



Presentation to the
Reform Roundtable

December 2010

upport children.
upport the future.

Colorado School Finance Project

Created in 1995, following the passage of the 1994 School Finance Act, the Colorado School Finance Project (CSFP) provides research and analysis of school finance information to school districts and state policy makers.

Augenblick, Palaich and Associates:

- APA has been involved in estimating costs in almost 20 states.
 - APA was founded in 1983
 - It has evaluated school finance systems in many states and built state aid formulas in several states.
 - APA also evaluates the Denver Preschool Program, is helping Jefferson County implement a new approach to paying teachers, provides assistance to Mississippi in the Delta region, and provides support to the National Board for Professional Teaching Standards.

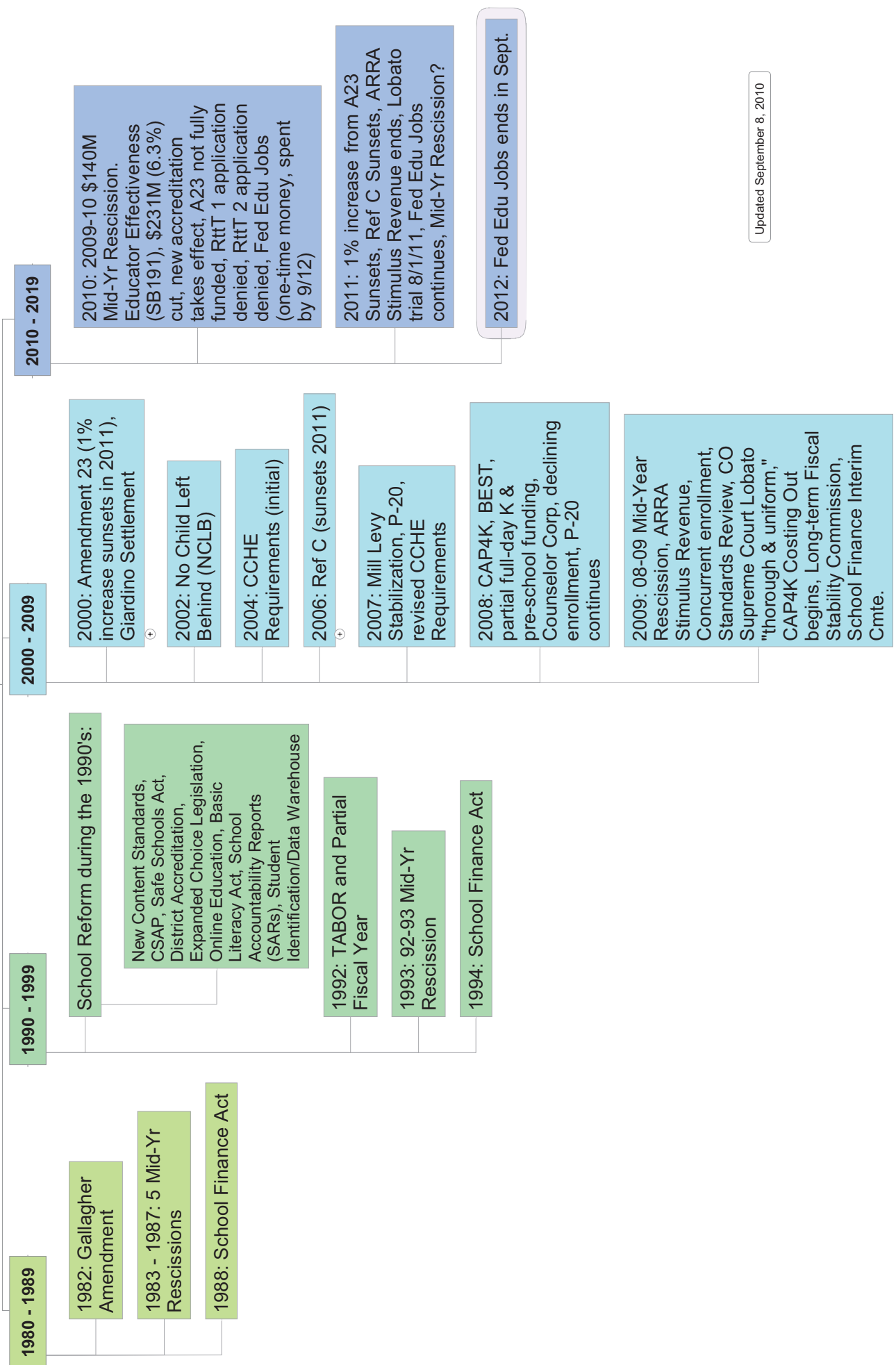
School Finance Act – 1994 Objectives and Goals

