The Nation’s Report Card:” One of these ways is by presenting average scores on the NAEP subject scale.¹⁹

NAEP assessment results are reported as average scores on a 0-500 scale for reading and mathematics in grades 4 and 8. “These scale scores, derived from student responses to assessment questions, summarize the overall level of performance attained by that student. Scale scores for individual students are not reported, but summary statistics describing scale scores for groups of students (demographic, gender, race/ethnicity, etc.) are reported.

“Scale scores can be used for comparisons between the nation, states, and selected districts, as well as among selected student groups (e.g., Black/White, Hispanic/White). Because NAEP scores are developed independently for each subject, results cannot be compared across subjects.”

“NAEP reports results using widely accepted statistical standards; findings are reported based on a statistical significance level set at 0.05, with appropriate adjustments for multiple comparisons. Only differences found to be statistically significant are referred to as higher or lower.”

“Although comparisons are made in students’ performance based on demographic characteristics and educational experiences, the comparisons cannot be used to establish a cause-and-effect relationship between the characteristic or experience and achievement. Many factors may influence student achievement, including educational policies and practices, available resources, and the demographic characteristics of the student body. Such factors may change over time and vary among student groups.”

Defining the Proxy for Student Income Level

In this report, eligibility for the National School Lunch Program (NSLP) is used as the proxy for student income level.

According to the NAEP Glossary of Terms, the NSLP is “A federally assisted meal program that provides low-cost or free lunches to eligible students. It is sometimes referred to as the free/reduced-price lunch program.”²⁰

The NAEP uses student eligibility for NSLP as an indicator of poverty and began collecting this data in 1996. “Based on available school records, students were classified as either currently eligible for the free/reduced-price school lunch or not eligible. Eligibility for free and reduced-price lunches is determined by students’ family income in relation to the federally established poverty level. Students from families with incomes at or below 130 percent of the poverty level qualify to receive free lunches and those from families with incomes between 130 and 185 percent of the poverty level qualify to receive reduced-price lunch. For the period July 1, 2021, through June 30, 2022, for a family of four, 130 percent of the poverty level is \$34,450 and 185 percent is \$49,025.”²¹

Figures 4, 5, 6 and 7 use eligibility for the NSLP to identify two groups: low-income students and high-income students. Low-income students are represented by students who are eligible for the NSLP, while high-income students are represented by students who are ineligible for the NSLP.

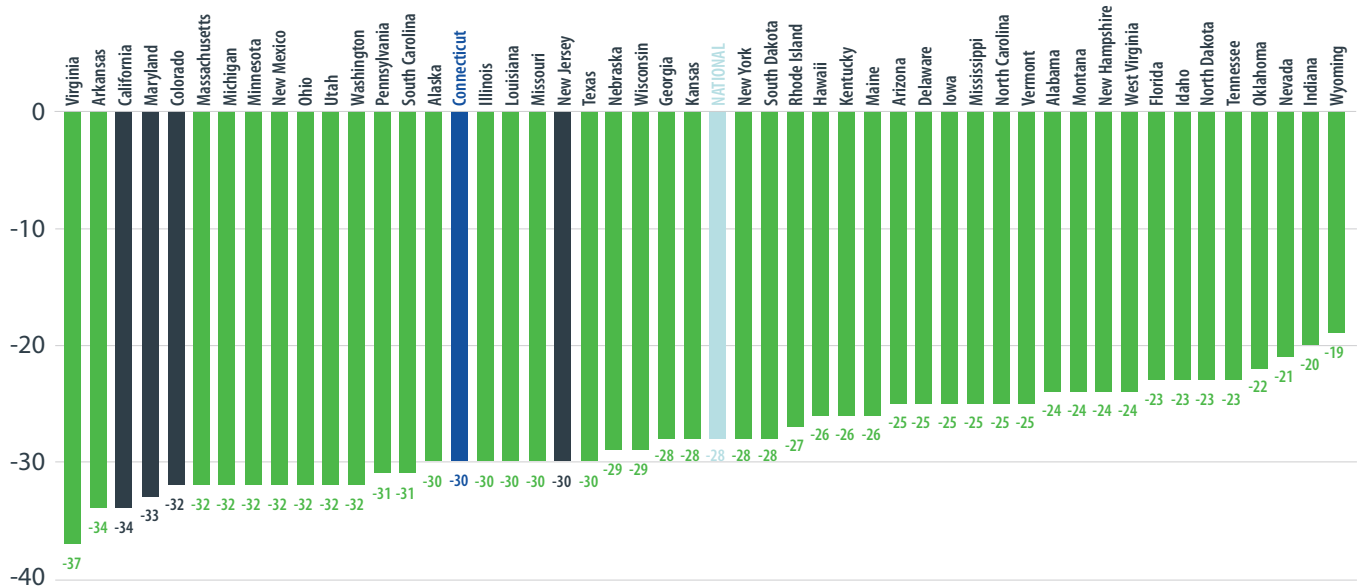
Educational Achievement Gaps By Income, By State

Figures 1–7, paired with analysis, show that Connecticut has high per capita personal income in 2021 and high education rankings in the United States. But Connecticut also has high household income distribution inequality and wide educational achievement gaps between low-income and high-income students in 2022 grade 4 and 8 reading and grade 4 and 8 mathematics.

In Figures 4, 5, 6 and 7, the U.S. states highlighted in black represent the four states with the widest educational achievement gap in grade 8 mathematics between low-income and high-income students in 2022, with Connecticut in blue, from Figure 7: California, Maryland, Connecticut, Colorado and New Jersey.

Figure 4:
Reading, Grade 4, Achievement Gap by Income, Per U.S. State, 2022²²

Achievement Gap, NAEP Grade 4 Reading Average Scale Scores, 2022,
 NSLP Eligibility, Eligible - Ineligible Students, By State



Note: Oregon Data NA

Figure 4, above, depicts the educational achievement gap between NSLP-eligible students (low-income) and NSLP-ineligible students (high-income) by state, based on NAEP 2022 grade 4 reading assessments. For more information on educational achievement gaps, refer to the heading “Defining the ‘Educational Achievement Gap.’” For more on student eligibility for the National School Lunch Program, refer to “Defining the Proxy for Student Income Level” above. Figure 4 represents educational achievement through average scale scores of 0 – 500 points on NAEP 2022 grade 4 reading assessments. For more information on average scale scores, refer to the heading “Defining the Proxy for Educational Achievement, Applicable to Section IV.”

As shown in Figure 4, Connecticut has a wide educational achievement gap in grade 4 reading between low-income and high-income students in 2022 compared to other U.S. states. Figure 4 illustrates that Connecticut had the 15th widest educational achievement gap in 2022 grade 4 reading, with a gap of 30 points in average scale scores, tied with Alaska, Illinois, Texas, New Jersey and Missouri.

