



# Colorado Preschool Program

*Building a Brighter Future for Colorado's Children*

## 2010 Legislative Report

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## Colorado State Board of Education

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### School Readiness Definition

*"School Readiness describes both the preparedness of a child to engage in and benefit from learning experiences, and the ability of a school to meet the needs of all students enrolled in publicly funded preschool or kindergarten. School Readiness is enhanced when schools, families, and community service providers work collaboratively to ensure that every child is ready for higher levels of learning in academic content."*

This definition was approved by the Colorado State Board of Education in December 2008 in accordance with the requirements of Senate Bill 08-212

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# CPP Reaches an Important Step in Accountability

The 2010 Colorado Preschool Program Legislative Report is an important milestone for the Colorado Preschool Program (CPP). Over the last 10 years, critical foundations have been laid that allow CDE to report data not only on how CPP children develop during the preschool years, but also how they perform on later primary assessments statewide. With the implementation of automatic data collections, statewide assessments and state assigned student IDs, we now are able to report on student outcomes in the primary grades, regardless of whether students remain in the school district where they attended preschool or not.

In May of 1988, the Colorado Preschool Program was established by the Colorado General Assembly (22-28-102 C.R.S.) to serve 2,000 preschool children who were considered at risk of educational failure due to life circumstances. From the very beginning of the program, CPP has been charged with studying the effectiveness of the program and ensuring that it be fully accountable to the General Assembly and the people of Colorado.

In the early years of the program, the department obtained a grant from the U.S. Department of Education that funded a study of the program during its pilot phase

**In kindergarten and in later grades, CPP children perform better on statewide assessments than other at-risk children.**

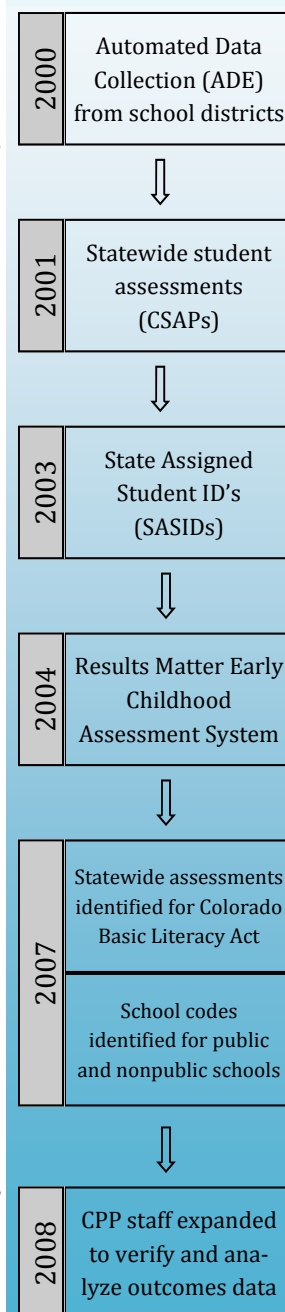
from 1990 through 1993. Children's language development was measured at the beginning and end of the preschool year, and it was determined that in a seven-month period, CPP children demonstrated a 13-month gain in language ability and an 11-month gain in auditory comprehension. Furthermore, the children who started out furthest behind made the greatest gains.

The research design, developed by the University of Colorado at a cost of \$380,000 per year, became unsustainable for the program. As the program continued to develop, CDE began laying the foundation to measure the short- and long-term effectiveness of CPP, while school districts developed strategies to measure outcomes at the local level.

This year the Colorado Preschool Program is proud to report, just like in 1993, our children are making better-than-expected progress in language development and are closing the school readiness gap. Thanks to Results Matter, our statewide early childhood assessment system, we can also measure those same positive short-term outcomes in cognitive development, social-emotional development and physical development.

What is most exciting this year is the ability to report the sustained benefits of attending preschool. As highlighted throughout this report, CPP graduates perform better on statewide assessments administered in kindergarten and in later grades than other at-risk children.

## Important Steps Taken to Measure both Short-Term and Long-Term Outcomes for CPP Children



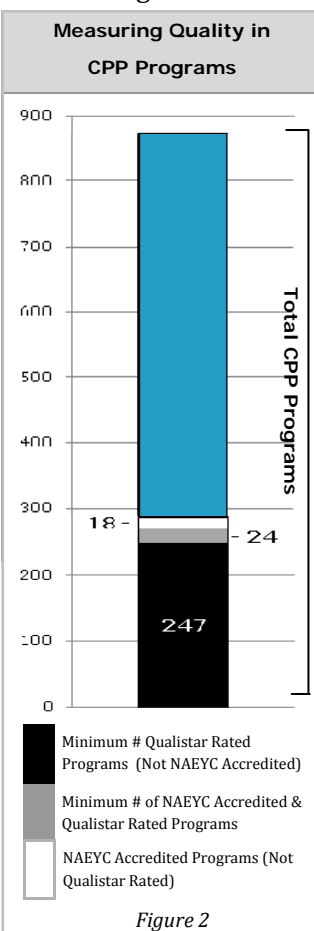
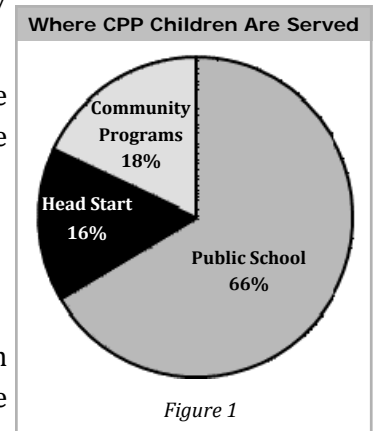
# Colorado Preschool Program At-a-Glance

**Who are the children served by the Colorado Preschool Program?** CPP serves children who are at risk for being unprepared for school. The Legislature has established eligibility factors for children to participate in the program, including low family income, foster care, violence or neglect in the home, parents who have not successfully completed high school, parent drug and alcohol abuse and delays in language and social development (22-28-106 C.R.S.).

