

Counting the Cash for K-12:



The Facts about Per-Pupil Spending in Colorado



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SUMMARY

Selected statistics often are cited to argue for more funding increases to Colorado's K-12 public schools. Yet evidence from the National Center for Education Statistics (NCES) and other reliable sources adds needed clarity to the discussion. Most notable is the lack of a relationship between total spending and academic outcome, as witnessed by the following facts:

- According to a comprehensive analysis, two-thirds of relevant studies show no link between increasing total dollars spent and achieving classroom success, while several studies show a negative relationship
- No significant correlation can be made between states' total per-pupil funding in 2002-03 and their resulting 2003 scores on the National Assessment of Educational Progress
- From 1992 to 2003, 27 of 42 states with available testing data increased per-pupil spending more than Colorado: of the 27 states, only Delaware also showed greater gains than Colorado in 4th-grade reading scores

Even so, Colorado's K-12 education spending places it among the middle of all states:

- **The most complete picture of resources spent ranked Colorado 26th in total expenditures per pupil: \$8,917 in 2002-03**
- Three different sources for *current expenditures* per pupil, which exclude debt financing and capital construction costs, place Colorado anywhere from 25th to 31st in 2002-03
- The assertion that Colorado ranks 49th in school spending is not only outdated (45th is current) but also is based on the assumption that the more money taxpayers earn, the more they should spend on K-12 education: New Mexico ranks in the top 10 in this category but spends less per pupil than Colorado

Finally, Colorado continues to grow K-12 education spending (all figures adjusted for inflation):

- Colorado increased total per-pupil expenditures more quickly than most states during the 1970s and less quickly than most states in the 1980s and 1990s, but both Colorado and the nation as a whole roughly doubled per-pupil spending from 1970 to 2000
- From 1988-89 to 2002-03 Colorado's total per-pupil spending grew by more than 17 percent, despite limitations on taxation and government growth set by the Gallagher Amendment and Taxpayer's Bill of Rights (TABOR)
- The Colorado General Assembly appropriated more dollars per student in the 2004-05 school year than at any previous point in state history

Interest groups that seek higher funding for K-12 public education use selective—often misleading—statistics to make their case. However, an honest and thorough look at the facts should move the school funding discussion away from expanded subsidies toward more efficient attainment of successful outcomes. Colorado's education leaders have the chance to make the state a leader in how schools use resources.

More Money Does Not Bring Better Results

The debate over the need for increased K-12 public school funding continues in Colorado, but the facts concerning the state's ranking next to others and how much spending has increased in recent decades often are not presented clearly in context. Data from the National Center for Education Statistics (NCES) show that Colorado stands among the middle of states by spending about \$9,000 per student, a 17 percent increase in inflation-adjusted dollars from 14 years before.

The Colorado School Finance Project (SFP), a non-profit organization funded by education interest groups that lobby for more funding, has said an additional \$800 million to \$1.5 billion (roughly \$1,000 to \$2,000 more for each student) a year is needed for "adequate" funding of Colorado's K-12 public schools.¹ SFP experts attached a substantial price tag for educators to meet the demands of No Child Left Behind and state-based accountability tests.² Yet if parents and taxpayers are to believe that extra funds are needed for students to learn basic standards, someone ought to ask how current money is being used.

The SFP's adequacy studies are based on two different methods, both of which provoke skepticism. One method asks school leaders for their "professional judgment" regarding how much money they think they need to run the system. The other tries to determine adequacy by finding the median amount spent by "successful schools," even though many successful schools spend less—and many unsuccessful schools spend more—than the median amount.

...[In] order to create a more effective delivery system for public education, answering the question of how the money is spent should take precedence over simply how much money is spent.

Calls for greater increases in funding generally are motivated by a positive desire to help children. Yet in order to create a more effective delivery system for public education, answering the question of how the money is spent should take precedence over simply how much money is spent. For example, funds should be provided to an academic program based on the amount of evidence showing its effectiveness in improving important student skills.

Just adding more money is not good enough. A comprehensive professional analysis by Dr. Eric Hanushek of Stanford University in the 1990s found that only 27 percent of 163 studies "that conformed to basic social science methods" demonstrated "a statistically significant relationship between increased per-pupil spending and student performance." Two-thirds of the studies showed insignificant correlations, and the rest revealed a negative relationship.³

COLORADO: Per-Pupil Spending vs. Test Score Results

In 1991-1992, Colorado ranked...

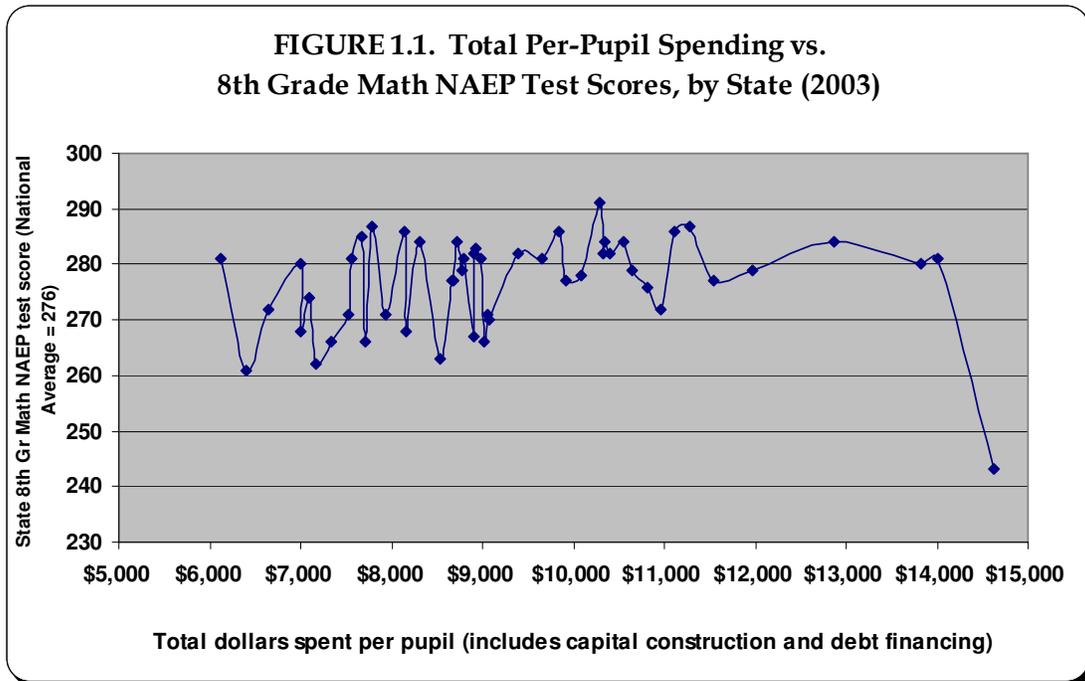
- 22nd in the nation in total per-pupil education spending.
- 17th out of 41 participating states and D.C. in average NAEP scores.

