

EARLY CHILDHOOD EDUCATION

Overview

This paper explores the benefits of high-quality early childhood education (ECE), particularly the evidence for and potential of free, full-day pre-school and kindergarten to improve the health and wellbeing of children, their families, communities, and society. It discusses the wide variation and disparities in participation in ECE, and the primary barriers to access to quality ECE. The paper also presents financing strategies for preschool and kindergarten programs and gives examples of successful and promising ECE initiatives across the U.S. and within Colorado.

Evidence of Benefits of Preschool/Kindergarten

High-quality early childhood education (ECE), provided through full day preschool programs and kindergarten classes, is an integral building block of a child's education. Studies suggest that participating in learning activities early in life enhances and stimulates cognitive development and reduces achievement gaps, particularly among low-income and minority students.¹ Engaging children in education early has many emotional, social, and societal benefits as well.² There are promising results that suggest enrollment in ECE can reduce significant health issues, such as high blood pressure and drug addiction, as well as encourage positive educational outcomes, including reduced high school dropout rates, increased number of years in school, and increased participation in the labor market.^{3,4} Investing in high-quality early childhood education, compared to low-quality programs, has even been linked to reducing overall crime rates and economic racial disparities.⁵ While there may be some remaining uncertainty regarding the impacts of ECE,^{6,7} the preponderance of evidence collected shows the positive benefits that high-quality ECE can have on children through their life course.

Kindergarten programs in particular have been shown to be beneficial in preparing young children for education by anchoring them with educational skills such as reading, spatial reasoning, motor skills, basic math concepts, and language.⁸ Full-day programs have been shown to offer a multitude of additional benefits over half-day programs, including increased academic gains in kindergarten and increased academic performance well into high school.^{9,10} There are also social and emotional benefits, such as better preparing five-year-old children for longer school days and preparing all participants for first-

¹Alison Friedman-Krauss, "National Institute for Early Education Research: How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps", *National Education Policy Center*, April 8, 2016, <http://nepc.colorado.edu/blog/high-quality-universal-pre-k>

² Ibid.

³ Jorge Luis Garcia et al., "The Life-cycle Benefits of an Influential Early Childhood Program," *National Bureau of Economic Research*, December 2016, https://heckmanequation.org/assets/2017/01/F_Heckman_CBAOnePager_120516.pdf

⁴ Rob Grunewald and Arthur J. Rolnick, "An Early Childhood Investment with a High Public Return", *The Regional Economist*, July 2010, <https://www.stlouisfed.org/publications/regional-economist/july-2010/an-early-childhood-investment-with-a-high-public-return>

⁵ "The Economics of Early Childhood Investments", *Report of President's Council of Economic Advisers*, January 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/early_childhood_report_update_final_non-embargo.pdf

⁶ Grover J. Whitehurst, "Does Pre-k Work? It Depends How Picky You Are", *The Brookings Institution*, February 26, 2014, <https://www.brookings.edu/research/does-pre-k-work-it-depends-how-picky-you-are/>

⁷ Concerns include external and internal validity questions around studies not using randomized controlled trials (RCT), along with studies using RCTs finding null or slight negative results along with issues around the conflation of ECE and childcare

⁸ William T. Gormley Jr. et al., "The Effects of Universal Pre-K on Cognitive Development," *Developmental Psychology* 41, 2005, <http://www.iapsych.com/wj3ewok/LinkedDocuments/Gormley2005.pdf>

⁹ "Full-Day Kindergarten: An Advocacy Guide," *National Education Association and Collaborative Communications Group*, 2006, http://www.nea.org/assets/docs/HE/mf_kadvoguide.pdf

¹⁰ Lisa Pitch and Ordene Edwards, "Kindergarten Study: Full-Day versus Half-Day Kindergarten", *Clark County School District*, 2006, <http://www.ccsd.net/resources/assessment-accountability-research-school-improvement-division/full-day-kindergarten-review-of-literature.pdf>

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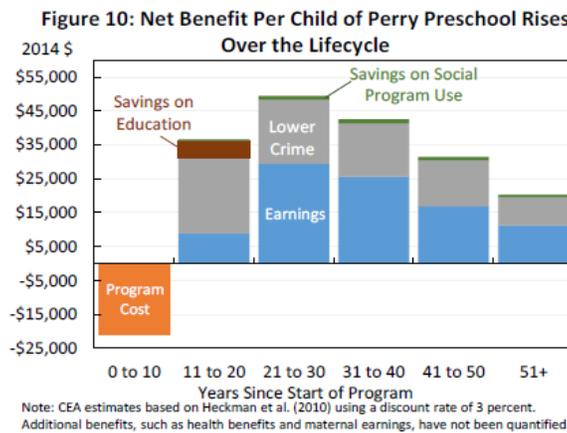
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grade.¹¹ Full-day kindergarten allows more time for teachers to work with students and to individualize instruction for students, particularly when class sizes are smaller.¹²

