

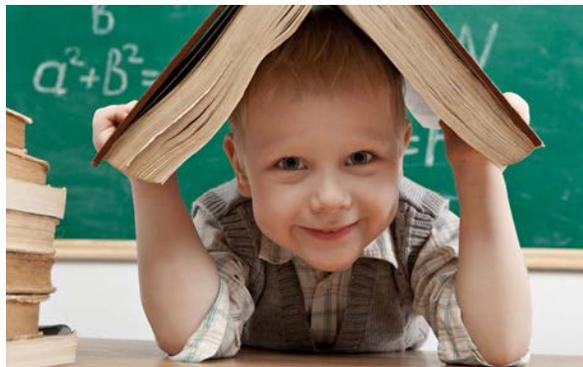
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Research Report

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Lessons From Our Neighbor

Learning from Colorado's Educational Success



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The mission of Utah Foundation is to promote a thriving economy, a well-prepared workforce, and a high quality of life for Utahns by performing thorough, well-supported research that helps policymakers, business and community leaders, and citizens better understand complex issues and providing practical, well-reasoned recommendations for policy change.

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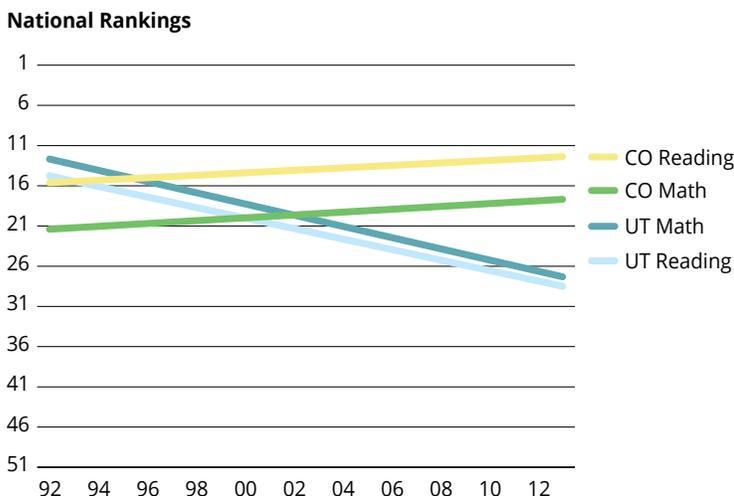
In the early 1990s Utah ranked in the top 15 states on all four major national tests. Utah lost ground in the late nineties and now ranks in the middle twenties among the states. Colorado also slipped in national rankings, but contrary to Utah, Colorado quickly rebounded, and has been in the top 15 in reading and math for the last decade despite spending less than the national average on education.

This report explores a range of policies and programs in Colorado that might account for their robust improvement. Utah could learn from Colorado’s statewide assessments and accountability measures, publicly-funded preschool, full-day kindergarten, and specific literacy legislation.

FINDINGS

- Utah used to be ranked higher on national tests than Colorado, but now the opposite is true.
- Utah has no state-funded preschool. In Colorado, 21% of four-year olds attend state-funded preschools, all of which adhere to rigorous standards of quality.
- A pilot program is providing preschool for 1,000 at-risk Utah children through a private-public partnership. By contrast, Denver has local government subsidies for all four-year olds to attend high-quality preschool. In total, tens of thousands of Colorado children attend high-quality public preschool annually.
- In Utah, 13% of five-year olds attend full-day kindergarten. In Colorado, 74% of five-year olds attend full-day kindergarten.
- In Utah, money for literacy is spent on tutors, specialists, and software. Other programs are poorly funded, community-based, and staffed by volunteers. In Colorado, literacy initiatives are more centralized, better funded, and targeted towards at-risk kids. Further, Colorado’s teachers are required by statute to create individualized plans for each child, and to make parents active partners in achieving reading goals.

National Trends of 4th Grade Reading and Math Rankings, Utah and Colorado, 1992-2013



Source: National Center for Education Statistics (NCES).

This report was written by Utah Foundation Research Analyst Melissa Proctor and Research Director Shawn Teigen. Ms. Proctor and Mr. Teigen can be reached for comment at (801) 355-1400 or by email at melissa@utahfoundation.org or shawn@utahfoundation.org.

Special thanks to our reviewers Sydnee Dickson from the Utah State Office of Education, Chris Ellis from the United Way of Salt Lake, and Bill Jaeger from the Colorado Children’s Campaign. At the end of this report we thank the other education policy experts in Utah and Colorado who offered their time and insights on this project.

INTRODUCTION

In this report, Utah Foundation examines Colorado's education policies to understand the policies and programs behind its success. Other than graduation rates, Colorado has performed better than Utah on comparable metrics, particularly over the past ten years. Colorado, like Utah, spends less per pupil than the national average, and the states have similar demographic trends. Despite those similarities, Colorado beats Utah on national tests.

Utah Foundation found that no single educational policy measure accounts for Colorado's better performance, which is not surprising since success over time is rarely mono-causal. What this report provides is a comparison of various programs in each state with an eye toward spurring conversation. One such program is a somewhat contemporary concept: turnaround schools. Other significant programs in Colorado have been implemented to different degrees over time: preschool, full-day kindergarten, and early literacy programs.

This report focuses mostly on two racial and ethnic subgroups: white students and Hispanic or Latino students. In both Utah and Colorado, white children make up the majority of the student population, but in each case Hispanic or Latino children make up a vast majority of the students of color population.

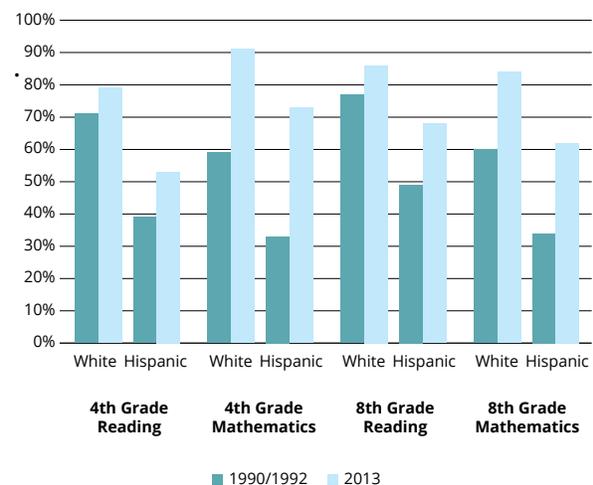
Utah Foundation formally interviewed more than a dozen education experts and policymakers in Colorado to tease out what they saw as the major, statewide initiatives or program changes that affected national test results over the past 10 to 20 years. These experts ranged from a state senator who sponsored literacy legislation to education policy administrators in various fields at the Colorado Department of Education. In addition, Utah Foundation interviewed education experts from the Utah State Office of Education and elsewhere to more fully understand comparable programs in this state.

NATIONAL TEST SCORES

The U.S. Department of Education has been testing a small sample of 4th and 8th grade students in each state on reading and mathematics on a regular basis (typically every two years) since the early 1990s, via the National Assessment of Educational Progress (NAEP, pronounced "nape"). Historical test score comparisons of NAEP (all the way from the 1970s) show only slight improvement over time. Paradoxically, these scores provide robust improvements when examining students by race and ethnicity. This is an example of Simpson's paradox.

Simpson's paradox is the result of averaging different groups of data which have different weights. This occurs with NAEP scores because the proportion of race and ethnic subgroups is changing. Since certain groups of students which have not historically performed as well on tests are making up a larger proportion of the population of students (particularly Hispanic or Latino students), the average of all students is artificially reduced,

Figure 1: Percent of Students with "Basic" or Higher NAEP Proficiency by Subject by Year, U.S



Source: NCES.

and thus it appears as though students overall are barely improving. This report uses disaggregated – or uncombined – data to reveal the paradox in comparing Utah and Colorado.

NAEP has four achievement levels: advanced, proficient, basic, and below basic. While there is some question as to how these levels should be interpreted, it is clear that each of the racial and ethnic subgroups have shown vast improvement for those attaining basic and proficient achievement.¹ White students have a greater increase in proficient than basic across all four of the common NAEP tests (between 11 and 37 percentage point increases depending upon the test), while the Hispanic or Latino students have a greater increase in basic than proficient (between 14 and 40 percentage point increases depending upon the test). (See Figure 1 for basic increases.)

In addition to tracking changes in in-state achievement, a major NAEP goal is to compare student achievement across states.² In the early 1990s, Utah fared well, ranking within the top 15 of states on all four major NAEP tests (see Figure 2).

However, Utah has lost considerable ground in rankings. Colorado has performed much better over time. The state was trailing behind Utah on all four tests in 1992. Like Utah, Colorado slid in national rankings toward the end of the 1990s, but has improved within the past decade and has performed better than Utah on each of the four main tests every year since 2003. Colorado was among the top ten states in math and just outside of the top ten for reading. On a bright note, Utah students have improved on the eighth grade reading exam from 29th in 2007 to 20th in 2009 and most recently 13th in 2013.