In 2002-2003, Colorado ranked...

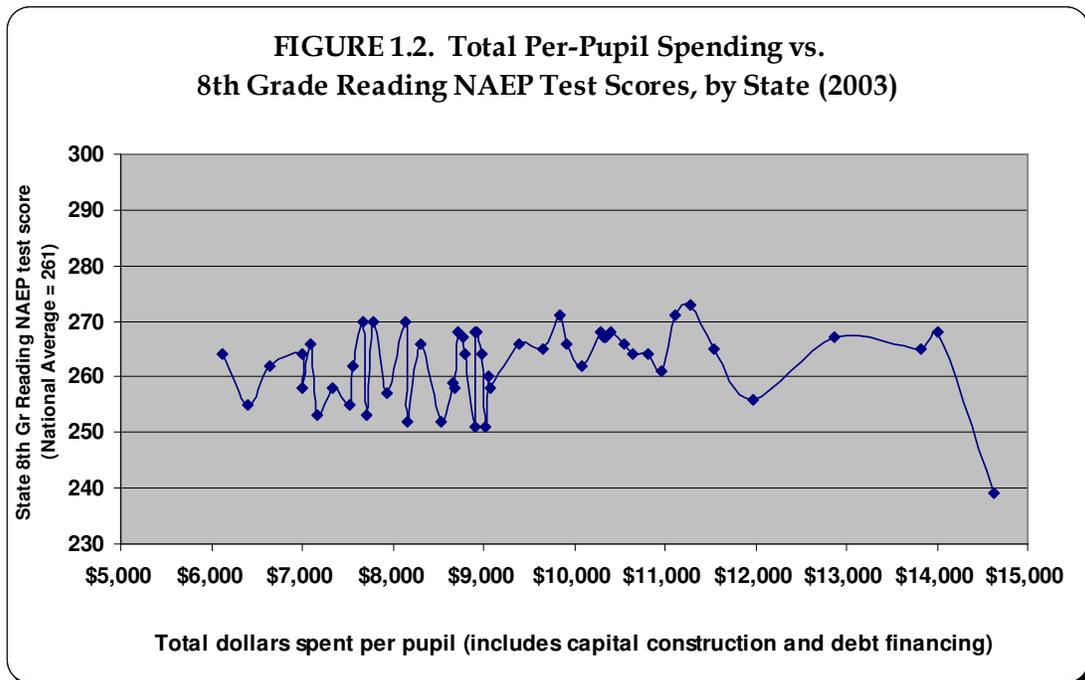
- 26th in the nation in total per-pupil education spending.
- 15th out of all 50 states and D.C. in average NAEP scores.

Sources: National Center for Education Statistics, Common Core of Data and Nation's Report Card.

Test scores from the National Assessment of Educational Progress (NAEP) are the best objective indicators used to compare student performance among different states and over time. On a state-by-state basis, NAEP scores do not correlate well with per-pupil spending. As an example, no significant relationship can be found between total per-pupil spending and 2003 NAEP math and reading scores (see figures 1.1-1.4).⁴

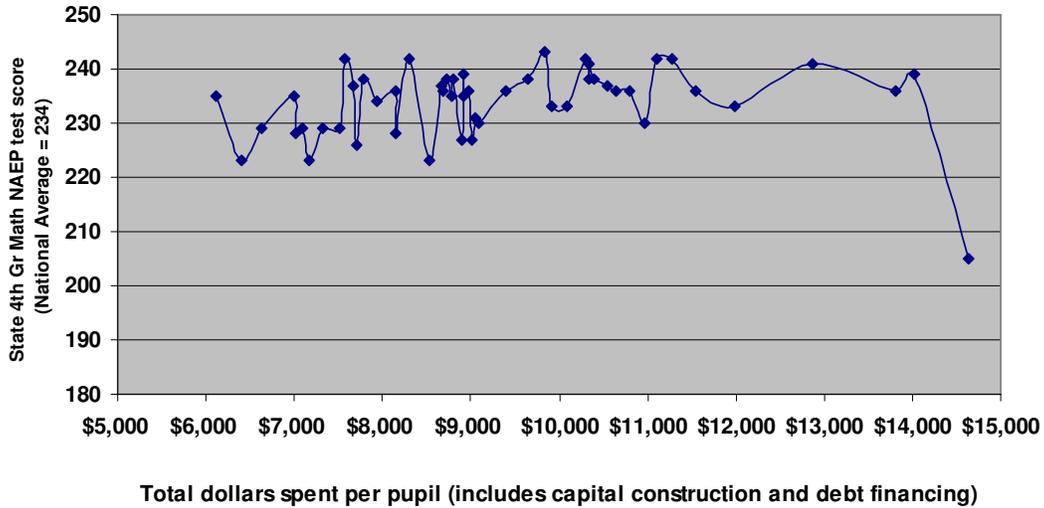


Source: National Center for Education Statistics, Common Core of Data and Nation's Report Card



