

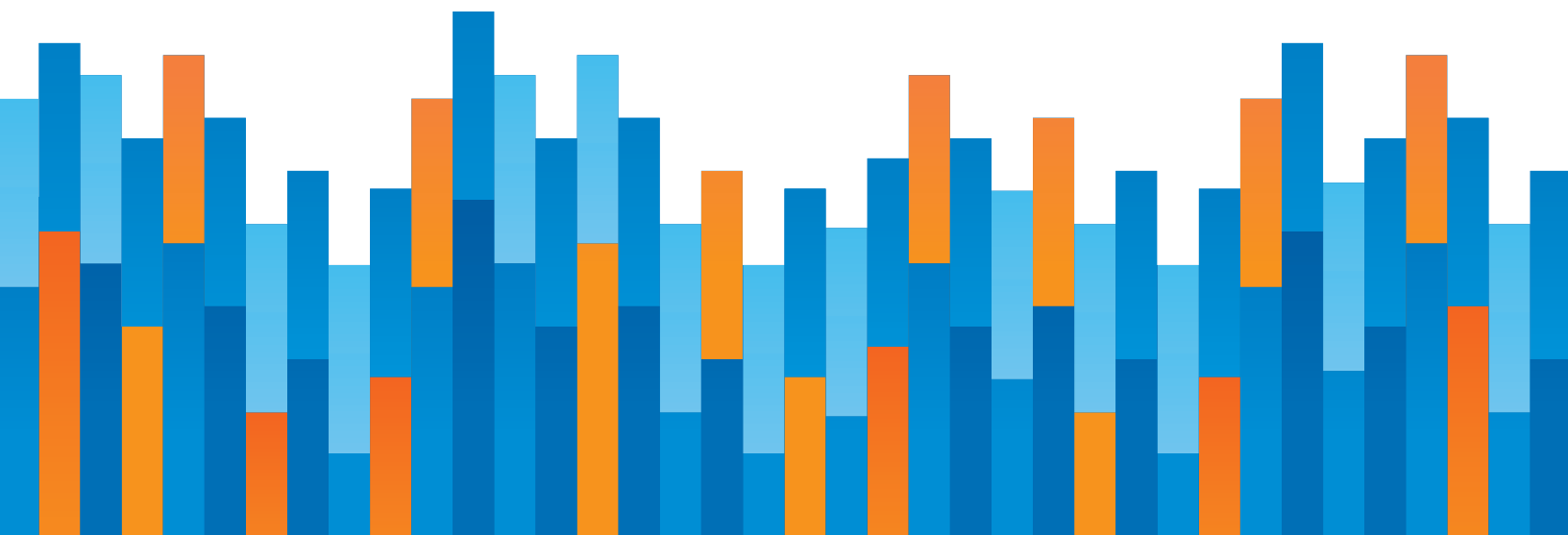


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PUBLIC EDUCATION AT A CROSSROADS: A COMPREHENSIVE LOOK AT K-12 RESOURCES AND OUTCOMES FOR ALL 50 STATES

by Aaron Garth Smith, Jordan Campbell, and Christian Barnard

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EXECUTIVE SUMMARY

Faced with an unprecedented set of challenges in the wake of the COVID-19 pandemic—enrollment declines, learning loss, unsustainable budgets, union activism, curricular battles, and the rise of school choice—public education is at a crossroads. To be sure, much has changed since 2020 when the COVID-19 pandemic swept the nation, but pre-pandemic trends provide policymakers with a critical anchor for navigating post-pandemic decisions. To better equip policymakers for pivotal decisions that will shape generations to come, this study gives a comprehensive snapshot of K-12 public education resources, illustrating five key national trends, and also outcomes for all 50 states individually.

Nationwide data from 2002 to 2020 show that inflation-adjusted public school revenues grew by 25%, going from \$12,852 per student to \$16,065 per student. During this time, teachers' average real salaries decreased by 0.6%, going from \$64,522 to \$64,133. Despite student enrollment increasing by 6.6%, total public school staff grew by 13.2%. Much of this can be attributed to growth in non-teaching staff, which increased by 20% across states. Additionally, real spending on employee benefits increased by 78.6% (or \$1,499 per student), accounting for nearly half of the per student increase in funding.

Students' assessment results on the National Assessment of Educational Progress (NAEP) can shine light on academic progress during similar time periods. Overall, reading scores were largely flat across all grade levels while math scores showed improvement in grades 4 and 8 but then flattened for 12th graders. For low-income students, reading scores grew for 4th and 8th graders but declined for 12th graders. Math scores for low-income students grew across all three grade levels.

These data, combined with state figures, reveal five key trends.

Key Trend #1: Education funding is up in nearly every state.

Education funding was at historic levels even before the COVID-19 pandemic. Between 2002 and 2020, 49 of 50 states saw real increases in revenue per student, with funding growth exceeding 50% in five states—New York, New Hampshire, Illinois, North Dakota, and Washington. In 2020, education funding in nine states surpassed \$20,000 per student, with New York topping the list at \$30,723 per student.

Key Trend #2: Teacher salary growth lagged funding growth in all 50 states.

Sizable increases in education funding in many states have not translated into higher teacher salaries. Of the top 10 states in funding growth between 2002 and 2020, real average teacher salaries declined in three—Illinois, Pennsylvania, and Delaware—and were fairly flat in New Hampshire and Connecticut. Notably, Illinois' inflation-adjusted per student revenue increased by \$7,141 while its real average teacher salary fell by \$3,301.

Key Trend #3: Public school staffing growth is far outpacing student enrollment growth.

A prevailing trend across states is to add new staff, regardless of enrollment levels. Between 2002 and 2020, staffing growth exceeded student growth in 39 of 50 states. Much of this can be attributed to growth in non-teaching staff, which increased by 20% across states. Even in states with declining student populations, public school staffing is still increasing. For instance, Connecticut's total staff grew by 14.1% while its student enrollment declined by 8.2%.

Key Trend #4: Education dollars are increasingly going toward spending on employee benefits.

Education dollars are increasingly devoted to covering employee benefits. Notably, many of the states with the highest increases in education revenue also saw the highest increases in benefit spending. Between 2002 and 2020, nearly all of Hawaii's \$3,971 increase in real revenue per student went to benefit spending. Similarly, benefit spending accounted for at least half of per student revenue growth in states such as Kentucky, Alaska, New Jersey,

Pennsylvania, and Illinois. Research shows that pension debt is a primary driver of this trend.

Key Trend #5: There isn't a consistent relationship between funding growth and outcomes across states.

Statewide investments in public education don't automatically lead to increased student achievement on standardized tests. Comparing real funding growth between 2003 and 2019 and NAEP score results did not reveal a clear or consistent relationship. For instance, New York had the largest increase in per-student funding but its scores were largely flat, including declines in both 4th and 8th grade reading. In comparison, Arizona ranked near the bottom in per-student funding growth but saw NAEP score gains across all subjects, including large improvements for its low-income students.

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PART 1

INTRODUCTION

Public education is grappling with an unprecedented set of challenges in the wake of the COVID-19 pandemic. For starters, nationwide public school enrollment is down by over 1.2 million students compared with pre-pandemic levels, including losses exceeding 5% in New York, Oregon, and Mississippi.¹ Research suggests that families are increasingly choosing homeschooling or private schools, with demographic factors—such as drops in school-age populations—also contributing to enrollment declines.² Because states generally tie funding to student counts, this could have substantial effects on school district budgets.

Students also fell behind during COVID-19, with 2022 National Assessment of Educational Progress results showing historic losses for 4th and 8th graders in both reading and math. “The breadth of the declines across states is breathtaking,” concluded Mark Schneider, the director of the U.S. Department of Education’s Institute of Education Sciences.³ These losses were especially steep for students who were already behind their peers, and Stanford

¹ Thomas Dee, “Where the Kids Went: Nonpublic Schooling and Demographic Change during the Pandemic Exodus from Public Schools,” Urban Institute, 2023. <https://www.urban.org/research/publication/where-kids-went-nonpublic-schooling-and-demographic-change-during-pandemic> (20 April 2023).

² Ibid.

³ Mark Schneider, “NAEP Release: What to Know, What to Admit We Don’t Know,” Institute of Education Sciences, ies.ed.gov, November 2, 2022. www.ies.ed.gov/director/remarks/11-2-2022.asp (20 April 2023).

University's Eric Hanushek estimates they could result in 5.6% lower lifetime earnings on average.⁴

Additionally, school districts are heading toward a fiscal cliff when \$190 billion in K-12 federal relief funding expires in 2024.⁵ Available data suggest that many have used these temporary dollars to plug budget holes and make permanent commitments, such as pay raises and hiring new staff, which will prove untenable in the coming years.⁶ Absent substantial funding boosts, staff layoffs and school closures could be on the horizon for these school districts.



Public education is grappling with an unprecedented set of challenges in the wake of the COVID-19 pandemic. For starters, nationwide public school enrollment is down by over 1.2 million students compared with pre-pandemic levels...



Labor strife has also shut down classrooms in places such as Los Angeles, Minneapolis, and Columbus, with teacher salaries shaping up to be an important topic on the campaign trail ahead of the 2024 elections, as inflation continues to eat up paychecks.⁷ In his State of the Union address, President Biden remarked “Let’s give public school teachers a raise,” and Senator Bernie Sanders recently introduced legislation that would boost teacher salaries nationwide.⁸ According to Sanders, “No public school teacher in America should make less

⁴ Eric A. Hanushek, “The Economic Cost of the Pandemic,” Hoover Institution, 2022. <http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%202022%20HESI%20EconomicCost.pdf> (20 April 2023).

⁵ Collin Binkley, Geoff Mulvihill, Camille Fassett, and Larry Fenn, “Pandemic Windfall for US Schools has Few Strings Attached,” *APNews.com*, AP News. 26 August 2021. <https://apnews.com/article/pandemic-aid-public-school-funding-346d3d4b86f904184e357c34c9754800> (20 April 2023).

⁶ Katherine Silberstein and Marguerite Roza, “The Massive ESSER Experiment: Here’s what we’re learning” *Education Next*, 2023. www.educationnext.org/the-massive-esser-experiment-heres-what-were-learning/ (20 April 2023).

⁷ “12-month percentage change, Consumer Price Index, selected categories,” U.S. Bureau of Labor Statistics, *bls.gov*, www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm (20 April 2023).

⁸ Ira Stoll, “Democrats Push on Teacher Pay Crisis,” *Education Next*, 2023. www.educationnext.org/democrats-push-teacher-pay-crisis-senator-sanders-would-set-60000-nationwide-salary-minimum/ (20 April 2023).

than \$60,000 a year.”⁹ But even against the backdrop of battles over public school curricula—and fears of economic recession—legislatures in both red and blue states have made sizable investments in public school funding, including teacher salaries.¹⁰

Finally, as school choice gains in popularity—states such as Arkansas, Iowa, and Utah adopted comprehensive programs in 2023—public schools must adapt to a more competitive environment that increasingly values personalization over standardization. A survey by Tyton Partners indicates that more than half of parents now want to lead and tailor their child’s education, with 79% believing that learning should happen beyond just classroom walls.¹¹ Public schools must become more responsive to students’ needs or risk further enrollment losses, especially as students gain access to options that offer greater customization.



Public schools must become more responsive to students’ needs or risk further enrollment losses, especially as students gain access to options that offer greater customization.



Putting it all together—enrollment declines, learning loss, unsustainable budgets, union activism, curricular battles, and the rise of school choice—public education is clearly at a crossroads, and the decisions made today will shape generations to come. To be sure, much has changed since 2020 when the COVID-19 pandemic swept the nation, but pre-pandemic trends provide policymakers with a critical anchor for navigating post-pandemic decisions.

⁹ “Sanders Introduces Legislation to Address Teacher Pay Crisis in America,” United States Senate, [sanders.senate.gov](https://www.sanders.senate.gov/press-releases/news-sanders-introduces-legislation-to-address-teacher-pay-crisis-in-america/), March 9, 2023. www.sanders.senate.gov/press-releases/news-sanders-introduces-legislation-to-address-teacher-pay-crisis-in-america/ (20 April 2023).

¹⁰ Kevin Mahnken, “Why Are So Many Republicans Raising Teacher Salaries,” *The74Million.org*, The 74. 21 September, 2022. www.the74million.org/article/why-are-so-many-republicans-raising-teacher-salaries/ (20 April 2023).

¹¹ Adam Newman and Christian Lehr, “Choose to Learn,” Tyton Partners 2022. www.tytonpartners.com/choose-to-learn-2022/ (9 Nov 2023).

1.1

ABOUT THIS STUDY

The primary objective of this study is to provide a comprehensive snapshot of K-12 public education resources and outcomes so that policymakers are better equipped to make these choices. By bringing together key revenue, expenditure, enrollment, staffing, and student performance data over the past two decades, this report gives stakeholders in all 50 states a solid foundation for assessing public education trends at a crucial moment. Looking forward, they should use this information to ask important questions like what their goals are for students and whether resources are being deployed toward those aims.



By bringing together key revenue, expenditure, enrollment, staffing, and student performance data over the past two decades, this report gives stakeholders in all 50 states a solid foundation for assessing public education trends at a crucial moment.



Importantly, this study is geared toward shining light on the school finance decisions made by state and school district officials over time, and not evaluating the degree to which those decisions have been effective. Nevertheless, longitudinal outcomes on the National Assessment of Education Progress (NAEP) exams are included since they are a straightforward and common way to measure student progress. While these data have limitations, they serve as a useful barometer for student achievement and how public schools are performing. Because student demographics vary considerably across states, NAEP data for low-income students are provided to allow for more meaningful comparisons.

Similarly, state rankings are provided for context, so that readers can easily compare where states stand in relation to each other and the U.S. average on various metrics.¹² The timeframe considered in this study—2002 to 2020—was selected based on the availability of state-level school finance summary data from the U.S. Census Bureau at the time of writing.

The study starts by presenting an analysis of nationwide and state-level data, including five key trends with public education resources and outcomes. It is then divided into three sections, which provide a more granular look at the data and state rankings: revenue and expenditures, enrollment and staffing, and student outcomes. This is then followed by a detailed overview of our methodology, concluding with state appendices, which summarize the key trends and rankings for all 50 states.

¹² Note, these rankings aren't necessarily ordered from best to worst and are subject to interpretation. For instance, some readers might interpret a high ranking in per student revenue growth as positive, while others will view this more skeptically.

PART 2

ANALYSIS: NATIONAL SNAPSHOT AND KEY TRENDS

Nationwide, inflation-adjusted public school revenues grew from \$12,852 per student in 2002 to \$16,065 per student in 2020 as displayed in Table 1. These revenue figures include all local, state, and federal dollars for both operating and capital expenses. Available data suggest there were two key drivers of this increase: employee benefits and new staffing positions. Benefit spending grew by 78.6% per student—or \$1,499 per student—while growth in public school staff increased by 13.2%, outpacing a 6.6% increase in student enrollment. For context, public schools added staff (779,107) to their payrolls equivalent to a quarter of enrollment growth (3,124,575). About three-quarters of this staffing increase was accounted for by non-teachers, which in 2020 comprised 52.1% of public school staff across the U.S. Notably, average inflation-adjusted teacher salaries decreased between 2002 and 2020, going from \$64,522 to \$64,133. Table 1 summarizes these trends.

