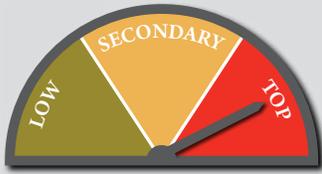


# K-12 EDUCATION

## PRIORITY



## SAVINGS

Total Recommended Savings = \$268.7 million

## OVERVIEW

The chapter describes the magnitude of public school funding and analyzes the state contribution. It is the second time this chapter has appeared in a Citizen's Budget.

## RECOMMENDATIONS/SAVINGS

Recommendation	Savings
• Eliminate ineffective “master’s bumps” from teacher pay formulas.	\$114.6 million
• Provide sensible reduction in business support service costs.	\$136.0 million
• Enact tax credits for private school tuition scholarships.	\$18.1 million
• Repeal Amendment 23 to restore fiscal flexibility.	

## ORIGINAL ARTICLE

The entire original article can be found at [http://tax.i2i.org/files/2010/12/CB\\_K\\_12.pdf](http://tax.i2i.org/files/2010/12/CB_K_12.pdf)

## BACKGROUND

For fiscal year 2012-13, appropriations to K-12 education comprise the largest share of the state’s general fund, (39.8 percent). It is notable that the percentage of the budget fell from more than 45 percent two years ago. When federal and other state designated funds are included, the state appropriated \$4.4 billion, an \$81 million increase from \$4.3 billion in 2011-12. Colorado’s K-12 state-appropriated funding has remained relatively flat at real 2007-08 dollar levels during the past couple years.<sup>1</sup>

Static appropriation levels have worked to slow the long-term growth trend. In the past quarter century, state funding of Colorado K-12 education grew both in real terms and as a share of total education funding. The annual amount of real state-appropriated dollars per pupil rose by 42.2 percent from 1986-87 to 2011-12.<sup>2</sup> The state today assumes a significantly greater share of the elementary and secondary education funding burden than 25, or even 10, years ago.

Rising expenditures for public schools are mandated in the state constitution. In 2000 Colorado voters narrowly approved Amendment 23. The law mandated annual increases to School Finance Act and categorical funding of 1 percent above inflation through 2010-11, and at the rate of inflation in years thereafter. Amendment 23 also created the State Education Fund through a designated transfer of state income tax revenue. Additionally, Amendment 23 enacted a “maintenance of effort” provision that requires a 5 percent annual increase in General Fund contributions to K-12 education—except when the state economy slows and personal income growth fails to reach 4.5 percent.

During the 1990s—before Amendment 23 was enacted—the General Fund contribution to K-12 education grew every year in real dollars while decreasing as a share of General Fund contributions from 40.8 percent to 37.8 percent. In the decade after Amendment 23, K-12 education took greater shares of General Fund moneys, increasing to 45.6 percent in 2010-11. K-12 education’s share of the General Fund has dropped off since. Still, with the rapid rise in federal funds and Amendment 23’s creation of a separate State Education Fund, the General Fund now only provides 68.2 percent of state-appropriated K-12 education dollars as opposed to 84 percent in 2000-01.<sup>3</sup>

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Since Amendment 23, the state's share of the K-12 education funding burden has increased greatly, and placed limits on legislative flexibility. The law obligated the State to underwrite unending increases regardless of stalled total tax receipts, but was silent on incentives to enhance learning. Though a technical provision has enabled the legislature to bypass the measure's intended purpose, the provisions at the heart of Amendment 23 need to be revisited.

## **K-12 FUNDING AND RECENT COLORADO POLICY DEBATES**

The public is woefully uninformed about how much money is spent in public K-12 education. A 2007 Education Next-PEPG survey of nearly 2,000 American adults found more than 90

percent of respondents underestimated their school district's per-pupil expenditure. The median response of \$2,000 was more than 80 percent below the actual figure<sup>4</sup> of roughly \$10,000. In a 2011 follow-up survey, the share of 2,600 respondents who supported increases in K-12 spending fell from 59 percent to 46 percent, when informed of current local spending amounts.<sup>5</sup>

The accelerated increases in Colorado's K-12 per-pupil spending during the recent decade largely can be attributed to voter approval 12 years ago of Amendment 23. That constitutional change promised and largely guaranteed a decade's worth of spending increases

above the rate of inflation for the School Finance Act and categorical programs, representing the core of public school budgets.

Several subsequent state-level tax-hike efforts have been predicated on increasing taxes "for the children." The largest successful measure raised \$3.5 billion<sup>6</sup> during its first five years and in 2012-13 will maintain state taxes \$1.16 billion higher<sup>7</sup> than would have occurred in its absence. Most proponents of 2005's narrowly-approved Referendum C promised one-third of enhanced tax collections would be committed to K-12 education funding. Further, in 2007 the General Assembly enacted a property tax mill levy rate freeze. The action was a change in fiscal policy resulting in increased tax burden. The legislation became law without a popular

vote, despite a strong case that it violated the Taxpayer's Bill of Rights. Once again, the change was presented primarily as a way to slow the growth of the state's share of school funding and to free extra funds to spend on preschool, full-day kindergarten and other education programs.<sup>8</sup>