When comparing Utah to Colorado it is useful to look beyond NAEP rankings to the test scores themselves. The NAEP mathematics and reading scales range from 0 to 500 (though these scale scores and achievement level results should not be used to compare subjects or grades).³ Average scores for both states have trended up in the past decade. Colorado scores have been equal to or higher than Utah scores over the past decade. But here too, disaggregating the scores by race and ethnicity provides further rationale for looking to Colorado as a high achieving state since its racial and ethnic subgroups far out perform Utah's subgroups. (See Figure 3.)

NAEP also administered a science test in 2009 and 2011. Utah beat Colorado each year. In 2011 Utah was sixth in nation while Colorado was tenth (scores were very close: 161.4 and 160.6 respectively).⁴ However, disaggregated by race and ethnicity, Colorado scores were higher (in 2011 white Coloradans topped the nation, though Hispanic or Latino Coloradans were 15th).

ACT scores are also comparable across the states. Colorado and Utah both have had 100% of students tested in 2013 and 2014 (Utah did not test 100% of students in 2012). Utah's students performed better than Colorado's students both years; in 2014 the average composite score for English, math, reading and science in Utah was 20.8 compared to 20.6 in Colorado. But again, when disaggregated by race and ethnicity, Colorado edged out Utah.⁵

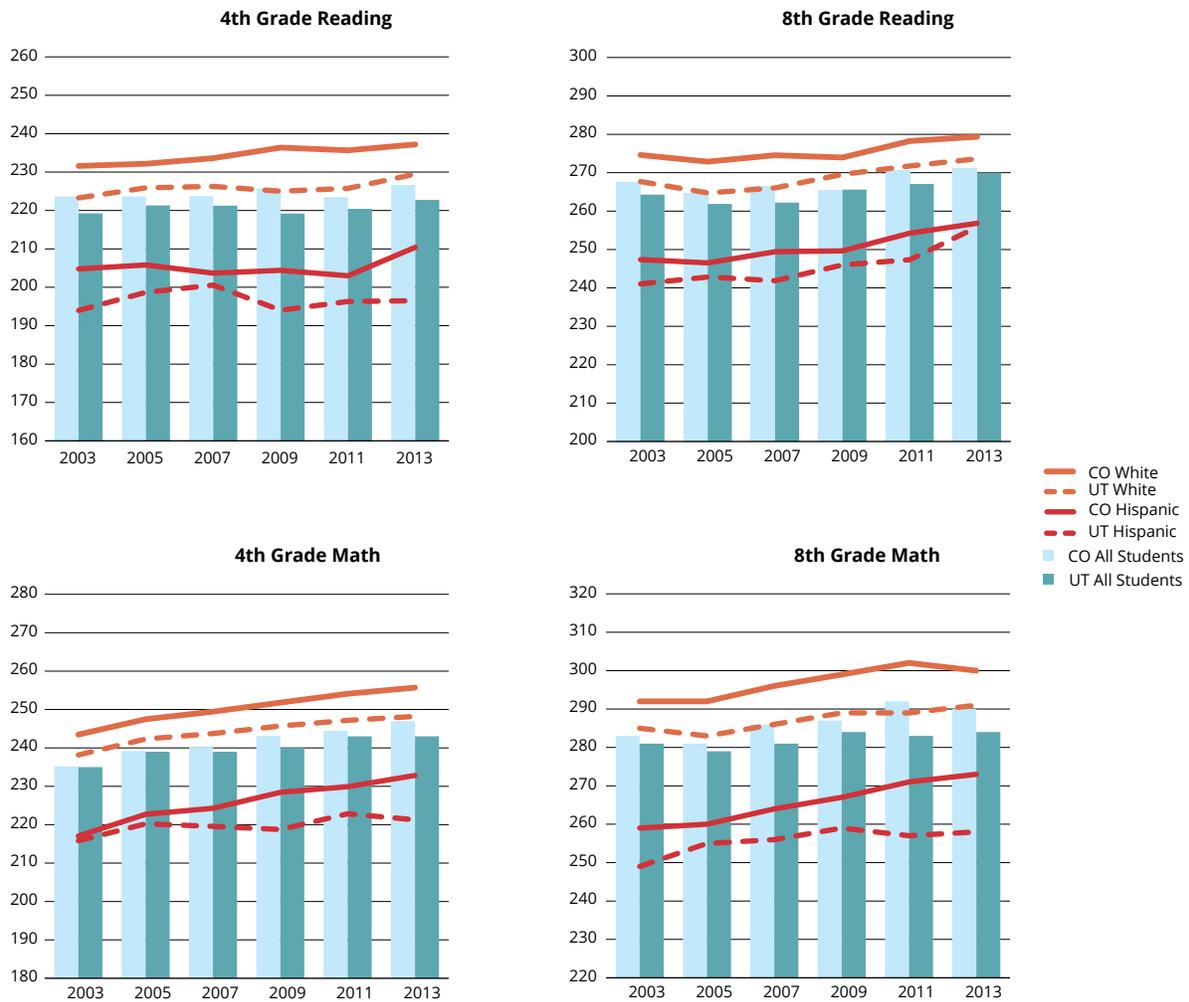
Utah has been finding success with graduation rates. It has been ahead of Colorado since 2009, the year when each state implemented the new federal measurement standard – the 4-year adjusted cohort graduation rate.⁶ Utah pulled ahead of the U.S. average in 2013 (see Figure 4).⁷ Even when disaggregated by race and ethnicity, Utah passed Colorado in 2013. Additionally, the graduation gap between white students and Hispanic or Latino students is narrower in Utah (86% compared to 72%) than in Colorado (83% compared to 67%).

Figure 2: Utah and Colorado National Testing (NAEP) Rankings, earliest available state test and 2013.

	1992*		2013	
	Utah	Colorado	Utah	Colorado
4th grade math	12	17	22	6
4th grade reading	15	21	22	11
8th grade math	10	13	28	9
8th grade reading	11	16	13	12

*The earliest 8th grade reading score is from 1998.
Source: NCES.

Figure 3: NAEP Average Scores for All Students by Race and Ethnicity, Colorado and Utah, 2003-2013



Note: Test utilizes a scale of 0-500; scores should not be used to compare subjects or grades.
Source: NCES.

Like Colorado, Utah has focused its efforts toward increasing graduation rates for all students. In 2014 Hispanic or Latino students saw an increase in their graduation rate of 13%. Afterschool programs that provide school-related tutoring programs are targeted in neighborhoods that need the most improvement. Programs like the United Way of Salt Lake’s Community Schools seem to be having great success to this end. Further, numerous districts are making efforts toward implementing disciplinary practices not to suspend and expel students. The Enhancement for At-Risk Students funds provided by the Utah Legislature is used in a variety of ways, including toward the Mathematics, Engineering, Science, Achievement program which focuses on underserved female students and students of color. High schools are now hiring student trackers to communicate with families to ensure that students do not miss school and stay on track to graduate. A portion of the

Figure 4: High School Graduation Rate (4-year adjusted cohort), U.S., Utah and Colorado 2011-2014

	2011	2012	2013	2014
United States	79%	80%	81%	n/a
Utah	76%	78%	81%	83%
Colorado	74%	75%	77%	77%

Source: U.S. Department of Education; Utah State Office of Education; Colorado Department of Education.

increase in graduation rates may be due to better tracking of students because of an increased emphasis on graduation rates (see the “From Standards to Turnaround Schools” section of this report).⁸ Further, there has been a decrease in student retention over the past 10 years across the country. Differing levels of social promotion – or allowing graduation when students are not ready – in Utah and other states may be affecting state graduation rankings disparately.⁹

Utah is doing well on graduation rates, but Colorado is finding more success on NAEP tests and a bit more success even on ACTs. Why is Utah trailing behind on comparable tests? What can Utah do to improve its success rates? Part of the answer to these questions may lie in the states’ demographic similarities and differences.

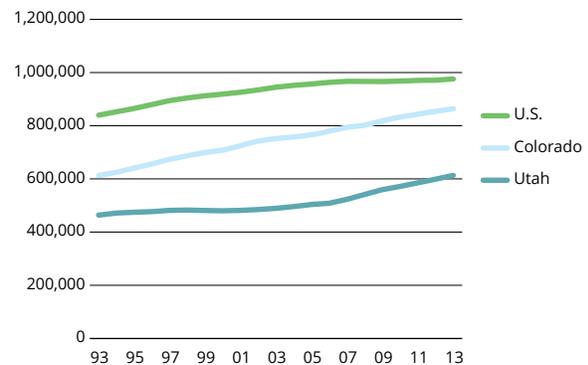
POPULATION CHANGE AND DEMOGRAPHICS

Utah Foundation is not making comparisons to Colorado simply based on test scores. If that were the case then Massachusetts – which consistently has the best NAEP scores in the nation – would be the focus of this report. However, Massachusetts also spends more than twice what Utah does and has a very different student population. Colorado is a much more comparable state in terms of funding and student population.

