



K-12 Education Funding: How Do We Compare?

Summary

No statistic has dominated the debate on taxes and spending in Arizona more than the state's low ranking in K-12 operational expenditures per student. Regrettably, the statistic has been used as an indicator to inaccurately suggest everything from low compensation of school employees to poor performing schools. For better or for worse, statistics will continue to play a role in policy debates at the Capitol. To that end, it is vitally important that policymakers and the public have a deeper appreciation of school spending in Arizona than that which one isolated statistic can provide.

When comparing each state's funding level for a class the size of the state's average number of students per teacher, Arizona ranks well above average, placing 16th among the 50 states and the District of Columbia. Arizona ranks 25th in average teacher salaries and 8th in the percentage of its per-capita income spent on the average teacher's salary. Arizona ranks 3rd in the percentage increase in operational expenditures over the last 20 years.

A complete comparison of education funding in Arizona demonstrates that the per-student expenditure ranking merely reflects Arizona's higher student-to-teacher ratio. While Arizona coped with the explosive growth of the last 20 years and kept class sizes within the manageable range, nearly every other state significantly reduced the number of students per class. While these class-size reductions came at a great expense to the participating states, respected research organizations found no correlation between the smaller classes and student achievement.

16th Highest Per-Class Funding Level

To compare the funding levels of each state's education system independent of the expenses dedicated to reducing class sizes,

Table 1: School Funding in FY 2007

States	Expenditures Per Pupil ¹	Student-to-Teacher Ratio ¹	Expenditures Per Class ²
1 D.C.	\$13,848	13.9	\$192,487
2 Alaska	\$11,330	16.8	\$190,344
3 New Jersey	\$14,998	12.1	\$181,476
4 New York	\$14,747	12.2	\$179,913
5 Connecticut	\$13,151	13.4	\$176,223
6 California	\$8,267	21.3	\$176,087
7 Delaware	\$11,485	15.2	\$174,572
8 Massachusetts	\$12,627	13.2	\$166,676
9 Oregon	\$8,593	18.9	\$162,408
10 Pennsylvania	\$10,778	14.8	\$159,514
11 Maryland	\$10,922	14.5	\$158,369
12 Hawaii	\$9,897	15.9	\$157,362
13 Minnesota	\$9,180	16.7	\$153,306
14 Washington	\$7,959	19.2	\$152,813
15 Michigan	\$9,652	15.7	\$151,536
16 Arizona	\$6,248	24.2	\$151,202
17 Indiana	\$8,874	17.0	\$150,858
18 Wyoming	\$11,447	13.1	\$149,956
19 Ohio	\$9,728	15.4	\$149,811
20 Wisconsin	\$10,051	14.7	\$147,750
21 Illinois	\$9,054	16.1	\$145,769
22 Vermont	\$13,090	10.5	\$137,445
23 Colorado	\$8,035	16.9	\$135,792
24 New Hampshire	\$10,543	12.8	\$134,950
25 Nevada	\$6,897	19.4	\$133,802
26 West Virginia	\$9,457	14.1	\$133,344
27 Rhode Island	\$12,831	10.1	\$129,593
28 Maine	\$11,007	11.7	\$128,782
29 Utah	\$5,243	24.3	\$127,405
30 Kentucky	\$7,634	16.5	\$125,961
31 New Mexico	\$8,328	15.1	\$125,753
32 Nebraska	\$9,307	13.5	\$125,645
33 Florida	\$7,652	16.3	\$124,728
34 Virginia	\$9,349	13.1	\$122,472
35 Georgia	\$8,360	14.6	\$122,056
36 Louisiana	\$8,778	13.9	\$122,014
37 South Carolina	\$8,067	15.0	\$121,005
38 Montana	\$8,703	13.7	\$119,231
39 Kansas	\$8,710	13.5	\$117,585
40 Idaho	\$6,338	18.1	\$114,718
41 Alabama	\$7,621	15.0	\$114,315
42 Iowa	\$8,321	13.7	\$113,998
43 North Dakota	\$8,879	12.8	\$113,651
44 Missouri	\$8,268	13.7	\$113,272
45 Arkansas	\$7,996	13.9	\$111,144
46 North Carolina	\$7,228	15.2	\$109,866
47 Texas	\$7,275	14.9	\$108,398
48 Tennessee	\$6,930	15.6	\$108,108
49 Mississippi	\$7,174	14.8	\$106,175
50 South Dakota	\$7,790	13.5	\$105,165
51 Oklahoma	\$6,918	15.1	\$104,462

Sources: 1. American Legislative Exchange Council 2. Calculated from the provided data

ATRA ranked the states according to the amount each spends on a class the size of the state’s student-to-teacher ratio. According to the American Legislative Exchange Council (ALEC), Arizona spent \$6,248 in operational expenditures per student in fiscal year (FY) 2007 while employing one teacher for every 24.2 students. This means Arizona’s education system spent \$151,202 for each class that included the average number of students per teacher. Ranking 16th among the 50 states and the District of Columbia puts Arizona well above the median state and above the nationwide average of \$143,652 per average-sized class (see table 1).