In 2008 Amendment 59 sought to dismantle the Taxpayer's Bill of Rights by taking dollars available for TABOR refunds and dedicating them to fill requests for funding increases to K-12 education. Fifty-five percent of Colorado voters rejected the measure.<sup>9</sup> In 2011 Coloradans rejected Proposition 103 even more soundly, 64 to 36 percent.<sup>10</sup> The latter proposal to raise state sales and income tax rates to generate more education revenue won majorities of votes in only three of Colorado's 64 counties.<sup>11</sup> Local school tax elections also lost at a historically high rate. Of 38 K-12 mill levy and bond proposals before Colorado voters in 2011, only 12 were adopted.<sup>12</sup>

## **SCHOOL FINANCE ACT**

The Colorado state constitution guarantees the provision of "a thorough and uniform system of free public schools."<sup>13</sup> The lion's share of funding for public schools comes in the form of tax revenue collected by state and local governments. Most funding to the state's 178 local school districts—and to the Charter School Institute, a special authorizer created in 2004—is administered through the School Finance Act. The Act's basic existing framework was adopted in 1994, though it has been amended regularly in subsequent years. A broad coalition of interest groups and leaders has

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been building momentum to introduce a legislative School Finance Act overhaul in the near future.

The core funding each district receives through the School Finance Act is known as its total program. The total program amount is derived from a statutory formula that factors in a funded pupil count (the number in the current year or an average of up to five years of actual October pupil counts to protect districts with declining student enrollments), a base funding amount and various factors that attempt to reflect the cost of providing education services in different parts of the state:

- A factor that expresses the difference in cost of living between a metropolitan Denver suburb, a rural farm community and an upscale mountain resort town
- A factor that accounts for local and regional personnel costs, as employee salary and benefits make up the dominant share—typically more than 80 percent—of local education budgets
- A factor that compensates for a school district’s size, recognizing especially the constraints on purchasing power in a geographically large rural district

Additional considerations that drive the formula and determine a district’s total program amount include:

- The number of at-risk students (i.e., students eligible for the federal free lunch program due to limited family income, and some students for whom English is a second language) increases the amount of funds received; and

- Students enrolled in an online education program that operates across district lines are funded at a standard rate lower than statewide average per-pupil funding.

Total program funding for 2012-13 is estimated to be \$5.291 billion, a full billion dollars less than the amount provided for under Amendment 23. It marks the third consecutive year the General Assembly has employed a “negative factor,” formerly known as the “budget stabilization factor,” to offset or eliminate required inflationary increases. At its peak in 2009-10, Colorado total program funding reached \$5.717 billion. A district’s total program amount divided by the funded pupil count yields the amount of PPR, or per-pupil revenue. Individual district PPR amounts range from \$6,059 for Branson School District Re-82 in Las Animas County (because most students are enrolled statewide through a special online program) to \$15,099 for Pawnee School District Re-12 in Weld County. Larger districts like Jefferson County Public Schools and Denver Public Schools receive PPR of \$6,308 and \$6,868, respectively.<sup>14</sup>

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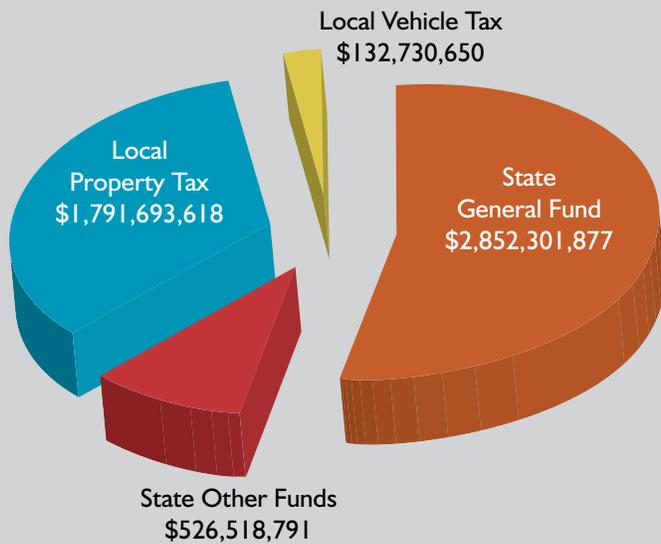
### Earmarked Revenue

As currently amended, the School Finance Act only has one statutory obligation on local districts for the use of total program funding. At least three-fourths of the dollars received to provide at-risk student funding must be designated “to school or district-wide instructional programs for at-risk pupils or to staff development associated with teaching at-risk pupils in each district.”<sup>15</sup>

Before 2009-10 the School Finance Act required specified minimum amounts of total program funding to be allocated to instructional supplies (including textbooks), as well as to reserve funds for capital and insurance purposes. The General Assembly concluded in 2009 that local education agencies needed fewer earmarked revenues and greater discretion over the use of general education dollars.

Public charter schools are entitled to receive 100 percent of PPR based on October 1 enrollment count. Authorizing districts with more than 500 students may charge up to 5 percent of PPR for administrative services. Authorizing districts with fewer than 500 students may charge up to 15 percent of PPR.<sup>16</sup>

**Figure 1: Colorado School Finance Act Funding: Local vs. State Revenue, FY 2012-13**



### State vs. Local Share

Funds generated locally through property taxes on homes and businesses furnish \$1.792 billion of the School Finance Act’s \$5.291 billion. Total program mill levy rates vary by district—from 1.68 mills in rural southern Colorado’s Primero School District to 27 mills, the maximum allowed by statute, which is imposed on 38 districts.<sup>17</sup> An additional \$132.7 million in the Act comes from locally-collected vehicle ownership taxes. These two local revenue sources provide the foundation of School Finance Act funding: \$1.925 billion, or 36 percent.