Both Utah and Colorado are growing at a rate that is faster than the national rates. Since 1993, Utah and Colorado have had K-12 enrollment increases of 2.0% and 1.6% per year, respectively. The national average was 0.8% per year. (See Figure 5.) Growth only matters insofar as states, districts, and schools need to accommodate this growth. Population growth can create growing pains for states. Increasing numbers of students means more teachers are needed. The result is a younger, and therefore potentially less-experienced teaching pool, which may lead to poorer outcomes for students.

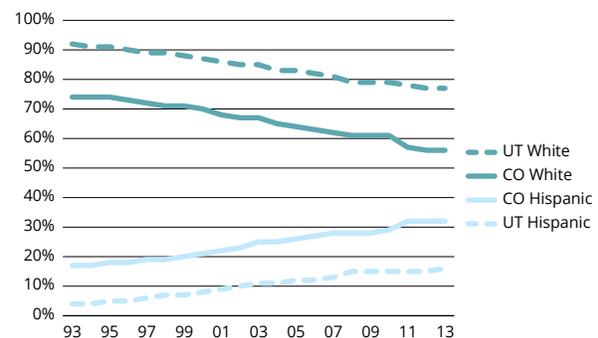
A large proportion of that growth for both Utah and Colorado was in the Hispanic or Latino student population. Colorado’s Hispanic or Latino student population increased from 17% of its total student body to 32% over the past 20 years. Utah has increased from 4% to 16%, and is on track to mirror Colorado’s growth percentages in the next twenty years. One reason to look toward Colorado is to understand which programs Colorado implemented – or should have implemented – in the past 20 years to narrow the achievement gap. Understanding how to find an equity of success in Utah’s Hispanic or Latino population could go far in improving Utah’s national rankings. There is a bigger gap between the national test scores of Utah’s white students and Utah’s Hispanic or Latino students than there is between Utah and Massachusetts.¹⁰ Beginning to close that gap now would have large implications for Utah’s future educational success.

Figure 5: Total K-12 Enrollment, U.S., Utah, and Colorado, 1993-2013



Source: NCES.

Figure 6: Percentage of White and Hispanic or Latino Students, Utah and Colorado, 1993-2013



Sources: Utah State Office of Education; NCES.

As noted, Coloradans’ success on national tests is not due to narrower racial/ethnic achievement gaps. Colorado – just like Utah – is working on closing that gap. Beginning in 2005 the Colorado Commission on Closing the Achievement Gap focused on best practices from reading and early childhood education to teach professional development and parental involvement. Colorado has not implemented measures statewide that focus specifically on achievement gaps, but has worked toward some of the recommendations, including expanded preschool programming and the READ Act (detailed in the “Preschool” and “READ Act” sections of this report).

Figure 7: Ethnicity and Race of Teachers, 2011–12

	Hispanic, All Races	White, Non-Hispanic
Colorado	7.0%	88.3%
Utah	0.5%	97.1%

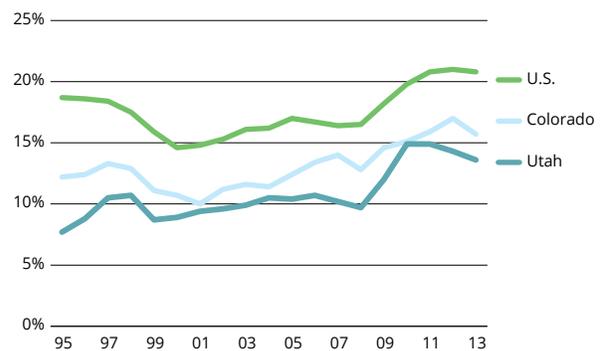
Source: NCES.

However, there are plenty of social class characteristics outside of school that are working against narrowing the gap. This includes single parenthood, parents’ irregular work schedules, inadequate access to healthcare, and others; the rates of these characteristics tend to differ by race and ethnicity.¹¹ Additionally, teachers act as role models for their students, but also have certain cultural competencies when they are more culturally similar to their student. Utah has a program in place to increase the number of teachers in underrepresented races and ethnicities. The Salt Lake Community College and the University of Utah, in partnership with several public school districts, are working to diversify teacher recruitment and licensure. Despite this and other efforts, neither Utah nor Colorado has a proportion of their teachers that mirrors their student body makeup (see Figure 7).¹²

A large proportion of Utah’s and Colorado’s Hispanic or Latino populations and nearly all refugee populations are English Language Learner (ELL) students. Academic English proficiency is key to student achievement.¹³ Utah’s ELL student rate has decreased from as high as 10% in the past 10 years to 5% at 2013. Colorado has been fairly steady for the past 10 years and is 12% at 2013, while the U.S. has edged upward to about 9%.¹⁴

Colorado has over 100,000 ELL students in public schools. Though the state has had an English Language Proficiency Program in place since the 1980s, it provided only two years of funding though experts suggest that it can take from four to seven years to acquire proficiency in a new language. To meet the growing need and provide up to five years of instruction in an English Language Proficiency Program, the Colorado General Assembly passed HB12-1298 in May 2014, allocating \$16.7 million for evidence-based English Language Proficiency programs. As additional \$27 million was allocated for professional development for educators who work with ELL students. These students are not only instructed in Spanish, they are assessed via state tests in Spanish as well. Some of the policymakers at the Colorado Department of Education suggested that had some of these changes been implemented earlier, it may have reduced the achievement gap that exists. Utah might take note of these types of programs to prepare for the state’s expected demographic changes.¹⁵

Figure 8: Children Ages 5 to 17 in Families in Poverty, 1995-2013



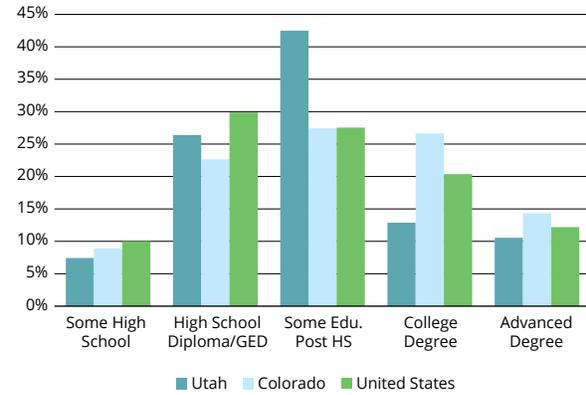
Source: U.S. Census Bureau, Small Area Income and Poverty Estimates.

Socioeconomic status (which can include measures like poverty rates, educational attainment and occupations of parents) are large indicators of students’ educational success. Poverty rates have been on the rise since the turn of the millennium, and increased sharply during the Great Recession. They are up by 4% in Utah, Colorado, and the U.S. since 2005, peaking in the early 2010s with a slight

decrease since. Utah's rate is less than three-quarters of the national rate, and more than two percentage points below Colorado's rate.

Utah has lower parental educational attainment than both the national average and Colorado (see Figure 9). Coloradans are far more likely to have bachelor's degrees than are Utahns (41% to 24%).¹⁶ This is also true for maternal educational attainment (38% to 27%), and mothers tend to have more influence on the success of their children than do fathers.¹⁷ One explanation for the difference in educational attainment is that Utahns have children at an earlier age. However, when looking at all ages of educational attainment, Utah is near the top of the nation for its proportion of residents with some college but no degree (27.8%).¹⁸

Figure 9: Parental Educational Attainment, 2013



Source: CPS 2013 March Supplement Survey.

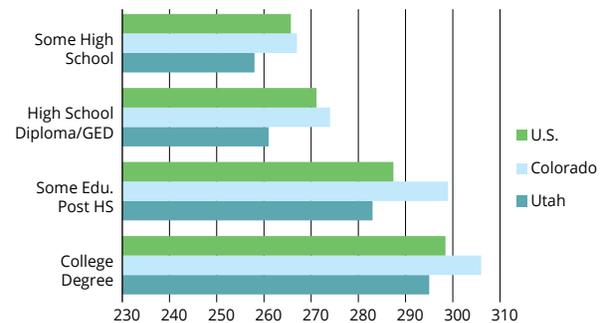
As noted, parental educational attainment is an important indicator for student success. Since Colorado has higher attainment, students in Colorado should have greater educational success. However, when controlling for the parental educational attainment of eighth grade NAEP math testers, Colorado students still perform better (see Figure 10). For instance, Utah students of college graduate parents averaged a score of 295 on the math test, while Colorado students of college graduate parents scored 306.¹⁹

THE DIFFICULTY IN FINDING A SILVER BULLET

Discussions with Colorado Department of Education educational experts did not provide many explanations as to why their state is performing better than Utah. One possible reason for this dearth may be due to Colorado districts' local control, which is constitutionally guaranteed. As outlined in the Colorado Constitution, districts' elected boards of education "have control of instruction in the public schools of their respective districts."²⁰ This passage has effectively guaranteed local control in each of the districts.²¹

This does not mean that there is no cohesiveness across the state. The Colorado Department of Education does work to provide common, structured training and assistance across the state. Further, there is an organizational structure in place to provide additionally cohesiveness across groups of districts – Colorado's Boards of Cooperative Educational Services. However, there are very few statewide, cohesive programs that could have an effect on national test scores due to the confines of the Colorado Constitution. Utah Foundation looked toward comprehensive, state-level numeracy measure, wide-reaching professional development efforts, and intensive statewide graduation programs, but none exist. Conversations with the Colorado Department of

Figure 10: NAEP 8th Grade Math Test Scores by Parents' Educational Attainment, 2013



Note: Test utilizes a scale of 0-500.
Source: NCES.