In addition, according to Figure 4, the national average educational achievement gap in 2022 grade 4 reading is 28. In other words, Connecticut’s gap exceeds the national average.

Furthermore, Virginia has the widest educational achievement gap in 2022 grade 4 reading, with a 37-point gap in average scale scores between low-income and high-income students, followed by Arkansas, California, Maryland, Colorado, Massachusetts, Ohio, Washington, Michigan, New Mexico and Utah. Moreover, according to Figure 4, the following U.S. states have the narrowest educational achievement gap in 2022 grade 4 reading between low-income and high-income students: Wyoming, Indiana, Nevada, Oklahoma, North Dakota, Tennessee and Florida.

Figure 5: Reading, Grade 8, Achievement Gap by Income, Per U.S. State, 2022²³

Achievement Gap, NAEP Grade 8 Reading Average Scale Scores, 2022,
NSLP Eligibility, Eligible - Ineligible Students, By State

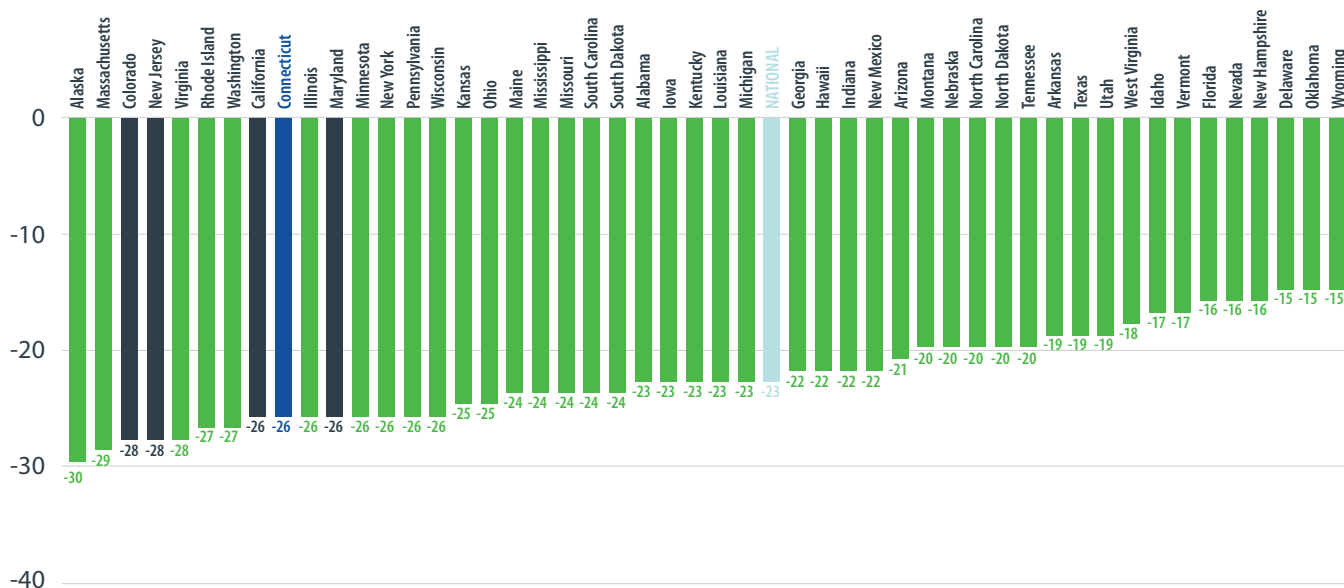


Figure 5 depicts the educational achievement gap between NSLP-eligible students (low-income students) and NSLP-ineligible students (high-income students) by U.S. state, based on NAEP 2022 grade 8 reading assessments. For more information on educational achievement gaps, refer to the heading “Defining the ‘Educational Achievement Gap.’” For more on student eligibility for the National School Lunch Program, refer to “Defining the Proxy for Student Income Level” above. Figure 4 represents educational achievement through average scale scores of 0 – 500 points on NAEP 2022 grade 8 reading assessments. For more information on average scale scores, refer to the heading “Defining the Proxy for Educational Achievement, Applicable to Section IV.”

Referencing Figure 5, Connecticut has a wide educational achievement gap in grade 8 reading between low-income and high-income students compared to other U.S. states. Figure 5 illustrates that Connecticut has the 8th widest educational achievement gap in grade 8 reading, with a gap of 26 points in average scale scores between NSLP eligible students and NSLP non-eligible students, tied with California, Illinois, Maryland, Minnesota, New York, Pennsylvania and Wisconsin.

In addition, according to Figure 5, the national average educational achievement gap in grade 8 reading between NSLP-eligible students and NSLP non-eligible students in 2022 is 23 average scale score points.

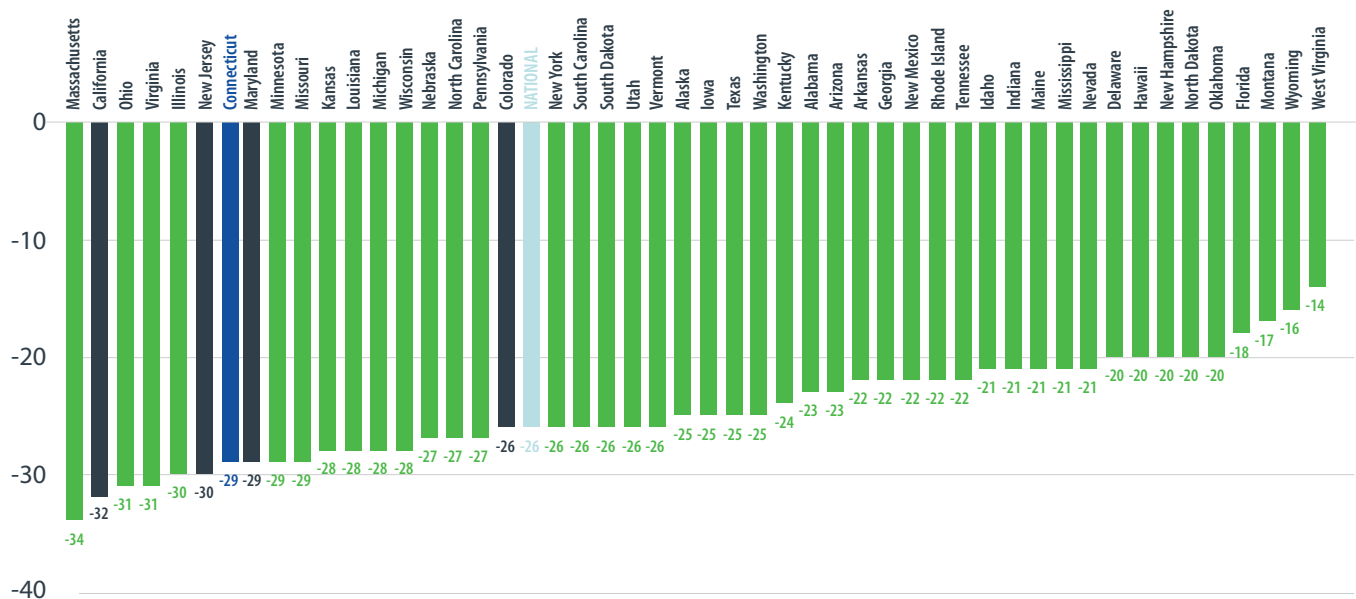
Depicted in Figure 5, Alaska has the widest educational achievement gap in 2022 grade 8 reading, with a 30-point gap in average scale scores between low-income and high-income students, followed by Massachusetts, Colorado, New Jersey, Virginia, Rhode Island and Washington. Furthermore, the following U.S. states have the narrowest educational achievement gap in grade 8 reading between low-income and high-income students in 2022: Delaware, Oklahoma, Wyoming, New Hampshire, Florida and Nevada.