In most districts, the combined property and vehicle ownership tax revenue falls short of the total program formula amount defined in statute. The remaining funds are backfilled through income taxes and other funds collected at the state level. In 2012-13 nearly 85 percent of state dollars used to pay for the School Finance Act comes directly from the general fund, \$2.852 billion.<sup>18</sup> The remainder is appropriated from the State Education Fund (created by Amendment 23) and the State Public School Fund.

As shown in figure 1 above, the state’s share of total program funding for the current budget year (2012-13) is projected to be 63.7 percent, or \$3.379 billion. Largely, state funds have grown in the past couple years to offset declining revenues from local tax dollars. Two years ago, seven districts depended exclusively on local tax revenues for total program aid: Aspen, Clear Creek Re-1, Estes

Park R-3, Gunnison Watershed Re-1J, Park County Re-2, Summit Re-1 and West Grand 1-Jt. In 2012-13, every one of Colorado’s 178 districts is estimated to receive at least some state aid through the School Finance Act, though for four districts the amount is nominal (less than \$1,000). Eight districts receive more than 90 percent of total program funding from state coffers. None is more heavily dependent than Edison School District 54JT in rural El Paso County, slated to receive the greatest share of state aid at 95.9 percent.<sup>19</sup>

### ADDITIONAL FUNDING SOURCES

Other major sources of public revenue are available to school districts beyond the total program in the School Finance Act. In 2011-12, state lawmakers designated \$235.5 million in state-generated funds for **categorical programs** to serve disabled students, gifted students, students with limited English proficiency, and expelled and at-risk students, as well as to provide extra aid for transportation, vocational training, comprehensive health services and small attendance centers. This amount represents an appropriations increase 31.8 percent above inflation since 2000-01, compared with 17.9 percent growth in student enrollment over the same 11-year period.<sup>20</sup>

State statute also authorizes local districts to seek voter approval for **mill levy overrides**. The amount of override a district can receive generally is capped according to the size of its total program funding.<sup>21</sup> As with the total program mill levy, override revenues are determined by multiplying the mill levy rate to the property’s assessed valuation: 7.96 percent for homes and 29 percent for commercial properties. In

2011-12, 109 school districts generated a total of \$649.3 million in override revenues.<sup>22</sup>

**Example:** *A school district has a voter-approved override of 10 mills (.010), with total assessed residential property value of \$100 million and total assessed commercial property value of \$100 million. The assessed valuation for homes is **\$7.96 million** (7.96 percent of \$100 million), and the assessed business valuation is **\$29 million** (29 percent of \$100 million), for a total valuation of \$36.96 million. At 10 mills, the school district each year would collect 1 percent of **\$36.96 million**, or **\$369,600**. As long as the district's currently funded "total program" is \$1,478,400 or higher, that amount of funding would not exceed the override cap of 25 percent.<sup>23</sup>*

Further, the federal government authorizes spending to support local schools.

Federal money includes the Title I program for low-income schools and support for categorical programs,<sup>24</sup> in addition to a wide range of other U.S. Department of Education funds. These comprise a significant share of Colorado K-12 funding. In 2010-11, the state's public schools received slightly more than \$1 billion in federal funds administered through state and local education agencies, comprising nearly 11 percent of total revenues.<sup>25</sup> Federal funds appropriated through the Colo-

rado Department of Education peaked at a whopping \$826.9 million in 2009-10 before receding to an estimated \$628.7 million in 2012-13. Even so, the 30-year compound annual growth rate in Colo-

rado's K-12 federal funding stands at a healthy 7.58 percent.<sup>26</sup>

One particular case shows why a thorough understanding demands school funding calculations include additional revenue sources beyond the School Finance Act. Colorado public charter schools by law receive the same PPR as district schools, in most cases minus 5 percent for district administrative overhead (as explained previously). Yet a 2010 study from Ball State University shows that charter schools in 2006-07 on average received 15 percent fewer dollars per student than their traditional public school counterparts. The discrepancy is explained primarily by two factors: 1) The state's charter schools receive significantly less funding from the U.S. Department of Education's Title I program for low-income schools, and 2) Before 2009 charter schools were not eligible to receive a share of local mill levy overrides.<sup>27</sup>

### Capital Construction Funding

The State of Colorado also makes funds available to local schools (including district and charter schools) through the Building Excellent Schools Today (BEST) program, enacted by the General Assembly in 2008. Through BEST, a combination of income generated from state trust lands and matching funds at the local level finances qualifying capital construction projects throughout the state. Over five years, BEST has awarded a total of more than \$700 million in state funds, in addition to \$300 million in local matching fund requirements. More than one-third of the BEST funding recently secured State Board of Education approval during the 2012-13 grant cycle.<sup>28</sup>

To finance the cost of building new schools local Colorado districts frequently issue voter-approved bonds, or may also create a local mill levy-backed Special Building and Technology Fund. For districts growing in student population, the state treasurer also may provide capital construction loans—provided voters have approved the debt, payment method and length of repayment period beyond one year.<sup>29</sup>

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## THE BIG PICTURE: FUNDING RANKINGS AND FACTS

Traditional media outlets, elected officials and other public figures typically cite current expenditures per pupil in drawing comparisons between states and local school agencies in the area of K-12 education finance. Current expenditures exclude money allotted for capital projects and for financing bonded debt. Yet using different assumptions, competing sources yield diverse numbers and rankings, allowing for selective manipulation of statistics.