TABLE 1: KEY U.S. PUBLIC SCHOOL SPENDING, STAFFING, AND ENROLLMENT TRENDS (2002-2020, INFLATION-ADJUSTED)

Category	2002	2020	Growth
Revenue Per Student	\$ 12,852	\$ 16,065	25.0%
Benefit Spending Per Student	\$ 1,907	\$ 3,406	78.6%
Student Enrollment	47,671,870	50,796,445	6.6%
Total Staff	5,904,195	6,683,302	13.2%
Non-Teachers	2,904,667	3,485,132	20.0%
Teachers	2,999,528	3,198,170	6.6%
Average Teacher Salaries	\$ 64,522	\$ 64,133	-0.6%

Student assessment results on the National Assessment of Educational Progress (NAEP) can shine light on academic progress during a similar time period. Table 2 summarizes NAEP score growth across six exams on the administration dates that most closely match the spending, staffing, and enrollment data.¹³ Overall, reading scores were largely flat across all grade levels while math scores showed improvement in grades 4 and 8 but then flattened for 12th graders. For low-income students, indicated by the free or reduced price lunch program (“FRL” in Table 2) proxy, reading scores grew for 4th and 8th graders but declined for 12th graders. Math scores for low-income students grew across all three grade levels.¹⁴

TABLE 2: U.S. NAEP SCORE GROWTH BY SUBJECT

Student Group	4 th Grade		8 th Grade		12 th Grade	
	Reading (2003-2019)	Math (2003-2019)	Reading (2003-2019)	Math (2003-2019)	Reading (2002-2019)	Math (2005-2019)
All	2	6	0	4	-1	0
FRL Eligible Only	6	7	3	7	-2	4

These national observations, combined with state-level data, reveal five key trends during the time period examined.

Key Trend #1: Education funding is up in nearly every state.

Between 2002 and 2020, 49 of 50 states saw real increases in revenue per student with funding growth exceeding 50% in five states—New York, New Hampshire, Illinois, North Dakota, and Washington. Notably, all three levels of government increased public education funding with nationwide federal, state, and local contributions per student growing by 20.2%, 18.9%, and 32.9% respectively. In 2020, education funding in nine states surpassed \$20,000 per student with New York topping the list at \$30,723 per student.

Why It Matters: Public education revenue per student has almost invariably grown in inflation-adjusted terms since 2002. States differed significantly in the level of additional

¹³ The primary purpose of this study is to evaluate revenue and spending trends with the most recent available federal data, which at the time of writing this was the 2019-2020 school year. The starting point, 2002, was selected based on the availability of continuous state-level summary data from the U.S. Census Bureau. Although NAEP administration dates don't perfectly align with the timeframe of these figures, they're close enough to provide a reasonable comparison. Additional data are provided as appendix items for full transparency.

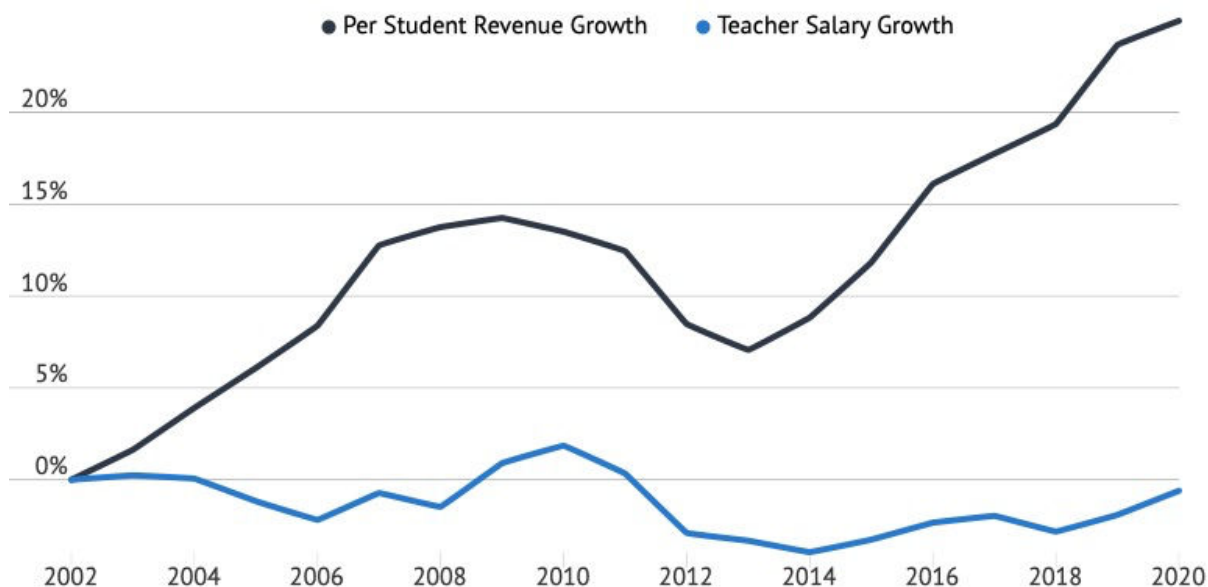
¹⁴ Note: NAEP results are based on a 0-500 scale for all subjects shown except 12th grade math, which is based on 0-300 score. For more information, www.nces.ed.gov/nationsreportcard/ndehelp/webhelp/scale_scores.htm

funding during this timeframe and there was a period of declining or stagnant revenue in the aftermath of the Great Recession, but the fact remains that education spending has consistently increased nationwide and was at historic levels even before the COVID-19 pandemic.

Key Trend #2: Teacher salary growth lagged funding growth in all 50 states.

Nationwide, total inflation-adjusted education dollars increased by 25% per student while average teacher salaries fell by 0.6% from 2002 to 2020. Table 3 summarizes this comparison for the top 10 states in funding growth, ranging from 34.5% per student in Delaware to 70.2% per student in New York. Of these states, real average teacher salaries declined in three—Illinois, Pennsylvania, and Delaware—and were fairly flat in New Hampshire and Connecticut. Notably, Illinois' inflation-adjusted per student revenue increased by \$7,141 while its real average teacher salary fell by \$3,301.

FIGURE 1: U.S. REVENUE PER STUDENT GROWTH VS. AVERAGE TEACHER SALARY GROWTH (2002-2020, INFLATION-ADJUSTED)



Because teachers are paid based primarily on years of experience, a decline in average teacher tenure might contribute to the trend of flat or declining real salaries in some states.

However, national data published by NCES suggest that average teacher salaries have been largely flat over time even when comparing teachers with similar years of experience.¹⁵

TABLE 3: AVERAGE TEACHER SALARY GROWTH FOR THE TOP 10 STATES IN FUNDING GROWTH

State	Total Revenue Per Student			Average Teacher Salary		
	2002	2020	Growth	2002	2020	Growth
New York	\$ 18,054	\$ 30,723	70.2%	\$ 75,088	\$ 87,069	16.0%
New Hampshire	\$ 12,939	\$ 20,131	55.6%	\$ 57,637	\$ 59,622	3.4%
Illinois	\$ 13,054	\$ 20,195	54.7%	\$ 71,384	\$ 68,083	-4.6%
North Dakota	\$ 10,992	\$ 16,624	51.2%	\$ 46,573	\$ 53,525	14.9%
Washington	\$ 11,776	\$ 17,685	50.2%	\$ 62,762	\$ 76,743	22.3%
Pennsylvania	\$ 14,435	\$ 21,524	49.1%	\$ 73,065	\$ 70,339	-3.7%
Vermont	\$ 15,875	\$ 23,575	48.5%	\$ 56,663	\$ 61,108	7.8%
Connecticut	\$ 17,158	\$ 24,875	45.0%	\$ 77,328	\$ 78,427	1.4%
California	\$ 12,471	\$ 16,934	35.8%	\$ 78,479	\$ 84,531	7.7%
Delaware	\$ 14,896	\$ 20,032	34.5%	\$ 69,836	\$ 64,853	-7.1%

Why It Matters: Sizable increases in education funding in many states have not translated into higher teacher salaries. Stagnant salaries, combined with high levels of inflation, could increase pressure on policymakers to increase education funding even more despite the fact that past increases often haven't improved teacher pay.

Key Trend #3: Public school staffing growth is far outpacing student enrollment growth.

Between 2002 and 2020, U.S. public school enrollment increased by 6.6% while total staff grew by 13.2%. At the state level, staffing growth exceeded student growth in 39 of 50 states. Much of this can be attributed to growth in non-teaching staff, which increased by 20% across states. For context, the bulk of non-teachers in 2020—about 59.8%—were classified by NCES as Other Support Services Staff and Instructional Aides, with only about 10.8% classified as district-level staff. In other words, many non-teachers are school-level employees.

Even in states with declining student populations, public school staffing is still increasing. Table 4 summarizes staffing growth for the 10 states with the largest enrollment declines, which ranged from 6.2% to 14.3%. Notably, total staff increased in eight of these states. For instance, Connecticut's total staff grew by 14.1% while its student enrollment declined by 8.2%.

¹⁵ "Digest of Education Statistics, Table 211.20," National Center for Education Statistics, *nces.ed.gov*. https://nces.ed.gov/programs/digest/d22/tables/dt22_211.20.asp?current=yes (20 April 2023).

FIGURE 2: PUBLIC SCHOOL STAFFING VS. STUDENT ENROLLMENT GROWTH (2002-2020)

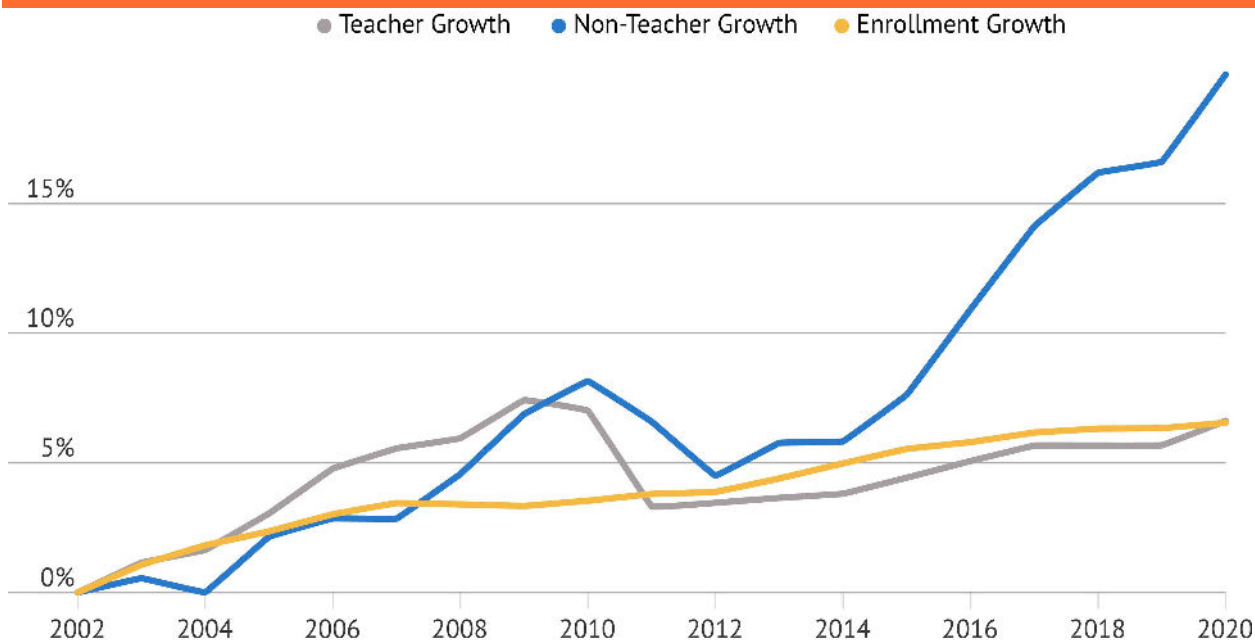


TABLE 4: STAFFING TRENDS FOR THE TOP 10 ENROLLMENT DECLINE STATES

State	Student Enrollment			Public School Staff		
	2002	2020	Growth	Total Staff Growth	Non-Teacher Growth	Teacher Growth
New Hampshire	206,847	177,351	-14.3%	9.9%	19.8%	0.1%
Vermont	101,179	86,759	-14.3%	3.6%	12.2%	-6.0%
Michigan	1,730,669	1,459,925	-13.6%	-10.7%	-7.7%	-14.2%
Maine	205,586	180,291	-12.3%	7.3%	25.4%	-11.4%
Rhode Island	158,046	143,557	-9.2%	10.4%	31.2%	-3.6%
Connecticut	570,228	523,690	-8.2%	14.1%	26.4%	1.5%
Ohio*	1,830,985	1,689,867	-7.7%	48.0%	117.3%	-13.2%
West Virginia	282,885	263,486	-6.9%	-1.1%	5.0%	-6.4%
New York	2,872,132	2,692,589	-6.3%	0.7%	-2.5%	4.0%
Illinois	2,071,391	1,943,117	-6.2%	0.7%	-1.2%	2.5%

*Note: Ohio’s staffing data might be subject to data quality issues during the time period examined, likely due to changes in how the state reported its data to NCES.

Why It Matters: A prevailing trend across states is to add new staff, regardless of enrollment levels. Although this trend is decades in the making, many school districts will face tough fiscal decisions in the coming year when federal COVID-19 relief funding dries up, especially given the magnitude of recent enrollment losses.¹⁶ This could lead to

¹⁶ For additional information, see Marguerite Roza, “The Big Bet on Adding Staff to Improve Schools Is Breaking the Bank,” Hoover Institution, 2020. https://edconomicslab.org/wpcontent/uploads/2020/03/roza_webreadypdf_revised.pdf (20 April 2023) and

widespread school closures, layoffs, and other measures as district officials are forced to right-size operations. Legislators will also face pressure to increase funding as a way to avoid these difficult decisions.

Key Trend #4: Education dollars are increasingly going toward spending on employee benefits.

Nationwide, real spending on employee benefits increased by \$1,499 per student or 78.6% from 2002 to 2020. Table 5 shows the top 10 states for growth in benefit spending per student, with all states more than doubling spending on this Census expenditure category that includes pensions, social security, health insurance, life insurance, worker's compensation, unemployment compensation, and tuition reimbursement. Revenue growth per student is included in the table to show how this relates to overall funding growth in each state. Notice that, in six of the 10 states, benefit spending growth represented over half of their revenue increases, with nearly all of Hawaii's per-student funding growth going to this expense category alone.