The operational expenses required to provide classroom instruction do not change significantly with changes in the number of kids in the room. Whether a class has 15 students or 30 students, a district must still fund the salaries and benefits of the class’s teachers and assistants. The class of 15 pupils will cost approximately twice as much per student since these fixed classroom expenses are spread across half as many pupils. This same concept holds true at the state level; i.e., the states with the lowest student-to-teacher ratios tend to have the highest per-student costs, while the states that spread the fixed classroom costs across more students spend less per pupil (see figure 1).

Ranking states by the funding level per class controls for the differences in the amount of expenditures each state devotes to class-size reductions. Whether a state has smaller classes due to geographic restraints or due to a deliberative policy to maintain a low student-to-teacher ratio, this statistic ranks states according to the revenue available to fund the fixed costs of each class’s instruction and, therefore, provides a more appropriate comparison of how well each state funds their respective education systems. Decision makers can then evaluate the state’s student-to-teacher ratio to determine how the state’s average class size compares to those of other states. If a state or district determines that larger classes place the students at a competitive disadvantage the districts could hire more teachers to divide the students into smaller classes (see discussion on class-size reductions on page 4); but, without a large infusion of new resources, the revenues that would be available to fund the fixed costs of each class would drop as a result of such a policy.

25th in Average Teacher Salaries

The comparatively high level of funding that Arizona provides for the average-sized class leads to competitive teacher salaries. The National Education Association (NEA) annually ranks each state and the District of Columbia according to the average salaries paid to each state’s teachers. For the five years from FY 2002 through FY 2006, Arizona consistently ranked within one or two states of the median. The most recently released NEA statistics reported rankings for FY 2007 and FY 2008 and claimed that Arizona fell from this consistent standing. The NEA figure seems to stem from the unaudited data that districts report annually to Arizona’s Superintendent of Public Instruction. Due to a recent change in the method of reporting the number of full-time-equivalent (FTE) teachers, this figure was significantly over reported in FY 2007 and FY 2008.

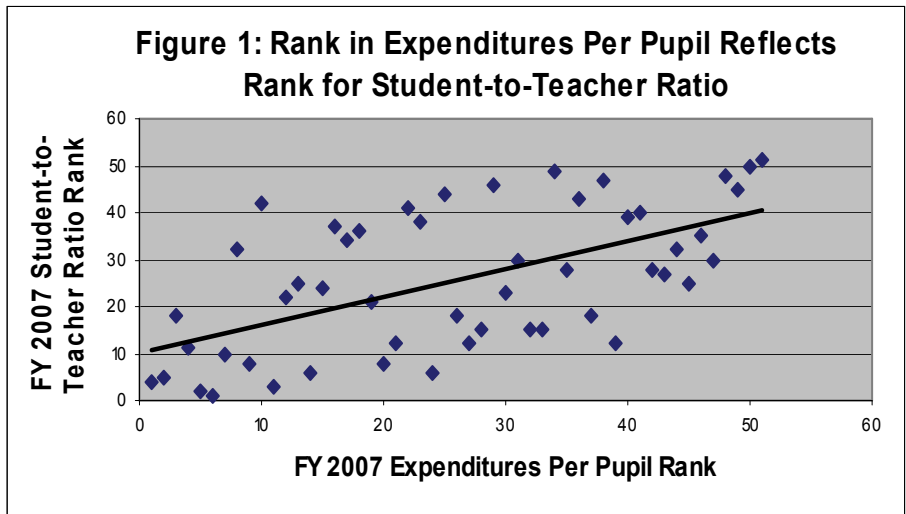


Figure 1: This chart plots the FY 2007 rank for student-to-teacher ratios as reported by ALEC against the FY 2007 rank for expenditures per student also as reported by ALEC. States with the lowest student-to-teacher ratios tend to have the highest per-student expenses, while the states that spread the fixed classroom costs across more students spend less per pupil.



Officials at the Arizona Department of Education confirmed that the reported number of FTE teachers was likely over reported by as much as 7% in FY 2008. Overestimating the number of teachers resulted in an underestimate of the average salary.