For 2009-10, the U.S. Census Bureau records Colorado's current expenditures at \$8,853 per pupil, ranked 40th in the nation. Meanwhile, the National Education Association offers substantially different information, placing Colorado at \$9,631 per pupil, or 29th in the nation. (A third source for public school expenditures, the U.S. Department of Education, has not yet released any financial figures beyond 2008-09.)

Regardless of the source, the long-term trend remains clear. According to the U.S. Department of Education, real current per-pupil expenditures nationwide roughly doubled between 1970 and 2000, and grew by an additional 20 percent following the turn of

the millennium. Colorado's spending growth outpaced most states during the 1970s but has tended to lag them during the subsequent three decades.<sup>30</sup>

Representing the most recent data, the Colorado Department of Education reports that the state's K-12 schools in 2010-11 spent \$7.518 billion on "current" operating expenditures, or \$9,808 per pupil.<sup>31</sup> Measured in real dollars, Colorado K-12 current expenditures have risen by more than 34 percent since 2000-01, nearly twice as great as the 10-year student enrollment growth of 16.4 percent.<sup>32</sup>

### Total Per-Pupil Expenditures

The U.S. Department of Education also measures total expenditures per pupil—including capital construction and debt financing costs. On a statewide basis, comparisons using these statistics

provide a fuller picture of the financial resources available to public schools. Federal data show Colorado spent nearly \$8.73 billion on K-12 education in the 2008-09 school year, or \$10,669 per pupil. Colorado ranked 38th in total per-pupil spending, about \$1,700 below the national average of \$12,384.<sup>33</sup>

Measuring the growth of dollars spent is more meaningful than comparing rankings, as states almost universally have increased expenditures beyond student enrollment for years and decades. Starting in the 1988-89 school year, the U.S. Department of Education began reporting consistent yearly information on total K-12 expenditures by state. Within two decades Colorado's total spending grew by 23 percent in real dollars per student, a substantial increase but smaller than the national increase of more than 41 percent.<sup>34</sup>

Some interest and advocacy groups frequently seize on this disparity to make comparisons showing Colorado lagging national spending averages. A commonly-used misleading chart displays the red line of Colorado's long-term per-pupil spending going down—an effect that only works by making the steadily-rising national spending average into a flat line.<sup>35</sup> If Colorado had matched the nation's inflation-adjusted K-12 spending increases since 1988-89, the state would have spent \$12,263 per student in 2008-09—ranking the state at 21st and just below the national average. An additional \$1.3 billion in funding from state revenue or other sources would have been required for that year alone.

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Table 1. Total K-12 Per Pupil Spending, Colorado vs. Regional States (2008-09)			
Wyoming	\$18,922	Colorado	\$10,600
Nebraska	\$12,703	Nevada	\$10,449
New Mexico	\$11,835	Arizona	\$9,552
Montana	\$11,463	Oklahoma	\$8,696
Kansas	\$11,427	Idaho	\$8,601
Texas	\$11,085	Utah	\$8,446

### In Context: Comparing with Other States

Colorado's 2008-09 total per-pupil spending is comparable to or greater than most neighboring and other regional states. Along with actual spending, our state's relative standing in student-level expenditure slipped from the previous year. As indicated in table 1, Colorado (\$10,600) still ranked slightly higher than Nevada and significantly ahead of Arizona, Oklahoma, Idaho, and Utah. Kansas, Montana, and

Texas spent less than \$1,000 more per student than Colorado, while New Mexico and Nebraska paid out substantially more. Rural Wyoming (which has no income tax but funds its schools largely through oil and gas revenues) stands far ahead at \$18,922 per student.<sup>36</sup> In fact, Wyoming is only outspent nationally by the District of

Columbia (\$27,155) and New York (\$19,983). Rounding out the top five spenders are New Jersey (\$18,549), and Alaska (\$18,058).<sup>37</sup>

No clear correlation exists between significantly greater amounts of money spent per student and academic results. According to a comprehensive analysis performed in the late 1990s, two-thirds of 163 academic

studies showed insignificant correlations and a handful showed a negative relationship. Only 27 percent demonstrated "a statistically significant relationship between increased per-pupil spending and student performance."

A 2012 Harvard study further affirms the body of research that challenges increased spending as a strategy to improve educational outcomes. Analyzing "trends in student performance," the report found that additional per-student education expenditures and the related state-

by-state gains on national achievement tests had but a very small, statistically insignificant correlation. The same report found that of six other regional states with comparable data, only Texas reaped higher achievement gains than Colorado. Wyoming, which has much higher overall spending and has increased spending much more greatly, produced lower results.<sup>39</sup>

### 49th in Funding?

Some advocates of increased spending claim Colorado ranks 49th in K-12 education funding, but few explain the context. The reference is to the amount of dollars spent as a share of residents' personal incomes. Because Colorado is a wealthier state, the income denominator is high. More dollars need to be spent per student than in poorer states to achieve a comparable ranking. 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.<sup>40</sup>