TABLE 5: BENEFIT SPENDING PER STUDENT GROWTH VS. TOTAL REVENUE PER STUDENT GROWTH

State	2002	2020	Growth	Growth Per Student	Total Revenue Growth Per Student	Benefit Spending Growth as a Share of Revenue Growth
Hawaii	\$1,392	\$5,014	260.2%	\$3,622	\$3,971	91.2%
Illinois	\$2,024	\$6,062	199.5%	\$4,038	\$7,141	56.5%
Pennsylvania	\$2,068	\$5,656	173.6%	\$3,589	\$7,089	50.6%
New Hampshire	\$1,919	\$4,639	141.8%	\$2,720	\$7,191	37.8%
New York	\$2,929	\$7,069	141.4%	\$4,140	\$12,670	32.7%
Connecticut	\$2,600	\$6,197	138.4%	\$3,597	\$7,717	46.6%
New Jersey	\$2,679	\$6,233	132.7%	\$3,554	\$5,041	70.5%
Vermont	\$2,447	\$5,618	129.6%	\$3,171	\$7,700	41.2%
Alaska	\$2,366	\$5,304	124.2%	\$2,938	\$4,808	61.1%
Kentucky	\$1,610	\$3,536	119.6%	\$1,926	\$2,521	76.4%

Why It Matters: Education dollars are increasingly devoted to covering employee benefits. Notably, many of the states with the highest increases in education revenue also saw the highest increases in benefit spending. Research shows that pension debt is a primary driver of this trend, with Equable Institute estimating \$878 billion in unfunded liabilities

Benjamin Scafidi, "Back to the Staffing Surge," EdChoice, 2017. www.edchoice.org/wp-content/uploads/2017/05/Back-to-the-Staffing-Surge-by-Ben-Scafidi.pdf (20 April 2023).

nationwide.¹⁷ As a result, more funding is going to cover pension costs, even while states have reduced benefits for teachers.¹⁸

Key Trend #5: There isn't a consistent relationship between funding growth and outcomes across states.

“

There isn't a consistent relationship between funding growth and student achievement, even when students' income status is accounted for.

”

There isn't a consistent relationship between funding growth and student achievement, even when students' income status is accounted for. Table 6 compares NAEP score growth for 2003-2019 in three high funding-growth states with three low funding-growth states. Because NAEP administration dates don't align with the time period otherwise examined in this study (2002-2020), inflation-adjusted revenue figures for 2003-2019 are provided for each state in Appendix 1 and used in Table 6. This allows for accurate comparisons between funding growth and NAEP score growth.¹⁹

Notably, New York had a substantial increase in per-student funding but its scores were largely flat, including declines in both 4th and 8th grade reading. The lone bright spot for the Empire State was a four-point increase in 8th grade math for low-income students. In comparison, Idaho saw increases across all subjects, including positive gains for its low-income students, without increasing its per-student funding. Compared to its neighboring state of Washington (a high funding-growth state), students in the Gem State achieved the same or better growth across all subjects.

To be sure, low-income students in Illinois—where per student funding growth was among the highest in the nation—demonstrated impressive NAEP gains. However, these NAEP

¹⁷ “Teacher Pensions in 2022,” Equable, 2022. <https://equable.org/teacher-pensions-in-2022/> (20 April 2023).

¹⁸ Chad Aldeman, “Teacher Pension Pac-Man: How Rising Costs Are Eating Away at Education Budgets,” *The74Million.org*, The 74. 21 March 2023. www.the74million.org/article/teacher-pension-pac-man-how-rising-costs-are-eating-away-at-education-budgets/ (20 April 2023).

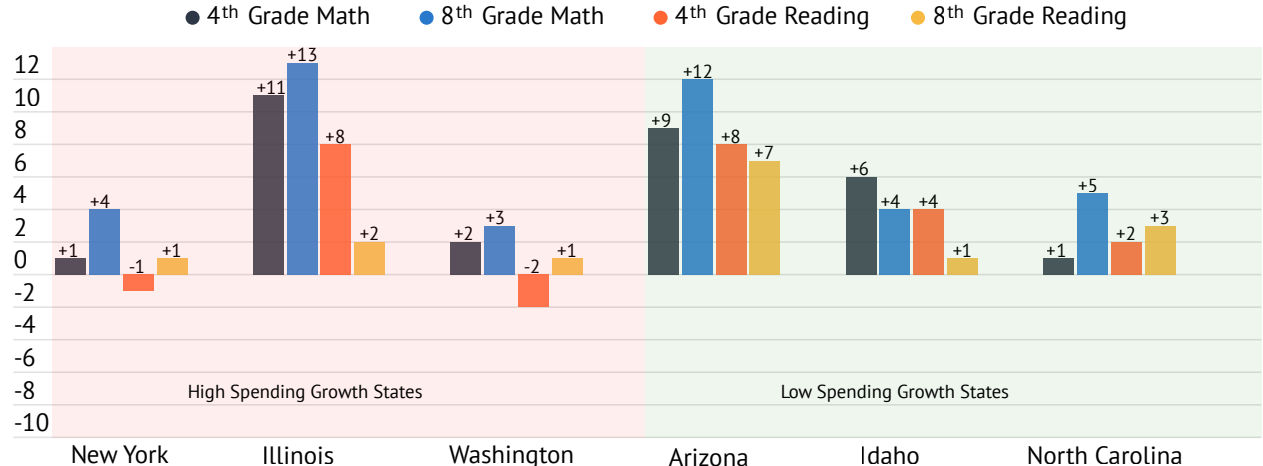
¹⁹ All other revenue figures and rankings in this study are based on the time period 2002-2020 unless otherwise noted. We recommend using the revenue growth figures provided in Appendix 1 (2003-2019) when making direct comparisons to NAEP outcomes.

increases are similar to those observed for low-income students in Arizona, which posted the largest NAEP increases for its overall student population despite a funding increase of only 1.4%.

TABLE 6: NAEP SCORE GROWTH FOR THREE HIGH AND LOW FUNDING-GROWTH STATES

State	2003	2019	Funding Growth	All Students (2003-2019)				FRL Eligible Students (2003-2019)			
				4 th Grade		8 th Grade		4 th Grade		8 th Grade	
				Reading	Math	Reading	Math	Reading	Math	Reading	Math
New York	\$18,580	\$30,313	63.1%	-3	1	-4	1	-1	1	1	4
Illinois	\$13,081	\$19,299	47.5%	2	5	-2	5	8	11	2	13
Washington	\$11,897	\$17,518	47.2%	-1	1	2	5	-2	2	1	3
Arizona	\$10,329	\$10,478	1.4%	7	9	4	9	8	9	7	12
North Carolina	\$10,646	\$10,720	0.7%	0	-1	1	2	2	1	3	5
Idaho	\$9,579	\$9,441	-1.4%	4	7	2	6	4	6	1	4

FIGURE 3: NAEP SCORE GROWTH FOR LOW-INCOME STUDENTS FOR HIGH AND LOW FUNDING-GROWTH STATES (2003-2019)



Why It Matters: These trends indicate that further statewide investments in public education don't automatically lead to increased student achievement on standardized tests. Factors beyond overall per-student spending can lead to performance gains in states with low spending growth and can hold achievement flat in states with high spending growth.

PART 3

REVENUE AND EXPENDITURE TRENDS

This section begins by examining revenue trends and then provides expenditure data for the following spending categories: support services, instruction, employee benefits, capital expenditures, and debt.

3.1

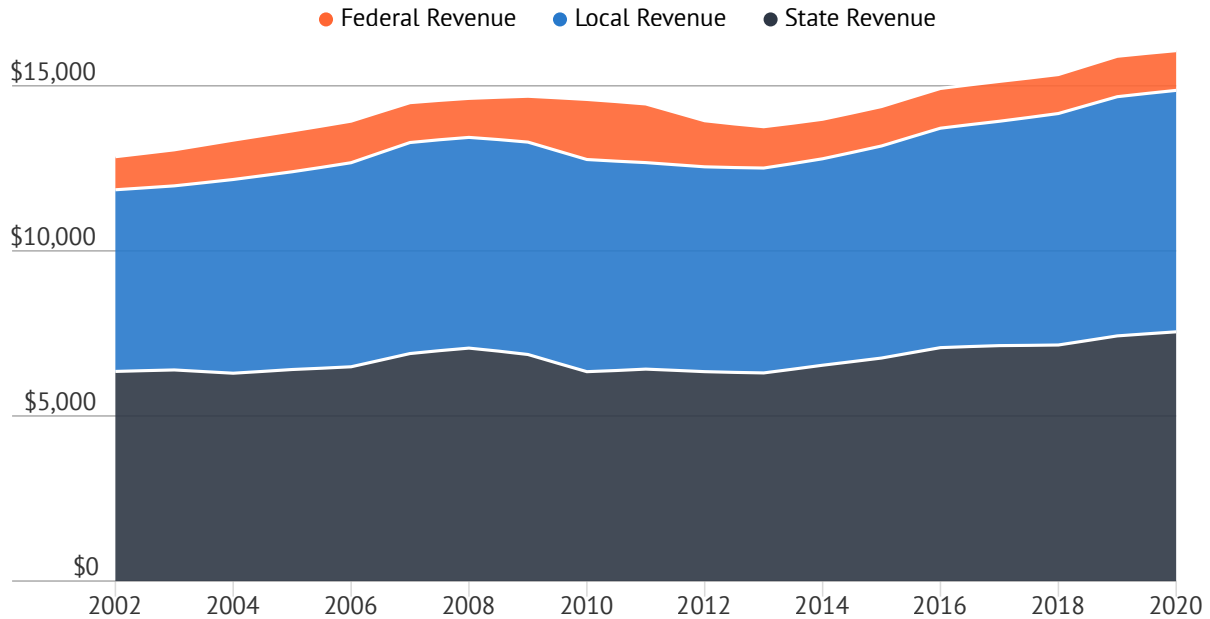
REVENUE TRENDS

Figure 4 shows nationwide revenue growth by funding source, and Table 7 shows revenue per student growth for all 50 states between 2002 and 2020. These data include federal, state, and local education dollars, and this time period was selected based on the availability of continuous state-level summary data from the U.S. Census Bureau.²⁰

Nationwide, inflation-adjusted K-12 revenues grew by \$3,213 per student or 25% between 2002 and 2020. During this time, nearly every state increased education funding with per-student revenues increasing by at least 10% in 41 states and growth exceeding 50% in New York, New Hampshire, Illinois, North Dakota, and Washington.

²⁰ Census revenue figures don't include money received for the issuance of debt, liquidation of investments, or as agency and private trust transactions and excludes non-cash transactions.

FIGURE 4: U.S. PUBLIC EDUCATION REVENUE GROWTH BY FUNDING SOURCE (2002-2020)



In 2020, education funding in nine states surpassed \$20,000 per student, with New York topping the list at \$30,723 per student followed by Connecticut and New Jersey. That year per-student funding was the lowest in Idaho, Utah, and Mississippi. Importantly, cost-of-living differences might skew unadjusted comparisons of per-student funding levels across states. For instance, in 2020 Idaho spent the least on K-12 education (\$9,802) but is a low-cost state compared to higher-spenders such as New York, Illinois, and New Jersey.

TABLE 7: TOTAL REVENUE PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 12,852	\$ 16,065	25.0%
1	1	New York	\$ 18,054	\$ 30,723	70.2%
2	8	New Hampshire	\$ 12,939	\$ 20,131	55.6%
3	7	Illinois	\$ 13,054	\$ 20,195	54.7%
4	19	North Dakota	\$ 10,992	\$ 16,624	51.2%
5	15	Washington	\$ 11,776	\$ 17,685	50.2%
6	5	Pennsylvania	\$ 14,435	\$ 21,524	49.1%
7	4	Vermont	\$ 15,875	\$ 23,575	48.5%
8	2	Connecticut	\$ 17,158	\$ 24,875	45.0%
9	17	California	\$ 12,471	\$ 16,934	35.8%
10	9	Delaware	\$ 14,896	\$ 20,032	34.5%
11	10	Alaska	\$ 14,957	\$ 19,765	32.1%
12	33	Louisiana	\$ 10,411	\$ 13,753	32.1%
13	14	Maryland	\$ 14,135	\$ 18,581	31.4%
14	11	Rhode Island	\$ 14,993	\$ 19,574	30.6%
15	12	Wyoming	\$ 14,903	\$ 19,384	30.1%
16	16	Maine	\$ 13,521	\$ 17,584	30.1%
17	26	Colorado	\$ 11,322	\$ 14,496	28.0%
18	22	Oregon	\$ 12,426	\$ 15,844	27.5%
19	6	Massachusetts	\$ 16,755	\$ 21,276	27.0%
20	13	Hawaii	\$ 14,785	\$ 18,756	26.9%
21	3	New Jersey	\$ 18,969	\$ 24,010	26.6%
22	27	New Mexico	\$ 11,437	\$ 14,394	25.9%
23	18	Minnesota	\$ 13,421	\$ 16,762	24.9%
24	37	Kentucky	\$ 10,194	\$ 12,715	24.7%
25	32	Montana	\$ 11,051	\$ 13,769	24.6%
26	25	Kansas	\$ 11,718	\$ 14,588	24.5%
27	48	Mississippi	\$ 8,878	\$ 10,774	21.3%
28	29	Iowa	\$ 12,017	\$ 14,310	19.1%
29	28	South Carolina	\$ 12,038	\$ 14,324	19.0%
30	44	Tennessee	\$ 9,268	\$ 10,971	18.4%
31	38	South Dakota	\$ 10,533	\$ 12,410	17.8%
32	40	Arkansas	\$ 10,081	\$ 11,828	17.3%
33	24	Nebraska	\$ 12,545	\$ 14,717	17.3%
34	49	Utah	\$ 8,607	\$ 10,027	16.5%
35	36	Texas	\$ 11,473	\$ 13,346	16.3%
36	31	Virginia	\$ 12,129	\$ 13,998	15.4%
37	42	Alabama	\$ 10,192	\$ 11,729	15.1%
38	20	Ohio	\$ 14,008	\$ 16,064	14.7%
39	30	West Virginia	\$ 12,351	\$ 14,163	14.7%
40	41	Nevada	\$ 10,472	\$ 11,755	12.3%
41	21	Michigan	\$ 14,518	\$ 15,967	10.0%
42	45	Oklahoma	\$ 10,141	\$ 10,956	8.0%
43	43	Florida	\$ 10,707	\$ 11,526	7.6%
44	23	Wisconsin	\$ 14,091	\$ 15,015	6.6%
45	34	Georgia	\$ 12,803	\$ 13,605	6.3%
46	39	Missouri	\$ 11,702	\$ 12,402	6.0%
47	46	Arizona	\$ 10,353	\$ 10,790	4.2%
48	50	Idaho	\$ 9,518	\$ 9,802	3.0%
49	35	Indiana	\$ 13,116	\$ 13,368	1.9%
50	47	North Carolina	\$ 10,806	\$ 10,790	-0.1%

3.2

EXPENDITURE TRENDS

3.2.1 PUPIL SUPPORT SERVICES

Table 8 shows expenditure trends broken down by support services, which includes spending on salaries, benefits, supplies, materials, and contractual services. (Note that some expenditures classified under support services—such as curriculum development and instructional development—are related to instruction, as discussed in Section 3.2.2.)