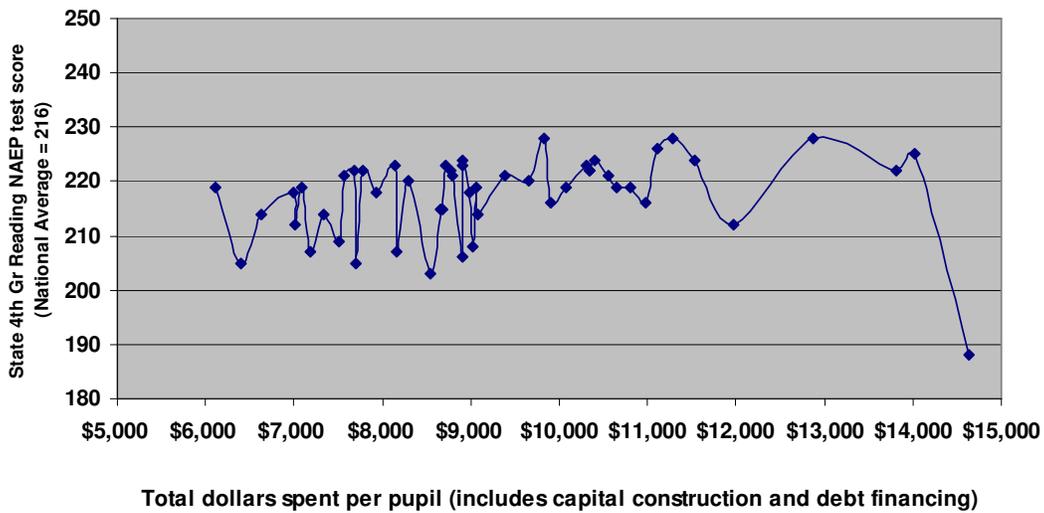
Source: National Center for Education Statistics, Common Core of Data and Nation's Report Card

FIGURE 1.3. Total Per-Pupil Spending vs. 4th Grade Math NAEP Test Scores, by State (2003)



Source: National Center for Education Statistics, Common Core of Data and Nation's Report Card

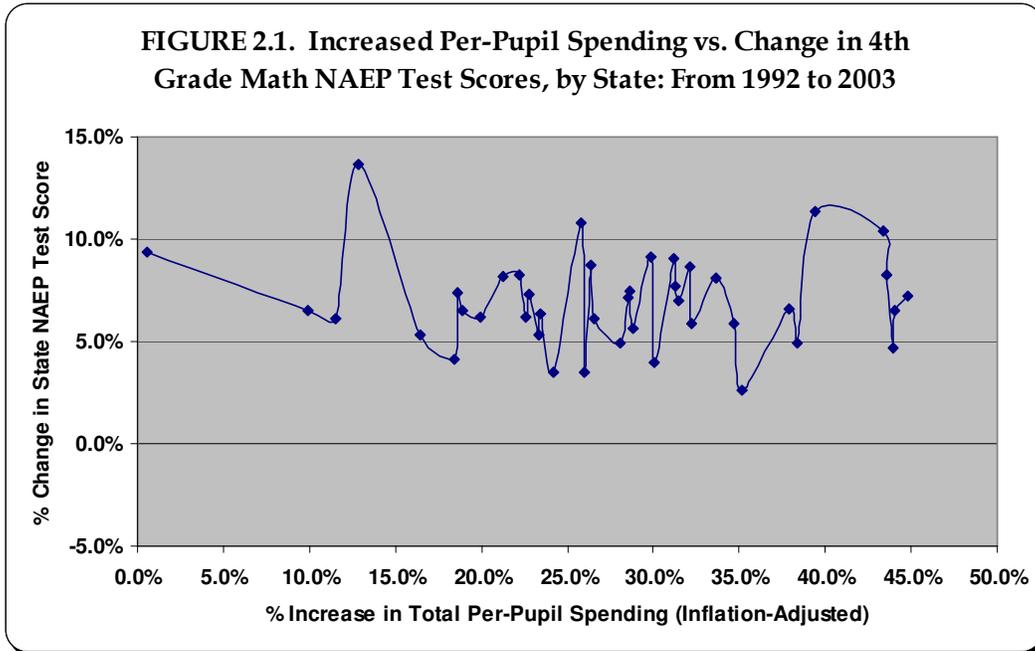
FIGURE 1.4. Total Per-Pupil Spending vs. 4th Grade Reading NAEP Test Scores, by State (2003)



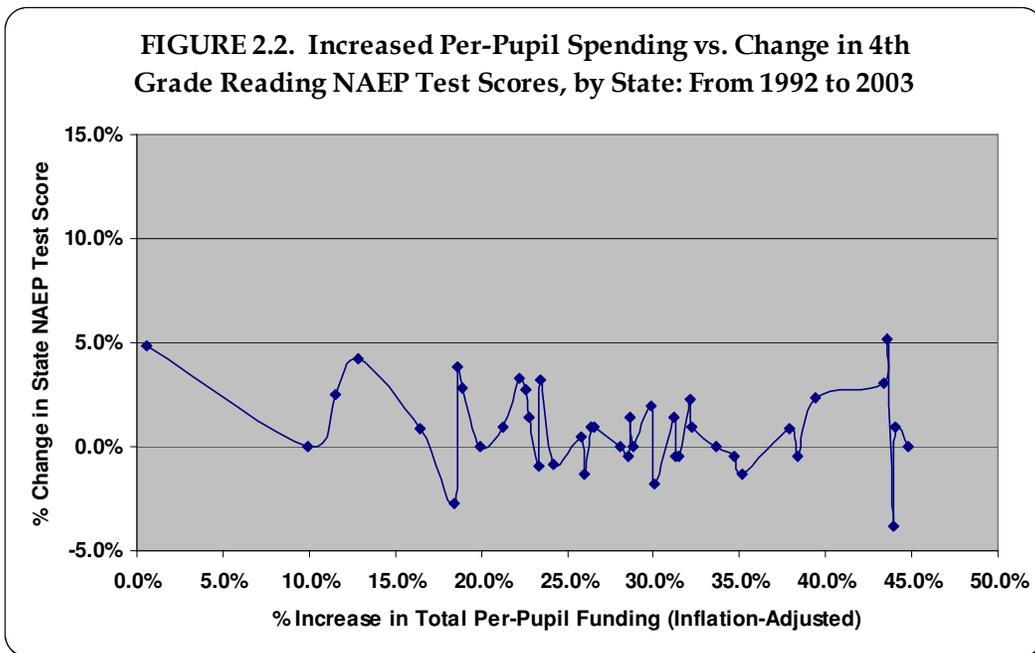
Source: National Center for Education Statistics, Common Core of Data and Nation's Report Card