Goals and Objectives:

1. To have a 50% state and 50% local contribution in funding formula
2. To have all school districts participate around 40 mills
3. To acknowledge some differences in student and district characteristics
4. To acknowledge regional cost differences – mechanism for adjustment
5. Allow for additional district participation – through an override system above state formula
6. Promote Universal access for students – ensuring students attend



Condensed Timeline of Colorado's
 School Finance & Education Reform
 1980 - 2012



Adequacy Study and Update Overview 2002-2008

In the spring of 2002, the Colorado School Finance Project (CSFP) contracted with Augenblick, Palaich and Associates (APA) to perform an Adequacy Study for Colorado. Colorado had adopted legislation that changed how school districts and students were evaluated at both the state and Federal levels.

CSFP embarked on this study to:

- Quantify the financial concerns of school districts and to analyze these concerns using an approach that is credible and defensible.
- Articulate financial needs tied to academic achievement and to help communities be proactive, instead of reactive, to state policy-makers.
- Objectively demonstrate that issues of both adequacy and equity must be considered in funding a “thorough and uniform” system of public education in Colorado.
- Consider how a new school finance system might address the variety of pressures districts face.
- Specifically address issues around special education, English language learners and at-risk populations.
- Articulate the profound change of moving from “*universal access to universal proficiency*” for every student.

The two approaches utilized were the Professional Judgment and Successful School District. CSFP also:

- Created a bipartisan review committee – inclusive of legislators and state board members
- Developed guiding principles for resource allocation – which was vetted for over a year
- Obtained public perspective of a “successful school” – focus groups of businesses and parents articulated their expectations

Adequacy Study Approach and Process

The *Professional Judgment* approach created panels composed of individuals around the state, representing a variety of school district sizes and areas of expertise. Five model school district sizes were established. The panels were asked to design and establish the programs needed to meet the academic expectations under Colorado’s 12 Model Content Standards, accreditation system, as well as those required by No Child Left Behind (NCLB). District panels and an all-state expert panel reviewed this process.

After the reviews, APA assigned costs to the identified needs. The costs were then reviewed and compared to trends outside of Colorado. This information was used to determine a **base level** of funding for school districts and the characteristics of the populations being served. Perhaps the most important findings from the Professional Judgment panels were that:

- Adequate per pupil funding must be weighted, taking into account:



- Student characteristics (the number of special education, English language learners and at-risk students),
- district size and cost of living
- The factors must be considered in totality, not as “categoricals”.

This approach is common in many states. It allows funding adjustments to more accurately target the needs of the students and costs associated with program delivery.

The *Successful Schools* approach considers how much is spent by school districts that are considered successful under the established accountability systems, such as NCLB. This more simplistic methodology considers spending by a single district or an average of districts, but it does not include analysis of spending on special education, English language learners or at-risk populations. The Successful Schools model cannot alone be used to create a comprehensive school finance structure. Factors to address the needs of special populations must be added in.

The CSFP completed the Adequacy Study in January of 2003. The study provided an analysis of “adequate funding” based on state and federal educational reforms at that time. This analysis included the impact of state and federal academic expectations on current school district financing. This was inclusive of the initial Colorado NCLB plan.

Results

The findings of this work showed a need for changes in a new school finance act that better addressed the costs associated with:

1. School district size.
2. Student populations of at-risk, special education and English language learners.
3. Cost of living adjustments.
4. The growing need of school districts to provide preschool, all day kindergarten, alternative education, summer school, elongation of the school day or year, technology, staff development and the impact of choice.
5. Capital and transportation expenses.

As discussions occurred surrounding the Adequacy Study results there was a desire to:

1. Educate stakeholders and policy leaders at the local and state level of the work.
2. Begin exploring what a new school finance act might look like.
3. Participate and be actively involved with state tax policy discussions.
4. Provide alternative analysis to potential legislation and be a resource.