Census breaks down support service expenditures by seven primary functions, which are defined as follows:

- **General Administration:** Includes expenditures for board of education and executive administration services.
- **Instructional Staff Support:** Includes expenditures for instructional supervisors, curriculum development, instructional staff training, and other services.
- **Operation and Maintenance of Plant:** Includes expenditures for building services (e.g. HVAC), security, and upkeep of grounds and equipment.
- **Pupil Support Services:** Includes expenditures for social work, counseling, record-keeping, and several categories of services such as medical, dental, nursing, psychological, and speech.
- **Pupil Transportation Services:** Includes expenditures for transporting students and maintaining vehicles.
- **School Administration:** Includes expenditures for principal services.
- **Other Support Services:** Includes expenditures for central office support and business services such as research, development, data processing, budgeting, and purchasing.

Between 2002 and 2020, U.S. inflation-adjusted support service expenditures grew by \$974 per student or 25.4%. A total of nine states saw increases of at least 50%, with New Hampshire, Hawaii, Vermont, Connecticut, and Washington all exceeding 60%. At the other end of the spectrum, five states had growth rates below 10%—North Carolina, Florida, Oklahoma, Michigan, and Idaho. Idaho was the only state where per-student spending on support services did not increase during the time period examined. Nationwide, pupil

support services increased the most as displayed in Figure 5. In 2020, New Jersey spent the most on support services at \$8,027 per student, followed by Vermont at \$7,895 per student and Alaska at \$7,894 per student. Utah, Idaho, and North Carolina spent the least on support services per student that year.

FIGURE 5: SUPPORT SERVICES EXPENDITURE GROWTH BY FUNCTION, NATIONAL AVERAGE (2002-2020)

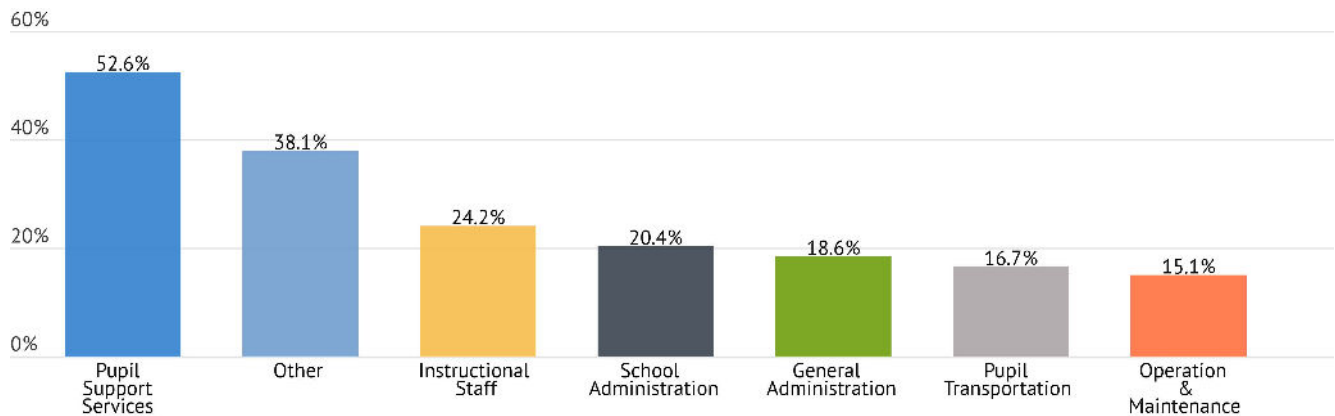


TABLE 8: SUPPORT SERVICES SPENDING PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 3,841	\$ 4,815	25.4%
1	11	New Hampshire	\$ 3,726	\$ 6,280	68.6%
2	12	Hawaii	\$ 3,582	\$ 6,001	67.5%
3	2	Vermont	\$ 4,833	\$ 7,895	63.4%
4	4	Connecticut	\$ 4,855	\$ 7,827	61.2%
5	15	Washington	\$ 3,478	\$ 5,590	60.7%
6	14	Maine	\$ 3,784	\$ 5,948	57.2%
7	23	North Dakota	\$ 3,058	\$ 4,647	52.0%
8	5	New York	\$ 4,759	\$ 7,213	51.6%
9	9	Illinois	\$ 4,237	\$ 6,379	50.5%
10	3	Alaska	\$ 5,267	\$ 7,894	49.9%
11	6	Delaware	\$ 4,573	\$ 6,826	49.3%
12	26	Louisiana	\$ 3,060	\$ 4,555	48.8%
13	8	Rhode Island	\$ 4,466	\$ 6,446	44.3%
14	10	Wyoming	\$ 4,482	\$ 6,283	40.2%
15	17	California	\$ 3,753	\$ 5,190	38.3%
16	44	Mississippi	\$ 2,569	\$ 3,547	38.1%
17	38	Arkansas	\$ 2,926	\$ 3,992	36.4%
18	13	Pennsylvania	\$ 4,435	\$ 5,967	34.5%
19	7	Massachusetts	\$ 4,903	\$ 6,589	34.4%
20	25	South Carolina	\$ 3,473	\$ 4,576	31.8%
21	40	Alabama	\$ 2,812	\$ 3,700	31.6%
22	50	Utah	\$ 2,054	\$ 2,690	31.0%
23	46	Tennessee	\$ 2,613	\$ 3,418	30.8%
24	27	Montana	\$ 3,442	\$ 4,468	29.8%
25	30	Nebraska	\$ 3,388	\$ 4,397	29.8%
26	16	Maryland	\$ 4,143	\$ 5,296	27.8%
27	21	Colorado	\$ 3,829	\$ 4,878	27.4%
28	37	Kentucky	\$ 3,143	\$ 3,995	27.1%
29	28	Missouri	\$ 3,520	\$ 4,435	26.0%
30	1	New Jersey	\$ 6,497	\$ 8,027	23.6%
31	41	Nevada	\$ 2,990	\$ 3,691	23.5%
32	24	Virginia	\$ 3,733	\$ 4,607	23.4%
33	36	Georgia	\$ 3,281	\$ 4,010	22.2%
34	32	Iowa	\$ 3,508	\$ 4,287	22.2%
35	29	West Virginia	\$ 3,634	\$ 4,410	21.3%
36	31	Kansas	\$ 3,671	\$ 4,394	19.7%
37	20	Oregon	\$ 4,193	\$ 4,995	19.1%
38	35	Minnesota	\$ 3,560	\$ 4,142	16.4%
39	43	Arizona	\$ 3,081	\$ 3,563	15.6%
40	34	New Mexico	\$ 3,671	\$ 4,215	14.8%
41	42	South Dakota	\$ 3,170	\$ 3,637	14.7%
42	18	Ohio	\$ 4,554	\$ 5,173	13.6%
43	39	Texas	\$ 3,364	\$ 3,719	10.6%
44	22	Wisconsin	\$ 4,290	\$ 4,731	10.3%
45	33	Indiana	\$ 3,848	\$ 4,237	10.1%
46	48	North Carolina	\$ 2,925	\$ 3,190	9.1%
47	47	Florida	\$ 3,228	\$ 3,377	4.6%
48	45	Oklahoma	\$ 3,344	\$ 3,481	4.1%
49	19	Michigan	\$ 4,877	\$ 5,056	3.7%
50	49	Idaho	\$ 2,924	\$ 2,924	0.0%

3.2.2 INSTRUCTION

Table 9 shows expenditure trends for instruction, which includes spending on salaries, benefits, supplies, materials, and contractual services. In comparison, real spending per student on instruction grew at a lower rate than support services, averaging 20%, for an increase of \$1,364 per student. Four states saw increases of at least 50% for instruction—New Hampshire, New York, Hawaii, and Illinois—and per-pupil spending on instruction declined slightly in Indiana, Idaho, and Wisconsin. In 2020, nine states spent more than \$10,000 per student on instruction, with New York topping the list at \$17,813 per student. Arizona, Idaho, and Utah spent the least on instruction that year.

TABLE 9: INSTRUCTION SPENDING PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 6,819	\$ 8,183	20.0%
1	6	New Hampshire	\$ 7,094	\$ 11,228	58.3%
2	1	New York	\$ 11,473	\$ 17,813	55.3%
3	12	Hawaii	\$ 6,378	\$ 9,806	53.7%
4	8	Illinois	\$ 6,964	\$ 10,540	51.3%
5	17	North Dakota	\$ 5,938	\$ 8,616	45.1%
6	18	Washington	\$ 5,984	\$ 8,592	43.6%
7	3	Vermont	\$ 8,729	\$ 12,457	42.7%
8	2	Connecticut	\$ 9,044	\$ 12,880	42.4%
9	7	Pennsylvania	\$ 7,855	\$ 10,577	34.6%
10	5	Massachusetts	\$ 8,869	\$ 11,714	32.1%
11	13	Maryland	\$ 7,522	\$ 9,783	30.1%
12	10	Wyoming	\$ 7,620	\$ 9,899	29.9%
13	23	Kansas	\$ 6,016	\$ 7,790	29.5%
14	4	New Jersey	\$ 9,542	\$ 12,074	26.5%
15	15	Minnesota	\$ 7,068	\$ 8,885	25.7%
16	19	California	\$ 6,683	\$ 8,316	24.4%
17	33	New Mexico	\$ 5,390	\$ 6,580	22.1%
18	20	Ohio	\$ 6,730	\$ 8,213	22.0%
19	14	Alaska	\$ 8,112	\$ 9,753	20.2%
20	40	Florida	\$ 5,071	\$ 6,082	19.9%
21	46	Mississippi	\$ 4,655	\$ 5,546	19.1%
22	9	Rhode Island	\$ 8,416	\$ 10,023	19.1%
23	11	Delaware	\$ 8,310	\$ 9,827	18.3%
24	21	Nebraska	\$ 6,793	\$ 8,007	17.9%
25	22	Virginia	\$ 6,674	\$ 7,828	17.3%
26	31	Kentucky	\$ 5,734	\$ 6,665	16.2%
27	26	Oregon	\$ 6,442	\$ 7,460	15.8%
28	32	Louisiana	\$ 5,741	\$ 6,626	15.4%
29	27	Iowa	\$ 6,270	\$ 7,194	14.7%
30	48	Utah	\$ 4,612	\$ 5,281	14.5%
31	29	Montana	\$ 6,300	\$ 7,131	13.2%
32	16	Maine	\$ 7,870	\$ 8,828	12.2%
33	36	Colorado	\$ 5,769	\$ 6,351	10.1%
34	41	South Dakota	\$ 5,518	\$ 6,031	9.3%
35	43	Alabama	\$ 5,405	\$ 5,883	8.8%
36	50	Arizona	\$ 4,468	\$ 4,801	7.5%

Growth Rank	2020 Rank	State	2002	2020	Growth
37	25	Michigan	\$ 7,015	\$ 7,535	7.4%
38	42	Tennessee	\$ 5,596	\$ 5,977	6.8%
39	44	Arkansas	\$ 5,450	\$ 5,810	6.6%
40	47	Oklahoma	\$ 5,096	\$ 5,424	6.4%
41	45	Nevada	\$ 5,438	\$ 5,748	5.7%
42	34	South Carolina	\$ 6,063	\$ 6,393	5.4%
43	37	North Carolina	\$ 5,948	\$ 6,270	5.4%
44	30	Georgia	\$ 6,769	\$ 7,111	5.0%
45	39	Texas	\$ 5,909	\$ 6,147	4.0%
46	28	West Virginia	\$ 6,892	\$ 7,138	3.6%
47	35	Missouri	\$ 6,173	\$ 6,364	3.1%
48	24	Wisconsin	\$ 7,658	\$ 7,560	-1.3%
49	49	Idaho	\$ 5,255	\$ 4,975	-5.3%
50	38	Indiana	\$ 6,658	\$ 6,213	-6.7%

3.2.3 EMPLOYEE BENEFITS

Benefit spending played a substantial role in the trends observed in both support services and instruction spending categories. Overall, inflation-adjusted spending on employee benefits increased in all 50 states between 2002 and 2020, growing by \$1,499 per student or 78.6% nationwide as shown in Table 10. This Census expenditure category includes pensions, social security, health insurance, life insurance, worker’s compensation, unemployment compensation, and tuition reimbursement. Research suggests that much of this observed growth is driven by rising teacher pension costs due to unfunded liabilities that have accumulated over time.²¹ A total of 14 states doubled their per-pupil spending on benefits, with three—Hawaii, Illinois, and Pennsylvania—seeing increases exceeding 170%. In comparison, four states had relatively modest growth rates below 20%—Wisconsin, Idaho, West Virginia, and Florida.

3.2.4 CAPITAL EXPENDITURES

Nationwide, inflation-adjusted capital expenditures grew by \$129 per student or 7.9% between 2002 and 2020 as shown in Table 11. This Census reporting category includes building construction, building improvements, and equipment expenses but does not include maintenance and repairs.²² Capital outlays per student decreased in nearly half of all states but more than doubled in eight states.

²¹ Robert M. Costrell, “School Pension Costs Have Doubled over the Last Decade, Now Top \$1,000 Per Pupil Nationally,” Bellwether Education Partners, 2015. www.teacherpensions.org/blog/school-pension-costs-have-doubled-over-last-decade-now-top-1000-pupil-nationally (20 April 2023)

²² Census defines equipment as follows: “Apparatus, furnishings, motor vehicles, office machines, and the like having an expected life of more than five years. Equipment expenditure consists only of amounts for purchase of equipment, including both additional equipment and replacements. Expenditure for facilities that are integral parts of structures is classified as expenditure for construction or for purchase of land and existing structures.”