Education did suggest that their implementation of standards and assessment which began in the 1990s and were fully implemented by the late 2000s may have had positive educational outcomes.

FROM STANDARDS TO TURNAROUND SCHOOLS

Colorado

The 1993 Standards-Based Education Reform Bill required districts to complete a set of standards that were at least as stringent as the state's. Colorado drafted their standards – the Colorado Model Content Standards – over the subsequent four years. Most districts decided to rely on Colorado's standards instead of creating their own. The standards replaced the Colorado Academic Standards in 2011, which incorporated the Colorado Common Core State Standards in 2014.

Based on these standards, Colorado assessment began in 1997 with reading, writing, and math in the fourth grade. This was the *Colorado Student Assessment Program* (CSAP). These tests were introduced to other grades over the following decade. The Colorado Department of Education wrote these tests to help drive curriculum change, effectively forcing an increase in curriculum content breadth and depth.

Many districts wanted a calculation of “growth” – or an increase in performance – to be included in the assessment. In response the state developed the Colorado Growth Model – a statistical model used to calculate each student's progress on state assessments. It is also a tool that displays student, school, and district results to educators and to the public. The tool shows the percentile of gain for each student, and compares that gain to the gains of each student's academic peers. These peers are determined by the cohort of students who had similar scores in previous years. Now about half of U.S. states utilize a version of Colorado's growth model.

CSAP was replaced by the Transitional Colorado Assessment Program in 2012. This was replaced in 2014 by an assessment developed by the *Partnership for Assessment of Readiness for College and Careers* (PARCC, pronounced “park,” a Pearson Education, Inc., testing instrument).

Following in the steps of Colorado's implementation of its standards and assessment, Colorado's Education Accountability Act of 2009 was designed to incorporate and align numerous of Colorado's accountability systems and expand oversight for improvement efforts. The Act was written to:

Ensure that the standards for preschool through elementary and secondary education, culminating in postsecondary and workforce readiness, are sufficiently relevant and rigorous to ensure that each student who receives a public education in Colorado is prepared to compete academically and economically within the state or anywhere in the nation or the world.

Colorado's goal, expressed in the Education Accountability Act of 2009, is for all children to be on track to test proficiency within three years or by 10th grade, whichever comes first. The Act provides for levels of accreditation for districts and schools. The elementary and middle school levels of accreditation are calculated as follows:

- 25% on academic achievement
- 50% on academic growth
- 25% on academic growth gap (this includes students eligible for Free or Reduced Lunch, students of color, students with disabilities, English Language Learners, and students needing to catch up)

This calculation and the high school one reveal the importance that Colorado places on growth, making up between 50% and 75% of the total equation. The high school levels of accreditation are calculated as follows:

- 15% on academic achievement
- 35% on academic growth
- 15% on academic growth gap
- 35% on college and career readiness (this includes graduation rates, dropout rates, and school averages of ACT composite scores)

The Act details the state's Unified Improvement Planning which requires all districts and schools to create annual improvement plans. A State Review Panel to oversee district and school improvement strategies. The Colorado Department of Education provides support to struggling schools, particularly those which are the bottom five percent performing schools that are deemed accredited but in need of a turnaround plan. The Department provides:

- Ready access to data and research to support interpretation, decision-making, and learning
- Consultative services on best practices for improvement and implementation
- Evaluation and feedback on district and school plans

The Department provides additional support based upon need and resource availability. Schools that are accredited with a turnaround plan have a five year accountability clock within which period of time they need to improve from the bottom five percent (30 schools). This clock creates a sense of urgency for many districts. At the end of this time if the school does not improve it becomes unaccredited. At that time the Colorado State Board of Education determines whether situation warrants district reorganization, external management, conversion to innovative school or school zone status, conversion to a charter school, or school closure. The fifth year of the accountability clock was delayed by Colorado's 2015 General Assembly to be evaluated and adjusted as necessary before the Colorado State Board of Education takes initial action under the turnaround program.

Student assessment on statewide standards allows for school comparisons and a focus of efforts on schools that are deemed to be the lowest performers. In addition, it provides a certain amount of focus for districts and schools; once districts are engaged in the process they find that the data and the process itself can be powerful. It also allows for a way to coordinate best practice conversations by districts.

Utah

Utah has had a similar evolution in its road to turnaround programming, though there are some key differences regarding how schools are "graded." Utah has had a set of K-12 core standards for all academic areas since 1984. These standards have been updated over time, and in 2010 the State Board of Education adopted the Utah Core Standards for English language and math, which are based on the Common Core State Standards.

Utah's Criterion-Referenced Test was first administered in 2002-2003 using Utah Performance Assessment System for Students (U-PASS). For the 2011-2012 and 2012-2013 school years Utah used a new test, Utah Comprehensive Accountability System (UCAS), from the Smarter Balanced Assessment Consortium (SBAC). This replaced U-PASS and the federal testing/reporting requirement from the No Child Left Behind Act of 2001. Utah developed Student Assessment of Growth and Excellence (SAGE) to begin testing English language arts, math, and science during the 2013-2014 school year.

Across the nation there is a growing resistance to standardized testing, as well as to the new Common Core State Standards.²² And there are some data that show that testing and accountability are not working – particularly in regard to closing achievement gaps. The goal of the No Child Left Behind Act of 2001 (NCLB) is “To close the achievement gap with accountability, flexibility, and choice, so that no child is left behind.”²³ Research suggests that NCLB had no effect on achievement gaps; they were closing slowly before the legislation, and continued along that trend afterwards.²⁴

Utah has been grading schools on CRT tests for NCLB since the early 2000s. The state more recently moved to letter grading. The A through F grading system began in Florida in 1999 under Governor Jeb Bush and is now used in 15 states. The School Grading Act was passed by the Utah Legislature in 2011 and amended in 2012 and 2013. Unlike Colorado’s school accreditation system, Utah’s grades place higher emphasis on test scores (15-25% compared to 40-50%). The elementary, junior high, and middle school grades are calculated as follows:

- 50% on language arts, math, and science proficiency (SAGE test)
- 25% on overall student growth (similar to the Colorado Growth Model, Utah’s Student Growth Percentile – or SGP – quantifies the academic progress of individual students or groups of students based upon the median SGP which serves as a way for educators to understand how much growth a student makes relative to a student’s “academic peers”)
- 25% on student growth for non-proficient students

The high school grades are calculated as follows:

- 40% on language arts, math, and science proficiency (SAGE test)
- 20% on overall student growth
- 20% on student growth for non-proficient students
- 20% on school’s graduation rate

For high school grading, Colorado places more emphasis on “college and career readiness” than Utah (35% compared to 20%). Utah’s percentage is calculated from a simpler measure of graduation rates, while Colorado includes graduation and dropout rates, as well as ACT scores.

In Utah, the 2015 Legislature passed SB235, School Turnaround and Leadership Development Act. The Act requires the State Board of Education to designate schools as low performing if they are the lowest 3% of schools in the state according to the school grading system. The Act provides for the creation of turnaround committees to develop school improvement plans for low-performing schools. These committees are made up of local school board members, principals, teachers, and parents. The committees also select “independent school turnaround experts” from a list determined by the State Board of Education. The Act provides \$8,000,000 in funding (\$1,000,000 of which is one-time funding) for contracts and grants to pay for these experts and to use as turnaround funding.

Districts will develop school improvement plans for the low performing schools which will be approved by local boards and State Board of Education. Schools which do not improve their grades within two years will be restructured under contract management, converted to charter schools, or taken over by the state.

Utah’s turnaround program is similar to Colorado’s. While Colorado started its program in the late 2000s, Utah’s has a shorter time horizon. Nonetheless, given Colorado’s recent delay in final implementation for 30 turnaround schools, Utah’s program may have large effects on schools before Colorado’s does.

PRESCHOOL

This year marked the fiftieth anniversary of the Head Start Program, the oldest federal program to deliver high quality early learning opportunities to low-income children. To commemorate the day, President Obama issued a proclamation in which he echoed what numerous studies have shown to be true.

Investments in early children education boost graduation rates, increase earnings, and reduce violent crime. Three and four year-olds who attend high-quality preschool . . . are less likely to repeat a grade, less likely to need special education, and more likely to graduate from high school. This head start in life leaves a lasting impact on our students and fuels their curiosity, helping them to grow up with a passion for learning, a fair shot at good-paying jobs, and a more secure future.²⁶

While high quality preschool benefits all children, the advantages are especially pronounced for children who are at risk for developmental delays. Risk factors include living in poverty, being an English language learner, having a single parent, and having a mother with less than a high school education.