Fortunately, a report recently published by Arizona's Auditor General provides some clarity on the actual teacher salary figure. The Auditor General surveyed each school district in Arizona and reported the average teacher salary paid by each district (*Arizona Public School Districts' Dollars Spent in the Classroom FY 2008*). In addition, the Auditor General's report included the number of FTE teachers employed by each district which allows a statewide average to be calculated from the district-level data.

Table 2: FY 2008 Average Salaries of Public School Teachers

Unadjusted Average Salaries			Salaries Relative to Per-Capita Income		
1	California	\$64,424	1	Michigan	158.9%
2	New York	\$62,332	2	Georgia	151.8%
3	Connecticut	\$61,976	3	California	150.9%
4	New Jersey	\$61,277	4	Ohio	150.4%
5	District of Columbia	\$60,628	5	Kentucky	148.3%
6	Illinois	\$60,474	6	Arkansas	146.4%
7	Massachusetts	\$60,471	7	Oregon	144.1%
8	Maryland	\$60,069	8	Arizona	143.8%
9	Rhode Island	\$57,168	9	South Carolina	143.5%
10	Alaska	\$56,758	10	Mississippi	143.4%
11	Michigan	\$56,096	11	Illinois	142.6%
12	Delaware	\$55,994	12	Indiana	142.2%
13	Pennsylvania	\$55,833	13	New Mexico	140.6%
14	Ohio	\$53,410	14	Rhode Island	139.4%
15	Hawaii	\$53,400	15	Pennsylvania	138.7%
16	Wyoming	\$53,074	16	Alabama	138.5%
17	Oregon	\$51,811	17	West Virginia	137.9%
18	Georgia	\$51,560	18	North Carolina	137.5%
19	Minnesota	\$50,582	19	Utah	137.4%
20	Washington	\$49,884	20	Idaho	137.2%
21	Wisconsin	\$49,051	21	Delaware	137.1%
22	Indiana	\$48,508	22	Hawaii	131.9%
23	Nevada	\$47,710	23	Wisconsin	131.5%
24	New Hampshire	\$47,609	24	Tennessee	131.2%
25	Arizona	\$47,388	25	Alaska	131.0%
26	North Carolina	\$47,354	26	New York	129.7%
27	Colorado	\$47,248	27	Louisiana	129.5%
28	Kentucky	\$47,207	28	Iowa	127.2%
29	Louisiana	\$46,964	29	Montana	125.2%
30	Florida	\$46,930	30	Maryland	124.9%
31	Virginia	\$46,796	31	Maine	122.7%
32	Iowa	\$46,664	32	Missouri	122.6%
33	Alabama	\$46,604	33	New Jersey	120.3%
34	Vermont	\$46,593	34	Florida	120.1%
35	Texas	\$46,179	35	Vermont	119.8%
36	Arkansas	\$45,773	36	Texas	119.7%
37	South Carolina	\$45,758	37	Massachusetts	119.2%
38	Kansas	\$45,136	38	Kansas	118.8%
39	New Mexico	\$45,112	39	Minnesota	118.3%
40	Tennessee	\$45,030	40	Nevada	118.2%
41	Idaho	\$44,099	41	Oklahoma	118.0%
42	Oklahoma	\$43,551	42	Washington	117.8%
43	Maine	\$43,397	43	Nebraska	113.7%
44	Missouri	\$43,206	44	Colorado	111.5%
45	Nebraska	\$42,885	45	New Hampshire	111.2%
46	Montana	\$42,874	46	Connecticut	110.2%
47	West Virginia	\$42,529	47	Virginia	109.1%
48	Mississippi	\$42,403	48	Wyoming	106.7%
49	Utah	\$41,615	49	North Dakota	102.4%
50	North Dakota	\$40,279	50	South Dakota	98.1%
51	South Dakota	\$36,674	51	District of Columbia	93.3%

According to the district-level data as collected by the Auditor General, the statewide average teacher salary for FY 2008 was \$47,388. When this figure is compared to the salaries of the other states as reported by NEA, Arizona ranks 25th in the nation (see table 2).

Ranking one state above the median is consistent with Arizona's historic position. This ranking is also consistent with the most recent average salary rankings published by ALEC (for FY 2007, ALEC's *Report Card on American Education* ranks Arizona 25th in average teacher salaries).

While this statistic demonstrates that Arizona's teachers are far from the worst paid teachers in the country—as is often accepted as the conventional wisdom—this ranking still does not account for regional differences that exist in costs of living and in workforce experience.

Many of the states that pay higher average salaries than Arizona also have higher taxes, higher housing prices, and higher costs for other necessary goods and services. Many of these states also have diminishing population centers, while Arizona has been a leading state in population growth.