Figure 6, below, depicts the educational achievement gap between NSLP-eligible students (low-income students) and NSLP-ineligible students (high-income students) by U.S. state, based on NAEP 2022 grade 4 mathematics assessments. For more information on educational achievement gaps, refer to the heading “Defining the ‘Educational Achievement Gap.’” For more on student eligibility for the National School Lunch Program, refer to “Defining the Proxy for Student Income Level” above. Figure 4 represents educational achievement through average scale scores of 0 – 500 points on NAEP 2022 grade 4 mathematics assessments. For more information on average scale scores, refer to the heading “Defining the Proxy for Educational Achievement, Applicable to Section IV.”

Referencing Figure 6, Connecticut has a wide educational achievement gap in 2022 grade 4 mathematics between low-income and high-income students compared to other U.S. states. Figure 6 illustrates that Connecticut has the 7th widest educational achievement gap in grade 4 mathematics, with a gap of 29 points in average scale scores between NSLP-eligible students and NSLP non-eligible students, tied with Missouri, Maryland, and Minnesota.

Figure 6:
Mathematics, Grade 4, Achievement Gap by Income, Per U.S. State, 2022²⁴

Achievement Gap, NAEP Grade 4 Mathematics Average Scale Scores, 2022,
 NSLP Eligibility, Eligible - Ineligible Students, By State

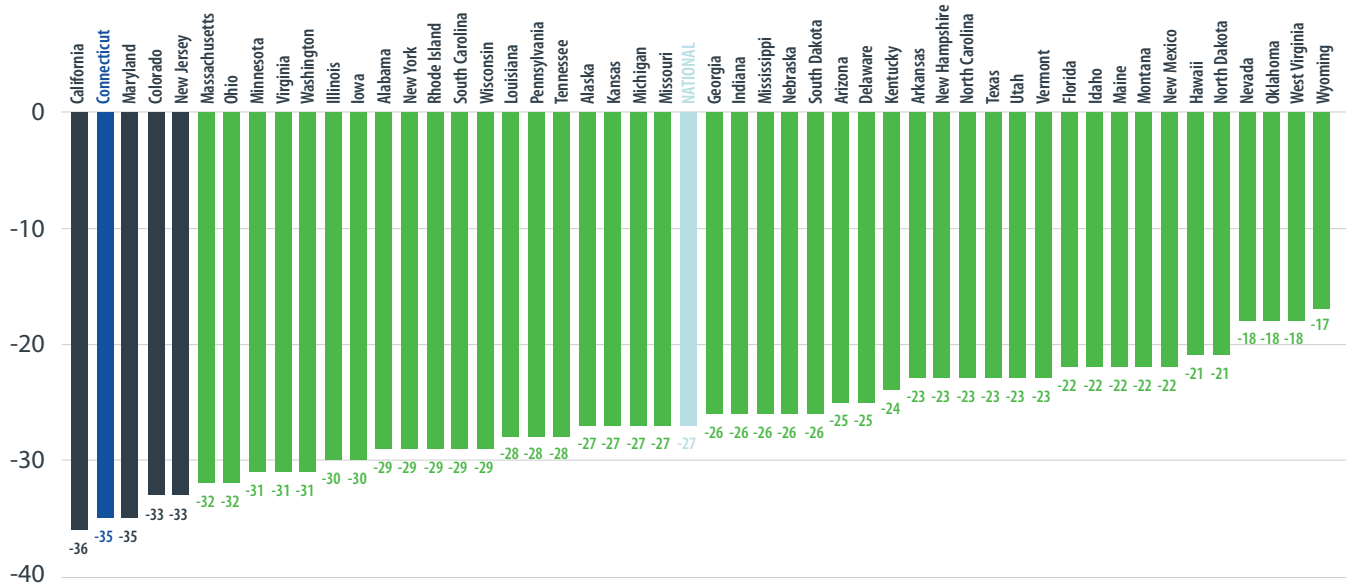


In addition, according to Figure 6, the national average educational achievement gap in grade 4 mathematics between NSLP-eligible students and NSLP non-eligible students in 2022 is 26 average scale score points.

Illustrated in Figure 6, Massachusetts has the most significant educational achievement gap in 2022 grade 4 mathematics, with a 34-point gap in average scale scores between low-income and high-income students followed by California, Virginia, Ohio, Illinois, New Jersey, Connecticut, Maryland, Minnesota and Missouri. Furthermore, the following U.S. states have the narrowest educational achievement gap in grade 4 mathematics between low-income and high-income students in 2022: West Virginia, Wyoming, Montana and Florida.

Figure 7:
Mathematics, Grade 8, Achievement Gap by Income, Per U.S. State, 2022²⁵

Achievement Gap, NAEP Grade 8 Mathematics Average Scale Scores, 2022,
 NSLP Eligibility, Eligible - Ineligible Students, By State



As noted earlier, the “top 4” states, plus Connecticut, shown in Figure 7, above, for ranking the highest in the nation on the metric of “Grade 8 Mathematics Achievement Gap” were used as the “black and blue” indicators throughout this section.

Figure 7 depicts the educational achievement gap between NSLP-eligible students (low-income students) and NSLP-ineligible students (high-income students) by U.S. state, based on NAEP 2022 grade 8 mathematics assessments. For more information on educational achievement gaps, refer to the heading “Defining the ‘Educational Achievement Gap.’” For more on student eligibility for the National School Lunch Program, refer to “Defining the Proxy for Student Income Level” above. Figure 7 represents educational achievement through average scale scores of 0 – 500 points on NAEP 2022 grade 8 mathematics assessments. For more information on average scale scores, refer to the heading “Defining the Proxy for Educational Achievement, Applicable to Section IV.”