U.S. Census Bureau data for 2009-10 ranks Colorado 45th in public school revenues and 46th in expenditures as a share of \$1,000 in personal income. When measured against personal income, Colorado's spending on school administration and general administration rank 27th and 37th, respectively.<sup>41</sup> Measuring data from 2008-09, the National Education Association ranks Colorado 42nd in spending as a share of personal income. About 3.7 percent of all earnings in the state are spent on K-12 public school current operating expenditures, compared to the national average of about 4.3 percent.<sup>42</sup>

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## How DOLLARS ARE SPENT

### State-Level Administration and Miscellaneous Appropriations

The Colorado Department of Education (CDE) is budgeted to take in \$80 million for 2012-13 to fulfill the functions of governance, oversight, professional licensure, TCAP assessment administration, the Charter School Institute and information management. This amount represents a substantial increase from previous years' appropriations, primarily but not exclusively driven by the legislative mandates to implement a statewide educator effectiveness system and to develop new standardized assessments. Roughly one-fourth of the appropriation for management and administration (\$20.3 million) is slated to come from federal funds. Other smaller appropriations have been made for the Colorado School for the Deaf and Blind (\$14.4 million) and library-related programs (\$7.0 million). To provide perspective, state-appropriated "assistance to public schools" for the current fiscal year is projected to be \$4.261 billion.<sup>43</sup>

### Spending Categories

For ease of comparison among states, the U.S. Department of Education has defined expenditure categories. Table 2 provides a comparative overview that breaks down Colorado's reported current operational spending versus the national average for the 2008-09 school year, the most recent for which data are available<sup>44</sup>:

Table 2. K-12 Spending Categories, Colorado vs. U.S. Average (2008-09)		
Category	Colorado	US Average
Instructional (Classroom Teachers, Textbooks)	57.6%	61.0%
General Administration (Boards, Executive, Legal)	1.6%	2.0%
School Administration (Principals and Office Staff)	6.8%	5.6%
Student Support (Guidance, Health, Intervention)	4.7%	5.4%
Instructional Support (Libraries, Teacher Training)	5.5%	4.8%
Student Transportation	3.0%	4.2%
Operation / Maintenance / Food Service	13.1%	13.6%
Other Support (Business, Research, Personnel)	7.1%	3.2%
Enterprise Operations	0.5%	0.2%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>

As shown in table 2, nearly 58 percent of Colorado's K-12 operating budgets is reported to reach the classroom level. After generally decreasing through much of the decade, the state's ratio of enrolled

students to full-time equivalent (FTE) teachers in 2010-11 (17.4) was identical to the ratio in 2000-01.<sup>45</sup> The NEA reports that Colorado has the eighth-highest student-teacher ratio nationally, above the national average of 15.6 but lower than regional counterparts in Utah, Arizona, Idaho and Nevada.<sup>46</sup> (Student-teacher ratio is not the same as average class size, which in grades K-3 typically exceeds the ratio by 9 or 10. Therefore, the average early elementary class size in Colorado stands at about 27, compared to 25 nationwide.<sup>47</sup>)

About 58 percent of Colorado K-12 operational spending is directed toward the classroom. Only 47.5 percent of K-12 personnel were reported to be teachers in 2009-10, a significant drop from 51.2 percent 10 years earlier.<sup>48</sup> During the same span, the national ratio of teachers to total K-12 employees fell only slightly from 53.3 to 52.9 percent.

For a variety of reasons the nationwide ratio has changed dramatically over the past half-century. In 1960 the national ratio of teachers to non-teacher K-12 employees was 2 to 1.<sup>49</sup>

### Personnel Salaries and Benefits

The U.S. Department of Education also breaks down spending by object. From 1999-2000 to 2008-09, Colorado's share of reported K-12 current operational expenditures dedicated to employee salaries and benefits grew from 76.1 to nearly 79 percent.<sup>50</sup> Thus, Colo-

*Only 47.5 percent of K-12 personnel were reported to be teachers in 2009-10, a significant drop from 51.2 percent 10 years earlier.*

Colorado's increased K-12 spending during the recent decade largely can be attributed to increased personnel hiring and/or compensation rates. Between 1999-2000 and 2009-10 Colorado's public school enrollment grew by 17.5 percent—from 708,109 to 832,368. During the same 10-year span the number of full-time equivalent (FTE) public school employees increased by almost 30 percent.<sup>51</sup>

In 2010-11, Colorado taxpayers spent \$5.85 billion on K-12 employee salaries and benefits, including retirement contributions. Nearly two-thirds of compensation went to teachers and about 8 percent to administrators, a ratio virtually unchanged from two years earlier. All other employees made up slightly more than a quarter of the payroll.<sup>52</sup> The average teacher's base salary was \$49,228, with an extra 24 percent typically received in benefits. Average teacher salaries ranged from \$26,726 in rural Kim Reorganized 88 to \$61,590 in Cherry Creek Schools.<sup>53</sup> According to the National

Education Association, Colorado's average public school teacher salary was 27th highest nationwide in 2010-11.<sup>54</sup>

A teacher with a bachelor's degree in Adams 12 (Northglenn-Thornton) —the median school district for teacher pay in the Denver metropolitan

area—started at \$28,133 in base salary for the 2003-04 school year. As a ninth-year teacher in 2011-12 he earned \$45,314 plus benefits with a B.A., a 36.5 percent rise in real earnings, or an average annual increase of 4 percent. If the same teacher has completed a master's degree and earns \$52,366, the increase would be 57.8 percent in real

earnings, or an average annual increase of 8.25 percent. Adams 12 teachers holding only bachelor's degrees top out base pay earnings at \$46,755 after 10 years of service. But an employee in his 20th year earns \$67,956 by obtaining a master's degree or \$78,592 with a doctorate.<sup>55</sup>