Adding more dollars in resources provides no guarantee of academic success. After adjusting for inflation, the national average for per-pupil spending in education *doubled* from the early 1970s to the early 2000s. During those three decades NAEP achievement scores stayed essentially flat, indicating a highly-diminished return on a large investment.⁵

How much a state increases spending on K-12 education has no bearing on how well its students improve their test scores. A comparison of state-by-state results on fourth-grade NAEP tests more than a decade apart bears out the absence of any related trend (see figures 2.1 and 2.2). In fact, reading test scores tended to be *less* likely to improve the more spending rose. Twenty-seven of the 42 states in the available sample increased spending more than Colorado. Of those 27 states, only Delaware improved more in reading test scores than Colorado did.⁶



Source: National Center for Education Statistics, *Common Core of Data and Nation's Report Card*



Source: National Center for Education Statistics, *Common Core of Data and Nation's Report Card*

Colorado was 15th nationwide in NAEP academic achievement for 2003. The state rated sixth in fourth-grade reading, seventh in eighth-grade reading, and 13th in eighth-grade math. After two more years of school spending increases, Colorado's test scores have remained flat while its national rankings in academic achievement have slipped. In 2005, Colorado ranked 22nd overall and 11th in fourth-grade reading, 19th in eighth-grade reading, and 26th in eighth-grade math.⁷

How Per-Pupil Spending in Colorado Really Compares to Other States

National Data

The most comprehensive data source for national school finance comparisons is the National Center for Education Statistics (NCES), the research arm of the U.S. Department of Education. According to NCES figures for the 2002-03 school year, *Colorado ranked 26th nationally at \$8,917 per pupil in total expenditures* (see table 1).⁸ Though subsequent data from other states are not available to make nationwide comparisons, Colorado spent \$9,062 per pupil in 2003-04—a slight increase in real dollars from the previous year.⁹

Table 1. Total Expenditures Per Pupil (2002-03)

State		Spending Per Pupil	State		Spending Per Pupil
1	District of Columbia	\$14,635	26	COLORADO	\$8,917
2	New Jersey	\$14,018	27	Virginia	\$8,908
3	New York	\$13,816	28	California	\$8,899
4	Connecticut	\$12,867	29	Washington	\$8,797
5	Alaska	\$11,978	30	Missouri	\$8,774
6	Delaware	\$11,536	31	Iowa	\$8,718
7	Massachusetts	\$11,276	32	South Carolina	\$8,681
8	Vermont	\$11,112	33	Texas	\$8,663
9	Rhode Island	\$10,968	34	New Mexico	\$8,540
10	Michigan	\$10,806	35	Kansas	\$8,302
11	Pennsylvania	\$10,651	36	Nevada	\$8,152
12	Wisconsin	\$10,554	37	Montana	\$8,140
13	Maine	\$10,397	38	Florida	\$7,938
14	Wyoming	\$10,339	39	North Dakota	\$7,781
15	Ohio	\$10,336	40	Louisiana	\$7,708
16	Minnesota	\$10,297	41	South Dakota	\$7,677
17	Maryland	\$10,077	42	North Carolina	\$7,563
18	Illinois	\$9,912	43	Arizona	\$7,518
19	New Hampshire	\$9,832	44	Arkansas	\$7,328
20	Indiana	\$9,651	45	Alabama	\$7,175
	NATIONAL AVERAGE	\$9,441	46	Kentucky	\$7,093
21	Nebraska	\$9,386	47	Tennessee	\$7,007
22	Georgia	\$9,082	48	Idaho	\$6,997
23	West Virginia	\$9,053	49	Oklahoma	\$6,636
24	Hawaii	\$9,019	50	Mississippi	\$6,407
25	Oregon	\$8,982	51	Utah	\$6,114

Source: NCES, *Revenues and Expenditures for Public School Education, 2002-03*, Table 7, "Total expenditures for public elementary and secondary education and other related programs, by type of expenditure, state, and outlying areas: School year 2002-03."

Statistical comparisons that cite *current expenditures* rather than *total expenditures* give readers a less complete picture of resources that are spent by public schools. Current expenditures leave out money expended on capital construction and debt financing. Since many states lack consistent and meaningful auditing practices for spending in public education, a comparison of *current expenditures per pupil* is less instructive.

As a result, actual figures for current expenditures per pupil tend to vary among different sources (see table 2). Only NCES also measures total expenditures.

Table 2. Current Expenditures Per Pupil (2002-03)

Source	National Average	Colorado	Colorado Rank	Colorado as % of National Avg
National Center for Education Statistics ¹⁰	\$8,041	\$7,384	31 st	91.8%
U.S. Census Bureau ¹¹	\$8,019	\$7,316	30 th	91.2%
National Education Association ¹²	\$8,065	\$7,857	25 th	97.4%

“I heard that Colorado ranks 49th in education spending”: The Rest of the Story

Colorado’s advocates of more education funding tend to neglect National Education Association (NEA) and U.S. Census Bureau figures that show the state ranks 25th or 30th, respectively, in actual current expenditures per pupil. Instead, they often use other figures from those sources to allege that Colorado ranks 49th in education spending “per \$1,000 of personal income.” In other words, because of its wealthier population, Colorado spends *a smaller share of its taxpayers’ earnings* on K-12 education than do most other states.

According to the latest tally from the Census Bureau, the nation as a whole spends 43 of every 1,000 dollars in gross taxpayer income for public schools’ operating expenditures. Colorado spends 37 of every 1,000 dollars in gross taxpayer income for the same purpose.¹³ Those who say Colorado ranks near the bottom in education funding use a statistical comparison that implies the more money you make, the more you should spend on education programs—no matter how well those programs work.