Pointing to a robust body of evidence about high-quality early learning programs, Arne Duncan, the U.S. Secretary of Education, has said, “The best way to close the achievement gap is to start young – by closing the opportunity gap. I want, once and for all, to get schools out of the catch-up business.”²⁷ To that end, Colorado has made significant strides.

Preschool in Colorado

Colorado Preschool Program

In Colorado educators do not speak in terms of K-12. They speak in terms of P-12, and with good reason. The Colorado Preschool Program (CPP) was enacted by the General Assembly as part of the Public School Finance Act of 1988 to serve children who lack learning readiness due to individual and family risk factors.

When it was first authorized, CPP provided preschool for 2,000 of Colorado’s four and five year olds who needed extra assistance with language development. Four years later, CPP was serving more than 11,000 children. In 2003-2004, the CDE began to document longitudinal academic outcomes for CPP children, and the following year CPP was expanded to serve more children. As a result, CPP now reaches 22,359 children every year. Approximately 54% of CPP students are Hispanic or Latino, and 82% are eligible for Free and Reduced Price Lunch program.²⁸

The longitudinal data collected over 10 years show that CPP graduates outperform other at-risk children who did not participate in CPP on every measure as far out as ninth grade.²⁹ While these improvements in academic achievement are inherently valuable, early interventions make economic sense too. The Colorado Preschool Program is not cheap. In 2015 the cost per slot was \$3,417 with a total price-tag of \$80 million, but the CDE has determined that CPP saves the state money in later remediation efforts.

Three years after CPP was first implemented, the CDE obtained funding from the U.S. Department of Education to study the effectiveness of the program. It turned out that 42.5% of the children participating in CPP were at-risk of placement into special education. After one year of participation in CPP, those children were tested again and only 11.1% of them continued to be at risk.³⁰ A percentage drop of 31.4% in special education use over the course of a child’s twelve year experience in public schools adds up to a dramatic cost savings to the state.

Nobel Laureate and Professor of Economics at the University of Chicago James Heckman explains “The logic is quite clear from an economic standpoint. We can invest early to close disparities and prevent achievement gaps, or we can pay to remediate disparities when they are harder and more expensive to close. Either way we are going to pay.”³¹

Denver Preschool Program

During the first eight years of CPP, demand for the program outstripped its capacity, and waiting lists grew. Perhaps in response to that need, Colorado voters approved a dedicated sales tax to fund the Denver Preschool Program (DPP) by ballot initiative. DPP is an independent, non-profit organization that administers tuition credits made available through Referendum 1A approved in 2006. DPP began as a ten year program subsidizing high quality preschool for every family with a four year-old in the Denver-metro area by offering tuition credits based on family size, income, and the quality of the program selected. What that means in practice is that the lowest income families who choose the highest quality preschools get the biggest subsidies. The mechanism determining tuition credits creates a virtuous cycle whereby the kids most at risk choose the best preschools, and preschools compete for high quality ratings. As a result, of the more than 250 preschool options in the Denver-metro area, more than 85% meet one of the two highest quality ratings.³² Colorado quality standards for preschool involve detailed and specific requirements for:

1. Family and community participation
2. Administration
3. Physical facilities
4. Learning environment
5. Health, nutrition, and safety
6. Staffing patterns
7. Development of learning plans
8. Individualization of developmentally appropriate curriculum
9. Plans for transition
10. Program evaluation³³

Since the Denver Preschool Program began, more than 31,000 children have been able to attend high quality preschool in the metro area. On assessments of kindergarten readiness, DPP children are consistently at or above average in literacy and math scores, 98% and 99%, respectively. Students who participated in the first full academic year (2008-2009) of DPP were third graders in the 2012-2013 year, and participated along with non-DPP third graders in the state’s standardized testing system. Similarly, participants in the second year of the program entered third grade during the 2013-2014 academic year, and were tested along with their non-DPP peers. As a result, two years of third grade state test data on students who participated in DPP are available for analysis. According to the DPP evaluation team, “DPP students were more likely to score at advanced or proficient levels than third-grade students who did not enroll in DPP. This was true across subjects assessed and for the third-grade cohorts taking the state test in either 2012-2013 or 2013-2014.”³⁴

Preschool in Utah

According to a report issued by the U.S. Department of Education in April 2015 only 13% of Utah’s children are enrolled in public preschool, putting the state second to last in the nation.³⁵ That 13% percent is the combined total of the 7% who attend Head Start, a federal program, and 6% who attend special education preschool. Of the more than 53,000 Utah four-year olds, 0% attend a preschool funded by the state because there is none.

By contrast, in Colorado 21% of four-year olds attend state funded preschool, in addition to another 13% in federally funded preschool programs for a total of 34% of kids in publicly funded preschool. Another 15% attend private preschools, for a total of 49%.

The DOE report makes it clear that funding preschool is not a red state vs. blue state issue. In Texas, for example, 52% of four year-olds are enrolled in state-funded preschool. Other representative examples include Georgia (58%), Oklahoma (74%) and Florida (78%).

Granite Preschool Program

The Granite School District (GSD) preschool program serves approximately 3,000 students in 45 schools across the Salt Lake Valley. Of these schools, 25 are identified as eligible for Title 1 funding based on the rates of students being eligible for free and reduced price lunch. Of these schools, 15 receive Title I funding to assist these children from preschool through sixth grade.

The GSD preschool program is largely funded via federal Title I and Special Education funds. The program has demonstrated improvements in literacy, language arts, and kindergarten readiness for children who attend the high-quality preschool program. Data show that children who attend the GSD preschool program not only outperform children in the same at-risk demographic, but all GSD kindergarten students.

According to a report by Voices for Utah Children, the achievement gap for academic year 2006-2007 preschool cohort had been effectively closed by third grade. What's more, the GSD preschool program helped a substantial number of children who were at-risk of needing special education avoid that expensive route.³⁶

Pay For Success

In 2014 the Utah Legislature passed House Bill 96 in order to help fund preschool in the state. HB96, also known as the "Utah School Readiness Initiative", provided for three-year grants for high quality preschool. The statute also formed the School Readiness Board, which is allowed to enter into results-based financing contracts with private investors on behalf of the state.

During the 2013-2014 school year the first \$1 million investment enabled approximately 600 children to attend high-quality preschool without any upfront cost to the taxpayer or other funders. Instead, the United Way of Salt Lake and Salt Lake County set aside funds to repay the investors depending on the success of the project. United Way of Salt Lake is the program intermediary in the transaction with Goldman Sachs and J.B. Pritzker who provide upfront loans to finance early education. Six providers including school districts, a non-profit, a charter school, and private preschools are participating in the "pay for success" program (Granite School District, Park City School District, Guadalupe School, YMCA of Northern Utah, Children's Express, and Lit'l Scholars).

As a result of entering kindergarten better prepared, it is expected that fewer children will use special education and remedial services in kindergarten through 12th grade, which will mean significant cost savings for school districts, the State of Utah, and other government entities. The cost avoidance measure is reduction in special education usage.

This kind of social impact loan is an innovative way to fund evidence-based social programs with proven outcomes, like preschool. National research shows that preschool improves academic achievement and long-term educational attainment. Utah-specific research shows that prevention is cheaper than remediation. In

five years the GSD Preschool Program saved the state more than \$1.7 million in Special Education for its At-Risk Preschool Cohort.

Compared to preschool efforts in Colorado, however, the scale in Utah is tiny. The Pay for Success program, built on the success of the GSD model, has only reached 1,000 three and four-year olds in Utah compared to tens of thousands of children attending preschool in Colorado.

KINDERGARTEN

This report does not examine kindergarten closely, but the difference in preschool participation between Colorado and Utah mirrors the difference between them in full-day kindergarten attendance. Kindergarten is not mandatory in either Colorado or Utah. Still, most children in both states attend some kindergarten.

The difference is that while only 13% of Utah children attend full-day kindergarten, 74% of Colorado children do.³⁷ Indeed, participation is up from 2008 when only 40% of Colorado children attended full-day kindergarten, a change that reflects growing parental preferences. Despite data showing that full-day kindergarten reduces the achievement gap for at-risk students, there is some ideological resistance to full-day kindergarten in Utah. Gayle Ruzicka, president of the Utah Eagle Forum has called full-day kindergarten an anti-family policy.³⁸



A 2011 Dan Jones survey showed that despite ideological resistance to full-day kindergarten by some, the large majority of Utahns supported full-day kindergarten. Of survey respondents, 83% strongly or somewhat favored continuing full-day kindergarten, and 78% of those in favor of continuing the programs already in existence wanted to see full-day kindergarten extended to all parents of kindergartners. Even if increasing the state income tax rate was the funding mechanism, 53% still supported the idea.³⁹

Nevertheless, during Utah's 2011 legislative session the language authorizing full-day kindergarten was repealed. The amount formerly allocated for the program (\$7.5 million) was redirected to the Early Intervention Program which specifies the use of funds for adaptive learning technology and assessments. In 2010 the number of children in full-day kindergarten was 8,000 or 18% of Utah children, but by 2012 that number had fallen to 6,656 or 13%.⁴⁰

Two years later, the 2013 legislature approved a \$7.5 million initiative to fund full-day kindergarten in an ongoing way, rather than on a one-time, annual basis, as had been done previously.