Referencing Figure 7, Connecticut had a significant educational achievement gap in 2022 grade 8 mathematics between low-income and high-income students compared to other states. In fact, Connecticut had the second-widest educational achievement gap in grade 8 mathematics, with a gap of 35 points in average scale scores between NSLP-eligible students and NSLP non-eligible students, tied with Maryland.

In addition, the national average educational achievement gap in grade 8 mathematics between NSLP-eligible students and NSLP non-eligible students in 2022 is 27 average scale score points. Connecticut, at 35, is significantly underperforming.

California has the most drastic educational achievement gap in 2022 grade 8 mathematics, with a 36-point gap in average scale scores between low-income and high-income students, followed by Maryland, Connecticut, Colorado, New Jersey, Ohio and Massachusetts. Moreover, illustrated in Figure 7, the following U.S. states have the smallest educational achievement gap in grade 4 mathematics between low-income and high-income students in 2022: Wyoming, West Virginia, Oklahoma and Nevada.

Educational Achievement Disparity Within Connecticut

Figure 8, below, is based on a different data set from the NAEP. Specifically, this data is drawn from ct.gov’s EdSight website, “Connecticut’s official source for education data.”²⁶

**Figure 8:
Performance Index, 2021-22, State of Connecticut,
Free/Reduced Price Meal Eligibility (3-level)²⁷**

Free/Reduced Price Meal Eligibility	ELA Performance Index	Math Performance Index	Science Performance Index
Free	53.6	46.3	50.6
Reduced	59.7	53.3	56.1
Non-Subsidized	71.2	66.7	68.1

Connecticut Government Definitions:

- The Performance Index is the average performance of students in a subject area (i.e., English Language Arts (ELA), Mathematics, or Science) on the state summative assessments.
- The Performance Index ranges from 0-100 and is reported for all students and for students in each individual student group.
- Connecticut’s ultimate target for a Performance Index is 75.²⁸

Analysis Proxy Definitions:

- The Performance Index is a proxy for educational achievement in the following analysis.
- Students eligible for free or reduced-price lunch through the NSLP represent low-income students.
- Ineligible students for the NSLP (non-subsidized lunch) represent high-income students.

Figure 8 shows the average performance of students, within Connecticut, eligible for free lunch through the NSLP, students eligible for reduced-priced lunch through the NSLP, and students not eligible for the NSLP (non-subsidized), in English language arts (ELA), mathematics and science, via the performance index of 0-100 based on 2021-2022 Connecticut state summative assessments. For more information on the free and reduced-priced student lunch eligibility through the NSLP, reference “Defining the Proxy for Student Income Levels.”

The average gap in educational achievement in ELA, math and science between free lunch-eligible students and reduced-priced lunch-eligible students is 6.2 points. The gap between poor (free lunch) and well off (non-subsidized) students is even more striking, averaging approximately 20 points across all three subject areas.

Referencing Figure 8, low-income students in Connecticut performed consistently worse than high-income students in ELA, math and science in 2021-2022 state summative assessments. The statement above suggests that low-income students have lower educational achievement scores than high-income students in Connecticut in 2021-2022 on the performance index, which reveals an educational achievement gap between low-income and high-income students in CT. Furthermore, the analysis of Figure 8 indicates that educational achievement is likely related to household income levels.

These within-Connecticut results are broadly in line with the findings in the national, state-by-state comparisons shown in Figures 4-7. Put bluntly, Connecticut, a rich and, on average, highly educated state, demonstrates significant, troubling levels of education gaps.

Figure 9, on the next page, depicts all Connecticut counties, 2021 annual per capita personal income by county, a Connecticut school district in each county, net current expenditures per pupil (NCEP) 2020-2021 in each district, and NSLP eligible and NSLP non-eligible students' educational achievement in ELA, math and science in 2021-2022.

Three overall – and critical – findings arise from the data in Figure 9:

1. Students in richer counties outperform poorer counties across all three subject areas. For example, both free lunch and non-subsidized lunch students in (wealthy) Fairfield County outperform those in (poorer) Windham County by approximately 15 points.
2. Gaps are apparent even in the wealthiest county, Fairfield. In fact, the education system in Fairfield County results in a roughly 13-point gap across all three subject areas. This is virtually identical to the gap evidenced in Windham County.
3. Per capita spending by county varies significantly, ranging from ~\$17,000 in Tolland County to ~\$23,000 in Litchfield County.

Figure 9:
Connecticut County, CT School District, National School Lunch Program (NSLP) Eligibility, by Performance Index, by Net Current Expenditures per Pupil (NCEP) ^{29, 30, 31}

County Name	Per Capita Personal Income by County, Annual, 2021	School District Name	NCEP 2020-2021	Free/Reduced Price Meal (NSLP) Eligibility (2-level)	ELA Performance Index 2021-2022	Math Performance Index 2021-2022	Science Performance Index 2021-2022
Fairfield	\$127,391	Fairfield School District	\$20,782	Eligible For NSLP	64.3	59.2	59.1
				Not Eligible For NSLP	77.9	73.9	73.0
Hartford	\$70,168	Hartford School District	\$21,756	Eligible For NSLP	46.2	39.1	44.6
				Not Eligible For NSLP	58.4	52.3	57.5
Litchfield	\$74,852	Litchfield School District	\$23,387	Eligible For NSLP	67.9	62.9	66.5
				Not Eligible For NSLP	72.4	71.9	72.9
Middlesex	\$74,453	Middletown School District	\$20,948	Eligible For NSLP	55.3	45.4	50.5
				Not Eligible For NSLP	68.6	59.3	61.4
New Haven	\$64,643	New Haven School District	\$18,870	Eligible For NSLP	48.6	38.9	44.3
				Not Eligible For NSLP	59.2	50.7	52.8
New London	\$63,877	New London School District	\$18,454	Eligible For NSLP	47.1	39.3	46.4
				Not Eligible For NSLP	64.9	55.6	63.3
Tolland	\$63,722	Tolland School District	\$16,972	Eligible For NSLP	61.6	59.4	58.2
				Not Eligible For NSLP	70.8	68.9	66.1
Windham	\$55,261	Windham School District	\$19,415	Eligible For NSLP	48.9	43.0	48.8
				Not Eligible For NSLP	61.9	56.9	64.8

Connecticut Government Definitions:

- The Performance Index is the average performance of students in a subject area (i.e., ELA, Mathematics, or Science) on the state summative assessments.
- The Performance Index ranges from 0-100 and is reported for all students and for students in each individual student group.
- Connecticut’s ultimate target for a Performance Index is 75.³²

Analysis Proxy Definitions:

- One school district was selected for each county in Connecticut.
- The Performance Index will be used as a proxy for educational achievement in the following analysis.