TABLE 10: EMPLOYEE BENEFIT SPENDING PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 1,907	\$ 3,406	78.6%
1	8	Hawaii	\$ 1,392	\$ 5,014	260.2%
2	4	Illinois	\$ 2,024	\$ 6,062	199.5%
3	5	Pennsylvania	\$ 2,068	\$ 5,656	173.6%
4	12	New Hampshire	\$ 1,919	\$ 4,639	141.8%
5	1	New York	\$ 2,929	\$ 7,069	141.4%
6	3	Connecticut	\$ 2,600	\$ 6,197	138.4%
7	2	New Jersey	\$ 2,679	\$ 6,233	132.7%
8	6	Vermont	\$ 2,447	\$ 5,618	129.6%
9	7	Alaska	\$ 2,366	\$ 5,304	124.2%
10	19	Kentucky	\$ 1,610	\$ 3,536	119.6%
11	17	California	\$ 1,791	\$ 3,932	119.5%
12	20	Washington	\$ 1,597	\$ 3,483	118.1%
13	34	Colorado	\$ 1,213	\$ 2,493	105.5%
14	23	North Dakota	\$ 1,633	\$ 3,294	101.7%
15	25	Louisiana	\$ 1,634	\$ 3,243	98.4%
16	32	Kansas	\$ 1,364	\$ 2,622	92.2%
17	9	Delaware	\$ 2,592	\$ 4,958	91.3%
18	11	Massachusetts	\$ 2,575	\$ 4,769	85.2%
19	10	Rhode Island	\$ 2,731	\$ 4,901	79.4%
20	36	North Carolina	\$ 1,306	\$ 2,340	79.2%
21	13	Wyoming	\$ 2,503	\$ 4,484	79.1%
22	22	Virginia	\$ 1,872	\$ 3,303	76.4%
23	16	Maryland	\$ 2,357	\$ 4,035	71.2%
24	49	Arizona	\$ 1,018	\$ 1,710	67.9%
25	30	Nebraska	\$ 1,819	\$ 2,856	57.0%
26	15	Oregon	\$ 2,630	\$ 4,124	56.8%
27	43	Tennessee	\$ 1,273	\$ 1,992	56.5%
28	28	Minnesota	\$ 1,920	\$ 2,981	55.2%
29	14	Michigan	\$ 2,776	\$ 4,286	54.4%
30	39	Missouri	\$ 1,473	\$ 2,267	53.9%
31	42	Mississippi	\$ 1,315	\$ 2,020	53.6%
32	35	Nevada	\$ 1,623	\$ 2,487	53.3%
33	31	South Carolina	\$ 1,825	\$ 2,772	51.9%
34	44	Oklahoma	\$ 1,249	\$ 1,864	49.3%
35	40	Utah	\$ 1,524	\$ 2,255	48.0%
36	37	New Mexico	\$ 1,579	\$ 2,319	46.9%
37	29	Georgia	\$ 2,062	\$ 2,963	43.7%
38	26	Ohio	\$ 2,240	\$ 3,174	41.7%
39	38	Alabama	\$ 1,621	\$ 2,281	40.7%
40	33	Iowa	\$ 1,915	\$ 2,596	35.6%
41	48	Arkansas	\$ 1,302	\$ 1,753	34.7%
42	41	Montana	\$ 1,659	\$ 2,227	34.3%
43	18	Maine	\$ 2,791	\$ 3,743	34.1%
44	45	South Dakota	\$ 1,389	\$ 1,815	30.7%
45	50	Texas	\$ 1,044	\$ 1,295	24.0%
46	24	Indiana	\$ 2,696	\$ 3,252	20.6%
47	47	Florida	\$ 1,515	\$ 1,791	18.2%
48	21	West Virginia	\$ 2,900	\$ 3,390	16.9%
49	46	Idaho	\$ 1,652	\$ 1,800	8.9%
50	27	Wisconsin	\$ 2,990	\$ 3,106	3.9%

TABLE 11: CAPITAL OUTLAY SPENDING PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 1,620	\$ 1,749	7.9%
1	33	Kentucky	\$ 323	\$ 1,254	288.7%
2	43	Rhode Island	\$ 249	\$ 941	278.0%
3	41	Hawaii	\$ 330	\$ 1,089	230.5%
4	9	Montana	\$ 670	\$ 2,101	213.5%
5	5	North Dakota	\$ 783	\$ 2,434	210.8%
6	12	Kansas	\$ 711	\$ 1,958	175.2%
7	1	Oregon	\$ 1,462	\$ 3,358	129.6%
8	2	Washington	\$ 1,484	\$ 3,094	108.5%
9	25	Arkansas	\$ 769	\$ 1,536	99.7%
10	7	Iowa	\$ 1,365	\$ 2,210	61.9%
11	10	Indiana	\$ 1,271	\$ 1,994	56.9%
12	39	Oklahoma	\$ 794	\$ 1,159	46.0%
13	8	Colorado	\$ 1,517	\$ 2,164	42.7%
14	3	Minnesota	\$ 2,205	\$ 3,036	37.7%
15	19	Utah	\$ 1,281	\$ 1,763	37.7%
16	37	Mississippi	\$ 879	\$ 1,170	33.2%
17	32	Maine	\$ 966	\$ 1,277	32.2%
18	16	Wisconsin	\$ 1,423	\$ 1,853	30.2%
19	15	Wyoming	\$ 1,520	\$ 1,890	24.3%
20	13	Maryland	\$ 1,579	\$ 1,933	22.4%
21	11	California	\$ 1,646	\$ 1,994	21.2%
22	6	Texas	\$ 1,896	\$ 2,233	17.7%
23	23	Connecticut	\$ 1,425	\$ 1,607	12.8%
24	4	New York	\$ 2,440	\$ 2,746	12.6%
25	28	Missouri	\$ 1,311	\$ 1,416	8.0%
26	18	New Mexico	\$ 1,683	\$ 1,786	6.1%
27	17	South Dakota	\$ 1,697	\$ 1,786	5.3%
28	21	Ohio	\$ 1,711	\$ 1,718	0.4%
29	20	Nebraska	\$ 1,854	\$ 1,762	-5.0%
30	46	Louisiana	\$ 882	\$ 829	-6.0%
31	44	West Virginia	\$ 996	\$ 936	-6.0%
32	14	South Carolina	\$ 2,050	\$ 1,908	-6.9%
33	36	Virginia	\$ 1,401	\$ 1,173	-16.3%
34	47	Alabama	\$ 986	\$ 825	-16.3%
35	26	Pennsylvania	\$ 1,833	\$ 1,530	-16.5%
36	29	Arizona	\$ 1,624	\$ 1,352	-16.8%
37	42	North Carolina	\$ 1,263	\$ 1,049	-16.9%
38	31	Georgia	\$ 1,629	\$ 1,325	-18.7%
39	35	New Jersey	\$ 1,527	\$ 1,191	-22.0%
40	30	Massachusetts	\$ 1,738	\$ 1,348	-22.5%
41	49	Idaho	\$ 984	\$ 760	-22.7%
42	24	Illinois	\$ 2,037	\$ 1,556	-23.6%
43	50	Vermont	\$ 972	\$ 742	-23.7%
44	27	Michigan	\$ 1,965	\$ 1,430	-27.2%
45	22	Nevada	\$ 2,448	\$ 1,672	-31.7%
46	40	Florida	\$ 1,733	\$ 1,151	-33.6%
47	48	Tennessee	\$ 1,227	\$ 812	-33.8%
48	45	New Hampshire	\$ 1,329	\$ 842	-36.7%
49	34	Delaware	\$ 2,000	\$ 1,224	-38.8%
50	38	Alaska	\$ 2,339	\$ 1,161	-50.3%

3.2.5 TOTAL DEBT PER STUDENT

Table 12 summarizes total debt obligations, which do not include retirement obligations. Overall, per-student debt in the U.S. increased by \$3,811 per student, growing by 55%. Five states—Indiana, Montana, Rhode Island, California, and North Dakota—saw per-student debt grow by more than 200%, while 11 states saw this figure decline.

TABLE 12: TOTAL DEBT PER STUDENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 6,932	\$ 10,743	55.0%
1	16	Indiana	\$ 2,125	\$ 10,481	393.2%
2	15	Montana	\$ 2,388	\$ 10,515	340.4%
3	30	Rhode Island	\$ 1,729	\$ 6,607	282.2%
4	5	California	\$ 4,293	\$ 15,636	264.3%
5	25	North Dakota	\$ 2,288	\$ 7,444	225.4%
6	36	Delaware	\$ 2,449	\$ 6,139	150.7%
7	14	Arkansas	\$ 4,972	\$ 11,467	130.6%
8	22	Iowa	\$ 3,840	\$ 8,704	126.7%
9	3	Oregon	\$ 8,008	\$ 16,706	108.6%
10	13	Nebraska	\$ 5,540	\$ 11,547	108.4%
11	35	Maryland	\$ 3,209	\$ 6,145	91.5%
12	20	Kentucky	\$ 4,673	\$ 8,868	89.8%
13	1	Texas	\$ 10,051	\$ 19,009	89.1%
14	27	Alabama	\$ 3,889	\$ 7,116	83.0%
15	26	New Mexico	\$ 4,035	\$ 7,336	81.8%
16	28	Maine	\$ 3,986	\$ 7,054	77.0%
17	18	Ohio	\$ 5,310	\$ 9,190	73.1%
18	21	South Dakota	\$ 5,190	\$ 8,819	69.9%
19	9	South Carolina	\$ 7,911	\$ 12,870	62.7%
20	45	Oklahoma	\$ 2,429	\$ 3,814	57.0%
21	8	Kansas	\$ 8,719	\$ 13,461	54.4%
22	33	Utah	\$ 4,130	\$ 6,187	49.8%
23	7	Washington	\$ 9,361	\$ 13,818	47.6%
24	24	Missouri	\$ 5,785	\$ 8,406	45.3%
25	2	Minnesota	\$ 12,868	\$ 17,759	38.0%
26	12	Illinois	\$ 8,787	\$ 11,722	33.4%
27	40	Idaho	\$ 4,031	\$ 5,258	30.5%
28	11	Colorado	\$ 9,736	\$ 12,160	24.9%
29	10	New York	\$ 10,207	\$ 12,488	22.3%
30	34	Tennessee	\$ 5,039	\$ 6,165	22.3%
31	23	Alaska	\$ 6,992	\$ 8,463	21.0%
32	6	Michigan	\$ 12,831	\$ 15,377	19.8%
33	37	North Carolina	\$ 4,832	\$ 5,609	16.1%
34	41	Louisiana	\$ 4,441	\$ 5,126	15.4%
35	43	Mississippi	\$ 4,012	\$ 4,454	11.0%
36	31	Connecticut	\$ 5,938	\$ 6,590	11.0%
37	4	Pennsylvania	\$ 14,441	\$ 15,717	8.8%
38	19	Wisconsin	\$ 9,041	\$ 9,186	1.6%
39	48	West Virginia	\$ 1,090	\$ 1,072	-1.7%
40	46	Vermont	\$ 3,657	\$ 3,541	-3.2%
41	42	Florida	\$ 5,142	\$ 4,940	-3.9%

Growth Rank	2020 Rank	State	2002	2020	Growth
42	32	Arizona	\$ 6,970	\$ 6,550	-6.0%
43	38	Virginia	\$ 6,326	\$ 5,559	-12.1%
44	29	Massachusetts	\$ 7,977	\$ 6,757	-15.3%
45	44	New Hampshire	\$ 5,361	\$ 4,438	-17.2%
46	47	Georgia	\$ 3,800	\$ 2,989	-21.3%
47	39	New Jersey	\$ 6,935	\$ 5,421	-21.8%
48	17	Nevada	\$ 13,152	\$ 10,046	-23.6%
49	49	Wyoming	\$ 2,301	\$ 463	-79.9%
		Hawaii ²³	\$ -	\$ -	NA

²² The U.S. Census Bureau does not report debt for Hawaii's K-12 public education system.

PART 4

ENROLLMENT, STAFFING, AND TEACHER SALARY TRENDS

4.1

ENROLLMENT TRENDS

Between 2002 and 2020 U.S. public education enrollment grew by 6.6% as displayed in Table 13.²³ During this time enrollment declined in 18 states with New Hampshire, Vermont, Michigan, and Maine all losing over 12% of their student populations. The states with the largest increases were Utah, Nevada, Texas, Idaho, and Arizona—all of which had enrollment growth at or above 25%. In 2020, three states—California, Texas, and Florida—had a combined 14.6 million students, accounting for over 28.7% of the 50.8 million public school students in the U.S.

²³ The enrollment figures provided in this study were obtained from National Center for Education Statistics. Notes that U.S. Census Bureau enrollment figures are slightly different since they don't include all charter students

TABLE 13: PUBLIC SCHOOL ENROLLMENT GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	47,671,870	50,796,445	6.6%
1	28	Utah	484,684	684,694	41.3%
2	33	Nevada	356,814	496,934	39.3%
3	2	Texas	4,163,447	5,495,398	32.0%
4	38	Idaho	246,521	311,096	26.2%
5	13	Arizona	922,180	1,152,586	25.0%
6	18	Colorado	742,145	913,223	23.1%
7	46	Delaware	115,555	139,930	21.1%
8	6	Georgia	1,470,634	1,769,657	20.3%
9	9	North Carolina	1,315,363	1,560,350	18.6%
10	23	South Carolina	676,198	786,879	16.4%
11	37	Nebraska	285,095	330,018	15.8%
12	3	Florida	2,500,478	2,858,461	14.3%
13	14	Washington	1,009,200	1,142,073	13.2%
14	26	Oklahoma	622,139	703,719	13.1%
15	12	Virginia	1,163,091	1,297,012	11.5%
16	29	Oregon	551,480	610,648	10.7%
17	34	Arkansas	449,805	496,927	10.5%
18	45	South Dakota	127,542	139,949	9.7%
19	16	Tennessee	924,899	1,014,744	9.7%
20	48	North Dakota	106,047	116,185	9.6%
21	49	Wyoming	88,128	94,616	7.4%
22	31	Iowa	485,932	517,324	6.5%
23	32	Kansas	470,205	497,963	5.9%
24	27	Kentucky	654,363	691,996	5.8%
25	20	Maryland	860,640	909,404	5.7%
26	15	Indiana	996,133	1,051,411	5.5%
27	11	New Jersey	1,341,656	1,411,917	5.2%
28	21	Minnesota	851,384	893,203	4.9%
29	36	New Mexico	320,260	331,206	3.4%
30	24	Alabama	737,190	744,235	1.0%
31	19	Missouri	909,792	910,466	0.1%
32	1	California	6,247,726	6,249,005	0.0%
33	43	Montana	151,947	149,917	-1.3%
34	17	Massachusetts	973,139	959,394	-1.4%
35	47	Alaska	134,349	132,017	-1.7%
36	40	Hawaii	184,546	181,088	-1.9%
37	22	Wisconsin	879,361	855,400	-2.7%
38	25	Louisiana	731,328	710,439	-2.9%
39	7	Pennsylvania	1,821,627	1,732,449	-4.9%
40	35	Mississippi	493,507	466,002	-5.6%
41	5	Illinois	2,071,391	1,943,117	-6.2%
42	4	New York	2,872,132	2,692,589	-6.3%
43	39	West Virginia	282,885	263,486	-6.9%
44	8	Ohio	1,830,985	1,689,867	-7.7%
45	30	Connecticut	570,228	523,690	-8.2%
46	44	Rhode Island	158,046	143,557	-9.2%
47	41	Maine	205,586	180,291	-12.3%
48	10	Michigan	1,730,669	1,495,925	-13.6%
49	50	Vermont	101,179	86,759	-14.3%
50	42	New Hampshire	206,847	177,351	-14.3%