**How many children does CPP serve?** The Colorado Preschool Program is authorized to serve 20,160 children. Children are primarily served as four-year-olds but three-year-olds with three or more risk factors may participate. A limited number of “slots” (5 percent statewide) may be used to fund a child to participate in a full-day program.

**How many districts participate in CPP?** School district participation in the program is voluntary and 169 out of 178 (95 percent) school districts and the Charter School Institute have CPP slot allocations.

**Where are children served?** The CPP Act gives communities the responsibility to decide locally who is best qualified to deliver CPP services. The intent of the law is to provide children and their families with the highest quality services available. As a result, Colorado Preschool Program children are served throughout the state in a variety of settings, as identified in the pie chart in Figure 1.



**How is quality measured in programs serving CPP children?** CPP district advisory councils are charged with the responsibility of identifying high quality programs where CPP children can be served. These councils are responsible for sustaining quality in those programs and must make at least two on-site visits per year to programs serving CPP children. CDE is tracking which programs serving CPP children are also measuring quality through the Qualistar rating and the National Association for the Education of Young Children (NAEYC) Accreditation process (see Figure 2).

**Are any at-risk four-year-olds not served by CPP?** The State Demography Office estimates that there were 72,185 four-year-olds in the state in 2008. With 20,160 slots, CPP has the resources to fund 28 percent of the four-year-olds in the state. The percentage of students in grades one through eight who are eligible for free or reduced lunch can be used as a proxy for the percentage of at-risk students in preschool. In 2008-09 this percentage was 39.9 percent, indicating an estimated 8,641 shortfall in slots.

*“For all categories reported, families experienced a 40 percent increase in all risk factors from last year. The largest increase, 52 percent, was found in low language/second language acquisition, a 46 percent increase in low income categories, a 40 percent increase in homelessness and a 35 percent increase in the number of children who scored below average at preschool screenings, suggesting possible developmental delays.”*

Sue Okerson, CPP Coordinator, Adams 14 School District

# Results Matter: A Cornerstone in Quality and Accountability

Results Matter, Colorado's early childhood assessment system, has experienced a high degree of success in Colorado and has been identified as a national model with numerous states following in Colorado's footsteps. Why? What sets Results Matter apart from other states?

**Utility** From the beginning, Colorado has aimed for a system that provides useful information to support teachers and administrators in their day-to-day work, as well as one that can meet accountability reporting needs. Results Matter has been successful in using an ongoing, observation-based assessment system which is most appropriate for very young children. It documents child progress in ways that inform teachers, interventionists and administrators, and it supplies automated reports for accountability purposes. Results Matter is used as both a formative and a summative evaluation tool.

**Inclusiveness** In 2004, when state leaders and local stakeholders came together to plan a statewide system of assessment and outcomes measurement, one thing was clear—the strong desire for a single system for all children. The Results Matter system of progress measurement is available and appropriate for all young children in Colorado, regardless of need or funding source. This means the assessment system can be implemented in all kinds of early childhood settings. Results can follow a child who moves to a new program. Large amounts of collected data provide an opportunity to study child outcomes for a variety of age groups and ability levels in order to help inform policy planning at the program, community, and state levels.

**Technology** All assessment information for Results Matter is recorded on secure online systems that allow immediate access to classroom, program, county and state level reports. Families may be included in this process through secure system access allowing them to review classroom records and to contribute observations of their children's development in the home learning environment and community settings. The next phase of implementation includes training and support for teachers to use advanced technology, such as pocket digital video cameras to document child learning and development, electronic portfolios in the online system and digital pen technology to record observations.

**Teacher Development** One of the most powerful outcomes of Results Matter is the increased knowledge of child development and instructional methods gained through the use of ongoing observation and documentation of child growth. When teachers learn to observe children carefully, to collect evidence that illustrates what children know and are able to do, and to reflect on this information against a framework of age and state expectations, their ability to understand and respond effectively to the children they serve expands exponentially.

*"Our classrooms are richer in the activities available and more individualized since observation of children is emphasized. Integrating content through meaningful, in-depth studies built on children's knowledge and interests has deepened family involvement, child participation and child outcomes."*

Libby Culver  
CPP Coordinator  
Durango School District





# Closing the Achievement Gap: Math and Science

## Why are CPP children behind when they start preschool?

Poverty and other risk factors place constraints on a family's investments in learning materials and positive parenting behaviors, which can affect children's school readiness skills.<sup>1</sup> In 2008-09, 78.8 percent of children served in the Colorado Preschool Program were eligible for free or reduced priced lunches. Twenty-seven percent of children had parents with only a high school diploma or equivalent. Research indicates that before entering kindergarten, the average cognitive



scores of preschool-age children in the highest socioeconomic group are 60 percent above the average scores of children in the lowest socioeconomic group.<sup>2</sup> At age four, children who live below the poverty line are 18 months below what is normal for their age group; for children living in the poorest families, the gap is even larger.<sup>3</sup> Poor children are as much as two times more likely to lack proficiency in math skills than children who are not poor.<sup>4</sup>