SECTION III: CONNECTICUT’S WIDE EDUCATIONAL ACHIEVEMENT GAP – POTENTIAL LINK TO ECONOMIC AND SOCIAL PATHOLOGIES

Section III outlines negative economic trends and social pathologies in Connecticut. Referencing Figures 1–13, although Connecticut has high per capita personal income in 2021 and high educational rankings in the U.S., Connecticut also has high household income distribution inequality, wide educational achievement gaps between low-income and high-income students in 2021-2022, low change in FHFA U.S. state house purchase-only price index in 2022 Q4 over five years, high percentage of teenagers ages 12 to 17-year-olds who report alcohol use in 2022 by U.S. state, high annual unemployment rate in 2021, and low percentage of change in per capita personal income from 2020 to 2021. The U.S. states highlighted in black represent the five states with the widest educational achievement gap in grade 8 mathematics between low-income and high-income students in 2022, with Connecticut in blue, from Figure 7: California, Maryland, Connecticut, Colorado and New Jersey. The highlighted U.S. states should show a correspondence between states with the widest educational achievement gap in grade 8 mathematics between low-income and high-income students in 2022 and Figures 10–13.

Figure 10:
5-Years Change in FHFA U.S. State House Price Indexes
(Seasonally Adjusted, Purchase-Only Index, 2022, Q4)³³

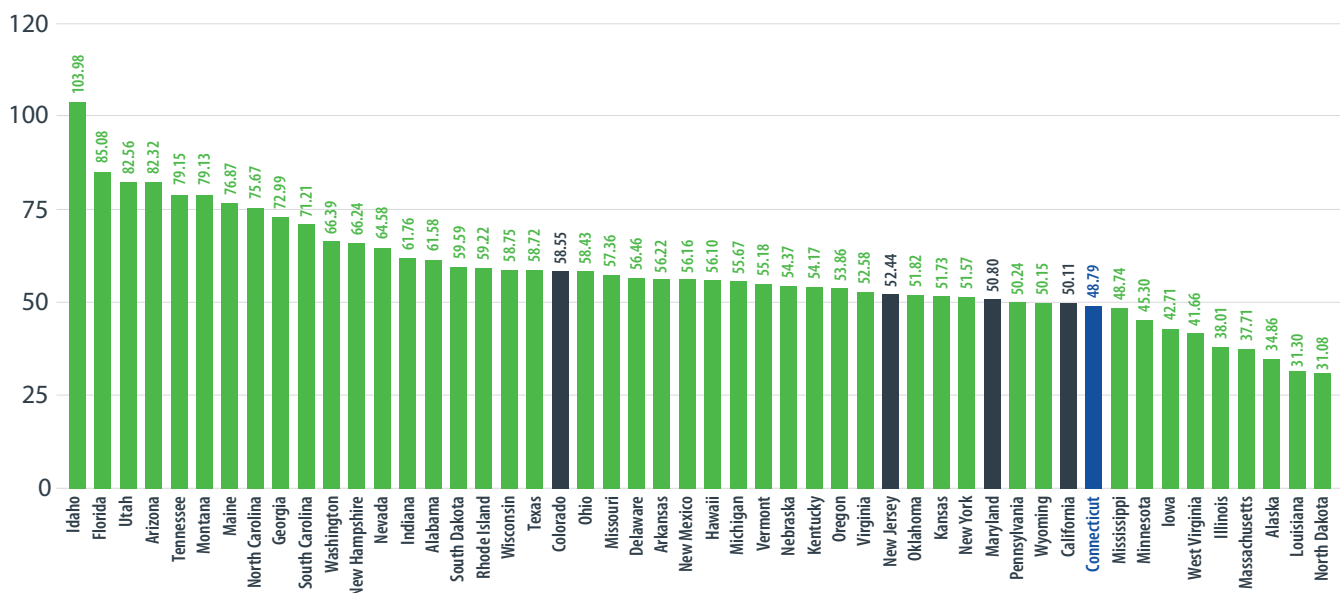


Figure 10 illustrates the change in the Federal Housing Finance Agency (FHFA) U.S. state house purchase-only price index in 2022 Q4 over five years.

Referencing Figure 10, housing prices increased quite slowly in Connecticut over the five-year period, ranking 41st.

Three of the four “black bar,” high education gap states (New Jersey, Maryland and California) are grouped closely with Connecticut.

Figure 11:
Percentage of Teens who Report Alcohol Use in the Last Year,
Ages 12 to 17-Year-Olds, by State, 2022³⁴

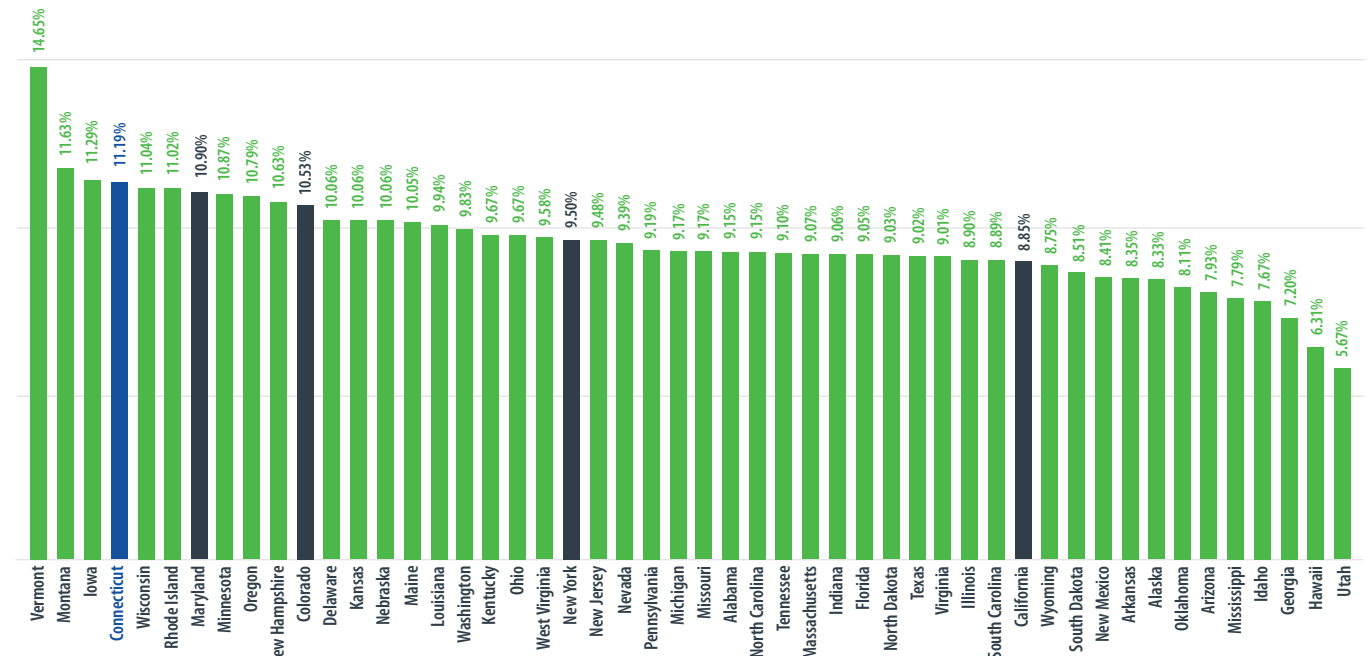


Figure 11 depicts one possible measure of social dysfunction: The percentage of teenagers aged 12 to 17 who report alcohol use in 2022 by U.S. state.