4.2

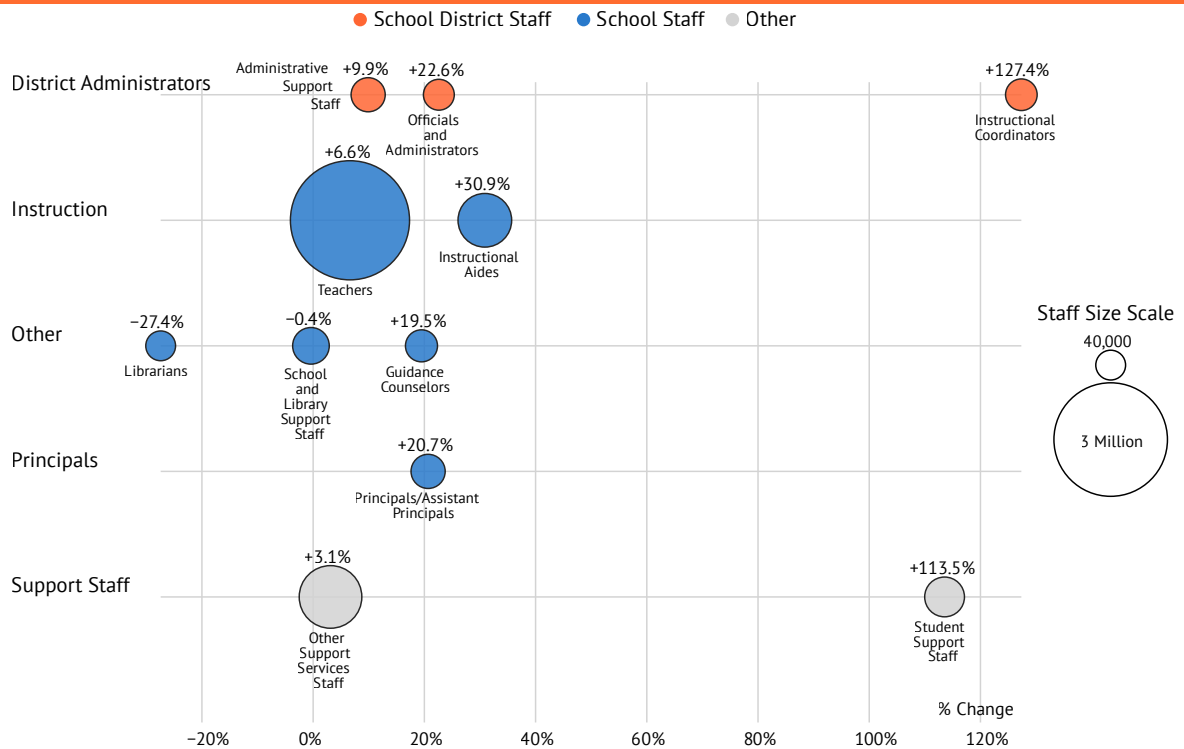
STAFFING TRENDS: NON-TEACHERS AND TEACHERS

Tables 14 and 15 summarize the growth in non-teaching and teaching staff between 2002 and 2020.²⁴ Nationwide, non-teaching staff grew by 20%, with 42 states seeing increases. A total of 20 states grew the number of non-teachers by at least 25%, with Ohio topping the list at 117.3% followed by South Carolina at 82.1%, Utah at 62.8%, and Nevada at 58%. For context, NCES reported there was a total of 3,485,132 non-teachers in 2020, 10.8% of which were exclusively classified as district-level employees—meaning they work in district central offices rather than for individual schools. For 2020, non-teaching staff are disaggregated by the NCES as follows:

- 1,200,343 Other Support Services Staff (3.1% growth rate since 2002)
- 883,071 Instructional Aides (30.9% growth rate since 2002)
- 392,699 Student Support Staff (113.5% growth rate since 2002)
- 281,179 School and Library Support Staff (-0.4% growth rate since 2002)
- 193,734 Principals and Assistant Principals (20.7% growth rate since 2002)
- 192,642 Administrative Support Staff—School District Staff (9.9% growth rate since 2002)
- 119,539 Guidance Counselors (19.5% growth rate since 2002)
- 104,603 Instructional Coordinators—School District Staff (127.4% growth rate since 2002)
- 77,875 Officials and Administrators—School District Staff (22.6% growth rate since 2002)
- 39,447 Librarians (-27.4% growth rate since 2002)

²⁴ Staffing data reported to NCES might be subject to data quality issues in some states during the time period examined. For instance, Ohio's non-teaching staff increased substantially in FY 2016, which was likely due to changes in how data were reported by the state.

FIGURE 6: STAFFING GROWTH BY NCES CATEGORY (2002-2020)



In comparison, the number of teachers in the U.S. grew modestly at 6.6%, with 38 states seeing increases.²⁵ Of the 12 states with negative teacher growth, only three saw reductions in the number of non-teachers (Louisiana, Michigan, and Alabama). Nationwide, non-teachers now outnumber teachers, accounting for 52.1% of public education staff.

²⁵ Note that NCES does not classify instructional aides as teachers.

TABLE 14: NON-TEACHING STAFF GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	2,904,667	3,485,132	20.0%
1	3	Ohio	107,892	234,439	117.3%
2	25	South Carolina	24,722	45,031	82.1%
3	34	Utah	18,900	30,767	62.8%
4	36	Nevada	14,691	23,210	58.0%
5	16	Colorado	43,400	63,791	47.0%
6	46	North Dakota	6,860	9,849	43.6%
7	7	New Jersey	89,726	125,194	39.5%
8	29	Oregon	29,071	39,831	37.0%
9	14	Tennessee	53,569	70,473	31.6%
10	49	Wyoming	7,022	9,235	31.5%
11	42	Hawaii	8,457	11,115	31.4%
12	47	Rhode Island	7,480	9,816	31.2%
13	18	Maryland	45,508	59,673	31.1%
14	24	Oklahoma	34,773	45,586	31.1%
15	11	Virginia	75,935	99,122	30.5%
16	15	Minnesota	51,660	66,388	28.5%
17	23	Connecticut	43,111	54,500	26.4%
18	2	California	270,263	341,291	26.3%
19	13	Indiana	69,280	87,018	25.6%
20	37	Maine	17,331	21,740	25.4%
21	1	Texas	299,709	373,941	24.8%
22	35	Nebraska	19,458	24,174	24.2%
23	9	Georgia	97,322	119,474	22.8%
24	43	Montana	9,080	11,059	21.8%
25	19	Arizona	47,961	57,924	20.8%
26	26	Iowa	34,598	41,723	20.6%
27	5	Florida	148,012	178,006	20.3%
28	39	New Hampshire	14,464	17,324	19.8%
29	41	Idaho	10,919	12,736	16.6%
30	12	North Carolina	80,480	93,841	16.6%
31	6	Pennsylvania	110,768	128,265	15.8%
32	30	Arkansas	33,499	38,405	14.6%
33	44	Vermont	9,496	10,653	12.2%
34	31	Kansas	32,071	35,945	12.1%
35	45	South Dakota	9,142	10,238	12.0%
36	50	Delaware	6,600	7,386	11.9%
37	17	Massachusetts	56,687	62,449	10.2%
38	48	Alaska	8,662	9,496	9.6%
39	32	Mississippi	33,941	35,648	5.0%
40	38	West Virginia	17,537	18,408	5.0%
41	22	Wisconsin	52,607	54,908	4.4%
42	20	Kentucky	54,451	56,659	4.1%
43	8	Illinois	125,929	124,433	-1.2%
44	4	New York	214,071	208,794	-2.5%
45	21	Missouri	59,515	56,188	-5.6%
46	10	Michigan	116,045	107,053	-7.7%
47	33	Alabama	41,375	34,435	-16.8%
48	28	Louisiana	51,572	40,666	-21.1%
49	40	New Mexico	23,118	16,371	-29.2%
50	27	Washington	59,487	41,294	-30.6%

TABLE 15: TEACHING STAFF GROWTH (2002-2020)

Growth Rank	2020 Rank	State	Teachers		
			2002	2020	Growth
		United States	2,999,528	3,198,170	6.6%
1	33	Utah	22,211	30,256	36.2%
2	35	Nevada	19,276	25,508	32.3%
3	1	Texas	282,847	364,478	28.9%
4	46	Delaware	7,571	9,747	28.7%
5	7	Georgia	92,731	117,837	27.1%
6	39	Idaho	13,854	17,207	24.2%
7	4	Florida	134,684	166,002	23.3%
8	21	Colorado	44,182	53,901	22.0%
9	16	Washington	52,533	62,212	18.4%
10	10	North Carolina	85,684	100,777	17.6%
11	28	Arkansas	33,079	38,629	16.8%
12	47	North Dakota	8,035	9,284	15.5%
13	22	South Carolina	46,616	53,556	14.9%
14	18	Maryland	53,774	61,485	14.3%
15	36	Nebraska	21,083	24,028	14.0%
16	8	New Jersey	103,611	117,060	13.0%
17	42	Hawaii	11,007	12,221	11.0%
18	15	Tennessee	58,358	64,784	11.0%
19	50	Wyoming	6,662	7,391	10.9%
20	30	Kansas	33,084	36,603	10.6%
21	13	Massachusetts	68,942	75,152	9.0%
22	34	Oregon	28,262	30,238	7.0%
23	23	Arizona	46,015	48,912	6.3%
24	14	Missouri	65,240	69,145	6.0%
25	45	South Dakota	9,370	9,930	6.0%
26	6	Pennsylvania	118,470	124,294	4.9%
27	20	Minnesota	53,081	55,630	4.8%
28	26	Kentucky	40,376	42,223	4.6%
29	24	Oklahoma	41,632	43,315	4.0%
30	3	New York	209,128	217,398	4.0%
31	17	Indiana	59,659	61,712	3.4%
32	44	Montana	10,408	10,675	2.6%
33	5	Illinois	129,600	132,815	2.5%
34	31	Iowa	34,906	35,737	2.4%
35	25	Connecticut	41,773	42,386	1.5%
36	32	Mississippi	31,214	31,578	1.2%
37	37	New Mexico	21,823	21,850	0.1%
38	41	New Hampshire	14,677	14,694	0.1%
39	11	Virginia	89,314	87,147	-2.4%
40	43	Rhode Island	11,104	10,704	-3.6%
41	19	Wisconsin	63,310	59,801	-5.5%
42	48	Vermont	8,554	8,042	-6.0%
43	38	West Virginia	20,138	18,854	-6.4%
44	49	Alaska	8,026	7,484	-6.8%
45	27	Alabama	46,785	42,022	-10.2%
46	2	California	304,203	271,805	-10.7%
47	40	Maine	16,741	14,826	-11.4%
48	9	Ohio	122,115	105,998	-13.2%
49	12	Michigan	98,849	84,838	-14.2%
50	29	Louisiana	49,980	38,589	-22.8%

4.3

TEACHER SALARIES

Nationwide, inflation-adjusted average teacher salaries fell by 0.6% between 2002 and 2020 with a total of 26 states seeing declines. Teacher salaries grew the most in Washington, Massachusetts, and New York while Indiana, Michigan, and Florida saw the largest declines. In 2020, the average teacher salary in the U.S. was \$64,133, with three states—New York, California, and Massachusetts—all exceeding \$80,000.

TABLE 16: AVERAGE TEACHER SALARY GROWTH (2002-2020)

Growth Rank	2020 Rank	State	2002	2020	Growth
		United States	\$ 64,522	\$ 64,133	-0.6%
1	5	Washington	\$ 62,762	\$ 76,743	22.3%
2	3	Massachusetts	\$ 72,623	\$ 84,290	16.1%
3	1	New York	\$ 75,088	\$ 87,069	16.0%
4	36	North Dakota	\$ 46,573	\$ 53,525	14.9%
5	19	Wyoming	\$ 54,637	\$ 59,786	9.4%
6	49	South Dakota	\$ 45,190	\$ 48,984	8.4%
7	17	Vermont	\$ 56,663	\$ 61,108	7.8%
8	33	Oklahoma	\$ 50,170	\$ 54,096	7.8%
9	2	California	\$ 78,479	\$ 84,531	7.7%
10	13	Hawaii	\$ 61,536	\$ 65,409	6.3%
11	29	Nebraska	\$ 52,325	\$ 55,267	5.6%
12	8	Maryland	\$ 69,674	\$ 73,444	5.4%
13	23	Iowa	\$ 55,204	\$ 58,184	5.4%
14	39	Montana	\$ 49,643	\$ 52,135	5.0%
15	7	Rhode Island	\$ 71,851	\$ 75,336	4.9%
16	20	New Hampshire	\$ 57,637	\$ 59,622	3.4%
17	31	New Mexico	\$ 52,619	\$ 54,256	3.1%
18	28	Maine	\$ 53,861	\$ 55,276	2.6%
19	12	Oregon	\$ 66,541	\$ 67,685	1.7%
20	4	Connecticut	\$ 77,328	\$ 78,427	1.4%
21	30	Utah	\$ 54,026	\$ 54,678	1.2%
22	9	Alaska	\$ 71,360	\$ 72,010	0.9%
23	26	Texas	\$ 56,651	\$ 57,090	0.8%
24	34	Alabama	\$ 53,708	\$ 54,095	0.7%
25	6	New Jersey	\$ 76,809	\$ 76,376	-0.6%
26	35	Kentucky	\$ 54,801	\$ 53,907	-1.6%
27	42	Louisiana	\$ 52,458	\$ 51,566	-1.7%
28	24	Colorado	\$ 58,712	\$ 57,706	-1.7%
29	21	Wisconsin	\$ 60,983	\$ 59,431	-2.5%
30	50	Mississippi	\$ 48,078	\$ 46,843	-2.6%
31	16	Ohio	\$ 63,578	\$ 61,406	-3.4%
32	22	Minnesota	\$ 60,928	\$ 58,663	-3.7%
33	27	Nevada	\$ 58,863	\$ 56,672	-3.7%
34	10	Pennsylvania	\$ 73,065	\$ 70,339	-3.7%
35	43	Kansas	\$ 53,562	\$ 51,320	-4.2%
36	25	Virginia	\$ 60,260	\$ 57,665	-4.3%
37	11	Illinois	\$ 71,384	\$ 68,083	-4.6%
38	18	Georgia	\$ 63,641	\$ 60,578	-4.8%
39	47	West Virginia	\$ 53,068	\$ 50,238	-5.3%
40	46	Arkansas	\$ 53,373	\$ 50,456	-5.5%
41	40	Tennessee	\$ 55,616	\$ 51,862	-6.7%

Growth Rank	2020 Rank	State	2002	2020	Growth
42	14	Delaware	\$ 69,836	\$ 64,853	-7.1%
43	44	Missouri	\$ 54,866	\$ 50,817	-7.4%
44	37	South Carolina	\$ 57,649	\$ 53,329	-7.5%
45	38	Idaho	\$ 57,169	\$ 52,875	-7.5%
46	45	Arizona	\$ 57,721	\$ 50,782	-12.0%
47	32	North Carolina	\$ 61,630	\$ 54,150	-12.1%
48	48	Florida	\$ 56,713	\$ 49,102	-13.4%
49	15	Michigan	\$ 76,064	\$ 63,568	-16.4%
50	41	Indiana	\$ 63,818	\$ 51,745	-18.9%

PART 5

STUDENT OUTCOMES: ALL STUDENTS

This section examines NAEP reading and math scores for 4th and 8th grade students. Importantly, NAEP data obtained from NCES were reported as decimal values. State rankings and calculated growth scores were determined using these unrounded figures. As such, there are no ties in the rankings, and some growth scores aren't identical to the difference between the rounded figures presented.