If one is looking for explanations for why Colorado children are performing better on national tests than Utah children are, the difference in instructional time seems like a good place to start. By third grade, the majority of children in Colorado have had up to 18 months more education than Utah children, a significant percentage of one's life at eight years old. Colorado is not the outlier here, Utah is. Nationally 77% of children are enrolled in full-day kindergarten.⁴¹

LITERACY EFFORTS IN COLORADO

In 2007 the Colorado Commissioner of Education released “Forward Thinking,” a state plan for closing achievement gaps and increasing graduation rates. One of the plan’s priorities was the “development of a consistent voice around literacy with which to address literacy challenges.” The goal was to provide a foundation of focused support from which to launch “a statewide literacy achievement plan that creates a coherent system for preschool through postsecondary initiatives.”⁴²

To achieve that goal, the Colorado Department of Education (CDE) conducted a comprehensive review of all of the literacy-related initiatives that it administered. That review combined with feedback from interviews, surveys, and focus groups produced a set of statements that embodied the shared beliefs and practices of leadership and staff about the most effective literacy practices. As a result, the CDE adopted a mission statement for literacy initiatives which reads,

Literacy is the backbone of a democratic society and is the gateway to opportunity. Anchored in the most rigorous research available, CDE collaboratively leads, supports, and extends effective practice in literacy for all learners. As stewards of the public trust, CDE embraces responsibility for educational excellence in partnership with our constituents, the residents of Colorado.⁴³

In 2008 the Commissioner established the Colorado Literacy Council to advise the CDE on literacy initiatives, including systems for the review of literacy content in educator preparation programs. That same year, the Colorado Legislature passed HB08-1223, which created technical assistant programs to help teachers intervene early with children who have literacy challenges such as dyslexia. Sponsor of the bill representative Mike Merrifield, explained at the time that effectively addressing dyslexia was one of the keys to reaching the governor’s goal of increasing the literacy rate and cutting Colorado’s drop-out rate in half in the subsequent 10 years.⁴⁴

In 2010 the United States Department of Education published the Blueprint for Reform in anticipation of the reauthorization of the Elementary and Secondary Education Act calling for the states to “develop comprehensive, evidence-based, pre-K-12 literacy plans and to align federal, state, and local funds to provide high-quality literacy instruction.”⁴⁵ To comply with these federal reform efforts, the CDE revised all of its state standards. It aligned its policies and focused its priorities on literacy initiatives in particular. With guidance and recommendations from national literacy experts and practitioners meant to ensure that the plan was grounded in research-based best practices, leaders and staff at the CDE collaborated to develop the Colorado Literacy Framework.

The Framework shapes all literacy initiatives and literacy-related grants administered by CDE. It established the basis for developing a P-12 literacy plan in the state, and offered a definition of literacy. The Framework defined literacy as “the ability to construe a written, linguistic, alphabetical symbol system.” It described literacy as the “most important skill students acquire in preschool through 12th grade education because it makes all other forms of higher-order learning, critical thinking, and communication possible.”⁴⁶

READ ACT

In 2012 the Colorado Legislature passed the Colorado Reading to Ensure Academic Development Act (READ Act). The READ Act focuses on early literacy efforts with a special emphasis on students who are at-risk for achieving third-grade reading proficiency.⁴⁷ The READ Act repealed the Colorado Basic Literacy Act (CBLA) enacted in 1997. The READ Act keeps a focus on K-3 literacy, assessment, and individual plans

for students reading below grade level, but differs from the previous legislation by focusing on students identified as having a significant reading deficiency, by describing requirements for parent communication, and by providing funds to support intervention.⁴⁸

Early Assessment

The READ Act requires teachers to assess literacy development in students from kindergarten through third grade in the five core component areas of reading: phonemic awareness, phonics, vocabulary development, including oral skills, reading fluency, and reading comprehension. The READ Act authorizes the CDE to create a Resource Bank that identifies quality assessments. The DIBELS test among others has been counted among the approved assessments.

Teachers must measure reading competency using one of these state board-approved assessments in order to determine if a student has a significant reading deficiency (SRD) within 30 days of enrollment. Any child scoring at or below the cut-off score is retested within another 30 days. After a student has been identified as having a significant reading deficiency, a teacher uses an approved diagnostic assessment to ascertain each student's specific reading skill deficiencies. The determination that a child has an SRD is based on a child scoring at least twice at or below the cut-off score within a school year. If a child is identified as having an SRD, information gleaned from the diagnostic assessments is used to create a READ plan in collaboration with the parent or guardian.⁴⁹ In its first year, 16% of students were identified as having a significant reading deficiency.

READ Plan

The READ Act requires the development and implementation of an individual intervention plan for students identified with a significant reading deficiency.⁵⁰ According to the statute, teachers and parents are to create the READ plan together.

Teachers must make three documented attempts to contact parents to participate in this process. When parents are unavailable after three documented attempts, teachers may create the READ plan and share it in writing with the parents. Every READ plan must include the following seven components at minimum:

1. The student's specific, diagnosed reading skill deficiencies
2. The goals and benchmarks for growth
3. How progress will be monitored and evaluated
4. The type of additional instructional services and interventions the student will receive.
5. The evidence-based instructional programming the teacher will use to provide reading instruction to address the five components of literacy
6. The strategies the student's parent is encouraged to use in assisting the student to achieve reading competency
7. An additional services the teacher deems available and appropriate to accelerate the student's reading skill development

According to the READ Act, if students are still struggling significantly at the end of the academic year, parents, teachers, and principals must determine whether students will advance to the next grade level. If this occurs at the end of third grade, the decision to advance to fourth grade is subject to the approval of the district superintendent.

Political Obstacles

The debate over retention was the biggest obstacle to passing the READ Act. The author of the READ Act, Senator Mike Johnston, explained, “People thought that it would lead to mandatory retention, and have a disproportionate impact on kids in poverty,” but that has not happened, and according to the statute, parents can appeal it when it does. For some, there was also the question of administrability. Some districts have a larger percentage of students who might be identified as having a significant reading deficiency than others, and the question was whether it might become administratively onerous for teachers to create a READ Plan for every child in that group. Senator Johnston says “neither teachers nor districts have complained.”⁵¹

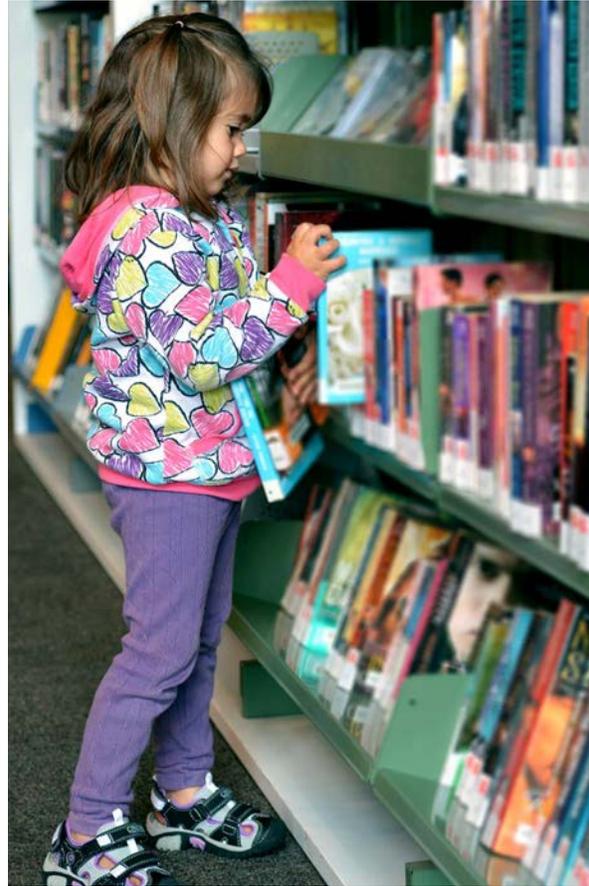
Funding Mechanisms

The READ Act provides per-pupil funds to assist districts with interventions for students identified as having a significant reading deficiency. The CDE allocates funds to LEAs by dividing the amount of funds available by the total number of students enrolled in kindergarten through third grade in public schools as having an SRD. These funds might be used to provide full-day kindergarten, to purchase tutoring services in reading, to operate a summer school literacy program, or provide other targeted, evidence-based intervention services. Each student identified as having an SRD must have access to one of the four types of interventions. In 2013, slightly more than \$15.4 million was distributed to 42,479 students (\$363 per pupil) in 174 reporting LEAs.⁵² According to Senator Johnston most of these funds have been used to expand the school day (via full-day kindergarten) or to expand the school year (via summer school classes).

