

Building a Solid Base for Literacy

Building a solid base for literacy is our third gateway to a life of opportunity. A child who masters literacy skills in elementary school will enjoy many more opportunities in life than a child who does not master these skills.

Literacy is the basis of all future learning. It sets the stage for mastering increasingly complex subjects in later grades and for meeting challenges throughout life.

A child who is literate at an early age is far more likely to succeed in other academic areas and to graduate from high school with the opportunity to succeed in college or the job market.

A child who does not master literacy skills in elementary school will increasingly fall behind her peers as she progresses through school and will almost certainly have fewer opportunities for financial success in adulthood.

We have chosen three indicators to measure how many of Colorado's elementary school children are making it through this third essential gateway.

Indicator 1: Proficiency in third-grade reading tests

The ability to read is the basis of all future learning.

Indicator 2: Proficiency in fifth grade math tests

Math literacy is increasingly important to success in the 21st Century workplace.

Indicator 3: Quality instruction in elementary school

Small class sizes that allow for increased personal attention and teachers who are highly qualified to teach in their fields are particularly important to improving student performance in the early years of school.





Indicator 1: Proficiency in third-grade reading tests

Being able to read in English is the base from which all future educational success can be achieved. Kindergarten through third grade is the most critical time for children to build reading skills.

Colorado law requires that by the end of third grade, children in public schools are to be fluent readers with a full range of reading strategies.

Of Colorado's third graders, 72 percent scored proficient or advanced on the Colorado Student Assessment Program (CSAP) reading test in 2005.

This represents a one point drop since 2001, indicating Colorado has made no progress since 2001 increasing the overall percentage of third-grade students with adequate reading skills.

Test results show 28 percent of Colorado's third graders are not able to read at the level necessary to succeed in the higher grades.

Embedded in this disappointing overall rate are significant achievement gaps based on race and income.

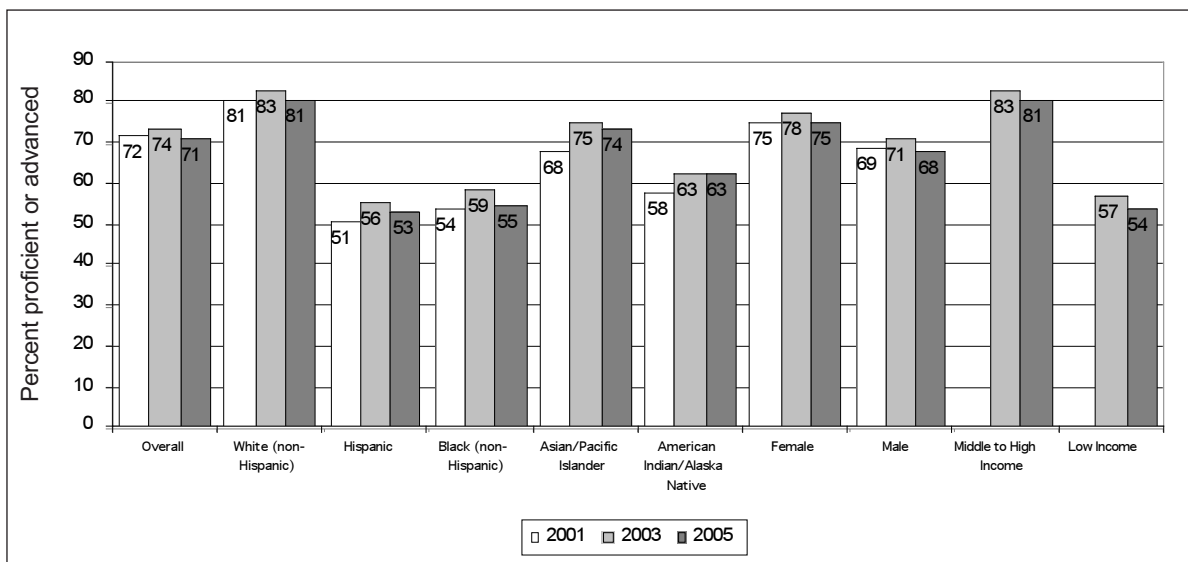
- 81 percent of white and 74 percent of Asian American students scored proficient or better, compared to 63 percent of American Indian, 55 percent of African-American and 53 percent of Hispanic students.
- 81 percent of middle- and high-income students scored proficient or better, compared to only 54 percent of low-income students.

There is a smaller but consistent achievement gap based on gender, with 75 percent of girls scoring proficient or better compared to 68 percent of boys.

The achievement gap is nothing new. It has persisted in all subject areas and grades since Colorado started the CSAP tests.

Lower than average performance of poor and minority students is one of the most pressing problems in Colorado's education system.

