

# Landmark study sparks question: Do preschool effects stick in Colorado but not in Tennessee?



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Two preschoolers work on a building project on a recent afternoon in a Clayton Educare classroom in northeast Denver (Ann Schimke).

A recent [landmark study out of Tennessee](#) upended the conventional wisdom about the power of preschool and raised questions nationwide, including in Colorado, about how to leverage early education to produce long-lasting impacts.

The Vanderbilt University study revealed that at-risk students who participated in Tennessee's publicly-funded preschool program showed significant gains initially, but by third grade performed worse than non-participants on both academic and behavior measures.

Early childhood experts here say the study underscores the need for quality in both preschool and subsequent K-3 instruction, but that the findings don't match Colorado data showing that academic benefits of preschool do stick.

"You don't have the same story in Colorado," said Charlotte Brantley, president and CEO of Denver's Clayton Early Learning.

Like several early childhood advocates here, she cited [longitudinal data](#) showing that students in the state-funded Colorado Preschool Program consistently outperformed non-participating peers on all state tests from third to ninth grade.

But Dale Farran, one of the Vanderbilt study authors, said such data—part of an [annual report to the Colorado legislature](#)—doesn't rigorously match preschool children to comparison group children. Instead of matching them prior to the preschool year, they're matched after-the-fact in first grade—leaving many unknowns about parent motivation, poverty status and skill levels when the comparison children were 4.

"You can't claim your program is effective for poor children if you don't know [the two groups] were the same at the beginning, before the children went to Pre-K," she said.

Megan McDermott, a spokeswoman for the Colorado Department of Education, said via email, "We acknowledge that it is not as rigorous as an experimental study. We are using extant data because that is what is available to us."

She went on to say that the [2012 legislative report](#) included a more rigorous regression analysis study that found significant positive benefits of Colorado Preschool Program participation in third grade through sixth grade.

Early childhood advocates here and around the country say Vanderbilt's findings on the "fade-out" of preschool benefits isn't surprising given similar findings from an earlier Head Start Impact Study. What's

## VANDERBILT STUDY HIGHLIGHTS

- Preschool participants had significantly higher achievement than non-participants at the end of the pre-K year.
- At the beginning of kindergarten, teachers rated preschool participants as better prepared for kindergarten work and as having better work skills and more positive peer relations than non-participants.
- By the end of kindergarten, non-participants had caught up to preschool participants on achievement measures.
- By the end of first grade, teachers rated preschool participants as less well prepared for school, having poorer work skills and feeling more negative about school than non-participants.
- By the end of second grade and into third grade, preschool

sometimes missing from the discussion, they say, is that other studies have shown preschool participants reap significant non-academic benefits later in life. These include things like increased earnings, better health and reduced criminal activity.

participants were doing worse than non-participants on most achievement measures.

"It's not like this is the first time that a large-scale study has found this," said Brian Conly, deputy director of the state's Office of Early Childhood in the Department of Human Services.

"Yes, there may be a fadeout...but there are many, many other benefits to providing pre-kindergarten services."

## The wheels on the bus

Amid the debate about the impact of preschool, a visit to Clayton's classrooms in northeast Denver offers both a glimpse of how a highly regarded program works and a reminder that it's not easy to achieve.

The program is part of the national Educare network of model centers serving at-risk children. It's been deemed a Center of Excellence by the federal Office of Head Start and holds a four out of five on the state's quality rating system, [Colorado Shines](#). (Currently, there are no programs with fives.)

On a recent afternoon there, six preschoolers boarded an imaginary bus, sitting in two rows of wooden chairs near their classroom door. One girl created tickets for her classmates, writing in orange crayon on slips of paper. A little boy in the front row assumed the role of the driver.

Lead Teacher Christine Holpuch crouched near the three- and four-year olds as they chattered about where they'd stashed their tickets and what errands they would do.



Preschoolers at Clayton Educare in northeast Denver go on an imaginary bus ride.

She smoothly eased frustration about the seating arrangement and asked the kids questions about their trip—How do you start the bus? Who’s wearing a seatbelt? Could they go to the grocery store?

Clayton, located in a stately building in northeast Denver, is a warm, inviting place where kids get lots of personal attention from well-trained teachers. On the afternoon of the imaginary bus trip, Holpuch, who holds a masters degree in early childhood education, and her fellow teacher John Quinn were in charge of about eight children.

Both teachers got down on the students’ level and let the youngsters guide the play—Holpuch’s group moved from riding the bus to playing school to building wooden ramps. Quinn sat nearby with two boys who were busy building robots and skyscrapers.