Keeping up with growth requires hiring more first-year teachers which drives down the

average teacher pay. This means any given teacher in a state with a higher average salary may very likely receive the same compensation as an Arizona teacher that has the same level of education and experience.

A comparison of two neighboring east valley school districts demonstrates the effect that population growth has on average teacher salaries.

The Mesa Unified School District has experienced a net population decline of 0.1% since FY 2000. In contrast, the Chandler Unified School District has experienced 74.5% growth over the same time frame.

Since these neighboring districts compete for the same teachers, their respective salary schedules are nearly identical. A first-year teacher makes about \$35,500 in each district and both salary schedules max out at around \$69,000. At some education and experience levels teachers earn a little more in the Chandler district, and at other levels a teacher earns a little more in Mesa.

Notwithstanding the congruencies in these salary schedules, the average teacher in Mesa earns \$58,442 which is more than \$10,000 greater than the \$47,578 average teacher salary in Chandler. The higher average in Mesa merely reflects the fact that the Mesa teachers on average have worked for the district longer than the average Chandler teacher. If each of the Mesa teachers had instead spent their careers in the Chandler district they would likely earn approximately the same salary.

If these two districts were states, Mesa would have the 9th highest average teacher salary in the nation while Chandler—with essentially the same pay scales—would rank 23rd. On a national level Arizona's population growth more closely resembles the fast-growing Chandler School District. According to the U.S. Census Bureau the population growth in Arizona from 1996 to 2006 exceeded the growth of every state but Nevada. Consequently, the salary schedules of Arizona's school districts are likely very similar to many of the states that report average salaries that are even higher than Arizona's.

8th in Salaries Relative to Per-Capita Income

As previously mentioned, the rankings for average salaries do not account for differences among the states in their underlying wealth, in their costs of living, or in other factors impacting the quality of life—all of which effect the salary for which an employee will agree to locate his or her household in the respective state.

Comparing funding levels of any governmental service relative to a state's per-capita income is a standard approach to account for differences in the underlying wealth of each state. Such rankings describe the relative portion of a state's tax base that is dedicated to the governmental service in question. Expressing salary rankings in terms of per-capita income is particularly appropriate as these rankings describe how well the average salary compares to the average income of all other individuals that have also chosen to live within the same state with its respective cost of living and quality of life.

Using the 2008 per-capita personal income figures reported by the Bureau of Economic Analysis, ATRA expressed each state's average teacher salary relative to the state's per-capita income. In Arizona, the average teacher earns nearly 44% more than the state's per-capita income. When compared to the other states, Arizona's teacher salaries rank 8th in the percentage increase above each state's respective per-capita personal income (see table 2).

3rd in 20-year Increase in Operational Expenditures

Arizona's teacher salaries have remained competitive, even while Arizona has coped with explosive population growth, because funding increases for education have kept up with both growth and inflation.

To evaluate how funding for education has changed over the last 20 years, ALEC compared FY 1987 education spending to FY 2007 (see table 3). ALEC adjusted the FY 1987 figures for inflation to compare real changes in expenditures and found that Arizona spent the 2007 equivalent of \$3.3 million dollars on education in FY 1987. By FY 2007, total education expenditures in Arizona had more than doubled in real terms to \$7.1 million. This 113% increase represents the third largest increase over this 20-year period.

As Arizona poured resources into its education system at this record-setting pace, expenditures per student remained nearly constant due to the dramatic population growth. Arizona expenditures per student in FY 2007 in real terms were within 1% of the amount spent per student in FY 1987 and were 5% greater than the amount