Figure 1. Percent of students scoring proficient or advanced on the CSAP third grade reading test, by race, income, and gender, from 2001 to 2005



Source: Colorado Department of Education. CSAP State Disaggregated Summary Results, 2001, 2003, 2005.

Note: Data for low-income and middle- to high-income is based on eligibility for Colorado's free or reduced lunch program and data is only available beginning in 2003.

Indicator 2: Proficiency in fifth grade math tests

Math skills are important for young students to be successful later in school and in our high technology world. For kids to have a chance to succeed, we must give them sufficient math skills. Whether it's for a future job, buying a house or doing taxes, math literacy is an important indicator of opportunity.

Of Colorado's fifth graders, 63 percent scored proficient or advanced on the CSAP math test in 2005. This represents an 11 point increase since 2001, indicating Colorado has made steady progress since 2001 improving the math skills of fifth-grade students. Still, 37 percent of Colorado's fifth graders have math skills that are considered only partially proficient or unsatisfactory.

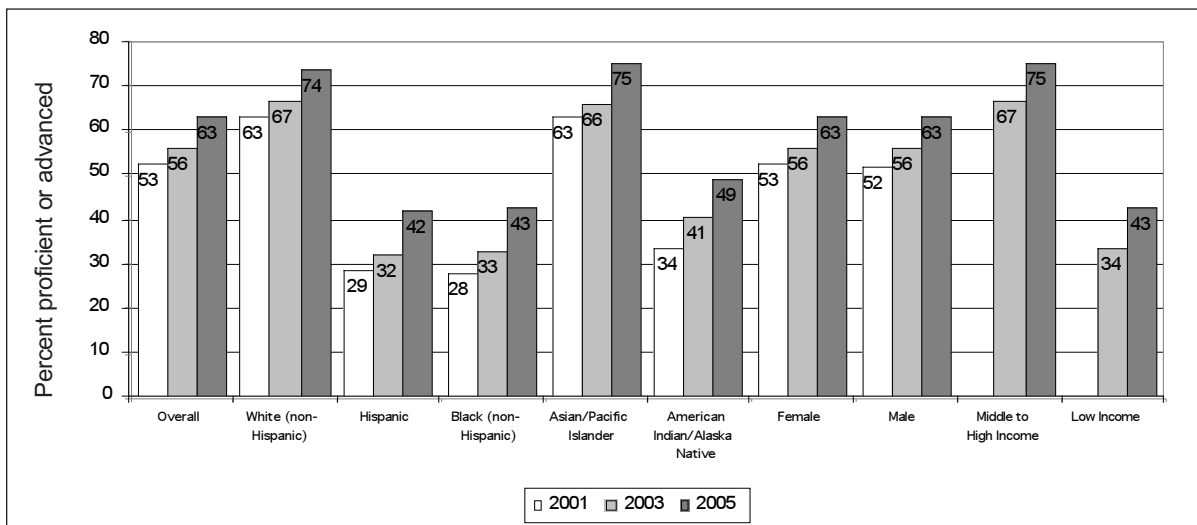
Math proficiency levels improved for all races and all income levels. But, as with the CSAP reading test, the fifth-grade CSAP math test exposes significant achievement gaps based on race and income.

- 74 percent of white and 75 percent of Asian American students scored proficient or better, compared to 49 percent of American Indian, 43 percent of African-American and 42 percent of Hispanic students.
- 75 percent of middle- and high-income students scored proficient or better, compared with only 43 percent of low-income students.

Colorado has had success over the past five years improving the math skills of its young students. However, so long as the achievement gap persists between races and income groups, the benefits of this improvement will not be fully shared by those most in need.



Figure 2. Percent of students scoring proficient or advanced on the CSAP fifth grade math test, by race, income and gender, from 2001 to 2005



Source: Colorado Department of Education. CSAP State Disaggregated Summary Results, 2001, 2003, 2005. Note: Data for low-income and middle- to high-income is based on eligibility for Colorado's free or reduced lunch program and data is only available beginning in 2003.

Online: www.cde.state.co.us/cdeassess/csap/as_latestCSAP.htm



Indicator 3: Quality instruction in elementary school

Elementary school class sizes

In smaller classes, teachers can respond better to student needs and students receive more individual attention, leading to higher academic achievement.

The clearest evidence of the positive effects of small class size is in the primary grades. Research shows primary grade children benefit when class size is reduced from an average of 25 to 15 students. In a four-year, large-scale study, small class sizes clearly improved the performance of all children, including low-income and minority children.¹

Low-income and minority children are less likely to come to school with the skills to succeed. They will gain the most from the close and personal relationships with teachers that small classrooms can allow.²

In 1999, the average class size in Colorado elementary schools was 23 students, above the national average of 21 and well above the size research suggests can result in significant improvements in achievement.