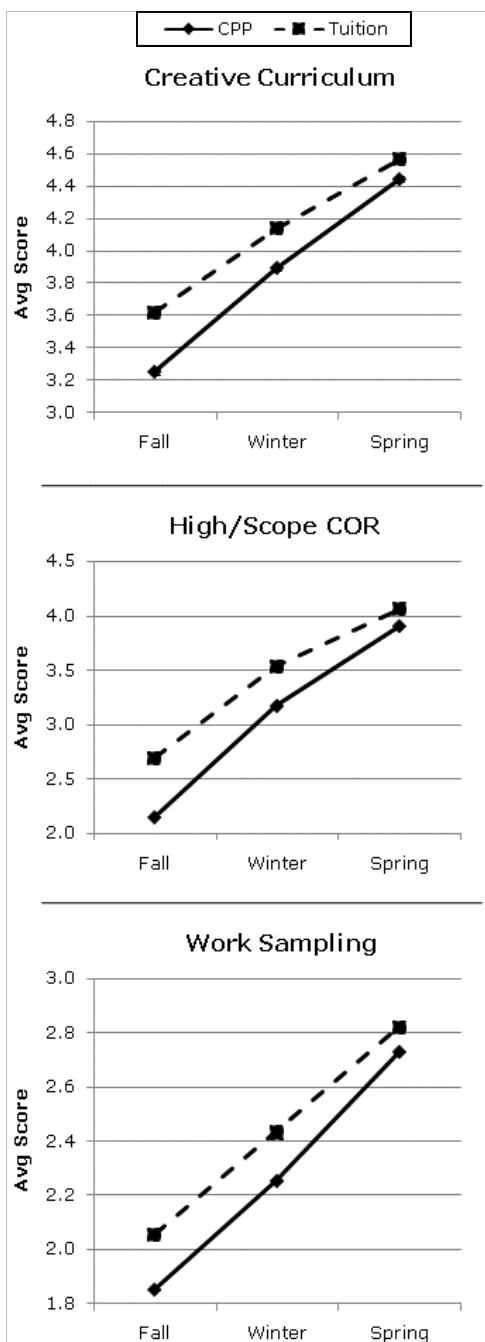
## Why does CPP have a positive impact on development?

High quality preschool supports children's learning of content and practices in math and science by providing opportunities to observe, explore, experiment, question, manipulate and discuss.<sup>5</sup> Children learn best through hands-on, exploratory experiences. Math experiences are embedded throughout the day's activities: children explore number concepts, patterns and relationships, geometry and spatial sense, measurements and data collection, organization and representation. Rich learning environments also highlight scientific learning: physical science (exploring physical properties of materials and objects), life sciences (exploring living things, including one's own body) and earth and environmental sciences (exploring natural settings).

As the graphs to the left show, CPP children are closing the achievement gap in the cognitive domain. At the beginning of the school year, a gap exists, as documented by all three assessment systems. As the school year progresses and children are able to take advantage of learning opportunities and teacher support, this gap narrows. CPP children's assessment ratings improved significantly across all three assessment systems.

*"Many of our families have very little income. Our expansive selection of learning toys, educational tools, books, music and structured play is a completely new experience for them."*

Sonya Shaw, President, Liberty J-4 Board of Education



# Closing the Achievement Gap: Social and Emotional Development

## Why are CPP children behind when they start preschool?

Academic knowledge on its own is not enough to guarantee school success. A child's emotional status affects early school performance, which in turn predicts later school outcomes. Children do not do as well in school when they have difficulty paying attention, following directions, getting along with others, and controlling negative emotions of anger and distress, all of which can lead to future school failure, delinquency and mental illness.<sup>6</sup> In 2008-09, programs reported that 28.6 percent of CPP children had "poor social skills" as one of their eligibility factors. Specific family and environmental factors, such as low family income and exposure to domestic violence, can make a child more vulnerable to social, emotional and behavioral problems.<sup>7</sup>



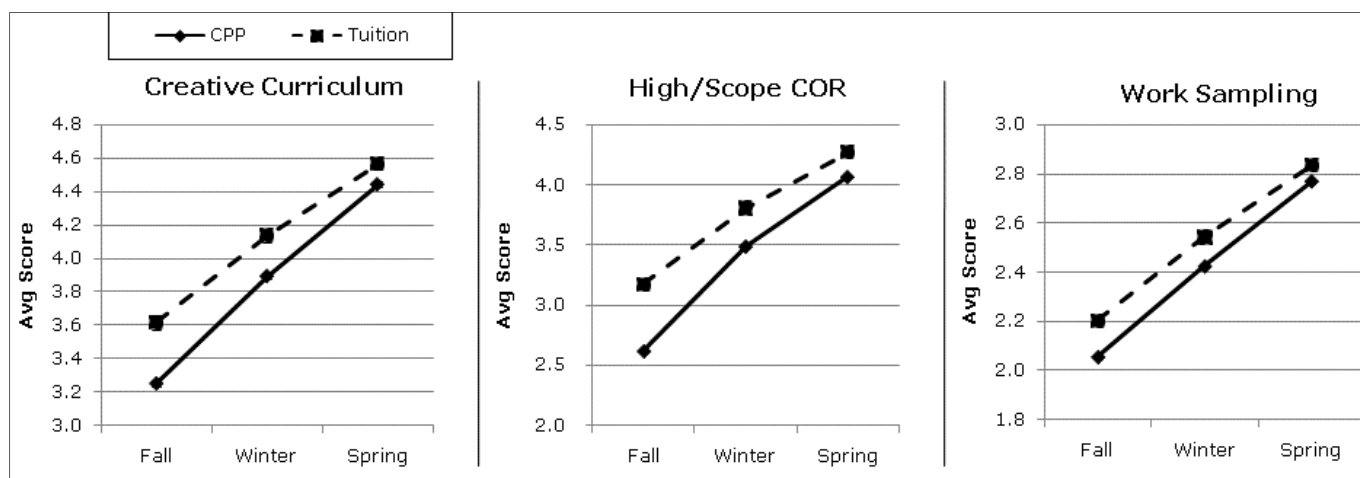
*Because of the CPP program, my child is able to recognize when he is starting to feel angry or frustrated and can – most times – calm himself and control the temper. The staff has helped us, as parents, learn how to help him make choices in behavior and we are more calm and patient with him at home.*