Measured by either the Census Bureau’s or NEA’s standard, examples of two other states in particular highlight the misleading nature of the oft-cited statistic. Maryland spends well above the national average but finishes in the bottom 10 (*Census 42nd, NEA 47th*) of the “per \$1,000 of personal income” category. New Mexico rates in the top 10 (*Census 9th, NEA 4th*) by spending about 50 of every 1,000 dollars of earned income on public school programs, but actually spends less per pupil than 45th-ranked Colorado.¹⁴ Still, Colorado had higher 2003 NAEP fourth- and eighth-grade math and reading scores than both Maryland and New Mexico.¹⁵

New Mexico rates in the top 10 by spending about 50 of every 1,000 dollars of earned income on public school programs, but actually spends less per pupil than Colorado.

According to the most recent data, Americans living in the South spend a higher percentage of their incomes on food than do residents of the Northeast. Americans in 2003 also spent a smaller percentage of their incomes on food than they did in 1993. These facts do not indicate that

Southerners eat better than Northeasterners, nor that Americans eat less or worse now than a decade before. The same principle applies to spending on education.¹⁶

Some groups that use the “per \$1,000 of personal income” rankings for education spending further exaggerate their case by citing outdated information.¹⁷ In 2004 NEA rated Colorado at 49th, based on available data from the 2000-01 school year. Few acknowledge that Colorado subsequently climbed the ladder to 45th in NEA’s most current measure of the statistic for 2001-02. The Census Bureau ranks Colorado at 45th for 2002-03. Although NEA and the Census Bureau both collect data from government sources, there are some discrepancies between the two sets of figures.

Interest groups vying for more public funding of education have a strong incentive to use figures selectively. They find different ways to make the case that their particular state’s schools are poorly funded in comparison with the rest of the country. In 2004 and 2005, interest groups in at least nine other states besides Colorado claimed a 49th ranking in education funding.¹⁸

At Least 10 States Claimed in 2004 or 2005 to Rank 49th in Education Funding:

Arizona	Colorado	Florida	Idaho	Illinois
Louisiana	Nevada	Pennsylvania	Tennessee	Utah

“I heard that Colorado ranks 40th in education funding”: Some Facts on “Quality Counts”

Some cite the annual *Education Week* “Quality Counts” survey to diminish Colorado’s per-pupil expenditure rankings. The 2005 survey showed Colorado 40th among the states by expending \$7,041 per pupil, while the 2006 survey places Colorado 37th at \$7,490 in per-pupil spending.¹⁹ Readers who see these figures touted should be aware of the following:

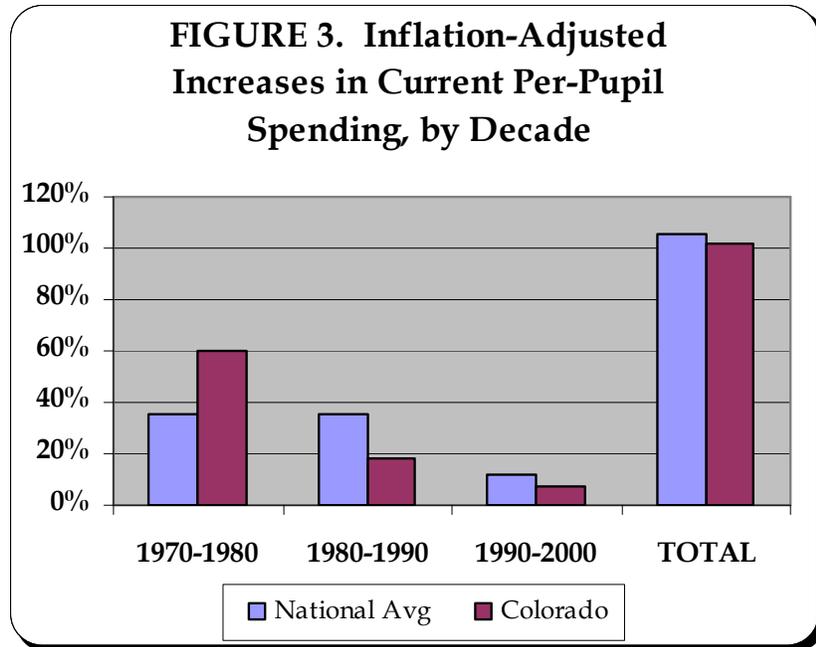
- The survey uses raw NCES current expenditures per pupil data, giving an incomplete picture of resources spent by public schools.
- The 2006 survey adjusted the raw 2002-03 spending data for regional economic differences using a 1993-94 Geographic Cost-of-Education index (GCEI)—a nine-year disparity.
- The method for creating the GCEI used subjective criteria, such as “district preferences for the personal qualifications of its employees,” to weight economic values.²⁰

How Colorado Has Increased Per-Pupil Spending Over Time

Per-pupil public school spending has risen substantially in the past few decades. From 1970 to 2000, both Colorado and the United States *doubled* current per-pupil expenditures in real, inflation-adjusted dollars. Colorado increased *current per-pupil spending* by 60 percent in the 1970s, by 18 percent in the 1980s, and by 7 percent in the 1990s. Nationwide, spending grew by 35 percent in the 1970s, 36 percent in the 1980s, and by nearly 12 percent in the 1990s (see figure 3).²¹

Objections often are raised that more money is needed to do the same job of education because students as a whole bring many more problems with them to school than before. Dr. Jay Greene

and Dr. Greg Forster of the Manhattan Institute have made the only prominent attempt to quantify a broad range of external factors that affect student learning. Their 2004 Teachability Index analyzed data on 16 factors, from family income and poverty to childhood disabilities. The report concluded that overall student disadvantages actually declined slightly from 1970 to 2001.²² Greene observed the following in his book *Education Myths*:



While the Teachability Index may not be a highly precise measurement, it is a reasonably good one. In light of the evidence it provides about the well-being of students during this period, it does not appear plausible that students could have gotten twice as hard to teach. It is not even very plausible that they could have gotten much harder to teach at all.²³

Many indicators of American children's general welfare (*e.g.*, health, nutrition, and wealth) have improved during the past three decades. However, more students today come from single-parent homes or speak English as a second language. Some Colorado school districts' demographics are more challenging now, but others face better or equally-equipped student populations than in 1970. Yet roughly the same educational outcome is achieved at twice the previous cost. Very seldom does one hear an education-oriented interest group or one of its supported officials refuse a funding increase because of a stable or improving social climate. State law even protects districts with declining student enrollments by allowing financial support to be distributed based on a higher pupil count that includes an average of the current and previous three years.