We were unable to find more recent reliable data on class size in Colorado. We urge the Colorado Department of Education to provide more recent data in this area.

Qualified teachers

Highly trained and qualified teachers add to the potential for success for elementary school students. Recruiting and retaining good teachers gives Colorado the ability to stay competitive and creative in its education policies.

Research has shown that quality teachers are the most important tools in bridging the achievement gap. Teachers who have command of their subject matter and a broad set of teaching methods are more effective at meeting the diverse needs of students.³

In Colorado, 62 percent of teachers majored in the core academic subjects they teach, less than the national average of 64 percent.⁴

In the 2002-03 school year, 95 percent of elementary school teachers in Colorado were defined as highly qualified.

In 2003, 9 percent of all classes in Colorado were taught by teachers who were not considered highly qualified.⁵

While Colorado has a high number of teachers highly qualified in their subject area, that does not necessarily mean each can effectively teach in diverse classrooms.

To become highly effective in the most challenging classrooms, teachers must be trained and practiced in a variety of methods and strategies and develop skills that can help move those students most at risk toward proficiency in reading, math and other subjects.⁶

What is Colorado doing?

Funding for K-12 education

Throughout the 1980s, Colorado spending per pupil for elementary and secondary education exceeded the national average. Colorado now spends less than the national average per pupil. Colorado voters approved Amendment 23 in 2000 to guarantee K-12 spending would grow by at least 1 percent over inflation during the following decade.

By approving referenda C and D, Colorado voters have said more should be spent on K-12 education, including class room instruction and the repair of dilapidated school buildings.

Incentives for teachers

Many states offer incentives such as loan repayment or housing assistance for teachers to work in underperforming schools.

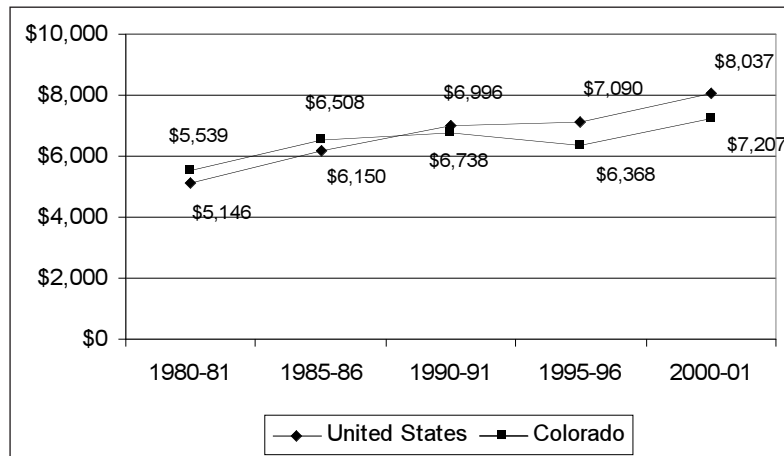
Colorado offers the Loan Incentive for Teachers (LIFT) program for teachers who receive their education at a Colorado college or university and then teach math, science, special education, or linguistically-diverse education. Teachers may qualify for up to \$2,000 in college loan forgiveness per year for up to four years.⁷ The federal government has a similar program.

In 2005, Denver voters approved ballot question 3A, a \$25 million professional compensation package for teachers, offering financial incentives to those who take on difficult subjects or show success in low-performing schools.

Colorado Closing the Achievement Gap Commission

In 2003, the Legislature passed SB03-254 to create the Commission on Closing the Achievement Gap. The appointed commission is to report to the state Board of

Figure 3. Average per-pupil spending for public education, U.S. and Colorado



Source: U.S. Department of Education, National Center for Education Statistics, Statistics of State School NCES Common Core Data (CCD), National Public Education Financial Survey, 1985-86 through 2000-01., August 2003. Note: Dollars adjusted for inflation.

Education and the Legislature with recommendations for action on program and policy changes to close the achievement gap. The commission issued an interim report in November 2004; a final report is due in December 2005.

The commission outlined key areas for action: improving teacher quality, professional development for teachers, cultural competency programs for instructors, and stronger parent and community involvement.⁸

CSAP tests and school ratings

Colorado law requires that schools rated unsatisfactory in CSAP tests for three consecutive years be converted to charter schools, allowing them to customize curriculum, and teaching methods to meet unique needs of the students. In 2002, the state set rating thresholds, with the lowest 2 percent of schools receiving an unsatisfactory rating, and the next lowest 25 percent scoring schools receiving a low rating.⁹

After 2002, there was no requirement that a certain percentage of schools be rated





What is Colorado doing?

unsatisfactory. Schools move in and out of this category depending on student scores. In school year 2003-04, 13 schools were rated unsatisfactory, down from 32 in 2002-03 and 49 in 2001-02.¹⁰ To date, Cole Middle School in Denver is the only forced conversion to a charter school under the law.¹¹

Read to Achieve

Colorado's Read to Achieve program funds intensive reading programs in elementary schools, charter schools and school consortiums. The program is designed for second and third grade students. Activities include academies for reading instruction, after-school literacy programs, summer school clinics, tutoring and extended-day reading programs.