The average principal or assistant principal's base salary was \$81,333 in 2010-11, while the average base salary for superintendents (including assistant superintendents) was \$109,648. Administrators typically receive an additional 22 percent in benefits.<sup>56</sup> Beyond the documented salary and benefits, the deferred compensation in pension guarantees for government employees who become vested through extended years of service yields a high value.<sup>57</sup>

### Costs of Collective Compensation

For most Colorado public school teachers, compensation is subject to the political pressures of budget negotiations and the rigid formulae of service years on one hand and graduate-level credits and degrees on the other. However, these factors do not align with effective teaching. In fact, less than 3 percent of assessed student learning and other instructional outputs can be explained by experience and academic credentials. About 97 percent of a teacher's effectiveness is determined by other factors.<sup>58</sup> Of 34 quality studies that address the question to account for year-to-year academic growth, precisely zero “found a relationship between a teacher's earning a master's degree and student achievement.”<sup>59</sup>

A 2012 report by the Left-leaning Center for American Progress noted that Colorado spent a full 3 percent of its current K-12 expenditures on “master's bumps”—rewarding teachers with automatic bonuses for master's degree achievement.<sup>60</sup> Similarly, pay raises for seniority ignore the fact that most studies find teacher quality plateaus after the fourth or fifth year and in some cases even may decline as an instructor approaches retirement age.<sup>61</sup>

Since negotiated bargaining agreements and salary schedules determine that teachers are compensated collectively, determining whether individual teachers are adequately paid is a highly difficult proposition. The average teacher works far fewer days per year than

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other white-collar professionals. Some teachers complete many hours of additional take-home work, such as grading papers, but no known effective comparison has been made to other professionals' amount of take-home work. Due to the nature of the subjects they teach or to other factors, other instructors complete all their work within the contract hours at school. Undifferentiated collec-

tive compensation obscures both the value of teacher inputs and outputs that affect student learning.

A 2011 analysis by economists Jason Richwine and Andrew Biggs concluded, based on academic proficiency and the lack of rigor in postsecondary education courses, that public school teacher salaries fall in line with private-sector earnings. However, due to added job security and fringe benefits, career teachers who become vested in their pension plans garner a 52 percent compensation premium.<sup>62</sup> For new teachers, earnings more

often lag or stand equivalent to their academic peers. But seniority and longevity are heavily rewarded in K-12 public education, regardless of measurable impacts on student learning.

### Achievement Results

The U.S. Department of Education's National Assessment of Educational Progress (NAEP) remains the gold standard of testing. Math and reading tests have been administered to statistically representative samples of fourth- and eighth-grade students in states every other year since 2003. Before 2003, the tests were given at less frequent intervals. On each of the four tests, Colorado ranks slightly ahead of the national average in performance, with the state's progress closely tracking most of its peers nationwide.<sup>63</sup>

In 2011-12 the Transitional Colorado Assessment Program (TCAP) replaced the Colorado State Assessment Program (CSAP), as the state works to adopt a new testing regiment aligned with updated academic standards. Like its predecessor, TCAP is administered statewide to public school students in four subject areas, the first three in every year from third through 10th grade:<sup>64</sup>

- **Reading** proficiency since 2002 has shown significant gains in grades 4 through 7 with smaller progress in the other grades
- **Writing** proficiency since 2002 has shown significant to

large gains in grades 5 through 8 and has been flat in the other grades

- **Mathematics** proficiency since 2005 has mostly moved up, with significant gains in grades 6 through 9
- **Science** proficiency (tested in three grades only) since 2008 has shown significant improvement at the fifth grade level and slightly positive results in eighth and 10th grade, though still remains below 50 percent at all three grade levels

Official calculations for Colorado's high school completion rate have changed, making valid long-term comparisons extremely difficult. In recent years the state's graduation rate has hovered around 75 percent.<sup>65</sup>

### PROPOSED REFORMS

A wide range of reforms that promote more efficient and effective use of K-12 education resources should be contemplated:

1. **Tuition tax credits** provide offsetting tax benefits to individuals and/or corporations that provide funds to help enable a student attend non-public school. Setting the scholarship value below a student's share of per-pupil revenue not only empowers more families to afford a private education but also ensures marginal cost savings. With sufficient demand expressed by education consumers, the state will save resources both in the short and long term while ensuring students have access to a wider range of quality education options.

*Setting the scholarship value below a student's share of per-pupil revenue not only empowers more families to afford a private education but also ensures marginal cost savings.*

*A 2011 analysis by economists Jason Richwine and Andrew Biggs concluded, based on academic proficiency and the lack of rigor in postsecondary education courses, that public school teacher salaries fall in line with private-sector earnings.*

The Cato Institute in Washington, D.C., has developed a formula to measure the fiscal impact of education tax credits, based on current financial and enrollment data and the specific design of the program. The tax credit program would provide private tuition coverage to K-12 students, through non-refundable deductions to state corporate and personal income taxes. Student eligibility is not limited by family income, with participation capped for students who are not transferring from public schools.<sup>66</sup>

A reasonable estimate of the **marginal cost** for Colorado public schools is needed to determine cost savings.<sup>67</sup> Table 3 shows how changes to the tax credit's maximum value as a percentage of state-funded per-pupil revenue (roughly \$4,140 in fiscal year 2011-12) affect savings. At 50 percent, a public school student could use about \$2,070 in tax-credited family savings or a tax-funded scholarship to supplement tuition for his new enrollment at a non-public school. The model predicts more than 52,000 students would choose

this incentive over time to leave a public school in order to pursue private education.