To discuss what new academic programs were needed to meet the requirements

Goals

1. To create an adequate and equitable funding system for K-12 that is grounded in academic reform and accountability systems, and that takes into account the following elements:
 - a. Base amount derived from the Adequacy Study, accounts for district size. The base amount could support, at a district’s discretion, programs such as



- preschool for at-risk students, all day kindergarten, summer school, after school programs, staff development or additional staff services (adjustments for time).
- b. Weighted adjustment for each school district, based on findings from the Adequacy Study, reflecting the school district size and populations they are serving (special education, English language learners and at-risk). Include the adjustments inside the formula, not as “categoricals”.
 - c. Cost of living adjustment.
 - d. Personnel cost factor.
 - e. Factor addressing the district overhead cost of choice.
 - f. On-line factor.
 - g. Adjustments for capital and transportation.
2. Support local control by school boards and districts for resource allocation, facility configuration and curriculum delivery.
 3. Create a system that would financially address academic performance expectations and cost of living.
 4. Stimulate an education community that is proactive and speaks in a unified voice about what a new school finance system should look like.
 5. Establish a finance system that reflects actual expenditures for capital outlay and transportation.

Updates

The CSFP has updated our 2002-03 study three times to reflect changes in law and additional regulations after implementation of NCLB and the CCHE guidelines.

The latest update in 2008 included the original approaches of *Professional Judgment* and *Successful Schools* and also included the *Evidence Based* approach. The *Evidence Based* approach analyzed research at a programmatic perspective – typically with certain populations of students. CSFP also looked at focus areas of investment by states and school districts that resulted in academic improvement. The research is not specific to a state’s standards or academic expectations as standards and goals vary by state. (In the previous methodologies CSFP was able to utilize the Colorado targets as the proficiency expectations and federal requirements. Therefore tying the analysis to where districts are in the continuum towards the 100% proficiency goal.)

Education is a social science rather than an exact science. Researchers have studied interventions for certain populations of students for over 20 years. Controlled environments are difficult to obtain and many situations see success in combined, high quality, sustainable programs. Some of the programs, in alphabetical order, are:

1. **Career and Technical Education (CTE)** – have shown some mixed results. The current programs evaluated did not meet the academic objectives for the non-CTE students in high school. Therefore, they did not assure additional post secondary education or readiness. The students in CTE programs did obtain higher earning jobs immediately after high school.
2. **Counselors** – have shown a direct positive result in improving student achievement K-12. Focus on early grade interventions for emotional and



- behavioral support in addition to post secondary preparation were critical components.
3. **Full Day Kindergarten** – high quality consistent programs have shown long-term academic benefits for all populations of students.
 4. **Pre School** – high quality programs have a strong long-term impact on student achievement.
 5. **Professional Development** – must be an ongoing program that improves classroom instruction, with a focus on student learning and curricular standards, assessments, and accountability requirements.
 6. **Small Class Size** – class size of 13 to 17 produces higher performance especially for low-income students. Long lasting results require consistent small class size for 3 to 4 years. Research does not support the use of paraprofessionals to lower class size.
 7. **Summer School** – consistency of summer offerings and high quality programs aligned with curriculum and consistent teachers with a focus on remedial or accelerated learning had a positive impact when emphasizing math and reading.
 8. **Teacher Pay** – recent work suggests a positive relationship between teacher salary levels and teacher characteristics (topic expertise/mastery of skills) – and between teacher characteristics and student performance. For example: one study showed 10% pay increase reduced high school drop out by 3-4%. Another study concluded a \$5,000 increase in teacher salary raised average test scores by 4 points in reading, 7 points in math at elementary and 12 to 18 points at middle level.
 9. **Technology** – has mixed results, as it becomes outdated, and is very difficult to find current research given the changing nature of equipment and classroom use. Studies do show a positive conclusion: (1) integration in instruction results in higher achievement, (2) students learn more quickly and have greater retention, (3) students like learning – engaged, (4) very promising for lower achieving or at-risk students. An ongoing concern for access, equity and accountability.

In the spring of 2008, the CSFP did further work with APA to research three areas:

1. **Are there specific educational programs or services that have a positive impact on student performance?**

Achieving academic success and meeting the accountability expectations in Colorado requires investing in students and teachers. Analysis of Colorado's education expectations for *all students to succeed* requires sustainable long-term investments in:

- a) Preschool for special needs students.
- b) Universal full day kindergarten.
- c) **Class size of 15-1 for Preschool – 3rd grade, 25-1 for 4th – 12th**
- d) Additional instruction time for students struggling to meet academic expectations – (before and after school programs, more days in the year, summer school etc.)
- e) Increased staff development.
- f) Increased computers and technology for students and staff.
- g) Additional support for students identified with special needs. (special education, at-risk, English language learners, gifted and talented)



2. Have other states seen an improvement in performance after increasing revenues?

With the national movement to standards and universal proficiency, many states have invested more rapidly and increased funding over the past 15 years compared to the national average. Some of these states are Arkansas, Kansas, New Jersey, New York, Wyoming, Louisiana, Maine, Maryland, Mississippi, South Carolina, and South Dakota. A brief synopsis for Kentucky and Maryland:

Kentucky – increased spending between 1990-2005 by a 5.3% increase over inflation and student growth. The funds were invested in (1) preschool for low income 4 year olds, (2) extended school services (before/after school or summer school), (3) technology, (4) family resource centers, (5) professional development.