Correcting for Context

The mythology surrounding Colorado's so-called decline in education funding needs to be looked at more carefully, including the following oft-cited quote from the Donnell-Kay Foundation 2005 report *Stepping Up or Bottoming Out?: Funding Colorado's Schools*:

...[In] 2000, real spending per pupil in Colorado was about \$500 less than it had been in 1988....²⁴

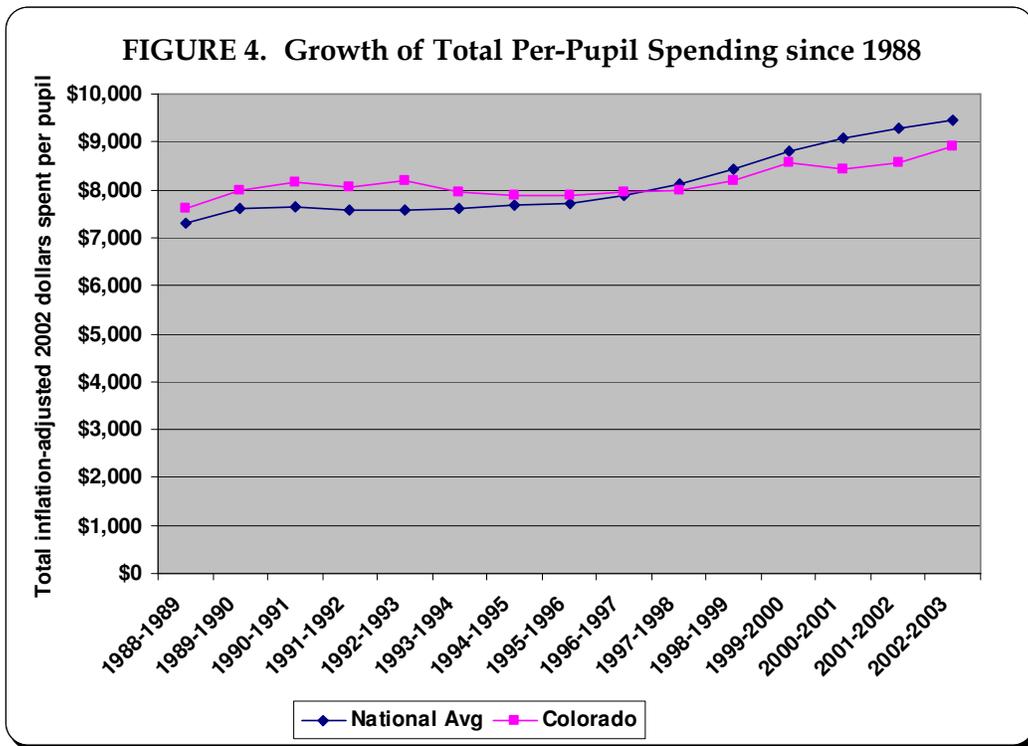
The claim made in the text of the report is not supported by the graph and data it cites. *The text asserts a real decline* in per-pupil spending based on adjustments for inflation and a comparison of Colorado to its own previous spending levels. The graph more accurately shows a decline in unadjusted dollars *relative to the national average*. Even so, the significance given to the graph

neglects the obvious fact that in any given year roughly half the states increase per-pupil spending less than the national average. But both the Bell Policy Center and *Denver Post* have repeated the text’s mistaken claim without highlighting the important distinction.²⁵

A closer look at the NCES numbers better tells the story in context. From 1987-88 to 1999-2000, after adjusting for inflation, Colorado’s current per-pupil spending increased by nearly 7 percent. Current per-pupil spending across the United States increased 20 percent during the same span, so Colorado appears to have spent less relative to the national average.²⁶

From 1988-89 to 1999-2000, after adjusting for inflation, Colorado’s total per-pupil spending increased by more than 12 percent. The growth in spending from 1988-89 to 2002-03 was 17 percent.

A look at the broader picture of resources spent—including resources spent on capital construction and debt financing—is even more telling. From 1988-89 (data unavailable for 1987-88) to 1999-2000, after adjusting for inflation, Colorado’s total per-pupil spending increased by more than 12 percent. The growth in spending from 1988-89 to 2002-03 was 17 percent. Total per-pupil spending across the United States during the same spans rose by 20.5 percent and 29.4 percent, respectively (see figure 4).²⁷



Source: National Center for Education Statistics, Common Core of Data.

Per-pupil spending increased under Gallagher and TABOR

Colorado’s total education spending increase over the past two decades has been smaller than the national average, most notably since the voter-approved Gallagher Amendment’s reduction of residential property tax assessment rates in 1983. Local education funding increases since have slowed somewhat, but state and federal dollars have poured in more quickly to generate the overall increase. Local revenues accounted for 56 percent of the money going into Colorado’s K-

12 public education system in 1987-88. By 2002-03, the local share had declined to 50 percent. During the same time span, state per-pupil funding rose by more than 27 percent and federal per-pupil funding rose by more than 52 percent, both adjusted for inflation.²⁸

Approved by 54 percent of Colorado voters in 1992, the Taxpayer's Bill of Rights (TABOR) limits the growth of government to inflation plus population growth on an annual basis. After adjusting for inflation, Colorado in fact has experienced three years of total per-pupil spending declines under TABOR (1993, 1994, and 2000). Yet the increases in all other years exceeded the three small reductions. During the eight years of TABOR before Amendment 23's K-12 spending mandates (1992-93 to 2000-01), per-pupil spending in Colorado increased by 2.7 percent in real dollars.²⁹

Amendment 23 has accelerated Colorado's per-pupil spending increases

Amendment 23, a constitutional change passed by 52 percent of Colorado voters in the fall of 2000, requires the state to increase funding for K-12 education's base and categorical programs by inflation plus 1 percent per year over a period of 10 years, and by inflation thereafter.³⁰ The state allots dollars to school districts through a formula that modifies *base funding* according to district size and cost of living factors. Money for *categorical programs* targets students with particular needs, such as youths enrolled in special education or English language learners. The automatic growth in funding for the base and for categorical programs has fueled the continuing rise in the state's contribution to public education.