During the first three years, when only public school “switchers” receive the benefit, the state would realize **\$18.1 million** in savings by having fewer students to fund. In intermediate years the growth of state savings would slow, but would continue to accumulate over time. Most financial benefit would be achieved at the local school district level, as combined in the 10-year savings calculation. A larger scholarship size decreases the state’s savings but necessarily increases the number of students expected to choose a non-public school. Over 10 years state savings would reach \$149.6 million, with more than \$780 million in cumulative savings realized at the district level. (See **Appendix** of K-12 chapter in 2010 Citizen’s Budget for more details on calculations, including regional breakdowns of student migrations from public to non-public schools.)

Although a strict calculation cannot be projected, it should be noted that further long-term savings also may be realized by a reduced need for new school construction. The potential savings in the area of capital costs presents an additional opportunity to lower the financial burden on the state of Colorado in coming decades.

In addition to the fiscal benefits, research has shown that the competitive effects of Florida’s private school tuition tax credit program significantly increased the academic performance of public school

<b>Table 3. Colorado Public Education Tax Credit, Projected Migration and Savings</b>					
<b>Tax Credit</b>	<b>Migration</b>	<b>State Savings: 3 Yrs</b>	<b>SAVINGS: 10 YEARS</b>		
			<b>State</b>	<b>District</b>	<b>Total</b>
10%	38,228	\$23,885,632	\$297,045,681	\$573,462,748	\$870,508,429
20%	40,978	\$22,765,441	\$268,265,980	\$614,598,394	\$882,864,374
25%	42,499	\$22,138,825	\$252,217,927	\$637,358,459	\$889,576,386
33%	45,173	\$21,027,713	\$223,837,995	\$677,334,659	\$901,172,655
40%	47,792	\$19,928,237	\$195,837,860	\$716,472,203	\$912,310,063
50%	52,082	\$18,106,581	\$149,591,999	\$780,548,957	\$930,140,956
60%	57,182	\$15,914,060	\$94,109,971	\$856,651,592	\$950,761,563
67%	61,367	\$14,098,805	\$48,271,801	\$919,017,723	\$967,289,524
75%	66,956	\$11,666,553	(\$13,029,359)	\$1,002,030,229	\$989,000,871
80%	71,025	\$9,915,356	(\$57,179,965)	\$1,061,967,275	\$1,004,787,309
90%	107,877	\$9,414,754	(\$115,143,737)	\$1,368,761,897	\$1,253,618,159
100%	120,226	\$0	(\$304,241,583)	\$1,552,662,780	\$1,248,421,197

students.<sup>68</sup> A subsequent study by one of the same researchers found small but statistically significant learning gains for the students who received a tax credit scholarship through Florida's program.<sup>69</sup> Tax credit scholarships also stand on strong legal ground, as a 5-4 U.S. Supreme Court majority ruled in 2009 that taxpayer plaintiffs lacked standing to protest the use of privately expended funds to support students who attend private religious schools.<sup>70</sup>

**2. Repeal Amendment 23.** The effect on the State budget could not be felt until after voters passed the repeal measure, so the next fiscal year would experience no flexibility from this reform. The earliest the legislature could place this measure on the ballot would likely be the general election in November 2014. Some might argue persuasively that the proffered change could be designated as a TABOR issue and therefore could go on the ballot in 2013, but that might not stand the inevitable court challenge. If delayed as expected, the next budget for 2013-14 would have no relief from this quarter and other cuts would have to be found.

The proposed solution is complicated by the fact state officials since 2010 have violated the spirit of Amendment 23. The legislature has used the "budget stabilization factor," or "negative factor," in the annual School Finance Act renewal three consecutive years to bypass the requirement for scheduled increases in per-pupil revenue (PPR). Two different governors have signed the School

Finance Act into law with factored reductions to the funding formula. The practice, which has been used to offset budget demands from other areas in the General Fund, has not been legally challenged. One practical effect of the "negative factor" has been to demonstrate the annual funding increases are more pliable than automatic. Nonetheless, the case for more flexibility in the State's K-12 education budget still may require formal repeal to avoid or minimize potential legal action.

**3. An effective way in which Colorado's K-12 system can move towards greater productivity is through expanded innovations in blended learning, allotting dollars more directly to fund student needs.** An effective way in which Colorado's K-12 system can move towards greater productivity is through expanded innovations in **blended learning**, allotting dollars more directly to fund student needs. Many secondary students in particular may benefit from enhanced opportunities to choose combinations of digital course offerings with traditional face-to-face learning models. The ability to "self-blend" courses in

this manner is significantly inhibited by the current model of school finance that counts students once a year, funds districts rather than students, and limits students to full-time or half-time status. The following menu of reforms, among its other benefits, ultimately should lead to a more cost-effective instructional delivery system and reduce fiscal pressures on K-12 education agencies:<sup>71</sup>

- Funds should be distributed to schools based on multiple count dates rather than the current single October 1 enrollment count, using school membership rather than attendance;
- Dollars should be divided beyond full-time and part-time to reach the course level, using a tiered funding structure to differentiate costs based on course content;
- PPR and categorical funds should be combined and allotted to individual K-12 students, weighted according to need, and directed to their chosen school and/or courses; and
- At least 50 percent of funding should be withheld from providers until successful course completion, with bonuses contemplated for measurable excellent achievement.