Referencing Figure 11, Connecticut has a significant percentage, 11.19%, of youths aged 12 to 17 who report alcohol use in 2022. Figure 11 illustrates that Connecticut has the 4th highest percentage. Furthermore, Vermont has the most drastic percentage, 14.65%. Following Vermont are Montana, Iowa, Connecticut, Wisconsin, Rhode Island, Maryland, Minnesota, Oregon and New Hampshire. The state with the lowest percentage is Utah, at 5.67%, followed by Hawaii, Georgia, Idaho, Mississippi, Arizona, Oklahoma, Alaska, Arkansas and New Mexico.

Figure 12:
Annual Unemployment Rate in the United States in 2021, by State³⁵

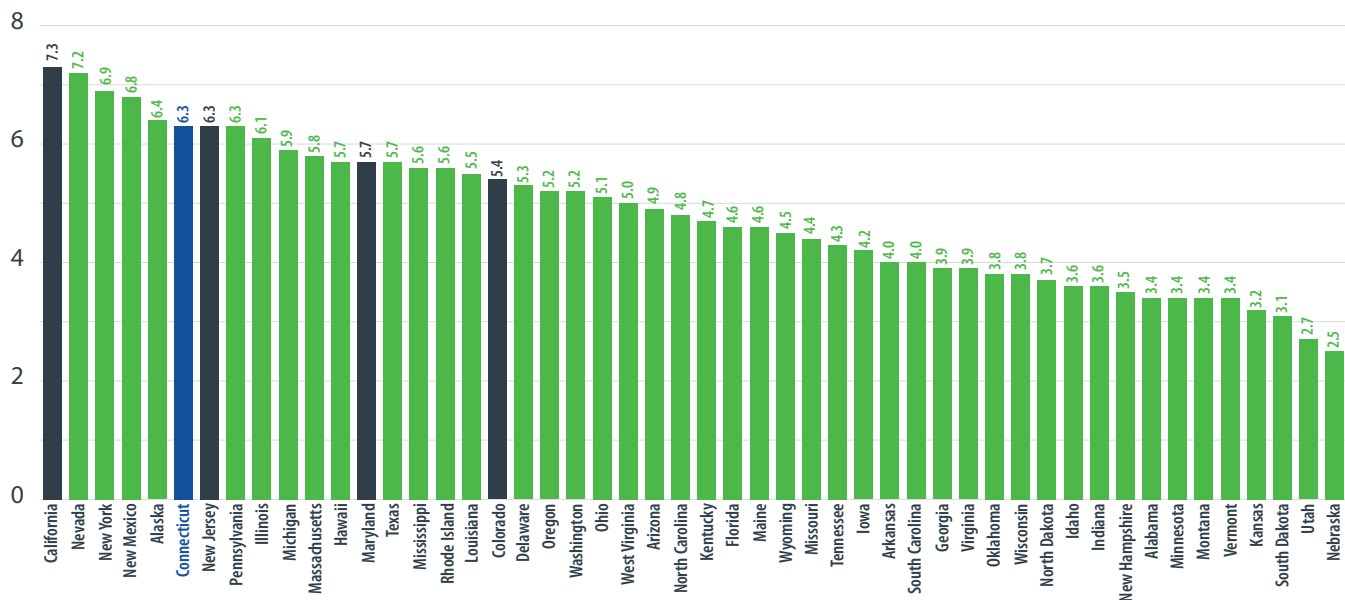


Figure 13:
Percentage of Change in Per Capita Personal Income in the United States from 2020 to 2021, by State³⁶

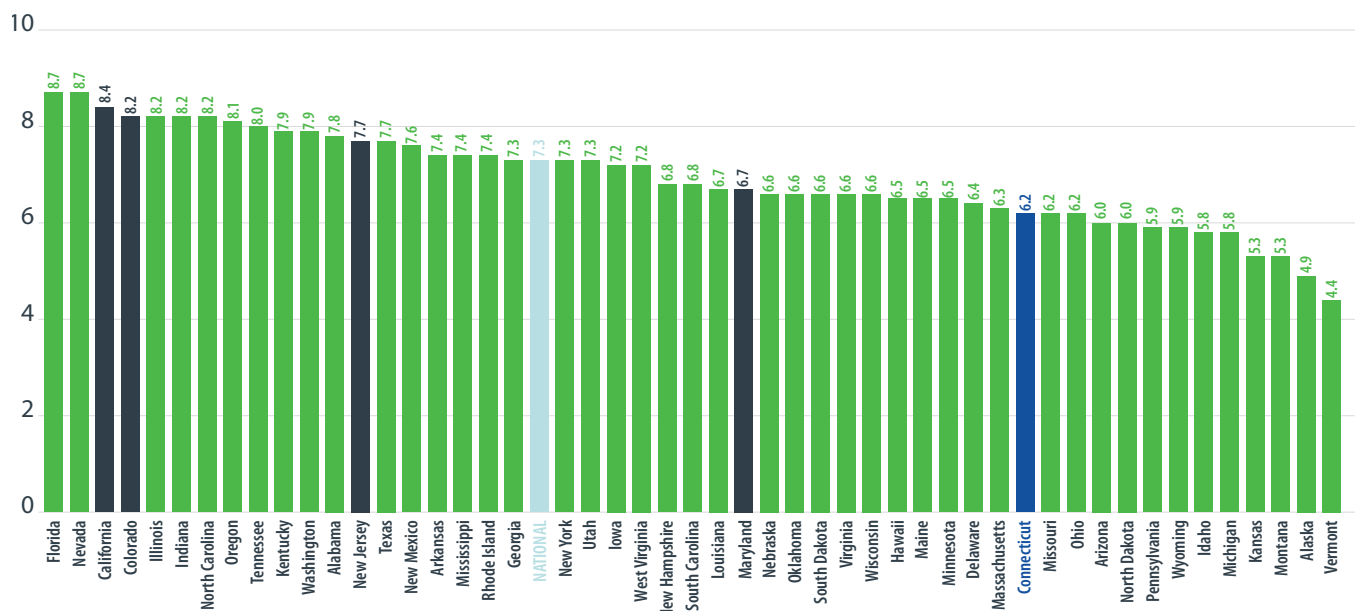


Figure 12 shows the 2021 annual unemployment rate in the United States by state.