5.1

4TH GRADE READING AND MATH NAEP

Between 2003 and 2019 the average U.S. 4th grade NAEP reading score increased by two points, going from 218 to 220. The three highest-growth states during this time were Mississippi, California, and Nevada, while the three lowest-growth states were Alaska, Delaware, and West Virginia. In 2019, the highest-scoring states were Massachusetts, New Jersey, and Wyoming, while the three lowest-scoring states were Alaska, New Mexico, and Louisiana. Table 17 summarizes 4th grade NAEP reading results.

TABLE 17: 4TH GRADE NAEP READING SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	218	220	2
1	29	Mississippi	205	219	14
2	40	California	206	216	11
3	38	Nevada	207	218	11
4	39	Hawaii	208	218	9
5	31	Tennessee	212	219	7
6	44	Arizona	209	216	7
7	6	Florida	218	225	7
8	4	Utah	219	225	6
9	48	Louisiana	205	210	5
10	47	Alabama	207	212	5
11	3	Wyoming	222	227	5
12	10	Pennsylvania	219	223	5
13	35	Georgia	214	218	4
14	49	New Mexico	203	208	4
15	11	Idaho	218	223	4
16	24	Rhode Island	216	220	4
17	1	Massachusetts	228	231	3
18	41	Oklahoma	214	216	3
19	2	New Jersey	225	227	2
20	22	Kentucky	219	221	2
21	33	Illinois	216	218	2
22	13	Nebraska	221	222	2
23	45	Arkansas	214	215	1
24	17	Indiana	220	222	1
25	42	Texas	215	216	1
26	5	Colorado	224	225	1
27	43	South Carolina	215	216	1
28	25	Maryland	219	220	1
29	9	Virginia	223	224	0
30	15	Ohio	222	222	0
31	36	Oregon	218	218	0
32	19	North Carolina	221	221	0
33	12	Minnesota	223	222	0
34	14	South Dakota	222	222	0
35	21	North Dakota	222	221	0
36	32	Michigan	219	218	-1
37	30	Kansas	220	219	-1
38	18	Montana	223	222	-1
39	26	Wisconsin	221	220	-1
40	27	Washington	221	220	-1
41	28	New York	222	220	-3
42	20	Maine	224	221	-3
43	23	Iowa	223	221	-3
44	8	New Hampshire	228	224	-4
45	7	Connecticut	228	224	-4
46	34	Missouri	222	218	-4
47	16	Vermont	226	222	-4
48	46	West Virginia	219	213	-6
49	37	Delaware	224	218	-6
50	50	Alaska	212	204	-7

Between 2003 and 2019 the average U.S. 4th grade NAEP math score increased by six points, going from 235 to 241. The three highest-growth states during this time were Mississippi, Florida, and Tennessee, while the three lowest-growth states were Vermont, Kansas, and Alaska. In 2019, the highest-scoring states were Minnesota, Massachusetts, and Virginia, while the three lowest-scoring states were Alabama, New Mexico, and Louisiana. Table 18 summarizes 4th grade NAEP math results.

TABLE 18: 4TH GRADE NAEP MATH SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	235	241	6
1	23	Mississippi	223	241	18
2	4	Florida	234	246	12
3	25	Tennessee	228	240	12
4	32	Hawaii	227	239	12
5	30	Kentucky	229	239	11
6	28	Rhode Island	230	239	9
7	10	Utah	235	244	9
8	36	Arizona	229	238	9
9	49	New Mexico	223	231	9
10	43	Nevada	228	236	8
11	38	Oklahoma	229	237	8
12	9	Pennsylvania	236	244	8
13	3	Virginia	239	247	8
14	11	Nebraska	236	244	8
15	35	Georgia	230	238	7
16	44	California	227	235	7
17	5	New Jersey	239	246	7
18	15	Idaho	235	242	7
19	7	Indiana	238	245	7
20	16	Colorado	235	242	7
21	1	Minnesota	242	248	6
22	12	Texas	237	244	6
23	50	Alabama	223	230	6
24	2	Massachusetts	242	247	6
25	33	Maryland	233	239	5
26	21	Montana	236	241	5
27	14	North Dakota	238	243	5
28	48	Louisiana	226	231	5
29	17	Wisconsin	237	242	5
30	6	Wyoming	241	246	5
31	37	Illinois	233	237	5
32	45	Arkansas	229	233	4
33	19	South Dakota	237	241	4
34	34	Missouri	235	238	4
35	29	Delaware	236	239	3
36	20	Ohio	238	241	3
37	22	Maine	238	241	3
38	13	Connecticut	241	243	3
39	24	Iowa	238	241	2
40	8	New Hampshire	243	245	1
41	26	Washington	238	240	1
42	39	South Carolina	236	237	1
43	40	New York	236	237	1

Growth Rank	2019 Rank	State	2003	2019	Growth
44	47	West Virginia	231	231	1
45	42	Michigan	236	236	0
46	41	Oregon	236	236	0
47	18	North Carolina	242	241	-1
48	46	Alaska	233	232	-1
49	27	Kansas	242	239	-2
50	31	Vermont	242	239	-3

5.2

8TH GRADE READING AND MATH NAEP

Between 2003 and 2019 the average U.S. 8th grade NAEP reading score was flat. The three highest-growth states during this time were California, Hawaii, and Florida, while the three lowest-growth states were South Dakota, North Dakota, and Virginia. In 2019, the highest-scoring states were Massachusetts, New Jersey, and Connecticut, while the three lowest-scoring states were New Mexico, Alaska, and Alabama. Table 19 summarizes 8th grade NAEP reading results.

TABLE 19: 8TH GRADE NAEP READING SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	263	263	0
1	39	California	251	259	8
2	42	Hawaii	251	258	7
3	22	Florida	257	263	6
4	43	Nevada	252	258	6
5	31	Georgia	258	262	5
6	30	Tennessee	258	262	4
7	37	Arizona	255	259	4
8	44	Louisiana	253	257	4
9	6	Utah	264	267	3
10	17	Maryland	262	264	3
11	2	New Jersey	268	270	3
12	3	Connecticut	267	270	3
13	10	Idaho	264	266	2
14	11	Washington	264	266	2
15	45	Mississippi	255	256	1
16	33	Rhode Island	261	262	1
17	12	Indiana	265	266	1
18	7	Wisconsin	266	267	1
19	38	South Carolina	258	259	1
20	29	North Carolina	262	263	1
21	40	Arkansas	258	259	1
22	9	Ohio	267	267	0
23	48	Alabama	253	253	0
24	1	Massachusetts	273	273	0
25	50	New Mexico	252	252	0
26	18	Pennsylvania	264	264	0
27	8	Colorado	268	267	0
28	21	Oregon	264	264	0

Growth Rank	2019 Rank	State	2003	2019	Growth
29	15	Illinois	266	265	-2
30	28	Michigan	264	263	-2
31	4	Vermont	271	268	-2
32	19	Nebraska	266	264	-2
33	16	Wyoming	267	265	-2
34	5	New Hampshire	271	268	-3
35	46	Texas	259	256	-3
36	13	Maine	268	265	-3
37	26	Kansas	266	263	-3
38	25	Kentucky	266	263	-3
39	41	Oklahoma	262	258	-4
40	35	New York	265	262	-4
41	20	Minnesota	268	264	-4
42	47	West Virginia	260	256	-4
43	49	Alaska	256	252	-4
44	23	Missouri	267	263	-4
45	36	Delaware	265	260	-5
46	14	Montana	270	265	-5
47	32	Iowa	268	262	-5
48	34	Virginia	268	262	-6
49	24	North Dakota	270	263	-6
50	27	South Dakota	270	263	-7

Between 2003 and 2019 the average U.S. 8th grade NAEP math score increased by four points, going from 278 to 282. The three highest-growth states during this time were Mississippi, Tennessee, and New Jersey, while the three lowest-growth states were Alaska, Iowa, and Kansas. In 2019, the highest-scoring states were Massachusetts, New Jersey, and Minnesota, while the three lowest-scoring states were Alabama, New Mexico, and Louisiana. Table 20 summarizes 8th grade NAEP math results.

TABLE 20: 8TH GRADE NAEP MATH SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	278	282	4
1	46	Mississippi	261	274	13
2	30	Tennessee	268	280	12
3	2	New Jersey	281	292	10
4	34	Georgia	270	279	10
5	42	Hawaii	266	275	10
6	31	Arizona	271	280	9
7	43	Arkansas	266	274	9
8	41	California	267	276	9
9	1	Massachusetts	287	294	8
10	35	Florida	271	279	7
11	50	Alabama	262	269	7
12	16	Pennsylvania	279	285	6
13	11	Idaho	280	286	6
14	45	Nevada	268	274	6
15	49	New Mexico	263	269	5
16	22	Illinois	277	283	5
17	7	Virginia	282	287	5
18	48	Louisiana	266	272	5

Growth Rank	2019 Rank	State	2003	2019	Growth
19	4	Wisconsin	284	289	5
20	12	Washington	281	286	5
21	38	Oklahoma	272	276	5
22	14	Indiana	281	286	4
23	18	Utah	281	285	4
24	13	Ohio	282	286	4
25	28	Michigan	276	280	4
26	36	Kentucky	274	278	4
27	40	Rhode Island	272	276	4
28	17	Nebraska	282	285	3
29	9	Wyoming	284	286	3
30	32	Texas	277	280	3
31	29	Maryland	278	280	2
32	10	Connecticut	284	286	2
33	21	North Carolina	281	284	2
34	6	South Dakota	285	287	2
35	26	Missouri	279	281	2
36	47	West Virginia	271	272	2
37	19	Colorado	283	285	1
38	5	New Hampshire	286	287	1
39	8	Vermont	286	287	1
40	27	New York	280	280	1
41	23	Maine	282	282	0
42	3	Minnesota	291	291	0
43	37	Delaware	277	277	0
44	39	South Carolina	277	276	-1
45	33	Oregon	281	280	-1
46	15	North Dakota	287	286	-2
47	20	Montana	286	284	-2
48	24	Kansas	284	282	-2
49	25	Iowa	284	282	-2
50	44	Alaska	279	274	-5

PART 6

STUDENT OUTCOMES: LOW-INCOME STUDENTS

This section examines NAEP reading and math scores for low-income 4th and 8th grade students. Importantly, NAEP data obtained from NCES were reported as decimal values. State rankings and calculated growth scores were determined using these unrounded figures. As such, there are no ties in the rankings and some growth scores aren't identical to the difference between the rounded figures presented.

6.1

4TH GRADE READING AND MATH NAEP (FREE AND REDUCED PRICED LUNCH ELIGIBLE STUDENTS ONLY)

Between 2003 and 2019 the average U.S. 4th grade NAEP reading score for FRL eligible students increased by six points, going from 201 to 207. The three highest-growth states during this time were Nevada, Mississippi, and California, while the three lowest-growth states were Delaware, West Virginia, and Vermont. In 2019, the highest-scoring states were Florida, Wyoming, and Mississippi, while the three lowest-scoring states were Alaska, Alabama, and New Mexico. Table 21 summarizes 4th grade NAEP reading results for FRL eligible students.

TABLE 21: 4TH GRADE FRL NAEP READING SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	201	207	6
1	7	Nevada	192	211	19
2	3	Mississippi	197	215	18
3	38	California	191	205	14
4	1	Florida	205	216	11
5	22	Pennsylvania	198	207	9
6	47	Arizona	194	202	8
7	35	Hawaii	197	206	8
8	37	Illinois	197	205	8
9	46	Louisiana	195	202	7
10	26	Georgia	200	207	7
11	8	New Jersey	203	210	7
12	48	New Mexico	195	201	6
13	49	Alabama	193	199	6
14	39	Maryland	199	205	6
15	33	Rhode Island	200	206	5
16	32	Michigan	201	206	5
17	15	Oklahoma	204	208	5
18	45	Tennessee	198	202	4
19	10	Indiana	205	209	4
20	9	Ohio	206	210	4
21	4	Massachusetts	210	213	4
22	6	Idaho	207	211	4
23	23	Arkansas	204	207	3
24	2	Wyoming	212	215	3
25	21	Virginia	205	208	3
26	5	Kentucky	209	212	2
27	12	Nebraska	207	209	2
28	18	North Carolina	206	208	2
29	17	Utah	206	208	2
30	16	New Hampshire	206	208	2
31	42	South Carolina	202	204	2
32	14	Colorado	207	208	2
33	40	Minnesota	203	205	1
34	27	Oregon	205	207	1
35	31	Texas	205	206	1
36	36	Connecticut	205	205	0
37	19	Montana	208	208	0
38	30	Kansas	206	206	0
39	25	Missouri	208	207	-1
40	29	New York	208	206	-1
41	28	Washington	208	206	-2
42	43	Wisconsin	205	204	-2
43	24	Iowa	209	207	-2
44	13	North Dakota	210	209	-2
45	20	South Dakota	210	208	-2
46	50	Alaska	192	189	-3
47	11	Maine	213	209	-4
48	34	Vermont	214	206	-8
49	41	West Virginia	212	204	-8
50	44	Delaware	212	202	-9

Between 2003 and 2019 the average U.S. 4th grade NAEP math score for FRL eligible students increased by seven points, going from 222 to 229. The three highest-growth states during this time were Mississippi, Florida, and Nevada, while the three lowest-growth states were Kansas, West Virginia, and South Dakota. In 2019, the highest-scoring states were Florida, Mississippi, and Wyoming, while the three lowest-scoring states were Alabama, Alaska, and West Virginia. Table 22 summarizes 4th grade NAEP math results for FRL eligible students.