Brantley said Clayton just receiving funding to embark on its own study of longer-term preschool outcomes, following on work done by Educare centers in [Chicago](#) and Omaha

“In those programs so far, they’ve got one or two cohorts now of kids who’ve completed third grade. There’s not been a fadeout,” she said.

## Fast and furious

So why do the Tennessee results look so different?

Some believe preschool quality suffered there because of a rushed statewide expansion. The 18,000-student program ramped up far faster than the similarly sized Colorado Preschool Program, launching statewide in 2005 compared to 1988 for Colorado.

Leaders here say several efforts to promote preschool quality have been going on in Colorado since the 1990s. These include the creation of the voluntary Qualistar rating program, which helped pave the way for the new mandatory Colorado Shines program. There also have been state grants to improve preschool quality, the creation of quality standards for Colorado Preschool Program classrooms and ongoing work by regional early childhood councils.

## RESPONSES TO THE VANDERBILT STUDY

- [DAVID L. KIRP](#), professor of public policy, University of California, Berkeley
- [W. STEVEN BARNETT](#), director of the National Institute for Early Education Research
- [LINDA K. SMITH](#), deputy assistant secretary for early childhood development, U.S. Department of Health and Human Services
- [GROVER J. “RUSS” WHITEHURST](#), senior fellow, Brookings Institution
- [KYLE SNOW AND LAUREN HOGAN](#), National Association for the Education of Young Children
- [JAMES J. HECKMAN](#), professor of

Kathryn Harris, executive director of Qualistar Colorado, said of Tennessee, “I don’t think they had the same vision around quality in early learning.”

Some [early childhood leaders in Tennessee agree](#), saying practices varied wildly from classroom to classroom leading to spotty quality overall. But Farran has pushed back against that explanation. She rebutted such criticisms in a recent [Brookings Institution report](#), writing that while the Tennessee program “has ample room for improvement, there is simply no convincing evidence that it is a program of distinctly lower overall quality than other statewide programs.”

In fact, Tennessee does have several well-regarded policies in place.

It meets nine of 10 preschool quality benchmarks established by the National Institute for Early Education Research, or NIERR. These include requiring preschool teachers to have a bachelor’s degree, and having class sizes of 20 or lower and staff-child ratios of 1:10 or better.

In comparison, Colorado meets just six of the 10 benchmarks.

Although Colorado falls short on four benchmarks—including the one requiring teachers to have a bachelor’s degree—it exceeds benchmarks on class size and staff-child ratio. The maximum class size in the Colorado Preschool Program is 16 and the maximum staff-child ratio is 1:8.

The director of NIERR, W. Steven Barnett, addressed the disconnect between model policies and quality classrooms in [a recent blog post about the Vanderbilt study](#).

He said the NIERR benchmarks “are not, in themselves, guarantees of quality...they are primarily indicators of the resources available to programs, not whether these resources are used well.”

## Financial resources

Many states, including Tennessee and Colorado, face preschool funding restraints that hinder their ability to meet the 10 quality benchmarks, according to the annual NIERR report. Both also lack the funding to serve all eligible at-risk children.

Tennessee, which spends about \$85 million on preschool, [would need to spend an additional \\$3,200 per child](#) to fully implement the benchmarks. Colorado, which spends



about \$75 million on preschool, would need to spend an additional \$1,000 per child.

The average Colorado Preschool Program slot, which typically covers a half-day class, cost about \$3,400 in 2013-14.

In contrast, consider an exemplary center like Clayton, which offers families a full complement of services along with child care and preschool. Each full-day, full-year seat costs \$15,000-\$18,000—typically paid for with money from various sources, including Head Start, Colorado

Preschool Program, state child care subsidies, grants and private money. All told, there are nearly 200 preschoolers at Clayton's main site and a second location in far northeast Denver.

While there are a small number of tuition-based slots at Clayton, most families either pay nothing or a small fee determined by the state's child care subsidy program. Generally, children with the most risk factors receive priority in admission.

Conly said while every Colorado child doesn't need a program as intensive as Clayton's, adequate funding is a constant challenge.

"At the state level, there's just so many competing priorities for the money," he said.

## **No silver bullet**

Aside from fresh discussions about what defines preschool quality, the Vanderbilt study has put new focus on the responsibility of the K-3 system to capitalize on preschool gains.

That's because the Tennessee preschoolers studied did in fact show show up to kindergarten ahead of their peers in literacy and math, and were rated more highly by teachers on work skills and peer relations.

Some experts say that [public schools tend to focus on the stragglers](#), leaving the more prepared preschool alums repeating lessons they already know until their non-preschool peers catch up.