By statute, continued funding for Read to Achieve depends on student performance. To be eligible after three years, schools must show at least 25 percent of students enrolled in the program improved their reading skills to grade level or achieved proficiency on the state reading assessment test.

During the 2003-04 school year, 483 schools received \$10 million for Read to Achieve programs, serving 22,000 second and third grade students. From January 2001 through June 2003, 50,481 students

participated in Read to Achieve programs. The Legislature's goal for the program was to have 25 percent of these at-risk students score proficient or above on the third grade reading CSAP. Of the 20,210 students who took the CSAP, 10,547 students, or 52 percent, scored proficient or above.¹²

Funding for the program has fallen each year: \$1,100 per pupil in FY 2000-01 and FY 2001-02, \$950 per pupil in FY 2002-03, \$630 per pupil in FY 2003-04, \$1,000 per pupil in FY 2004-05 and \$327 per pupil in FY 2005-06. Many Read to Achieve sites also use the Reading First program.¹³

Reading First Program

Reading First is a federal grant program to help schools ensure that more children receive effective reading instruction in the early grades. The program provides professional development for teachers and implements research-based reading programs for students in kindergarten through third grade.

The federal Department of Education approved Colorado's six-year plan. The state is eligible for \$59 million in federal funds if it meets performance goals. In FY 2005-06, Colorado expects to receive \$11.6 million in federal funds for Reading First programs.¹⁴

What more should Colorado do?

Ballot questions

The passage of Referendum C in 2005 is expected to bring approximately \$1 billion more into the public schools by 2010 and to raise overall school funding by at least \$250 million a year after that.

Recommendation: The Legislature should carefully target this money for programs that raise performance levels of all students and help close the persistent achievement gaps throughout the K-12 system. These

include reading and literacy programs, teacher development and incentive programs, and added slots in the Colorado Preschool Program.

The passage of Question 3A by Denver voters signals an important new willingness to use incentives to attract high quality teachers and to focus on the most vexing performance problems. Voters in other school districts should consider enacting similar measures tailored to their specific situations and unique problems. In addition, helping teachers who choose to teach in low-income

What more should Colorado do?

and under-performing schools repay their student loans could help bring highly qualified instructors to areas that badly need them.

Recommendation: The state should work with the Denver Public Schools to document the performance of its new compensation program, share lessons learned and provide technical assistance to other districts that want to try similar approaches.

Recommendation: The state should expand programs like LIFT to encourage college students to pursue education degrees and develop teaching skills in math, science and English proficiency.

Reading literacy

Proven programs exist that increase literacy skills for targeted groups of students. Training teachers on these scientifically based programs could increase reading proficiency. It is also important to train teachers to be racially and culturally competent so they can work toward closing the achievement gap for minority students.¹⁵ Professional development must be a priority to improve overall teacher quality.

Recommendation: The state should continue to fund and track the success rates of programs such as Read to Achieve and Reading First. And, as we first recommended in our 2002 opportunity report, Colorado should integrate the two reading programs into the state's education infrastructure to provide a seamless approach to early literacy.

Math proficiency

Colorado needs to ensure that teachers are taking coherent approaches to math instruction based on current research on math cognition and learning. To do this, Colorado must recruit and develop teachers

who are versed in a practice-based successful math curriculum.¹⁶ Teachers who can teach the “foreign” language of math to students, building their basic arithmetic and logic skills, are essential to educating a new generation of students to succeed in a global economy. Achieving greater success in math proficiency requires federal and local partnerships, performance-based awards for teachers, professional development and a strong system of student and teacher evaluation.¹⁷

Recommendation: Colorado should invest some of the revenues from Referendum C that are earmarked for public schools to make professional development programs for the state's math teachers more available and affordable.

Achievement gap

Left unchecked, the persistent achievement gap among different groups of students will become an opportunity and prosperity gap when those students become adults. Colorado's top priorities should be to close these gaps and raise overall performance of all students.

Recommendation: The Legislature should carefully consider the recommendations from the Colorado Commission on Closing the Achievement Gap. It should use revenues from Referendum C earmarked for public schools to develop initiatives that can be implemented by school districts across the state to close the gap.

Recommendation: The state should also actively train and develop teachers in proven programs that have worked to close the gap in other states. This should be a top priority for the use of funds made available by the passage of Referendum C.