Parent, Thompson School District

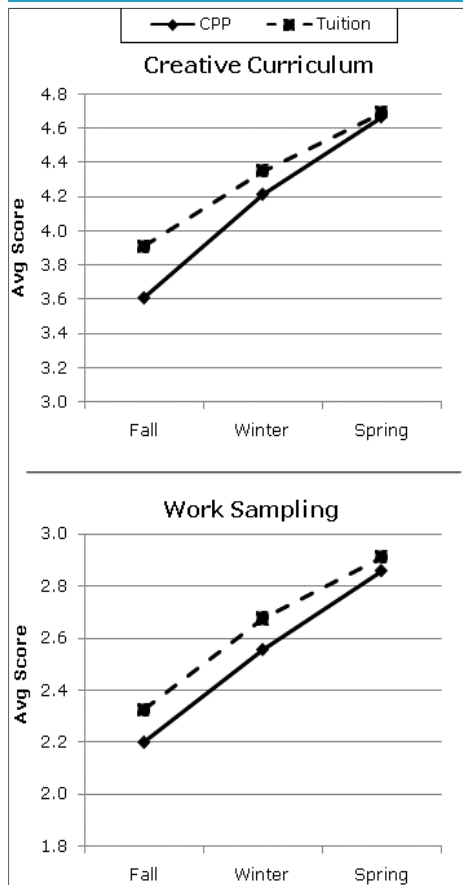
## Why does CPP have a positive impact on development?

Components of high quality programs include small group sizes and high adult-child ratios, as well as professional development for staff. These components have been associated with positive social and emotional outcomes for children including greater compliance, sociability, attention, self-regulation and peer relations, as well as lower rates of negative affect and behavior problems.<sup>8</sup>

As the graphs below show, CPP children are closing the gap in social and emotional development. However, addressing negative behaviors is only one aspect of social and emotional development in preschool. In CPP classrooms, at-risk children not only receive help with difficult behaviors, but they also have daily opportunities to practice self-regulation through play. In doing so, children work collaboratively and creatively to build the "21st century skills" they will need to succeed in the future and contribute their talents to society.



# Closing the Achievement Gap: Physical Development

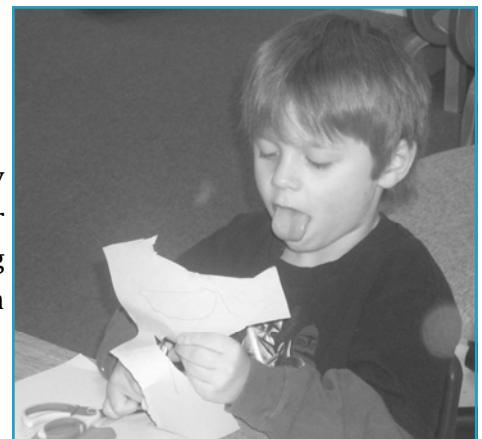


Please note: High/Scope's assessment data was not included in this analysis because of its focus on movement through music, as opposed to small and large motor skills.

## Why does CPP have a positive impact on development?

High quality preschool programs can provide children with a variety of equipment, materials and opportunities to practice and apply motor skills. These opportunities may include dressing themselves, crossing the monkey bars, writing their name or stringing beads. As children learn and master new skills, they develop self-confidence.

As evidenced in the accompanying graphs, CPP is closing the achievement gap in physical development. In the domain of physical development in particular, often solely the opportunity to use a specific material or piece of equipment is enough to allow the skill to develop fully and for the child to catch up. These opportunities can include navigating novel playground equipment, cutting for the first time with scissors or using writing tools.



## Why are CPP children behind when they start preschool?

Early childhood is an important time for promoting the development of motor skills, physical activity and healthy behaviors. However, not all parents have the same resources to help their children grow up healthy and provide stimulating home environments that support their children's physical development.