Results: Using National Assessment of Educational Progress (NAEP) results 4 of 5 areas of performance were higher than the national average.

Maryland – current spending has increased since 2001-02 to 2007-08 to 4.3% above inflation and student growth. Funding was used for: (1) increasing teacher salaries, (2) hiring additional employees – some specialists, (3) expand opportunities for full day kindergarten, (4) pre-school, (5) improve professional development, (6) implement behavior modification programs, (7) expanding graduation enhancement programs.

Results: From 2002-2007:

- a) Grades 3-5 gap reduced 35% reading, 42% math
- b) Grades 6-8 gap reduced 17% reading, 30% math
- c) High school gap in English reduced 32%

NAEP results showed that in 4 of 5 areas academic growth was higher than national average.

Similar results occurred in New Jersey and Arkansas. These 4 states invested at 4% to 10% per year over population growth and inflationary increases and showed similar.

3. Is there any other research that shows a relationship between spending and performance using state level data?

Given the national emphasis on educational reform, universal proficiency, No Child Left Behind and improvement in academic performance an analysis was done to look at state level spending and state academic performance using the National Assessment of Education Progress (NAEP) test results.

This can be a complicated analysis and the details of every state are available in the full report. For summary and comparative purposes the analysis showed that there



are seven states that are similar to Colorado in the demographic make up (based upon student need) and the wealth of the state.

What does this mean for Colorado?

- a) Colorado's student needs are below the national average.
- b) Colorado is the 5th wealthiest state – 10% higher than national average.
- c) Colorado's tax effort is low – 2 states lower.
- d) Colorado spends 10.8% below the national average for education - \$5,947 – the range of the 7 comparable states is \$6,524 to \$9,663.
- e) Classroom staffing is 13.3% below the national average – larger classes.
- f) Colorado is below the national average in salary and in relation to the 7 comparable states.
- g) Performance in Colorado based on the NAEP is 34.8 – in relation to the 7 comparable states 5 are higher, one is the same and one lower. The range was 32.6 to 45.

States higher in wealth and having a higher tax effort for education than Colorado: Kansas – Nebraska – Wyoming – Indiana – Iowa – New Jersey – Ohio – Pennsylvania – Texas – Wisconsin (the absolute levels of performance of these states vary from 31.5 to 39.1).

Colorado a leader in education reform

Colorado has recently implemented CAP4K, which will create new standards, assessments and accountability systems. Cap4K has created a P-20 framework inclusive of early childhood readiness standards, opportunities for students to have access to different educational choices and an alignment between systems. Students will be measured on annual growth, a minimum of one year of improvement for students. School district and school accreditation has been changed with focus on annual improvement and closing of achievement gaps. The educator effectiveness legislation is in beginning stages of being implemented and will dramatically alter evaluations. Colorado now must implement and sustain a new system; the cost of this new system is unknown. We do know that the cost of the old system was severely under funded, the cuts in education have been ongoing for multiple years and Colorado continues to fall farther and farther behind. This is counter productive to being globally competitive in a 21st century globally competitive economy.



Colorado K-12 Education: An overview (Data from 2008-09)

Increase in Colorado students identified with “special needs.”

At-risk: 30% of students are eligible for free lunch (234,481).
A 63% increase since 2001-02 (143,498).

Special Ed: 11% of students have disabilities requiring special services (83,302).
A 6% increase since 2001-02 (78,334).

ELPA: 9.5% of students are learning English as a second language (101,379).
A 176% increase since 2001-02 (36,756).

Total student enrollment continues to increase in Colorado.

- Colorado’s 178 district enrollment from 2007-08 to 2008-09 increased 17,224 students which is equivalent in size to the 16th largest district in the state.

Colorado per pupil spending falls \$1,036 short of the national average.

- Colorado’s per pupil spending is \$8,521.
- The national average for per pupil spending is \$9,557.

Colorado invests less income in education than the national average.

- Revenue directed to Colorado K-12 education is equal to 3.2% of personal income.
- Revenue directed to K-12 education nationally is equal to 4.3% of personal income.