Referencing Figure 12, Connecticut had a significant annual unemployment rate in 2021, at 6.30, tied for sixth-worst with New Jersey and Pennsylvania.

Furthermore, the other “black bar” high education gap states of California, New Jersey, Maryland and Colorado cluster near Connecticut, with above-average unemployment.

Figure 13 illustrates the percentage of change in per capita personal income in the United States from 2020 to 2021 by state.

Referencing Figure 13, Connecticut has a low percentage of change in per capita personal income compared to other U.S. states.

SECTION IV: ENVIRONMENTS AFFECT OUTCOMES

Three environmental factors are assessed in this section: Parent involvement, suspensions, and teacher support. Students from lower socioeconomic strata tend to suffer from higher suspension rates, lower parental involvement, and lower teacher support, leading to poor educational outcomes. Conversely, students in high socioeconomic areas tend to enjoy a lower suspension rate, higher parent involvement and higher teacher support.

Parental Involvement Faces Serious Barriers

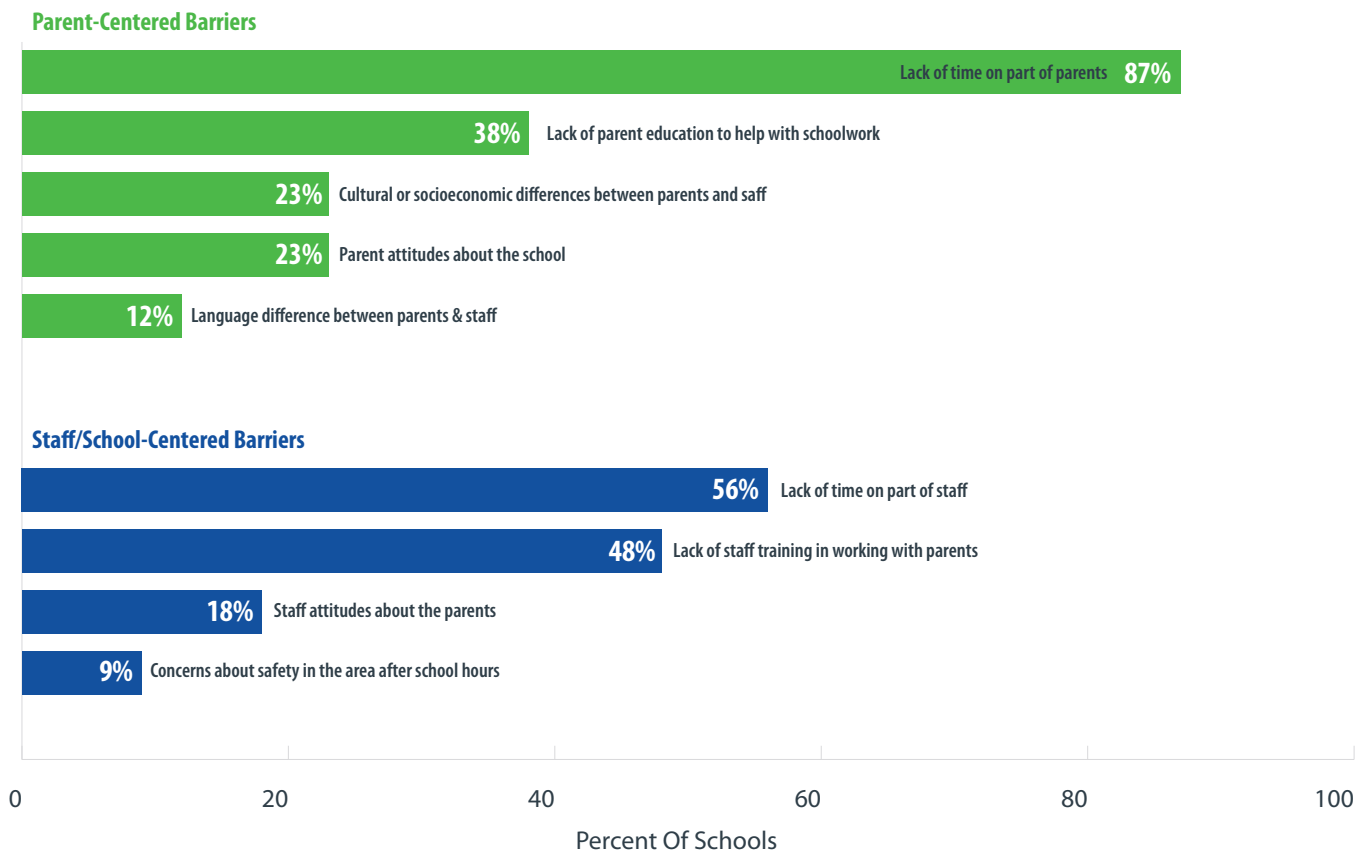
It may be inferred that, when children’s parents are not involved, it demonstrates to their child that failure to participate is acceptable, leading students to exhibit similar behavior. Parent involvement is, presumably, rooted in the school’s atmosphere, expectations, or priorities. When a school has no interest in learning about family’s home traditions, values or religion parents are less likely to spend time at the school. If all the foregoing assertions are true, that would raise the question, “What are the barriers to parental involvement?”

Interestingly, the National Center For Educational Statistics executed, in the late 1990’s, a survey of school principals in attempt to determine the nature and level of the barriers—from the schools’ points of view—to greater parental involvement. The study was titled, “Parent Involvement in Children’s Education: Efforts by Public Elementary Schools.” Below is a description of the study.

This report presents the findings from the “Survey on Family and School Partnerships in Public Schools, K-8”. Short questionnaires were sent to a nationally representative sample of 900 public schools enrolling kindergarten through eighth grade students. Principals were asked to either complete the survey or assign its completion to the person most knowledgeable about parent involvement programs and activities at the school.³⁷

Figure 14, below, displays some key results. Fully 87% of elementary school principals claim that “lack of time on the part of parents” is a key reason for low parental involvement. But, critically, the principals also note that some of the blame lies with their own institutions: 56% place part of the blame (barrier) for low parent involvement on “lack of time on the part of staff” and 48% include “lack of staff training in working with parents.”

Figure 14:
Percent of public elementary schools (K-8) that perceived various concerns as barriers to parent involvement at their school to a great or moderate extent: 1996³⁸



Cultural differences were cited by for 23% of principals and 12% included a language difference between parents and staff.³⁹

The findings reported above look quite different when school views on these barriers are examined by poverty concentration and minority enrollment in the school. Specifically, more schools with poverty concentrations and minority enrollments of 50 percent or more perceived the following issues to be barriers than schools low on these characteristics:

- Lack of parent education to help with schoolwork,
- Cultural or socioeconomic differences,
- Language differences between parents and staff,
- Parent attitudes about the school,
- Staff attitudes toward parents, and
- Concerns about safety in the area after school hours.⁴⁰

These quantified results are dramatic, and shown in detail in [Figure 15](#), below.