Higher parental education and income levels are associated with environments that provide more enriching materials for fine motor development (e.g. cutting, coloring, writing), opportunities for outdoor play (e.g. pulling, climbing, running, kicking, throwing, jumping) and nutritious meals.<sup>9</sup> Some low income parents may struggle to model healthy behaviors as well.<sup>10</sup>

*In 2008-09, 78.8 percent of CPP children were eligible for free and reduced price lunches and 7.9 percent were documented as homeless in the application process. Poverty is associated with lower nutritional levels in young children, including an increased prevalence of obesity. Malnutrition, including obesity, can cause social withdrawal, delayed motor skills development and delayed physical growth, which can lead to lower developmental expectations from parents and teachers and lower levels of environmental exploration.<sup>11</sup>*

*"Because of the screenings they do in preschool, we found that he was in need of glasses. Without these screenings, we may not have caught it until he went to school in another year, which the eye doctor said by then he may have been completely blind in one eye."*

Parent, Buffalo-Merino School District



# Closing the Achievement Gap: Language and Literacy

## Why are CPP children behind when they start preschool?

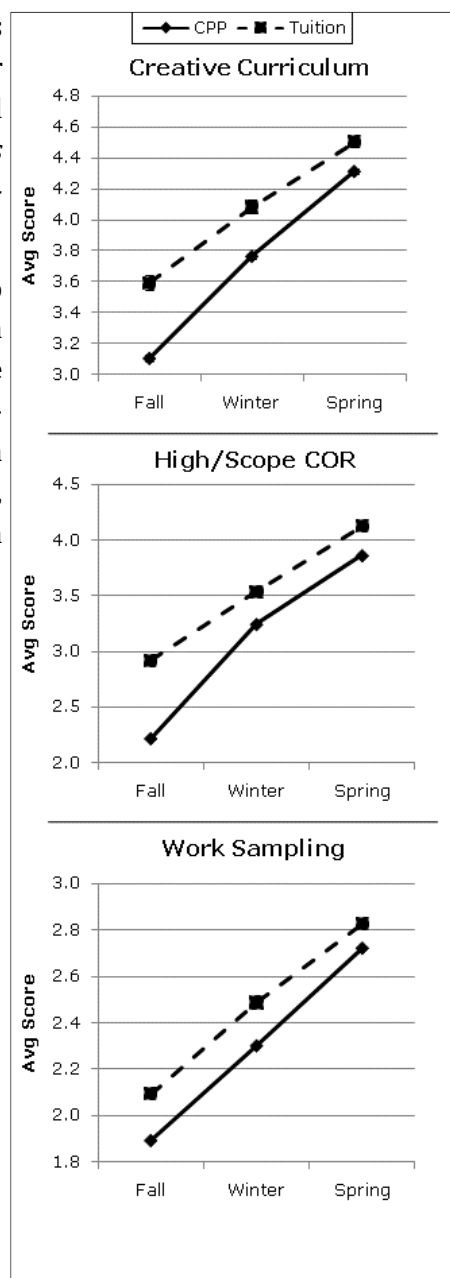
Families are children's first teachers. When children come from families that lack educational knowledge, experiences, time to spend with their children or extensive vocabularies, they are often already far behind their peers by the time they reach preschool. *In 2008-09, programs identified 44.5 percent of CPP children as in need of language development.*

Longitudinal data shows that children of parents in poverty come to preschool having been exposed to 30 million fewer words than children of professionals in upper income levels.<sup>12</sup> Research also indicates there is a discrepancy between the number of books in homes in wealthy versus impoverished communities. In Beverly Hills, California, children had an average of 199 books at home. In contrast, children in Watts, California, an impoverished community about 20 miles away, had an average of 0.4 books at home.<sup>13</sup>

## Why does CPP have a positive impact on development?

In high quality early childhood settings, closing the language and literacy gap is a primary focus. Building vocabulary through frequent and consistent teacher interaction is a key classroom feature. Teachers integrate books and reading into every part of the classroom life and routine. Adults in the classroom model language and, even more importantly, give children opportunities to practice language during make-believe play. When children balance their time between teacher-directed and student-directed activities, they receive multiple, varied and rich opportunities to speak, listen, remember and learn with active adult support.

In this way, CPP is narrowing the gap and building a strong foundation for reading comprehension in the later grades. While letter knowledge and phonological awareness are strong components in literacy instruction, children must also have context and meaning in order to decode words if they are to become proficient readers.



*"The kindergarten progress reports show the following data: Out of a total of 26 kindergartners that had CPP, 92 percent are proficient. Out of those kindergartners not receiving CPP, only 60 percent are proficient. None of the 26 students that received CPP have ILPs, but six of the 42 students that did not receive CPP have ILPs."*