Colorado teachers’ earnings are \$5,834 less than the national average.

- The average Colorado teacher salary is \$48,485.
- The average national teacher salary is \$54,319.

(Note: This is the average salary, not a base salary.)

Colorado teachers’ years of experience continues to decrease.

- In 1993, Colorado teachers averaged 13 years of experience.

- Colorado teachers average years of experience:

2004 – 9.00 yrs

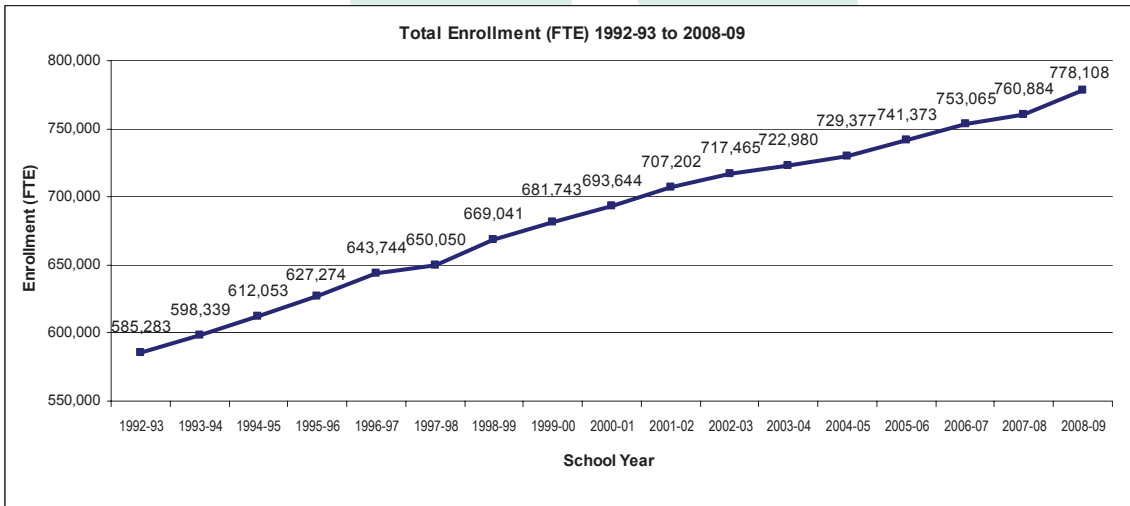
2008 – 8.73 yrs

2009 – 8.48 yrs

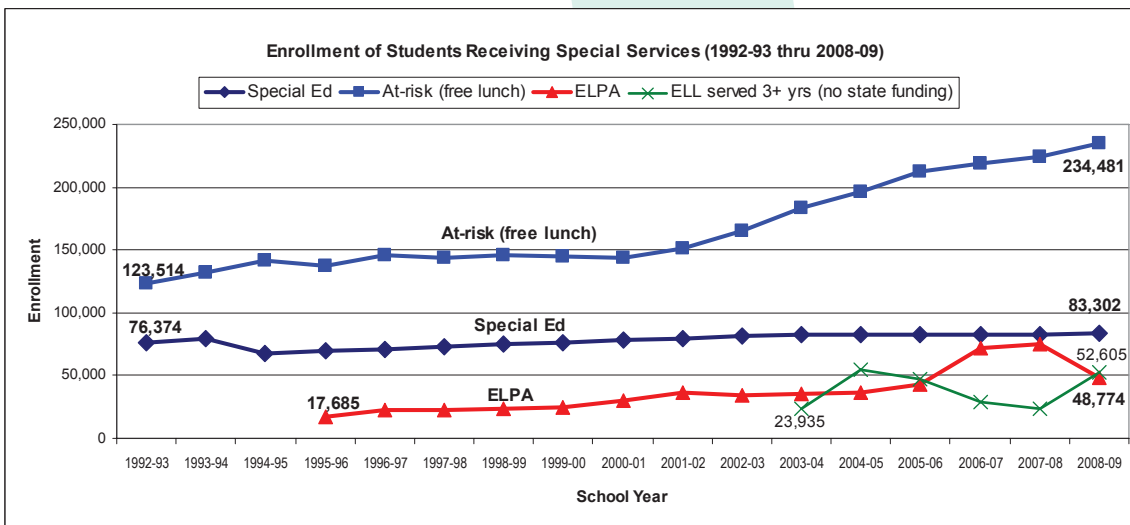
Profile data compiled by Augenblick, Palaich & Associates, 2008-09 data
Source: Colorado Department of Education



Characteristics of Colorado's K-12 Population 1992-93 thru 2008-09



- The number of students enrolled in Colorado's public schools has increased by 33% (192,714 students) from 1992-93 to 2008-09. District enrollment status: 90 districts increased enrollment, 86 declined and 2 did not change.