In the same vein, Bill Jaeger, vice president of early childhood initiatives for the Colorado Children's Campaign, said that nine months of preschool can't be expected to

inoculate kids from the effects of attending underfunded, low-performing schools in kindergarten and beyond.

But in states like Colorado and Tennessee—where K-12 funding is far below the national average—what are the prospects for a robust K-3 experience for at-risk children?

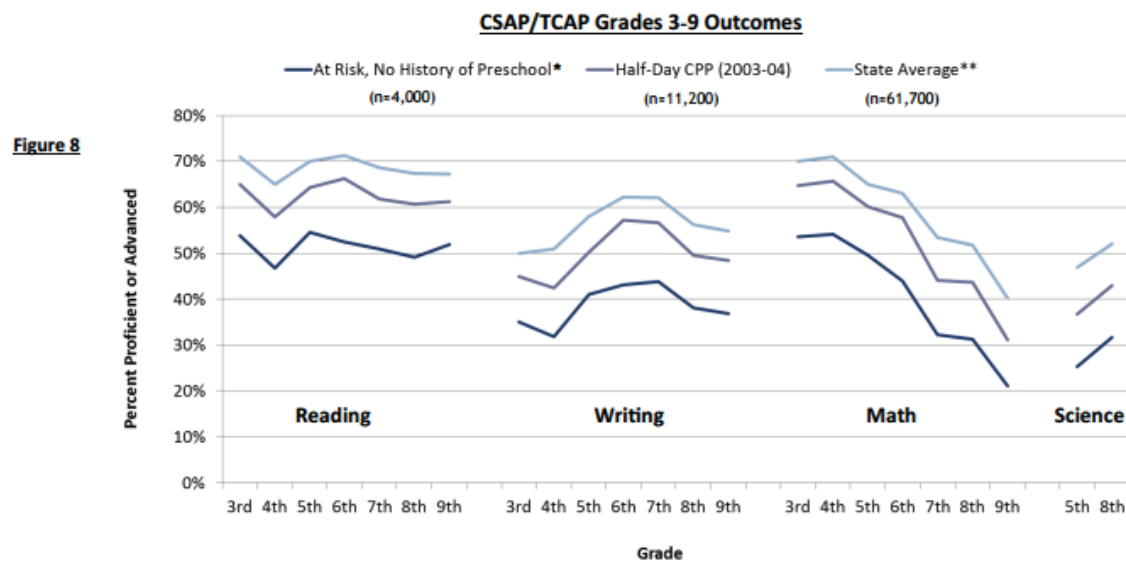
Take class size, which is strictly regulated in CPP programs but not in most public schools, Jaeger said.

“These kiddos walk into kindergarten,” he said, “and we’re hearing stories about kindergartens with 27, 28, 32 in a classroom.”

*The following is from the 2015 Legislative Report on the Colorado Preschool Program:*

### Colorado Preschool Program—Long-Term Impact on Student Achievement

CDE has been documenting longitudinal academic outcomes for a cohort of children participating in CPP since 2003-04 using annual CSAP/TCAP results. It is clear that graduates of CPP have a lasting benefit from the program compared to other at-risk children who did not participate in CPP (see below for a full definition of this matched comparison group). In the analysis illustrated in Figure 8, we examined results through ninth grade—the latest data available for the earliest CPP cohort that can be traced. (Note: science is not tested in ninth grade.) As demonstrated in the past, we see that on average, CPP graduates outperform other at-risk children who did not participate in CPP, even as far out as ninth grade. **In other words, academic improvements relative to similar peers do *not* fade out.**



**Figure 8**

\*At-Risk, No History of Preschool is a matched comparison group and is defined as children eligible for free or reduced price meals in first grade during the same year as the CPP cohort, with no history of preschool in CDE data collections.

\*\*State Average includes everyone assessed in the year corresponding with the expected grade/year of assessment for the 2003-04 CPP cohort. Therefore, “3<sup>rd</sup> grade” results for State Average equals 3<sup>rd</sup> grade overall results from 2008, “4<sup>th</sup> grade” = 2009, etc.

In order to align with Colorado’s new academic standards, CDE introduced the Transitional Colorado Assessment Program (TCAP) in 2012—seventh grade in this particular chart. Results from CSAP and TCAP are comparable across years.

A co-author of the Vanderbilt study questions whether this data from the 2015 Colorado Preschool Program

Legislative Report valid methodology.

IN THIS STORY: COLORADO PRESCHOOL PROGRAM, EARLY CHILDHOOD EDUCATION, EARLY EDUCATION, PRESCHOOL



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