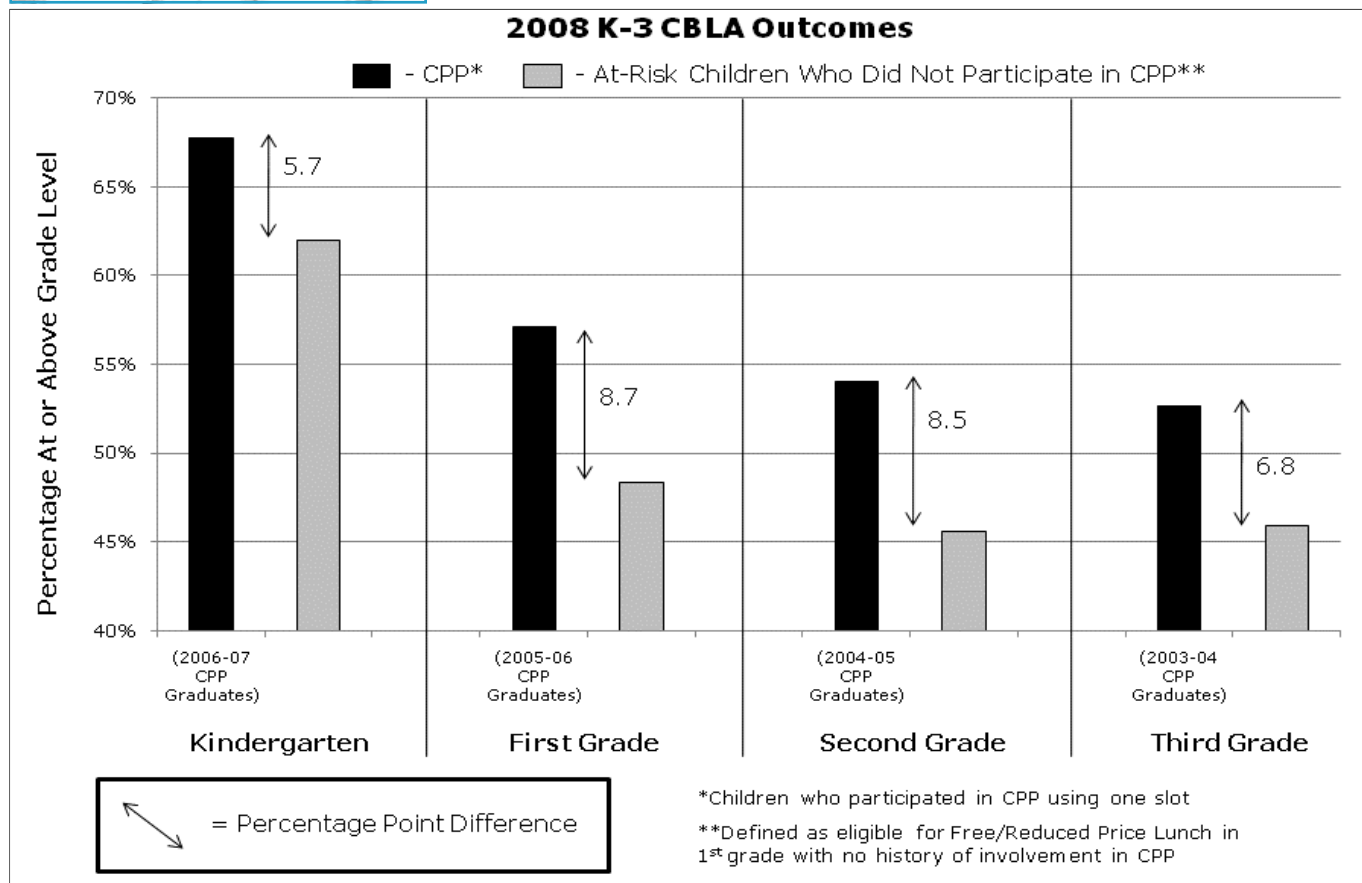
Morgan Alber, CPP Coordinator, Huerfano School District

# Strong Foundations in Language & Literacy: Results from the CBLA

As a result of the high quality early childhood experiences that CPP provides, school districts report that former CPP students, despite the presence of risk factors that might limit their success, are entering kindergarten well prepared and experiencing success through the primary grades.



One way to measure this success is by examining data from the Colorado Basic Literacy Act (CBLA) assessments. Three assessments are currently used in CBLA reporting: Dynamic Indicators of Basic Early Literacy (DIBELS), Developmental Reading Assessment-2 (DRA-2) and Phonological Awareness Literacy Screening (PALS). Each school district in the state uses one of these assessments as part of the measurement of literacy gains in grades K-3, and within each assessment, children take several subtests. The kindergarten assessments focus on phonological awareness and pre-reading skills. In grades one through three, children move to subtests in which they read passages or words of text.