- **At-Risk students** (free lunch): 30% of the total FTE enrollment, 234,481 students.
- **Special Ed students**: 11% of the total FTE enrollment, 83,302 students.
- **ELPA students** (students counted, districts funded by the state for 2 years): 38% of the total FTE enrollment, 48,774 students. 183 languages served in 134 districts. CDE has modified the way they count ELL students, which decreases the student funded count but is not a decrease in actual ELL students. An additional 52,605 ELL students were served by districts but were not eligible for state ELPA funding

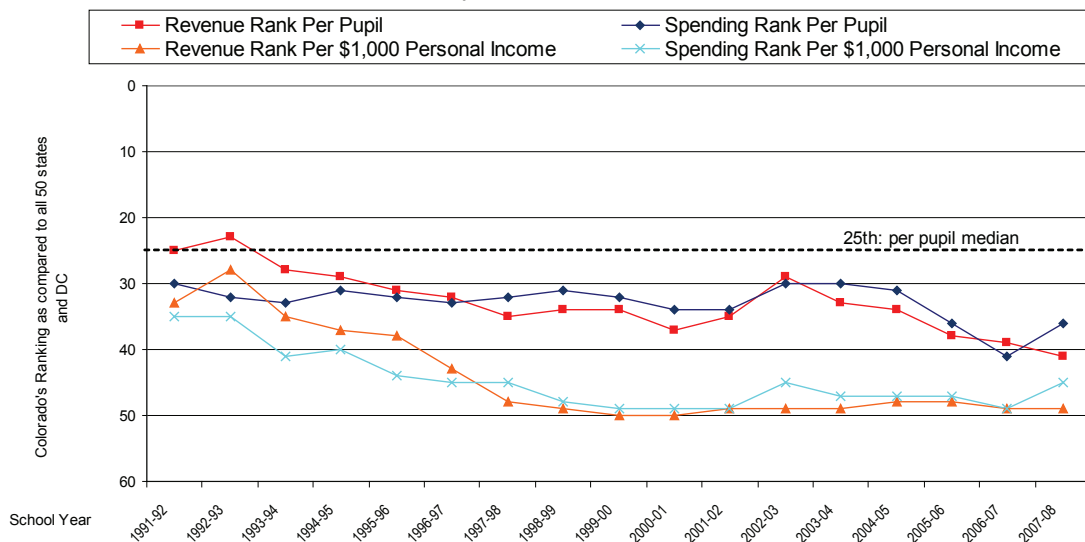
As the overall population of students grows, so does the number of students requiring special services.

Data Sources: Augenblick, Palaich & Associates, Profile of Changes in Colorado School Funding, 2010.
CDE: ELPA 10 Year State Summary, 2010



Colorado Revenue and Spending Rankings 1991-92 through 2007-08

How Colorado Ranks in Per Pupil Revenue and Spending
Compared to all 50 States and DC



In 1992-93, Colorado ranked 28th in per pupil revenue and 35th in per pupil spending per \$1,000 personal income. In 2007-08, Colorado ranked 49th in per pupil revenue and 45th in per pupil spending per \$1,000 of personal income.

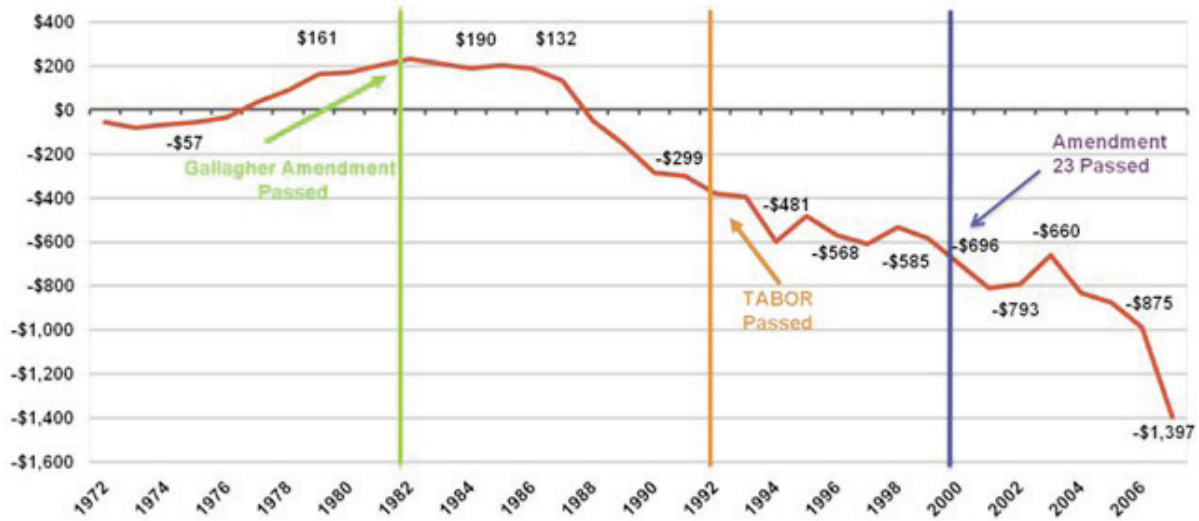
Source: US Census Bureau (1994 through 2010 reports)