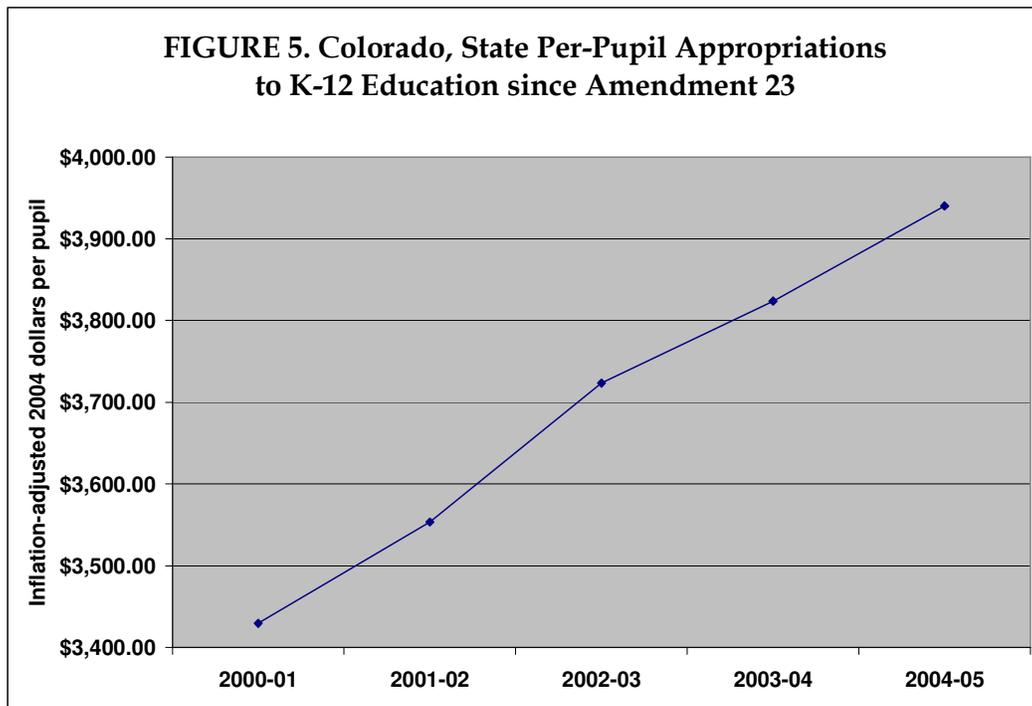
Spending at the national average is an artificial goal that obscures the state's ongoing significant yearly funding increases. Amendment 23 may be catching Colorado up to the national average, but in 2004-05 the state surpassed all of its own previous levels of inflation-adjusted education expenditures. It was at least the fourth straight year of record high per-pupil spending for the state, which occurred even amid a recession.³¹

Spending at the national average is an artificial goal that obscures the state's ongoing significant yearly funding increases.

From 2000-01 through 2004-05, the state's K-12 per-pupil appropriations, excluding local and federal revenues, grew by nearly 15 percent in real dollars (see figure 5). Through the latest student count, Colorado has continued the trend of raising the state's share of per-pupil funding by *more than inflation plus 1 percent* each year under Amendment 23.³²

Conclusion

The 2005 passage of Referendum C and the ongoing mandates of Amendment 23 indicate no foreseeable change in the rising trend of education spending in Colorado. The implementations of state and federal accountability measures have drawn more focus to educational output, prompting some to look more closely at how money is spent. Interest groups have responded with claims that the system lacks sufficient resources to measure up to accountability standards. If all the prior funding increases had been used to meet these basic expectations, then state officials only would need to raise a few more dollars per pupil to administer tests to confirm the satisfactory progress of student learning.



Sources: Colorado General Assembly, Joint Budget Committee Document, "Summary of Appropriations to the Department of Education: FY 2000-01 through FY 2005-06." Colorado Department of Education Statistics Index.

An unbiased look at the numbers reveals that Colorado continues to spend more per student in inflation-adjusted dollars, and that the current \$9,000-a-year figure ranks Colorado among the middle of all states. Moreover, spending increases do not correlate with greater academic success.

Therefore, instead of pursuing the elusive and unproductive goal of the national average in per-pupil spending, Colorado's education officials should look to make the state a leader in how schools use resources. Fortunately, the state's leaders do not strive similarly to meet the national average in test scores: its students already achieve higher than the national average. Many Colorado parents, future employers, and other citizens long to see even better academic success, but aiming for the middle in dollars spent per pupil will not increase student achievement.

Education-oriented interest groups have tended to dominate the school finance debate, often couching their arguments in rhetoric that touts the interests of students. Yet a reexamination of significant facts concerning per-pupil spending should serve to shift the discussion in support of the public interest—away from ongoing subsidies toward more effectiveness and better results.

Notes

¹ Final Report of School Finance Task Force to the Colorado General Assembly School Finance Interim Committee (September 13, 2005), 13.

² Colorado School Finance Project, "Calculation of the Cost of an Adequate Education in Colorado Using the Professional Judgement and the Successful School District Approaches (January 2003)," <http://www.cosfp.org/CSFP%20Website/History/Adq2003.pdf>.

³ Jay P. Greene, *Education Myths: What Special Interest Groups Want You to Believe about Our Schools—And Why It Isn't So*, (Rowman & Littlefield: 2005), 11-12. Eric A. Hanushek, "School Resources and Student Performance," in *Does Money Matter? The Effect of School Resources on Student Achievement and Adult Success*, Gary Burtless, ed., (Brookings Institution: 1996), 54-69.