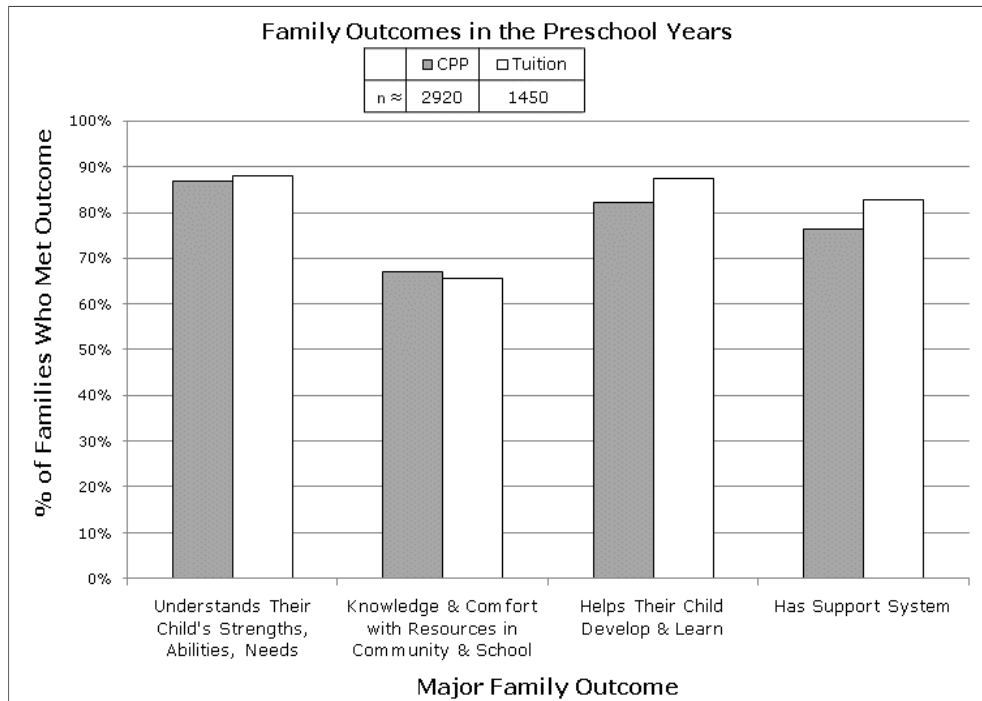


By second grade, there is less emphasis on letter naming and phonological awareness in literacy instruction and more on reading and comprehending text. As evidenced in the graph above, there is a gap in K-3 between the CPP children and the children who are at-risk but did not participate in CPP. Children with CPP experiences are closing the achievement gap, and it can be posited that this is a result of the emphasis in preschool on extending children's language and providing real-life experiences that bring an understanding to the written page.

# Families Play a Key Role:

## Results from the Family Outcomes Survey

The relationship children have with adults in their early development is critical to the development of their emotional health and thinking skills. While the Colorado Preschool Program provides the opportunity for these critical teacher-child relationships to be formed between children and their teachers, CPP can also strengthen parents' ability to support their children's learning. Through parent conferences, home visits and regular communication, families and teachers can exchange information about a child's strengths and share ways to support continued learning and growth.



In 2009, local program staff distributed a voluntary family outcomes survey to all families participating in Results Matter partner classrooms.

The graph to the left compares the outcomes met by families of CPP children versus tuition-paying children. Families of CPP children were close to, or on par with, their tuition-paying peers in all areas.

*"Thank you for all your help. You have given me the guidance and tools to help my son learn."*

**Parent, Delta County School District**

*"My son wouldn't have been in preschool without this program, because we just couldn't afford the cost."*

**Parent, Widefield School District**

*"The biggest effect that the Colorado Preschool Program has had on us as a family is that together my husband and I tell him stories and teach him the alphabet. Thanks for all the help and support to our children and teaching us how to help them in their future studies."*

**Parent, Roaring Fork School District**

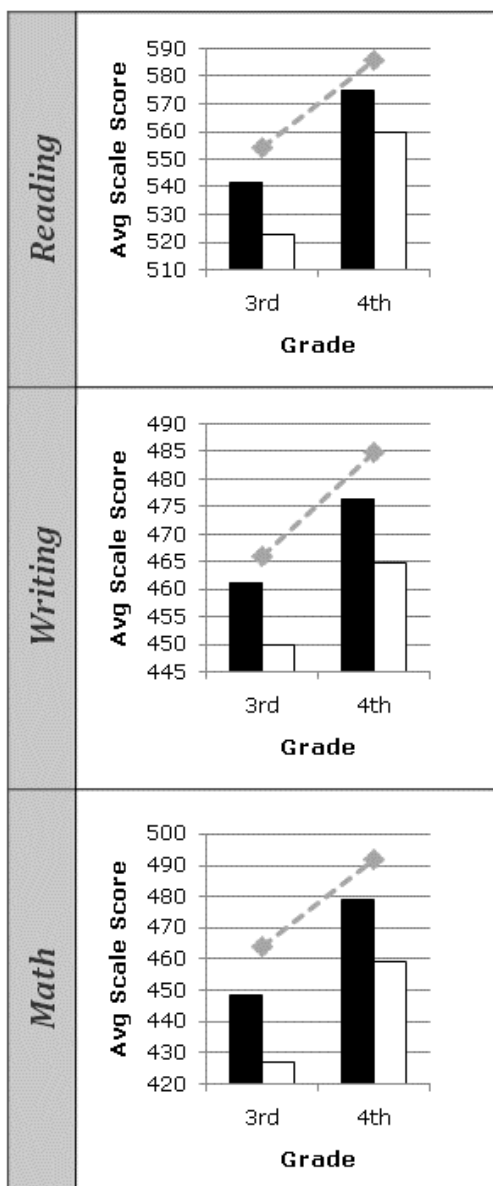
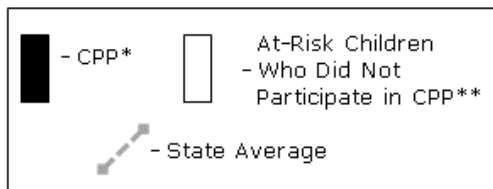


High quality preschool programs value parents as children's first and most important teachers and support opportunities for greater learning at home. They encourage family involvement in a variety of ways that respect families' time, comfort level and ability to participate. Early childhood programs offer a unique resource and support system that some families cannot find elsewhere. Staff link families to information, resources and referrals and provide a listening ear for the struggles families may encounter. A trusting relationship between the family and educational system begins during preschool and has the potential to influence parental involvement throughout the child's school years.

# Enduring Effects of CPP: Results from the CSAP

## CSAP Outcomes

### One Cohort (2003-04)



\* Children who participated in CPP using one slot

\*\* Defined as eligible for Free/Reduced Price Lunch in 1st grade with no history of participation in CPP

For many years, individual school districts have been tracking and reporting to CDE the standardized assessment scores of CPP children who remain in their district. Some school districts reported that CPP children



scored consistently higher on the CSAP compared to other at-risk groups (see sample data below). Many other districts found CPP children outperformed even the district averages. But the question always remained, "What about the children who have moved out of the district? How did they fare?"