K-12 Per-Pupil Funding: Colorado vs. National Average

Source: National Center for Education Statistics



Difference between CO and National Average



Guiding Principles for Resource Allocation to School Districts

1. The majority (95%) of all state funding, including state grants, should be distributed to school districts through a formula that considers the needs and fiscal capacities of individual school districts.
2. The formula should be driven by a per-student base cost that reflects the revenue needed for a regular student (a student and district without any special needs) to meet the 12 content standards.
3. Adjustments to the per-student base cost should reflect added costs associated with the school district or the student that require supplementary expenditures to meet the standards.
4. School districts should make a contribution to the costs specified by the formula based on a reasonable tax effort.
5. To reflect the differing needs of their students and communities, school districts are permitted, with limitation and voter approval, to utilize additional local revenue in excess of the adjusted base amount determined in the formula.
6. A priority for school districts will be to continue to develop procedures for allocating resources to schools that reflect the needs at those sites.
7. State funding and laws for capital should be provided based on needs of districts and their relative fiscal capacity to pay, as well as evidence of reasonable local effort.
8. Funding for transportation should be provided that takes into consideration the unique circumstances districts face in transporting students.
9. For districts who offer “choice,” defined as charters or online schools, a portion reimbursed for the overhead expenses that are not reduced as part of infrastructure, when these choices are introduced.
10. The state should not specify how district funds are spent.
11. The state should hold districts accountable for student performance and appropriate legal requirements.

These principles act as a whole and are inclusive.
This system should be designed to build capacity for school districts.

Revisions/Discussions ongoing.



Evaluating a School Finance System

Is it:

Equitable?

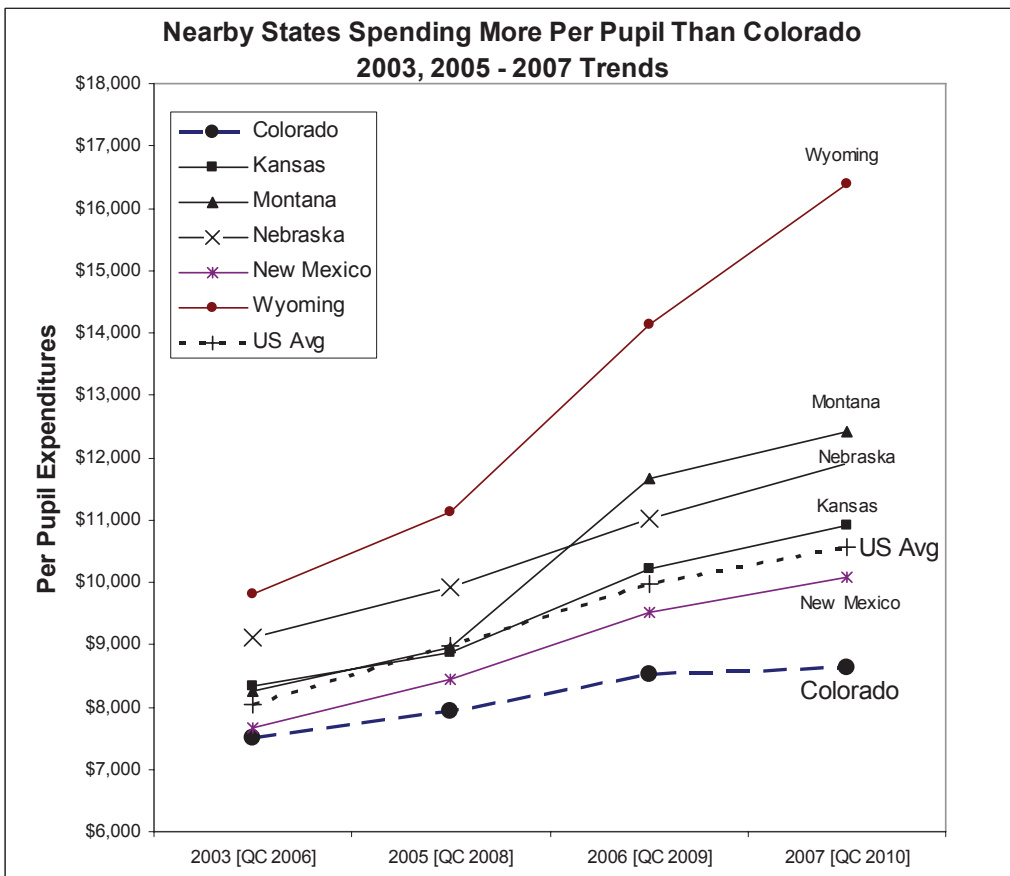
Adequate?