Table 3: Inflation Adjusted Changes in Operating Expenditures

States	FY 1981 Values*		FY 1987 Values*			FY 2007 Values			% Change	
	Expenditures		Expenditures		Expenditures		Expenditures		Expenditures	
	Per Pupil	Rank	(in \$1,000)	Per Pupil	Rank	(in \$1,000)	Per Pupil	Rank	Expenditures	Rank
Alabama	\$7,188	2	\$3,232,314	\$4,405	49	\$5,699,076	\$7,621	42	76.32%	18
Alaska	\$6,425	4	\$1,399,606	\$12,978	1	\$1,529,645	\$11,330	10	9.29%	50
Arizona	\$5,955	6	\$3,343,172	\$6,309	31	\$7,130,341	\$6,248	50	113.28%	3
Arkansas	\$5,364	15	\$2,036,405	\$4,690	46	\$3,808,011	\$7,996	37	87.00%	7
California	\$5,504	11	\$30,053,055	\$6,987	19	\$53,436,103	\$8,267	34	77.81%	17
Colorado	\$6,632	3	\$3,876,534	\$7,049	17	\$6,368,289	\$8,035	36	64.28%	27
Connecticut	\$5,170	20	\$4,394,769	\$9,796	5	\$7,517,025	\$13,151	4	71.04%	24
Delaware	\$5,645	9	\$760,971	\$8,085	10	\$1,405,465	\$11,485	8	84.69%	8
D.C.	\$11,821	1	\$802,866	\$10,104	4	\$1,057,166	\$13,848	3	31.67%	45
Florida	\$4,667	29	\$10,283,151	\$6,415	30	\$20,897,327	\$7,652	40	103.22%	4
Georgia	\$5,903	7	\$5,923,711	\$5,503	39	\$13,739,263	\$8,360	30	131.94%	2
Hawaii	\$5,194	18	\$1,049,682	\$6,758	21	\$1,805,521	\$9,897	16	72.01%	23
Idaho	\$5,469	12	\$933,679	\$4,518	48	\$1,694,827	\$6,338	49	81.52%	11
Illinois	\$4,033	40	\$11,763,686	\$6,878	20	\$19,244,908	\$9,054	23	63.60%	29
Indiana	\$4,476	32	\$5,654,041	\$6,036	33	\$9,241,986	\$8,874	25	63.46%	30
Iowa	\$5,770	8	\$3,109,361	\$6,736	22	\$4,039,389	\$8,321	32	29.91%	46
Kansas	\$6,216	5	\$2,706,002	\$6,673	25	\$4,039,417	\$8,710	27	49.28%	40
Kentucky	\$4,428	34	\$2,881,348	\$4,575	47	\$5,213,620	\$7,634	41	80.94%	13
Louisiana	\$4,059	39	\$4,113,915	\$5,300	44	\$5,554,278	\$8,778	26	35.01%	44
Maine	\$5,572	10	\$1,384,011	\$6,661	26	\$2,119,408	\$11,007	11	53.14%	36
Maryland	\$5,410	13	\$5,178,635	\$7,922	11	\$9,381,613	\$10,922	12	81.16%	12
Massachusetts	\$3,649	44	\$6,814,318	\$8,319	8	\$12,210,581	\$12,627	7	79.19%	16
Michigan	\$4,995	23	\$11,698,153	\$7,681	13	\$16,681,981	\$9,652	18	42.60%	41
Minnesota	\$4,990	24	\$5,129,469	\$7,275	15	\$7,686,638	\$9,180	22	49.85%	39
Mississippi	\$4,319	36	\$2,024,813	\$4,172	50	\$3,550,261	\$7,174	45	75.34%	19
Missouri	\$4,793	27	\$4,578,839	\$5,809	37	\$7,592,485	\$8,268	33	65.82%	26
Montana	\$5,291	17	\$1,062,628	\$7,046	18	\$1,254,360	\$8,703	28	18.04%	49
Nebraska	\$5,315	16	\$1,725,631	\$6,496	29	\$2,672,629	\$9,307	21	54.88%	34
Nevada	\$4,712	28	\$933,685	\$5,824	36	\$2,959,728	\$6,897	48	216.99%	1
New Hampshire	\$5,170	19	\$1,073,527	\$6,706	24	\$2,139,113	\$10,543	14	99.26%	5
New Jersey	\$3,511	46	\$11,101,040	\$10,639	3	\$20,869,993	\$14,998	1	88.00%	6
New Mexico	\$4,969	25	\$1,575,736	\$5,863	35	\$2,729,707	\$8,328	31	73.23%	21
New York	\$3,946	41	\$26,798,930	\$10,936	2	\$41,149,457	\$14,747	2	53.55%	35
North Carolina	\$5,095	22	\$5,811,873	\$5,427	41	\$10,476,056	\$7,228	44	80.25%	14
North Dakota	\$4,087	38	\$682,393	\$5,778	38	\$857,774	\$8,879	24	25.70%	47
Ohio	\$4,249	37	\$11,128,256	\$6,205	32	\$17,829,599	\$9,728	17	60.22%	32
Oklahoma	\$3,853	42	\$3,107,460	\$5,336	43	\$4,406,002	\$6,918	47	41.79%	42
Oregon	\$3,428	49	\$3,179,767	\$7,162	16	\$4,773,751	\$8,593	29	50.13%	38
Pennsylvania	\$4,631	31	\$13,061,933	\$8,106	9	\$19,631,006	\$10,778	13	50.29%	37
Rhode Island	\$5,376	14	\$1,107,138	\$8,480	7	\$1,934,429	\$12,831	6	74.72%	20
South Carolina	\$4,656	30	\$3,301,771	\$5,398	42	\$5,696,629	\$8,067	35	72.53%	22
South Dakota	\$5,097	21	\$670,244	\$5,437	40	\$948,671	\$7,790	39	41.54%	43
Tennessee	\$4,892	26	\$3,943,987	\$4,936	45	\$6,681,456	\$6,930	46	69.41%	25
Texas	\$4,358	35	\$18,477,587	\$5,872	34	\$33,851,773	\$7,275	43	83.20%	9
Utah	\$3,734	43	\$1,697,587	\$4,156	51	\$2,778,236	\$5,243	51	63.66%	28
Vermont	\$3,540	45	\$688,441	\$7,695	12	\$1,237,442	\$13,090	5	79.75%	15
Virginia	\$3,371	50	\$6,269,813	\$6,612	27	\$11,470,735	\$9,349	20	82.95%	10
Washington	\$3,462	47	\$5,111,718	\$6,731	23	\$8,239,716	\$7,959	38	61.19%	31
West Virginia	\$4,431	33	\$2,236,906	\$6,592	28	\$2,651,491	\$9,457	19	18.53%	48
Wisconsin	\$3,116	51	\$5,618,118	\$7,558	14	\$8,745,195	\$10,051	15	55.66%	33
Wyoming	\$3,434	48	\$891,482	\$8,841	6	\$965,350	\$11,447	9	8.29%	51