In addition to the per-pupil early literacy funds, the READ Act initiated an Early Literacy Grant program designed to ensure the essential components of reading instruction are embedded into all elements of the primary, K-3 teaching structures in all participating schools in order to assist every student in achieving reading competency. In 2013, the first year of the Early Literacy Grants, a total of sixteen grant awards were made representing 30 schools and totaling \$4 million, as required by statute.⁵³ The Early Literacy Grants replaced the twelve year-old Read to Achieve program, which an independent evaluator found hard to assess because CDE did not “collect or compile critical information needed to assess the Program in depth.” The problems included “lack of data, lack of evaluation, and minimal assessment efforts.”⁵⁴

Accountability

The READ Act, by contrast with the Read to Achieve program, requires strict accountability. Districts must report specific student, school and district level data to the CDE, including the number of students identified with significant reading deficiencies, and their progress in their performance frameworks and are



expected to use these data when developing their United Improvement Plans (UIPs). Schools and districts are also encouraged to share report effective strategies and share best practices with other districts.

LITERACY EFFORTS IN UTAH

According to a recent report by the Annie E. Casey Foundation only 37% of all Utah fourth-graders were reading at proficient levels in 2013. For low-income Utah fourth-graders the percentage of proficient readers was even lower at 24%. Governor Herbert has set a goal of having 90% of Utah's third-graders reading proficiently by 2020 so these data are cause for concern. Nevertheless, these data represent a slight improvement in reading achievement over the last decade.⁵⁵

Utah Commission on Literacy

In December of 2003 Governor Olene Walker created the Utah Commission on Literacy by Executive Order in order to “increase public awareness of the importance of reading, and to maximize the percentage of Utah children who read at or above grade level by the end of third grade.”⁵⁶ One of the Commission's central methods for achieving this goal was to encourage adults to read with their children for 20 minutes a day.

With a \$50,000 budget, the Commission published calendars for kids to track their reading, asked for gently-used book donations through the Reading Tree program which provided 150 donation bins state-wide, and created 40,000 “literacy backpacks” each of which included a pamphlet to instruct parents, a board book, and a “Read to Me” bib and booklet. These were distributed to preschools, childcare providers, and hospitals. In addition to the literacy backpacks published in English, ten thousand of these materials were also published in Spanish.⁵⁷ Though it is possible these efforts had positive effects, since the beneficiaries of these various programs were not tracked, no data exist with regards to outcomes or efficacy.

To the extent that the Governor's Commission on Literacy is still active, it seems to have restricted its scope to a summer reading program which gives kids a calendar to track their reading. They are encouraged to record and report their progress online in order to receive a certificate of achievement signed by the Governor at the end of the summer.

STAR

In 2005 the Utah State Office of Education (USOE) developed the Student Tutoring Achievement for Reading (STAR) program. The STAR program is not an evidence-based intervention, but a program developed for



students to practice their reading. The twice weekly, thirty-minute lessons are designed to enhance classroom instruction in phonemic awareness, phonics, fluency, comprehension, and vocabulary. The STAR curriculum is administered by AmeriCorps' Read. Graduate. Succeed. program. AmeriCorps provides coordinators at each school, collects data, and works in partnership with KSL's Read Today program, which recruits volunteer tutors, provides incentives, and celebrates literacy achievements with Chopper Five landings at schools. During the 2013-2014 academic year

4,674 students were tutored by 3,844 volunteers in 117 schools. Based on DIBELS Next Assessment, students who were tutored with STAR improve their reading fluency by increasing their word count per minute.

There is local enthusiasm for Read Today, and it seems to be an effective program. In fact, KSL has received many accolades including the prestigious Service to America award for raising awareness about literacy with this program.⁵⁸ It is difficult, however, to evaluate the program's efficacy or consistency over time since only one year of data was available at the time of this report. Furthermore, no cost-benefit analysis could be conducted since budgetary information was not available. Because USOE provides no funding specifically for the STAR program other than the costs of printing the materials, which money comes out of discretionary funds in an ad hoc way, it is reasonable to conclude that more money would benefit the program and multiply its success.

Other Programs

In 2011 the public charity, Success in Education, was established. It developed Road to Success in collaboration with the Governor's Commission on Literacy to promote the Commission's goal of encouraging children to read every day. Sponsored by Ken Garff and Zion's Bank, this popular program provides materials that range from hallway banners to reading charts in order to help kids set and track reading goals. If they meet their goals, kids receive points, bonuses, and prizes like iPods, bikes, and scooters. In many ways the Road to Success and the Read Today program are similar. They share the same basic goal, and employ some of the same strategies to incentive kids to read. It is possible that outcomes might be improved on a variety of measures if these two programs joined forces instead of duplicating efforts.

Beyond local literacy efforts, Utah kids benefit from partnerships with national organizations as well. For example, from 2000-2010 Utah Humanities partnered with the national organization, Motherhead, to train teachers, library staff, daycare providers, and even social workers in the Motherhead curriculum. Utah Humanities trained upwards of 500 teachers, and the program won state and national awards. In 2003 Utah Humanities received a \$500,000 grant, and in 2004 was recognized by the Governor's Commission on Women for this effort. When Head Start funding was reduced, however, schools drastically cut their programs and laid off many of the carefully-trained teachers, forcing Utah Humanities to retire the expensive program.⁵⁹

Other programs try to improve literacy by reaching parents through the healthcare system. For example, the national Reach out and Read program, which has had a presence in Utah, is an evidence-based nonprofit organization of medical providers who promote early literacy in pediatric exam rooms by integrating children's books and advice to parents about the importance of reading aloud into well-child visits. In 2014 Reach Out and Read had 40 programs, served 36,963 children and distributed more than 54,322 books in Utah.⁶⁰

In addition to initiatives by local nonprofits and programs sponsored by national organizations, Utah's elected officials have made efforts to address literacy through legislation.

Reading Improvement Program

In 2004 the Utah Legislature approved a new Reading Improvement Program via SB230 in order to meet the state's goals of having third graders read at or above grade level. The legislation required the State Board of Education to make rules to implement the program, and authorized local school boards to levy taxes to

help fund it. It called for the state to provide matching funds to help districts and charter schools ensure the program's goals. While it prohibited a district or charter school from using funds to supplant existing programs, it allowed funds to be used to augment existing programs. A one-time appropriation for fiscal year 2004-2005 of \$2.5 million dollars was approved along with an ongoing appropriation of \$12.5 million subject to future budget constraints.

Prior to using program funds, each school was required to submit a plan for reading proficiency improvement for approval by the State Board of Education that included the following components: assessment, intervention strategies, professional development, reading performance standards, and specific measurable goals based on improved scores. Other than these specific components required in every plan, the Reading Improvement Program allowed schools broad autonomy in developing their plans and setting their goals. There was an accountability mechanism though. Each district and charter school was required to submit an annual report to the State Board of Education accounting for the expenditure of program funds in accordance with its plan. If funds were used improperly, the school or district was liable for reimbursing the State Board of Education. If the plan goals were not met, then a new plan to correct deficiencies was required to be submitted to the Board.⁶¹

Reading Improvement Program Evaluation

In order to assess the Reading Improvement Program, Utah's Superintendent of Public Instruction, Patti Harrington, asked Regional Education Laboratory West to review LEA participation and determine how efficacious their efforts had been. The report found that all 40 Utah school districts took part on both the first year (2004-2005) and the second (2005-2006), and that the number of charter schools increased from 10 (of 12) in the first year to 17 (of 20) in the second⁶² Unfortunately, this nearly universal acceptance of the program by Utah LEAs meant that no control group existed for comparison. As the evaluator noted, "Any relationship identified between the program and student achievement outcomes is correlational at best and does not imply that the program caused the results."⁶³

The report also explained that it was difficult to evaluate whether the requirements of the Reading Improvement Program as stipulated by the legislation were met. For example, the law called for an annual report on "assessment tools," but without any statewide elementary reading test and no common assessment mandated by the program, schools used a variety of assessments to determine students' reading gains. A related example involves "measurable goals," which the legislation requires. With no statewide standard for student progress, the state necessarily left the goal-setting and assessment to individual schools. Performance targets vary by district with some setting more ambitious goals than others.⁶⁴ At a more basic level, the overarching goal of the Reading Improvement Program was to ensure that all Utah third-graders "read at or above grade level," but no definition of the term "grade level" or how to measure it was specified in the law.