Figure 15:
Percent of public elementary schools (K-8) that perceive various concerns as barriers to parent involvement at their school to a great or moderate extent, by high and low poverty concentration* and minority enrollments: 1996⁴¹

BARRIER	POVERTY CONCENTRATION*				MINORITY ENROLLMENT			
	LESS THAN 25%		50% OR MORE		LESS THAN 5%		50% OR MORE	
	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Lack of parent education to help with schoolwork	12	3.3	64	2.2	24	3.3	65	3.0
Cultural or socioeconomic differences between parents and staff	5	1.9	42	2.7	10	2.0	41	3.3
Language difference between parents & staff	4	1.6	20	2.2	5	1.7	31	2.9
Parent attitudes about the school	11	2.6	35	2.7	14	2.6	33	2.9
Staff attitudes about the parents	15	3.4	25	2.6	9	2.3	26	3.1
Concerns about safety in the area after school hours	2	1.1	19	2.0	2	0.7	27	2.9

*Poverty concentration is defined by the percent of students eligible for free or reduced-price lunch. This information was missing for about 3 percent of the sampled schools. These schools are not included in the analysis by this variable, but are included in totals and in analysis by other school characteristics.

Note: s.e. is standard error

On every measure of “barrier to parent involvement” in Figure 15, the assessment by principals in high poverty and/or high minority areas is five to ten times higher than in the more prosperous, lower minority areas.

Connecticut does provide a wide range of activities and programs aimed a greater family involvement and support for parents.⁴² Among those which specifically target or, at least, mention parents and families are:

Young Parents Program: A Young Parents Program (YPP) provides day care services for the infants/toddlers of students who are enrolled in and attending a comprehensive high school program leading to graduation from high school.

21st Century Community Learning Centers: Supporting community learning centers through professional development, training and networking opportunities for schools, community based organizations and after school programs, these programs provide academic enrichment opportunities during non-school hours for children, as well as literacy and other educational services to the families of participating children.⁴³

The success rate on these may well be a topic for further study.

Suspensions Are Damaging to Students and Occur More Often in Low-Income Districts

According to a team of experts at the University of Nebraska, “[...]schools began searching for alternatives to OSS [Out Of School Suspension] following backlash in the 1970s and 1980s when the Children’s Defense Fund found that public schools were unjustly suspending students.”⁴⁴ The Nebraska experts go on to point out that:

...[e]mpirical research shows that school suspension generally has been linked with school dropout (Hemphill et al., 2012), crime and delinquency (Costenbader & Markson, 1998), substance use (Hemphill et al., 2012), and alienation and isolation (Haley & Watson, 2000). Even more saliently, suspension from school has been associated with higher rates of antisocial behavior and subsequent suspensions (Hemphill et al., 2012)...

Students with disabilities, male students, and students who are racial or ethnic minorities, particularly African American, have been known for some time to be suspended or expelled from school at significantly higher rates than their peers (Connecticut State Department of Education, 2010; Costenbader & Markson, 1998; Mayhew, 2011; Skiba & Rausch, 2006; U.S. Department of Education, 2014). Low-income students, youth in foster care, and English language learners may also be disproportionately affected by exclusionary discipline practices. Many students fall into more than one of these groups, highlighting the cumulative effect of these institutional policies (Kim et al., 2010)...

Some research has suggested that at least half (52%) of students receiving ISS [In-School Suspension] have had previous office discipline referral issues, and that about a quarter (27%) have been previously suspended, calling into question the effectiveness of the intervention in reducing student behavior problems (Morrison et al., 2001).⁴⁵

There are huge discrepancies in suspension rates between low and high socioeconomic districts. As shown in [Figure 16](#), below, Connecticut’s state-wide average suspension rate in 6th grade is 5.6%, 2% in high-income Fairfield and 8.2% in lower-income Bridgeport’s. Then Fairfield’s average suspension rate is fairly steady through 8th grade, while Bridgeport’s numbers continue to skyrocket to almost 15%. These disparities persist through students’ final year of elementary education when, in 8th grade, the Connecticut average is 8.2%.

Figure 16:
Suspension Rate by Selected Districts and Grades (2019-2020)⁴⁶

Town/State	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade
Fairfield	NA	NA	2.00%	2.70%	3.30%
Bridgeport	5.10%	8.00%	8.20%	14.80%	16.40%
Connecticut	2.30%	3.20%	5.60%	7.90%	8.20%

Absenteeism rates follow a very similar pattern, indicating that the two factors—suspension and absenteeism rates—are correlated. This is shown in [Figure 17](#), below.

Figure 17:
Absentee Rate by Selected Districts and Grades (2019-2020)⁴⁷

School	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade
Fairfield	6.40%	4.90%	5.00%	5.40%	7.50%
Bridgeport	13.90%	13.90%	13.20%	18.20%	19.10%
Connecticut	8.50%	8.60%	9.40%	11.20%	12.20%

Teacher Support Appears Directly Correlated With Academic Outcomes

Using student-teacher ratio as a proxy for “Teacher support,” the troubling pattern continues to obtain: Poorer districts evidence higher ratios and lower proficiency scores in the critical subject areas of mathematics and reading.

[Figure 18](#) shows this relationship between student teacher ratio and subject proficiency. It is bluntly shown that middle or elementary schools that have higher student-teacher ratios have a negative educational outcome. Falls Village, Westbrook and North Haven are higher-income towns and have correspondingly positive measures. Bridgeport and New London are, generally, lower-income towns.

Figure 18:
Student-Teacher Ratio Compared to Math and Reading Proficiency,
Selected Schools (2023)⁴⁸

School	Town	% Math Proficiency	% Reading Proficiency	Student – Teacher Ratio
Lee H. Kellogg	Falls Village	59%	89%	7:1
Westbrook Middle	Westbrook	52%	77%	5:1
Clintonville Elementary	North Haven	45%	50%	10:1
Bryant	Bridgeport	9%	10%	12:1
Bennie Dover Jackson Middle	New London	1%	16%	11:1
Madison (Middle)	Bridgeport	8%	17%	12:1

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About The Authors

Abigail Fleisig

Abigail Fleisig is enrolled as a dual degree accelerated business management student at the University of New Haven. She is set to obtain her B.S. in business management — with a minor in marketing — in May 2023, completing the program in three years while maintaining a 4.0/4.0 GPA. By May 2024, she is expected to earn an M.B.A. from the University of New Haven with a concentration in strategic leadership.

Shauna Curran

Shauna Curran is currently a sophomore student-athlete at University of New Haven, majoring in marketing. In addition to her academic endeavors, Shauna is a star on the Women's Lacrosse team.