Accountable?

Adaptable (flexible)?

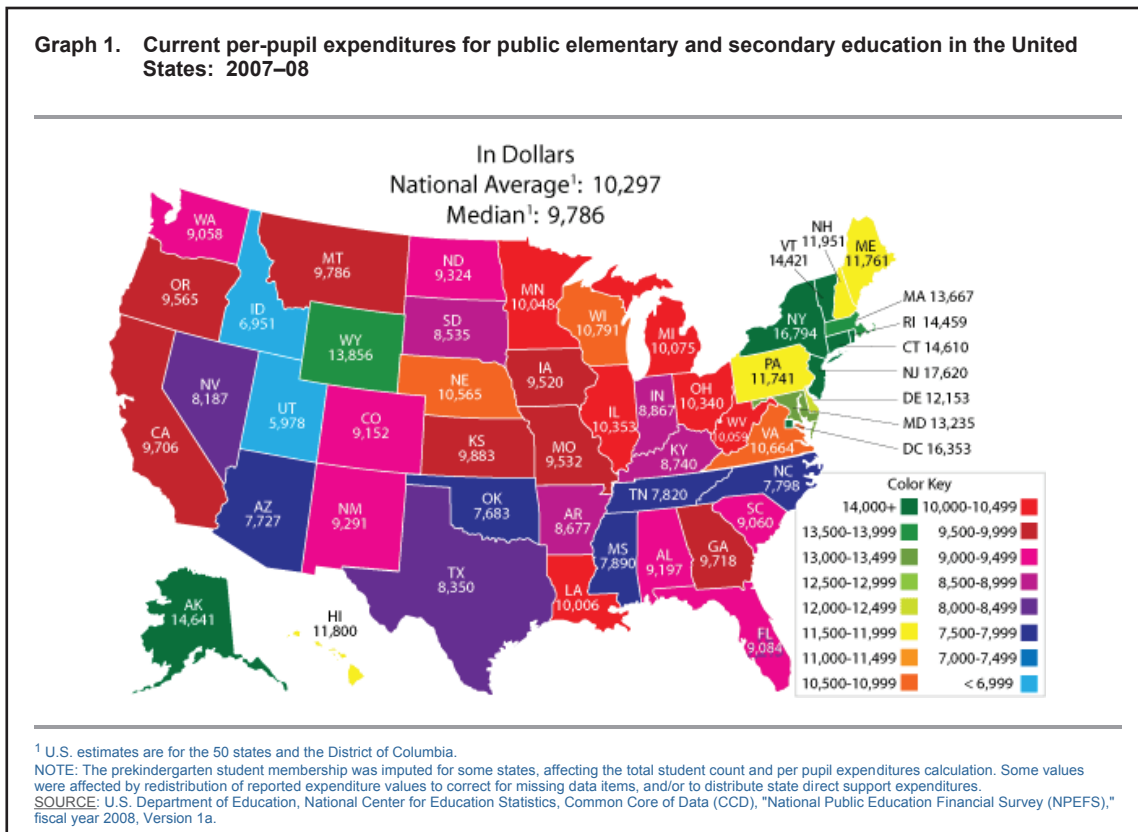
Understandable?

Supportive of local community values?



Graph represents investments states have made in K-12 funding – compares Colorado to surrounding states and national average.

Source: Ed Week Quality Counts 2006, 2008, 2009, 2010





Colorado School Finance Project

Fifteen years of research and analysis of school finance information
for school districts and state policy makers.

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