*Note: 1987 values are inflation-adjusted and represent the 1987 expenditures expressed in terms of the 2007 dollar.

Source: American Legislative Exchange Council 2008 Report Card on American Education

spent in FY 1981 demonstrating that Arizona's increases in funding for education kept up with growth and inflation.

While the amount spent per student increased in real terms from FY 1981 to FY 2007, Arizona's rank in this statistic dropped from 6th in the nation to 50th. As Arizona actually spent more per student in FY 2007 than the state spent when it ranked near the top of this list, Arizona's fall in this ranking clearly does not reflect a decrease in Arizona's per-student support for education. The decline in Arizona's ranking for per-student expenditures resulted as all other states dramatically increased expenditures per student to fund their increasingly smaller classes.

Class Size Reductions

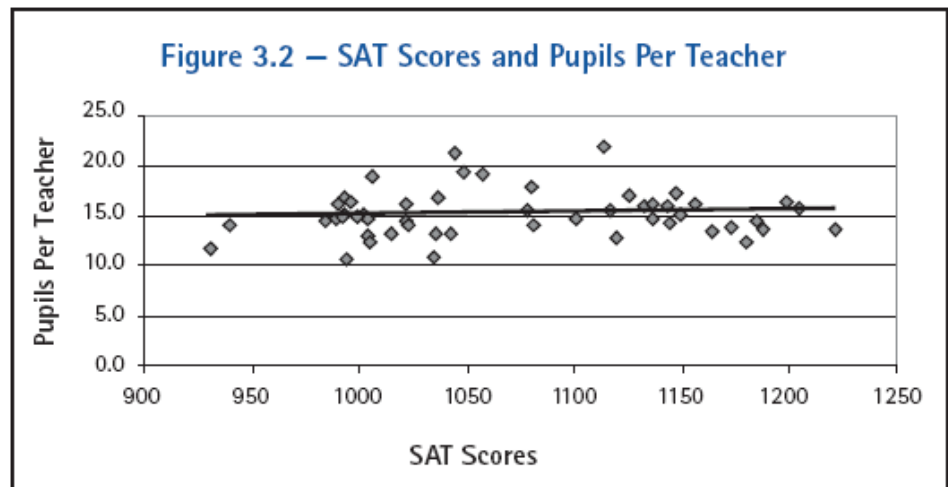
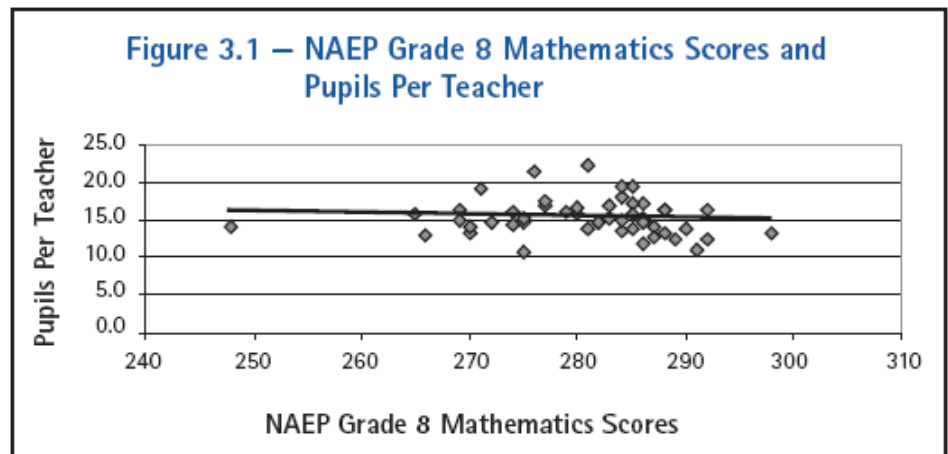
Arizona's low ranking in per-student expenditures merely reflects the state's higher student-to-teacher ratio. Over the last 20 years, there has been a nationwide trend toward smaller classes. According to ALEC, the nationwide student-to-teacher ratio fell by 11.9% from 1987 to 2007. All but four states saw decreases during these 20 years.