TABLE 22: 4TH GRADE FRL NAEP MATH SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	222	229	7
1	2	Mississippi	216	236	20
2	1	Florida	222	239	17
3	23	Nevada	216	229	13
4	24	Rhode Island	217	229	12
5	34	Illinois	216	226	11
6	36	Hawaii	216	226	10
7	16	Kentucky	220	230	10
8	8	Nebraska	222	233	10
9	15	New Jersey	221	231	10
10	42	Tennessee	216	226	10
11	6	Virginia	225	234	10
12	35	New Mexico	217	226	10
13	5	Indiana	225	235	9
14	40	Arizona	217	226	9
15	46	Maryland	216	224	8
16	31	Georgia	219	227	8
17	18	Oklahoma	223	230	7
18	27	Connecticut	220	227	7
19	47	California	216	223	7
20	10	Utah	225	232	7
21	28	Pennsylvania	220	227	7
22	50	Alabama	213	220	7
23	43	Colorado	219	225	6
24	19	Ohio	224	230	6
25	7	Idaho	227	233	6
26	4	Texas	229	235	6
27	21	Missouri	224	230	5
28	12	Minnesota	226	231	5
29	39	Arkansas	221	226	5
30	38	Wisconsin	221	226	5
31	45	Louisiana	220	224	5
32	14	Massachusetts	226	231	5
33	44	Michigan	220	224	4
34	11	Montana	227	232	4
35	9	New Hampshire	229	232	3
36	3	Wyoming	233	236	3
37	13	North Dakota	228	231	3
38	33	Delaware	225	227	2
39	20	Maine	228	230	2
40	25	Washington	226	228	2
41	41	New York	225	226	1

Growth Rank	2019 Rank	State	2003	2019	Growth
42	29	Oregon	226	227	1
43	17	North Carolina	229	230	1
44	32	South Carolina	226	227	1
45	22	Vermont	229	229	1
46	49	Alaska	220	220	0
47	30	Iowa	227	227	0
48	37	South Dakota	227	226	-1
49	48	West Virginia	225	222	-3
50	26	Kansas	231	228	-3

6.2

8TH GRADE READING AND MATH NAEP (FREE AND REDUCED PRICED LUNCH ELIGIBLE STUDENTS ONLY)

Between 2003 and 2019 the average U.S. 8th grade NAEP reading score for FRL eligible students increased by three points, going from 247 to 250. The three highest-growth states during this time were California, Florida, and Connecticut, while the three lowest-growth states were South Dakota, North Dakota, and Virginia. In 2019, the highest-scoring states were Vermont, Maine, and Indiana, while the three lowest-scoring states were Alaska, Alabama, and New Mexico. Table 23 summarizes 8th grade NAEP reading results for FRL eligible students.

TABLE 23: 8TH GRADE FRL NAEP READING SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	247	250	3
1	39	California	237	248	10
2	5	Florida	245	255	9
3	8	Connecticut	245	254	9
4	14	Georgia	243	252	9
5	13	Wisconsin	244	252	8
6	33	Nevada	242	249	8
7	3	Indiana	248	255	8
8	35	Arizona	241	248	7
9	40	Maryland	242	247	5
10	45	Hawaii	240	245	5
11	18	New Jersey	246	251	5
12	32	Louisiana	245	249	5
13	19	Mississippi	246	250	4
14	6	Utah	251	254	3
15	21	Michigan	247	250	3
16	37	Tennessee	245	248	3
17	48	New Mexico	241	244	3
18	31	North Carolina	247	249	3
19	25	Pennsylvania	247	250	3
20	10	Massachusetts	251	253	3
21	16	Illinois	249	251	2
22	49	Alabama	241	243	2
23	34	South Carolina	247	249	2
24	1	Vermont	255	257	1

Growth Rank	2019 Rank	State	2003	2019	Growth
25	23	New York	249	250	1
26	30	Washington	248	249	1
27	4	Idaho	254	255	1
28	50	Alaska	239	240	0
29	43	Texas	246	246	0
30	7	Oregon	254	254	0
31	27	Colorado	250	250	0
32	28	Arkansas	250	250	0
33	47	Rhode Island	245	245	0
34	26	Ohio	251	250	-1
35	41	Minnesota	248	247	-1
36	24	Oklahoma	251	250	-1
37	17	Kansas	253	251	-1
38	12	Wyoming	255	253	-3
39	2	Maine	258	255	-3
40	15	Missouri	255	251	-3
41	29	Nebraska	253	250	-3
42	38	West Virginia	252	248	-4
43	11	Kentucky	257	253	-4
44	22	New Hampshire	255	250	-5
45	9	Montana	258	253	-5
46	46	Delaware	250	245	-5
47	42	Iowa	252	246	-6
48	44	Virginia	252	246	-6
49	20	North Dakota	259	250	-9
50	36	South Dakota	261	248	-13

Between 2003 and 2019 the average U.S. 8th grade NAEP math score for FRL eligible students increased by seven points, going from 259 to 266. The three highest-growth states during this time were Mississippi, Georgia, and Tennessee, while the three lowest-growth states were North Dakota, Montana, and Delaware. In 2019, the highest-scoring states were Wyoming, Massachusetts, and Indiana, while the three lowest-scoring states were Alabama, Rhode Island, and Delaware. Table 24 summarizes 8th grade NAEP math results for FRL eligible students.

TABLE 24: 8TH GRADE FRL NAEP MATH SCORE GROWTH (2003-2019)

Growth Rank	2019 Rank	State	2003	2019	Growth
		United States	259	266	7
1	28	Mississippi	251	267	16
2	31	Georgia	253	265	13
3	40	Tennessee	250	263	13
4	16	Illinois	256	269	13
5	21	New Jersey	256	268	12
6	11	Arizona	258	270	12
7	41	California	251	262	12
8	25	Florida	256	267	11
9	2	Massachusetts	261	272	11
10	13	Wisconsin	259	269	11
11	45	New Mexico	252	262	9
12	36	Nevada	254	264	9
13	42	Hawaii	254	262	8
14	9	Virginia	261	270	8
15	35	Pennsylvania	257	265	8
16	34	Michigan	257	265	8
17	50	Alabama	246	254	7
18	22	Oklahoma	260	267	7
19	37	Arkansas	256	263	7
20	3	Indiana	266	272	6
21	44	Louisiana	256	262	6
22	8	Texas	264	270	6
23	26	Kentucky	261	267	6
24	19	North Carolina	263	268	5
25	47	Maryland	255	260	5
26	12	Nebraska	265	270	5
27	5	Idaho	267	271	4
28	23	Missouri	263	267	4
29	30	New York	262	266	4
30	33	Colorado	262	265	3
31	49	Rhode Island	253	257	3
32	4	Vermont	268	272	3
33	38	Connecticut	260	263	3
34	18	Washington	265	268	3
35	7	New Hampshire	268	270	2
36	1	Wyoming	271	273	2
37	32	Ohio	263	265	2
38	43	West Virginia	261	262	1
39	24	Oregon	266	267	1
40	27	Iowa	266	267	1
41	29	Utah	266	266	0
42	20	Maine	268	268	0
43	39	South Carolina	263	263	0
44	46	Alaska	260	260	0
45	14	Kansas	270	269	-1
46	10	Minnesota	271	270	-1
47	6	South Dakota	272	270	-1
48	48	Delaware	261	259	-2
49	15	Montana	273	269	-4
50	17	North Dakota	274	268	-6

PART 7

METHODOLOGY

7.1

NOTE ON DATA COLLECTION

Most of the data were collected from January to March of 2023. NCES updates data in the Digest of Education Statistics retrospectively, therefore data are subject to change in these categories. The Bureau of Labor Statistics will also update figures periodically. Given these constraints, data were thoroughly checked for accuracy prior to publication.

Bureau of Labor Statistics

The Bureau of Labor Statistics (BLS) produces the Consumer Price Index for All Urban Consumers: All Items (CPIAUCSL). This commonly used price deflator is frequently just referred to as CPI. We used a monthly average over the fiscal year (July to June) to get an average CPI for each school year. BLS will frequently release revisions to the CPI, and the values used in this paper were CPIAUCSL figures pulled from the St. Louis Federal Reserve's data site FRED on March 15, 2023.

The Bureau of Labor Statistics data are most accessible: <https://fred.stlouisfed.org/series/CPIAUCSL>

U.S. Census Bureau

The U.S. Census Bureau produces the Annual Survey of School System Finances. These data include revenue and expenditure data by state. The data used from this report include revenue (federal, state, and local), instructional expenditures, support services expenditures, salary and benefit expenditures, capital outlays, and debt for the fiscal years 2002 to 2020. The data begin in 2002 because that is the first year in which state summary tables are available. Census enrollment data were used to calculate per-student revenue and expenditure figures.

The U.S. Census Bureau is available: <https://www.census.gov/programs-surveys/school-finances.html>

NCES

The National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education. We used the NCES Digest of Education Statistics to get data on the number of teachers and non-teachers, general staffing, teacher salaries, and student enrollment. Note that NCES enrollment figures differ from U.S. Census Bureau figures due to how charter students are counted. Regarding staff, NCES breaks out staff into several different categories of full-time equivalent employees. School district staff, such as instructional coordinators, or school staff, such as instructional aides, are not counted as teachers. It should be noted that some of these non-teachers are involved in instructional activities. In comparison, the U.S. Census Bureau categorizes instruction activities, which count toward instruction expenditures (Function 1000), as “the interaction between teachers and students.” However, they also include “activities of aides or classroom assistants of any type (graders, teaching machines, etc.) who assist the instructional process.” Importantly, staffing data reported to NCES might be subject to data quality issues in some states during the time period examined. For instance, Ohio’s non-teaching staff increased substantially in FY 2016, which was likely due to changes in how data were reported by the state. Since we are using fiscal years instead of calendar years, data observations may refer to the fall of the year prior to the stated fiscal year. For example, for FY 2020 data are from a table that is indicated by fall 2019. The fiscal year for 2020 runs from July 2019 to June 2020.

The NCES Digest of Education Statistics is available: <https://nces.ed.gov/programs/digest/>

NAEP Data

The National Assessment of Educational Progress (NAEP) is a congressionally mandated assessment of what students know and can do in various subjects. NAEP is administered to students in grades 4, 8, and 12 in mathematics, reading, science, writing, the arts, civics, economics, geography, U.S. history, and world history.

We focused on math and reading scores for grades 4, 8, and 12. National figures were used for 12th grade students because scores aren't available for every state in the time period examined. NAEP is not administered every year, so we included scores that match the years of our other data sources as closely as possible. The years included for 4th and 8th grade math and reading are 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019. The years included for 12th grade math are 2005, 2009, 2013, 2015, and 2019. The years included for 12th grade reading are 2002, 2005, 2009, 2013, 2015, and 2019. We used main NAEP because long-term NAEP data are not available at the state level. However, long-term NAEP trends are provided for reference in Appendix 1. Finally, raw NAEP data obtained from NCES were reported as decimal values. State rankings and calculated growth scores were determined using these unrounded figures. As such, there are no ties in the rankings and some growth scores aren't identical to the difference between the rounded figures presented. For instance, New Mexico's 4th grade math score increased by nine points between 2003 and 2019, while the difference between their rounded scores—223 and 231—is eight. This approach was used to provide the most accurate growth score possible.

The NAEP data are available: <https://nces.ed.gov/nationsreportcard/naepdata/>

APPENDIX 1: GROWTH IN REVENUE PER STUDENT

TABLE A1: GROWTH IN REVENUE PER STUDENT (2003-2019)

State	Growth Between 2003-2019	Total Revenue-Per Student 2019 (FY 2020 dollars)
Alabama	14.7%	\$ 11,562
Alaska	31.3%	\$ 19,838
Arizona	1.4%	\$ 10,478
Arkansas	17.7%	\$ 11,925
California	29.5%	\$ 17,138
Colorado	18.6%	\$ 13,967
Connecticut	43.7%	\$ 25,053
Delaware	22.8%	\$ 18,823
Florida	4.5%	\$ 11,382
Georgia	2.9%	\$ 13,136
Hawaii	9.6%	\$ 17,511
Idaho	-1.4%	\$ 9,441
Illinois	47.5%	\$ 19,299
Indiana	17.8%	\$ 13,318
Iowa	16.0%	\$ 14,340
Kansas	14.8%	\$ 14,034
Kentucky	25.3%	\$ 13,048
Louisiana	30.4%	\$ 13,945
Maine	22.2%	\$ 17,232
Maryland	28.5%	\$ 18,209
Massachusetts	23.3%	\$ 20,699
Michigan	10.6%	\$ 15,563
Minnesota	19.0%	\$ 16,585
Mississippi	12.7%	\$ 10,545
Missouri	16.6%	\$ 13,472
Montana	24.0%	\$ 14,001
Nebraska	14.8%	\$ 14,492

State	Growth Between 2003-2019	Total Revenue-Per Student 2019 (FY 2020 dollars)
Nevada	7.5%	\$ 11,408
New Hampshire	44.5%	\$ 19,589
New Jersey	20.3%	\$ 23,996
New Mexico	8.7%	\$ 12,581
New York	63.1%	\$ 30,313
North Carolina	0.7%	\$ 10,720
North Dakota	45.8%	\$ 16,689
Ohio	13.4%	\$ 15,785
Oklahoma	7.8%	\$ 10,797
Oregon	32.5%	\$ 15,513
Pennsylvania	42.7%	\$ 21,542
Rhode Island	26.0%	\$ 19,472
South Carolina	21.5%	\$ 14,146
South Dakota	16.3%	\$ 12,396
Tennessee	17.1%	\$ 10,917
Texas	11.2%	\$ 13,085
United States	21.7%	\$ 15,894
Utah	17.9%	\$ 9,909
Vermont	38.0%	\$ 22,779
Virginia	11.8%	\$ 13,874
Washington	47.2%	\$ 17,518
West Virginia	7.1%	\$ 13,423
Wisconsin	4.0%	\$ 14,813
Wyoming	23.2%	\$ 19,456

APPENDIX 2: LONG-TERM NAEP

TABLE A2-1: LONG-TERM MATH NAEP

Year	Age 9	Age 13	Age 17
1978	219	264	300
1982	219	269	298
1986	222	269	302
1990	230	270	305
1992	230	273	307
1994	231	274	306
1996	231	274	307
1999	232	276	308
2004 (1)*	241	281	307
2004 (2)	239	279	305
2008	243	281	306
2012	244	285	306
2020	241	280	N/A

* In 2004 the test questions were updated. Original and new assessments were given to students randomly and graded separately so as to create a "bridge assessment," leading to two test scores for that year. For 2004, (1) is the original score and (2) is the new version score. From 2004 onward, the new version was used.

TABLE A2-2: LONG-TERM READING NAEP

Year	Age 9	Age 13	Age 17
1971	208	255	285
1975	210	256	286
1980	215	258	285
1984	211	257	289
1988	212	257	290
1990	209	257	290
1992	211	260	290
1994	211	258	288
1996	212	258	288
1999	212	259	288
2004 (1)*	219	259	285
2004 (2)	216	257	283
2008	220	260	286
2012	221	263	287
2020	220	260	N/A

* In 2004 the test questions were updated. Original and new assessments were given to students randomly and graded separately so as to create a "bridge assessment," leading to two test scores for that year. For 2004, (1) is the original score and (2) is the new version score. From 2004 onward, the new version was used.

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