This year, CDE was able to analyze standardized test data from all districts on CPP children for the first time. The analysis confirmed that CPP children demonstrate higher levels of performance than their peers on the CSAP in third and fourth grade reading, writing and math.

The graphs to the left include third and fourth grade CSAP scores of almost 5,000 CPP children who attended preschool in 2003-04. Their CSAP scores contrast with other children in the state who were eligible for free and reduced price meals (FRL) in first grade but did not attend CPP. In all subjects and in both grades, CPP children performed significantly closer to the state average on their CSAP assessments than their at-risk peers who were not funded by CPP. (Note: current tools do not allow analysis to control for children in the comparison group who may have attended other private preschools, Head Start, etc.)

These results echo findings from individual school districts and national research that high-quality preschool programs can close the achievement gap, and that the advantages do not fade out as children grow older.

### Adams 12 Five Star Schools

*In their 2009 Reapplication & Annual Report, Adams 12 demonstrated striking results: CPP graduates outperformed their free and reduced lunch-eligible (FRL) peers in every subject.*

#### 3rd Grade CSAP Outcomes (% Proficient/Advanced)

	CPP	FRL
Reading	72%	53%
Writing	53%	32%
Math	76%	53%

# Enduring Effects of CPP: Results from the CSAP

A second analysis of CSAP scores was performed to see how two different cohorts of children performed on the third grade reading, writing and math tests. The two cohorts included CPP children who attended preschool in 2003-04 and 2004-05 and their free/reduced lunch-eligible peers. As can be seen in the graphs to the right, CPP children in both years outperformed their low income peers in all three subject areas. These results suggest that not only does high-quality preschool produce long-term advantages, but the effect is also consistent across multiple graduating classes.



*"Our data continues to support the need for early intervention and a high quality preschool experience. The at-risk students who were enrolled in our Sheridan Early Childhood program scored in third grade at an 83 percent proficiency level compared to the rest of the district's overall 63 percent proficiency."*

Michael Clough  
Superintendent, Sheridan Schools

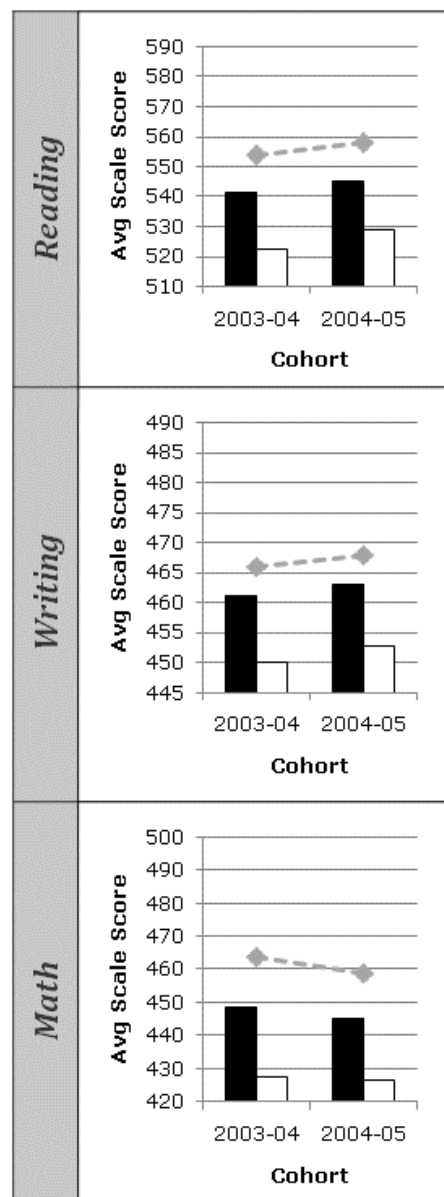
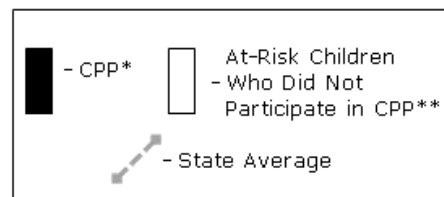
## Future Accountability Questions for CPP

This year's analysis is groundbreaking but it also leads to new questions. As the years move forward, CDE will continue to use the available tools to analyze program effectiveness. With additional tools, we could dig even deeper and answer other research questions. For instance, if unique student identifiers are established for all children receiving early childhood public funding, as discussed in House Bill 08-1364, CDE could analyze outcomes for many children who were not able to participate in any early childhood program, or children who participated in multiple programs. Additionally, if identifiers for early childhood educators are established, student outcomes could be studied with respect to teachers' educational backgrounds and experiences.

It is clear the Colorado Preschool Program provides significant, long-lasting educational benefits and creates a brighter future for Colorado's children.

## CSAP Outcomes

### Multiple Cohorts (2003-04 + 2004-05) 3rd Grade



\* Children who participated in CPP using one slot

\*\* Defined as eligible for Free/Reduced Price Lunch in 1st grade with no history of participation in CPP





## Acknowledgements

The Colorado Preschool Program would like to thank each of the CPP teachers, coordinators and district

advisory council members for their efforts in collecting and reporting data on the effectiveness of CPP.

We also want to extend a special thank you to the children, teachers and families whose pictures are featured throughout the report.

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