The largest decrease occurred in Rhode Island where the student-to-teacher ratio fell by 33.2%. Rhode Island now employs one teacher for every 10.1 students. The amount Rhode Island spends per student increased by 51.3% from FY 1987 to FY 2007. This increase resulted because the fixed classroom expenses that are now shared by only 10.1 students were shared by 15.1 in 1987. Virtually all of Rhode Island's increase in per-student expenditures was devoted to class-size reductions. The amount Rhode Island spent on the average-sized class in FY 2007 increased by only 1.2% above the amount it spent in FY 1987. In contrast, Arizona was able to increase the amount spent on its

average-sized class by 30.2% since Arizona's funding increases were not absorbed by class-size reductions.

The nearly universal decrease in class sizes caused the cost of education per student to climb in nearly every state other than Arizona. While Arizona maintained class sizes within the manageable range and, thereby, maintained the per-student cost of education nearly constant, the per-student costs in other states increased substantially as the fixed classroom expenses were spread across increasingly fewer students.

Arizona's low ranking in per-student expenditures reflects the efficiencies gained by maintaining full classrooms. This ranking does not indicate that Arizona's education system is underfunded but only that the state has not increased expenditures to fund class-size reductions. So the question that should be raised by Arizona's low ranking in per-student expenditures is whether Arizona's higher student-to-teacher ratio places Arizona students at a competitive disadvantage.



Figures 3.1 and 3.2 from ALEC's 2007 Report Card on American Education: These figures show no correlation between average class size and student achievement on standardized tests.

To address this question, ALEC performed an extensive evaluation of various measures of academic performance and compared these to each state's student-to-teacher ratio. ALEC found no correlation between student achievement and class sizes (see figures 3.1 and 3.2 of ALEC's *2007 Report Card on American Education* as reprinted on page 6 of this report).

Additionally, California hired the RAND Corporation, together with the American Institutes for Research, WestEd, Policy Analysis for California Education, and EdSource, to study the effects of the state's aggressive and expensive effort to reduce class sizes. In the *Capstone Report*, after four years of analyzing the effects of California's effort, the consortium of research organizations was unable to conclude that any relationship existed between student achievement and class size.

In a separate RAND study titled *School Readiness, Full-Day Kindergarten, and Student Achievement*, RAND evaluated various characteristics of different kindergarten programs and what effect these characteristics had on student achievement. RAND was surprised to find that larger kindergarten class sizes correlated positively with higher test scores and were similarly associated with self-control, with attitudes toward learning, and with interpersonal skills. The larger class sizes were negatively associated with problematic externalizing behaviors. RAND recognized that these counterintuitive findings may have resulted from purposeful assignment of challenging students into smaller classes. But the fact that respected scientific literature cannot identify an academic advantage to the smaller class sizes supports Arizona's lack of participation in the class-size reductions. Arizona's lack of participation in class-size reductions seems particularly appropriate given the record-setting funding increases needed to stay ahead of the state's explosive population growth and given the fact that maintaining class sizes within the manageable range allowed the state to pay competitive teacher salaries and provide the 16th highest level of funding per class.

Expenditures per Student or Academic Achievement

The over-emphasized and mischaracterized ranking for per-student expenditures leads many to accept the assumption that Arizona's education system is among the very worst in the nation. Many seem to embrace this perspective to further various political agendas. But, in reality, a state's ranking in per-student expenditures says nothing about the quality of a state's education system.