In terms of how the funds were used, the report showed that 70% of the program funds were used to pay for literacy coaches or reading specialists. Almost 70% also report using funds to train staff to administer and interpret the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) reading assessments. These numbers were self-reported by districts as researchers did not conduct any site visits to observe local implementation and therefore couldn't be independently verified. They also lacked school-level information on program activities. The report recommended that Utah policymakers consider "how to measure a program's effects as they draft legislation," and that USOE should confirm that "districts and charters have the capacity to ensure that school staff implement research-based literacy strategies correctly."⁶⁵

The Reading Improvement Program Under Fire

Perhaps partly due to the report, the Reading Improvement Program came under fire during the 2011 legislative session as failing to produce results, with some lawmakers threatening to defund it. In response, Senator Karen Morgan sponsored SB63. Senator Morgan explained her bill to the Education Committee, saying “Right now, we know that that funding is threatened. Instead of just cutting that line item and getting rid of that funding, I’m saying let’s keep the vital program in place.”⁶⁶ Then Superintendent Larry Shumway addressed the committee meeting to argue in favor of the Reading Improvement Program explaining that internal reviews showed that the program was producing significant improvements.⁶⁷

At the time, Senator Howard Stephenson said he was not convinced that the districts and charter schools getting the money were expanding their focus on K-3 reading. “I think this money is fungible,” Stephenson said. “How can we be sure that the report on the appropriation of this roughly \$30 million was not supplanted by other expenses?”⁶⁸ He suggested requiring districts to spend the money on specific things like reading software instead. Perhaps in response to this debate Senator Morgan added specifics to the bill that would lead to more transparency and accountability including a mandatory report by the State Board of Education to the Legislature about the use of funds. She also added the “use of reading software,” as one of the approved uses of Reading Improvement Program funds.

To address the problem of variance among schools and districts in assessments, starting in 2011-2012 all LEAs were required to test students using DIBELS twice a year. Additionally, a uniform growth goal was set for all students in third grade. While these changes to Reading Improvement Program were positive in terms of measurement and accountability, the report noted that the program is underfunded. Since the program was implemented the funding has remained consistent at \$15,000,000 despite the fact that the number of students and schools has increased. What’s more, according to a report prepared by the USOE department of teaching and learning increasing numbers of students in Utah are entering school from poverty-stricken homes, acquiring English as a second language, or coming to school less prepared for rigorous standards. It stands to reason that these factors would “increase the amount of support needed to ensure the development of literacy skills” but the reality is that number of “literacy dollars per student has decreased by over fifty real dollars per student.”⁶⁹

In 2011 the Utah Legislature enacted a law (HB302) which further decreased the amount of money spent per student on reading coaches and tutors, by allowing an appropriation from the K-3 Reading Improvement Program of up to \$7,500,000 (half its budget) for computer-assisted instructional learning.⁷⁰

The Early Intervention Program

In 2012 the Utah Legislature passed the Early Intervention Program (HB513). The Early Intervention Program (EIP) allocated \$2,500,000 to purchase adaptive learning technology software targeted to at-risk students. EIP requires the State Board of Education to select one or more technology providers, through a request for proposals to provide interactive computer software for literacy or numeracy instruction, or both, and assessments for students in kindergarten and first grade.⁷¹ According to Senator Stephenson the goal of the bill was “to provide reading software to assist teaching professionals in giving 30,000 kindergarten and first grade students a half an hour of digital reading instruction each day.”⁷² In 2013 eighteen more education technology related bills were introduced, with twelve passing into law.

While Stephenson and others have championed Utah’s embrace of digital learning as innovative and effective in empowering teachers to personalize lesson plans and spend more time with struggling students,

others are skeptical of the proliferation of these so-called “vendor bills,” including Governor Herbert. His spokesperson, Marty Carpenter, said the “practice of finding software first, then identifying a need for the program is not sound practice. It does not honor local control and is not an efficient use of taxpayer funds.” Too often these expensive technologies are “little more than experiments in education, and they get shelved shortly after purchase because they do not meet student needs. Vendors are guaranteed to profit from the arrangement, while the benefit to schools is hit and miss.”⁷³

Based on early evaluations of EIP, the Governor’s worry might be well-founded. The Utah Education Policy Center produced a report on EIP’s first year for USOE which concluded that it was difficult to assess the effects of the software for a number of reasons. First, “student performance was highly inconsistent from vendor to vendor.”⁷⁴ Second, “only one vendor provided data that clearly documented student performance gains.”⁷⁵ Third, vendor outcomes are internal to the software itself, and therefore precluded external validation. Ultimately the lack of vendor data that demonstrated student performance gains and that connected software use to external outcomes meant that the Policy Center found it “impossible to draw robust conclusions about the effectiveness of software use and student achievement in reading and math.”⁷⁶

The second year evaluation was not much better. According to a report prepared by the USOE on EIP for funding year 2014, among students in the second and third grades, DIBELS scores showed no evidence that participation in the program increased oral reading fluency. This finding echoes what Sharon Gallagher-Fishbaugh, president of the Utah Education Association, has said about the failure of technology to teach the basic components of reading.⁷⁷ Though there was some evidence that software use was associated with early literacy gains in kindergarten students, there were negative effects for first graders who used the software over 20 hours⁷⁸ USOE concluded that “expecting young children to use software for long periods of time may have negative learning effects due to the following:

- Time on the software interferes with core instructional time in the classroom.
- Teachers are keeping students who struggle with reading on the software longer in hopes that eventually it will work.
- Software usage for extended periods of time is not developmentally appropriate as young students may become bored, and in turn, bars the learning process.⁷⁹

The funds allocated by HB 513 for education technology meant that during 2013 the money spent on software materials from the K-3 Reading Improvement Program was reduced to approximately \$332,140.⁸⁰

HOW TO EXPLAIN THE DIFFERENCES?

Utah has lowest total current expenditures for education in the nation (\$6,641 compared to the national average of \$11,604).⁸¹ “Total current expenditures” include instruction, student support, instructional staff services (including expenditures for curriculum development, staff training, libraries, and media and computer centers), operation and maintenance, administration, student transportation, and food services. This is in contrast to “total expenditures,” which includes current expenditures as well as capital outlay and interest on long term debt.

Like Utah, Colorado spends less than the national average per pupil (\$8,861). Both states saw per pupil amounts decrease during the Great Recession. When adjusted for inflation, per pupil expenditures have stagnated since the turn of the millennium.

Many attest that increased spending in education does not lead to best quality and completion rates. From the frequently cited Coleman Report in 1996 to Stanford education economist Eric Hanushek, numerous researchers have not found a positive connection between funding and success, showing that “increased expenditures by themselves offer no overall promise for improving education.” He found that “there is little reason to believe that an additional dollar put into a school will improve student achievement.”⁸²

But recent work on court-mandated school-finance reforms contradicts older sources. In studying a nationally-representative sample of 15,000 children born between 1955 and 1985 and following them through 2011, researchers found a positive effect for all students; “a 10 percent increase in per-pupil spending each year for all 12 years of public school leads to 0.27 more completed years of education, 7.25 percent higher wages, and a 3.67 percentage-point reduction in the annual incidence of adult poverty.”⁸³ And “when per pupil spending increases by 10 percent in all 12 school-age years for students from low-income families:

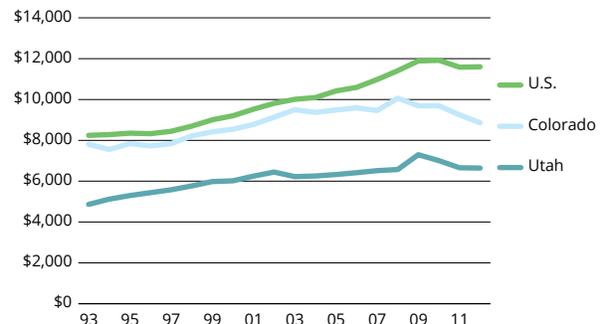
1. Years of completed education increase by 0.5 years;
2. The probability of high school graduation increases by 10 percentage points;
3. Adult hourly wages rise by \$2.07 (in 2000 dollars), or 10 percent;
4. Future family income increases by 17.1 percent (the authors note these effects may reflect increases in one’s own income, or increases in other family members’ income due to a higher likelihood of being and staying married.);
5. The annual incidence of poverty in adulthood decreases by 6.1 percentage points;
6. The likelihood of being married and never divorced increases by 10 percent.”⁸⁴

The researchers deemed that such effects were large enough to close the education gap between low and non-low income families.⁸⁵

CONCLUSION

Why is Colorado beating Utah on so many comparable national indicators? Perhaps it is rigorous standards and frequent assessment. Perhaps early childhood interventions like statewide kindergarten for at-risk children or full-day kindergarten make the difference. Perhaps it is the fact that Colorado spends almost thirty percent more per pupil than Utah does. Money is not sufficient for educational success, but data show that certain expenditures are necessary for top performance. Like Colorado, Utah will keep looking for ways to improve educational outcomes. While Colorado looks toward Utah to learn from its Pay for Success preschool program and other innovations, Utah likewise should continue to look towards its neighbor for successful approaches to educational policy.

Figure 11: Per pupil spending adjusted for inflation (2012 dollars), U.S., Colorado, and Utah, 1993-2012



Note: This table displays total current expenditures.
Source: NCES

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