Presentation to the 2009 School Finance Interim Committee

June 2009

Support children. Support 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.
Guiding Principles for Resource Allocation to School Districts

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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.

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.

The Adequacy Study and Update Overview

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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.

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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:
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.
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).

What Next?

Colorado has recently implemented CAP4K, which will create new standards, assessments and accountability systems. This CAP4K legislation has created a P-20 discussion of readiness, opportunities for students to have access to different educational choices and an alignment between systems. The legislation has been enhanced by the discussions of the “Race To The Top” part of the Federal Stimulus money available for states. This gives Colorado the opportunity to utilize the interim school finance committee to create a finance system that compliments its academic expectations. This opportunity will allow the committee to analyze the investment needed for sustainable educational reform and enable Colorado’s students and economy to compete globally in the 21st century.
Colorado K-12 Education: An overview
(Data from 2006-07)

Increase in Colorado students identified with “special needs.”

At-risk: 29% of students are eligible for free lunch (218,571).
A 52% increase since 2001-02 (143,498).

Special Ed: 11% of students have disabilities requiring special services (83,121).
A 6% increase since 2001-02 (78,334).

ELPA: 9.5% of students are learning English as a second language (71,582).
A 95% increase since 2001-02 (36,756).

Total student enrollment continues to increase in Colorado.
- Colorado’s 178 district enrollment from 2005-06 to 2006-07 increased 11,700 students which is equivalent in size to the 17th 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 3.12% of personal income.
- Revenue directed to K-12 education nationally is equal to 4.15% of personal income.

Colorado teachers’ earnings are $4,985 less than the national average.
- The average Colorado teacher salary is $45,831.
- The average national teacher salary is $50,816.
  (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:
  2002 – 10.96 yrs
  2006 – 9.10 yrs
  2007 – 8.97 yrs

Profile data compiled by Augenblick, Palaich & Associates, 2006-07 data
Source: Colorado Department of Education
The number of students enrolled in Colorado’s public schools has increased by over 29% (167,779 students) from 1992-93 to 2006-07. Between 2005-06 and 2006-07:

- 69 districts lost 11 or more students (range from 11 to 714 students).
- 53 districts were stable (enrollment increased or decreased by 10 or fewer students).
- 56 districts gained 11 or more students (range from 11 to 2,613 students).

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

Data Sources: Augustblick, Palaich & Associates, Profile of Changes in Colorado School Funding, 2008
CDE: ELPA 10 Year State Summary, 2007
K-12 Students under the English Language Proficiency Act (ELPA)

- ELPA Students are students whose dominate language is not English and whose academic achievement is impaired due to inability to comprehend or speak English.
- Eligible students are funded annually on per pupil basis, maximum funding two calendar years.
- Districts serve students after the two year funding limit to meet proficiency targets.
- Pre-K students are not eligible for ELPA funding.

![Graph showing Number of ELPA Students, 1995-96 through 2007-08](image)

**ELPA A/B Category:** *A Students* comprehend or speak a language other than English and do not speak English. *B Students* comprehend or speak some English, but the predominant comprehension and speech is in a language other than English. **ELPA C Category:** *C Students* comprehend or speak English and one or more other languages and their dominant language is difficult to determine.

![Graph showing Allocation per student, 1995-96 through 2007-08](image)

In 2003-04, funding allocation for A/B and C students was almost equal, $101 for A/B and $110 for C. In the 4 school years since that time, A/B funding increased $81 to $182 per student. C funding decreased $93 to $17 per student. The allocations are not adequate to accommodate instruction and materials necessary to enable students to gain the English language literacy skills necessary to learn course content.

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Revisions/Discussions ongoing.
Evaluating a School Finance System

Is it:

Equitable?

Adequate?

Accountable?

Adaptable (flexible)?

Understandable?

Supportive of local community values?
CSFP Research Inventory
Areas of Major Focus

1. “Profile Data” – 1993 thru 2007 – yearly district, state and national comparisons. Areas analyzed:
   a. Enrollment – changes – size
   b. Special Needs populations – trends
   c. Wealth of school district – equity
   d. Number of teachers – years of experience/education
   e. Dollars spent toward instruction, maintenance and operation

2. “Adequacy Study” - Approaches include Successful School District and Professional Judgment. Study originally completed in 2003, first updated in 2005, recently updated in spring of 2008. Updates reflect changes in accountability requirements. Results and implications for implementation also completed initially and after updates. During this process “Guiding Principles for Resource Allocation” were also developed.

   a. School district size
   b. Cost of living factor
   c. Personnel factor
   d. At-risk: definition and adjustment
   e. Choice: in a school, in a district and increased class offerings
   f. Special Education
   g. English language learners
   h. Transportation
   i. Declining enrollment
   j. Capital: facilities, maintenance, operations
   k. CPI adjustment: alternatives
   l. Increased academic adjustment
   m. Voc Ed/Career & Tech Ed
   n. Summer School
   o. Pre School
   p. Kindergarten: all day
   q. Technology
   r. On-line
   s. Staff Development
   t. Compensation/Benefits
   u. Mill Levy
   v. Evidence-Based/Research of best practices

4. 2005 – Interim Study: Financing of Public Schools
Colorado School Finance Project

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

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