Short-term savings to the state budget from a student-centered, course-level funding system cannot be easily calculated. But the greater flexibility and productivity achieved through enacting these student-centered school finance reforms inevitably should lead to lower costs.

Unlike the savings proposed through a tuition tax credit program, the State could not immediately realize the savings estimated from the proposals to repeal Amendment

*An effective way in which Colorado's K-12 system can move towards greater productivity is through expanded innovations in blended learning, allotting dollars more directly to fund student needs.*

23 and adapt funding for blended learning innovation. As previously explained, Amendment 23 constitutionally mandates minimum amounts for the School Finance Act—the core piece of K-12 funding. Any efficiencies achieved therefore would result in local agencies using the funds for other purposes. The State’s total bill would be unchanged. The two proposals provide salient examples of how local schools and districts could achieve real, significant efficiencies with modest reductions in state funding for K-12 education.

**4. Colorado’s local school boards retain the authority to dictate employee pay scales and policies.** Still, the General Assembly should consider using its prerogatives to impose an effective statewide cap on salary increases. A formal recognition that educators should not be compensated for earned master’s degrees,

which show no connection to improved student learning, is one crucial strategy. This observation could be due to the fact that about 90 percent of teacher master’s degrees are awarded from schools of education.<sup>72</sup>

An exception to the phase-out could be considered for master’s degrees in subject content areas relevant to the teaching assignment. The **phased-out elimination of ineffective “master’s bumps”** would remove as much as \$229.2

million in ineffective spending per year.<sup>73</sup> If even half the dollars were reinvested into performance pay systems that aligned with student success, the State would still save **\$114.6 million** otherwise backfilled into local K-12 budgets.

5. As indicated previously, Colorado spends about 3 percentage points less of

its current expenditures on classroom instruction than the national average: 57.6 compared to 60.8 percent. The only spending category where Colorado is more out of line with national trends is in the area of other support services, defined by the U.S. Department of Education as follows:

Expenditures for business support services (activities concerned with the fiscal operation of the [Local Education Agency]), central support services (activities, other than general administration, which support each of the other instructional and support services programs, including planning, research, development, evaluation, information, and data processing services), and other support services expenditures not reported elsewhere.<sup>74</sup>

In 2008-09, Colorado spent 7.1 percent of its current operating budget, or roughly \$625 per student, on “other support services”—as compared with 3.2 percent, or \$343 per student, nationwide. Only the District of Columbia spends more dollars per pupil on this category than Colorado does.<sup>75</sup> **Colorado spends 81 percent more on “other support services” than the average state.** This disparity is due in part to Colorado’s inclusion of certain purchased service expenditures in the category that some other states may leave out.<sup>76</sup> Even after factoring out these questionable expenditures, Colorado would still rank 4th nationally in the share of dollars spent on “other support services” at 5.8 percent, or \$509 per student, in 2008-09.

If the amount (not the rate) Colorado K-12 agencies spend on “other support services” were brought in line with the national average, significant cost savings would occur. Even after the questionable purchased service expenditures are factored out, to bring Colorado’s \$509 spent per student on “other support services” in line with the \$343 per student national average would yield a savings of \$136 million. Under such a scenario, Colorado still rank in the top 10 nationally in the share of current expenditures used for “planning, research, development, evaluation, information, and data processing services.”<sup>77</sup>

*A formal recognition that educators should not be compensated for earned master’s degrees, which show no connection to improved student learning, is one crucial strategy.*

*If the amount (not the rate) Colorado K-12 agencies spend on “other support services” were brought in line with the national average, significant cost savings would occur.*

## ENDNOTES

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- <sup>71</sup> For a full explanation, see Ben DeGrow, *Online Course-Level Funding: Toward Colorado Secondary Self-Blended Learning Options*, Independence Institute Issue Paper 4-2012 (May 2012), <http://education.i2i.org/2012/05/online-course-level-funding-toward-colorado-secondary-self-blended-learning-options/>.
- <sup>72</sup> Roza and Miller, "Separation of Degrees," pg 1; NCES, Schools and Staffing Survey, Public Teacher File, 2003-04, <http://nces.ed.gov/surveys/sass/>.
- <sup>73</sup> Figure calculated by Roza and Miller, "The Sheepskin Effect," p. 4.
- <sup>74</sup> U.S. Department of Education, "Revenues and Expenditures" 2008-09, Glossary, p. 24.
- <sup>75</sup> *Ibid.*, Tables 3 and 4, pp. 9-12.
- <sup>76</sup> Theresa Christensen, Senior Consultant, Public School Finance, Colorado Department of Education, electronic mail to the author, August 21, 2012; Frank H. Johnson, Statistician, Public Education Finance, U.S. Department of Education, electronic mail to the author, August 24, 2012.
- <sup>77</sup> Data provided by CDE, Public School Finance; U.S. Department of Education, "Revenues and Expenditures" 2008-09.

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