Table 4: Rankings in Expenditures and Student Achievement

	Per-Student Expenditures	4th Graders Proficient in Math	8th Graders Proficient in Math	4th Graders Proficient in Reading	8th Graders Proficient in Reading	8th Graders Advanced in Math	Graduation Rates	Scores of 3 or Higher on AP Tests	
Low-Spending	Utah	50	28	27	24	28	32	1	9
	South Dakota	43	22	7	26	8	24	9	32
	Iowa	42	17	18	15	12	21	3	38
	Idaho	47	26	26	21	24	31	12	31
	North Dakota	39	11	4	20	23	26	7	45
	Average Rank	44.2	20.8	16.4	21.2	19	26.8	6.4	31
High-Spending	West Virginia	21	40	47	40	43	48	27	47
	New Mexico	24	48	49	47	50	46	46	33
	Rhode Island	11	37	35	32	35	37	31	40
	Hawaii	14	38	45	44	47	45	41	44
	District of Columbia	1	51	51	51	51	51	48	42
	Average Rank	14.2	42.8	45.4	42.8	45.2	45.4	38.6	41.2
Average Difference	30	-22	-29	-21.6	-26.2	-18.6	-32.2	-10.2	

Sources: NEA *Rankings and Estimates 2008-2009* (most recent expenditure ranking), Education Week's *Quality Counts 2009* (most recent student-achievement rankings)

To illustrate that the relative expenditures per student is a poor indicator of relative educational quality, ATRA selected the ten states where the rankings in student achievement varied the greatest from the state's ranking in per-student expenditures. These ten states were divided into two groups: those that spent the least per student and those that spent the most. The states that spent the least per student (Utah, South Dakota, Iowa, Idaho, and North Dakota) had higher rankings in student achievement than they had in expenditures. The other

five (West Virginia, New Mexico, Rhode Island, Hawaii, and the District of Columbia) each had greater rankings in expenditures than in student achievement (see table 4).

The results of this comparison are striking. While the District of Columbia leads the nation in the most spent per student, it also ranks 51st in each category of math and reading test scores, 48th in graduation rates, and 42nd in scores on advanced placement (AP) tests. Conversely, Utah—ranking 50th in expenditures per student—graduates a greater percentage of its students than any other state in the nation, has the 9th highest percentage of students passing AP tests, and ranks within two states above or below the median state for each category of reading and math proficiency.

The differences in expenditure rankings and achievement rankings were not limited to these two jurisdictions. With a few exceptions in rankings for scores on AP tests, each of the five lower-spending states included in table 4 ranked significantly better than the five higher-spending states in all six of the remaining student achievement categories. The higher-spending states on average ranked 30 states above the lower-spending states in per-student expenditures; yet, the higher-spending states on average ranked about 20 to 30 states beneath the lower-spending states in each of the given student achievement categories.

There are other states like New Jersey and Massachusetts that rank high in per-student expenditures and high in achievement. Similarly, there are states like Mississippi that rank low in per-student expenditures and low in achievement. But the data in table 4 demonstrate that it is inaccurate to assume that increasing per-student expenditures will lead to increased academic performance or that less-than-desirable student achievement is the result of a low expenditures-per-student ranking.

Arizona's rankings in these same student achievement measures illustrate that there is room for improvement. But if policy decisions are primarily driven by a desire to change Arizona's low ranking in per-student expenditures then the state's emphasis is misplaced. With such a priority, the state risks developing an education system that mirrors Arizona's eastward neighbor. New Mexico's education system costs taxpayers 79% more per student than Arizona's system even while Arizona students outperform New Mexico students in six out of the seven achievement rankings included in table 4. If policy makers and opinion leaders, instead, recognize that Arizona's neighbor to the north, as well as several other states, have demonstrated that impressive student results are achievable regardless of the relative funding level per student, the state could then more effectively target improvements in student achievement after tabling the distraction of the per-student expenditure debate.

Conclusion

Contrary to the popular notion that Arizona's education system is woefully underfunded, a thorough comparison demonstrates that many aspects of Arizona's education system are funded at competitive levels.

The state ranks 16th in the funding level for the average-sized class, 25th in average teacher salaries, and 8th in salaries relative to per-capita income. Funding increases over the last 25 years exceeded increases in both growth and inflation. Over the last 20 years, Arizona poured resources into its system at a record-setting pace that surpassed the funding increases of 47 other states. As the other states were not subject to the same explosive growth, their smaller funding increases amounted to greater increases per student. These increases per student funded class-size reductions in nearly every state. As Arizona did not participate in these costly class-size reductions, the per-student expenditures of the other states surpassed the amount spent in Arizona.

Fortunately for Arizona's students, the expenditure increases that funded smaller classes in other states likely did not place Arizona students at a disadvantage as respected research organizations could not identify any educational benefit associated with class-size reductions.

While well-intentioned decision makers and opinion leaders will hopefully always strive to improve the quality of Arizona's education system, assuming that an increase in the amount spent per student will result in greater student achievement ignores the fact that several top-spending states have poor educational results and other low-spending states, in some measures, lead the nation in achievement.

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