⁴ NAEP scores for 12th grade were not used because they are not available on a state-by-state basis.

⁵ Greene, *Education Myths*, See Chapter 1, "The Money Myth."

⁶ National Center for Education Statistics (NCES), Common Core of Data, <http://www.nces.ed.gov/ccd>. NCES, Nation's Report Card. Fourth grade test scores were used because state-by-state 8th grade reading test scores are not available for 1992.

⁷ NCES, Nation's Report Card, <http://www.nces.ed.gov/nationsreportcard>.

⁸ NCES, *Revenues and Expenditures for Public School Education, 2002-03*, Table 7, "Total expenditures for public elementary and secondary education and other related programs, by type of expenditure, state, and outlying areas: School year 2002-03."

⁹ Electronic mail to the author from Deb Godshall, Colorado General Assembly Legislative Council, 18 November 2005. Calculations based on data from the Colorado Department of Education.

¹⁰ NCES, *National Public Education Financial Survey Data 2003*, 81, Appendix I, Table 5, <http://nces.ed.gov/ccd/pdf/stfis030cgen.pdf>.

¹¹ U.S. Census Bureau, *Public Education Finances 2003*, "Table 11, States Ranked According to Per Pupil Elementary-Secondary Public School System Finance: 2002-03," <http://www2.census.gov/govs/school/03f33pub.pdf>.

¹² National Education Association (NEA), *Rankings & Estimates: Rankings of the States 2004 and Estimates of School Statistics 2005*, 54, Table H-9, <http://www.nea.org/edstats/images/05rankings.pdf>.

¹³ U.S. Census Bureau, *Public Education Finances 2003*, "Table 12, States Ranked According to Relation of Elementary-Secondary Public School System Finance Amounts to \$1,000 Personal Income: 2002-03."

¹⁴ *Ibid.* NEA, *Rankings & Estimates*, 56, Table H-13.

¹⁵ NCES, Nation's Report Card.

¹⁶ U.S. Department of Labor, Consumer Expenditure Data Survey, <http://www.bls.gov/cex/home.htm#data>.

¹⁷ A recent example is the 2005 report from the Metro Denver Economic Development Corporation, *Toward a More Competitive Colorado*, Figures 81 and 82. The paper was released in October 2005, long after the availability of per capita income education spending data for the 2001-02 (or even 2002-03) school year.

¹⁸ Vicki Murray, "Rankings cloud real school indicators," *Arizona Republic*, 27 March 2005, <http://www.azcentral.com/arizonarepublic/viewpoints/articles/0327goldwater0327.html>. Murray, Director of the Goldwater Institute Center for Educational Opportunity, identified eight states where interest groups had made recent claims that their respective states ranked 49th in education funding. Colorado and Nevada could also be added to the list, which is likely not exhaustive. In a May 9, 2005, broadcast news story from Las Vegas, Clark County Education Association President John Jasonok was quoted as saying: "We are 49th out of 50 states. It's as bad as you can get here in Nevada in terms of pupil funding." See <http://www.klas-tv.com/global/story.asp?s=3320583>.

¹⁹ *Education Week*, "Quality Counts 2005, No Small Change: Targeting Money Toward Student Performance – Chart: Per-Pupil Expenditures," <http://www.edweek.org/ew/articles/2005/01/06/17overview-s1.h24.html>. "2006 Quality Counts: A Decade of Standards-Based Education – Resources: Spending," <http://www.edweek.org/media/ew/qc/2006/17sos.h25.rs.pdf>.

²⁰ Jay G. Chambers, *Geographic Variations in Public Schools' Costs*, 19, Table III-3, "Geographic cost-of-education index by state for 1987-88, 1990-91, and 1993-94," <http://nces.ed.gov/pubs98/9804.pdf>.

²¹ NCES, *Digest of Education Statistics, 2003*, "Table 170. Current expenditure per pupil in fall enrollment in public elementary and secondary schools, by state or jurisdiction: Selected years, 1969-70 to 2000-01." Similar comparative data are not available for total expenditures.

²² Jay P. Greene and Greg Forster, "The Teachability Index: Can Disadvantaged Students Learn?," Manhattan Institute Education Working Paper No. 6, September 2004.

²³ Greene, *Education Myths*, 16.

²⁴ Paul Teske, *Stepping Up or Bottoming Out?: Funding Colorado's Schools*, Donnell-Kay Report, January 2005, 8-9, http://www.dkfoundation.org/PDFs/Teske_Full_Report.pdf. An electronic mail from Teske to the author, 18 January 2006, acknowledged "that the sentence referring to the graph is a little misleading, as the graph shows funding relative to the national average...." The sentence's surrounding context also does not mention the comparison with the national average as a distinction.

²⁵ The Bell Policy Center, "TABOR Issue Brief," 2, <http://www.thebell.org/pdf/TB05Corank.pdf>. Dan Haley, "One state left behind: Voters weight TABOR's impact," *Denver Post*, 2 October 2005, E-1.

²⁶ NCES, Common Core of Data. All national inflation calculations were made with the Consumer Price Index. All Colorado inflation calculations were made according to the Denver-Boulder-Greeley inflation rate. See Colorado General Assembly, Legislative Council document, "Consumer Price Index – All Items (CPI-U)," http://www.state.co.us/gov_dir/leg_dir/lcsstaff/lcs/focus/2005/05consumerpriceindex.pdf.

²⁷ NCES, Common Core of Data.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Colorado State Constitution, Article IX, §17.

³¹ Colorado General Assembly, Joint Budget Committee Document, "Summary of Appropriations to the Department of Education: FY 2000-01 through FY 2005-06."

³² Total appropriations data taken from the Joint Budget Committee Document, "Summary of Appropriations." Yearly student enrollment counts taken from the Colorado Department of Education, "Colorado Education Statistics," http://www.cde.state.co.us/index_stats.htm. Data supplemented by electronic mail message from Carolyn Kammpan, Colorado General Assembly Joint Budget Committee, 2 December 2005.

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