Economic Impacts of High-Quality ECE

Beyond the benefits to the individual child provided from ECE, there are also economic benefits of high-quality programs. A 2015 report from the Executive Office of the President on the Economics of Early Childhood documents that investments in high-quality early education generate economic returns of over \$8 for every \$1 spent.¹³ These gains are primarily from the child's increased earnings potential, with the estimated gain in earnings over the child's career ranging from \$9,166 to \$30,581.¹⁴ Figure 1 provides information from an analysis of the Perry Preschool program by Heckman et al. In another study of the same program, researchers showed that for every \$1 invested into the program, there was a return of \$16.¹⁵ Economic gains also can come in the form of reduced involvement with the criminal justice system and with remedial education, helping to reduce expenditures for both the criminal justice system and public schools.¹⁶ ECE can also help increase mothers' employment rates and incomes, by enabling them to balance their time between work, family, and childcare.¹⁷ Figure 2 below shows some of the findings from the High/Scope study of the Perry Preschool program.

Figure 1: Net Benefit Per Child of Perry Preschool Increases Over the Lifecycle



Source: "The Economics of Early Childhood Investments", Report of President's Council of Economic Advisers, January 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/early_childhood_report_update_final_non-embargo.pdf

¹¹ Ibid.

¹² Ibid.

¹³ "The Economics of Early Childhood Investments"

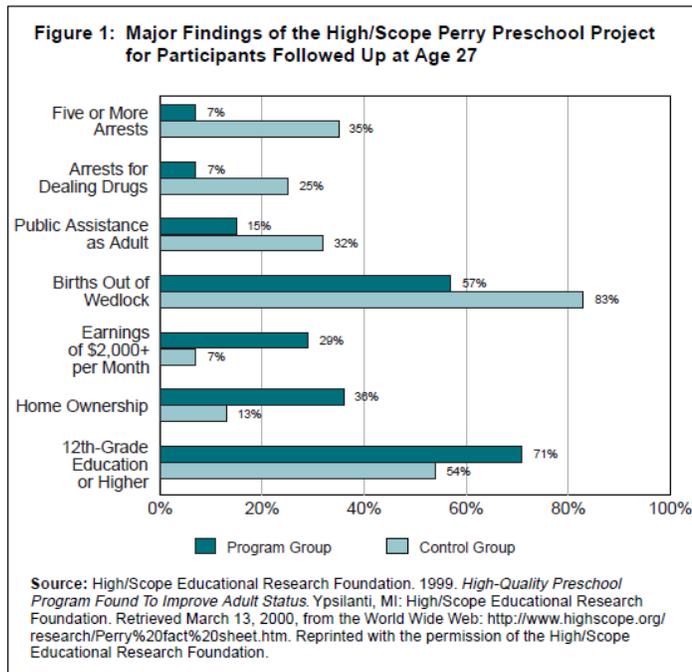
¹⁴ Ibid.

¹⁵ Lawrence J. Schweinhart, "The High/Scope Perry Preschool Study Through Age 40," *High/Scope Educational Research Foundation*, 2005, <http://www.peelearlyyears.com/pdf/Research/INTERNATIONAL%20Early%20Years/Perry%20Project.pdf>

¹⁶ Ibid.

¹⁷ Ibid.

Figure 2: Major Findings of the High/Scope Perry Preschool Project for Participants Followed Up to Age 27



Source: "The High/Scope Perry Preschool Project", 2000

Barriers to Access

Despite the overwhelming evidence of educational and quality of life enhancement, ECE programs are not universally available or accessible. The Organization of Economic Cooperation and Development (OECD) estimates that the United States ranks 28th out of 38 countries for the share of four-year-old children enrolled in early childhood education.¹⁸ Additionally, ECE programs in other countries are generally staffed by qualified teachers using a formal curriculum; in the United States, the qualifications of staff and program curricula can vary significantly.¹⁹ There are several barriers to enrollment in a preschool or kindergarten program, including lack of quality public programs made available through local government and the high costs to enroll in the programs. Policies regarding the provision of ECE programs vary widely across the country. There are currently no federal mandates that require public school systems to provide pre-school or kindergarten classes. Early childhood education policies are left entirely to the jurisdiction and funding of each state resulting in substantial variation from state to state in 1) the age at which children enter compulsory education, and 2) which type of program (preschool or kindergarten) a child enters. The U.S. Department of Education Office for Civil Rights reports that about

¹⁸ Andreas Schleicher, "Education at a Glance 2012: OECD Indicators", *Organization for Economic Co-operation and Development*, September 12, 2012, <https://www.oecd.org/unitedstates/CN%20-%20United%20States.pdf>

¹⁹ Ibid.

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40 percent of school districts in the United States do not offer any public preschool programs (other than kindergarten). Of districts that do offer preschool programs, only 43 percent offer full-day preschool.²⁰

As of 2016, only 14 states (Alabama, Arkansas, Delaware, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Rhode Island, Tennessee, Washington and West Virginia) and Washington D.C. require children to attend full-day kindergarten classes. Yet full-day programs have been shown to be more beneficial than half-day.²¹ The base age of entry into compulsory education in the United States is five, but it can be older, depending on a state's local legislation specifying whether kindergarten is a mandated program. For states that don't require children to attend kindergarten, the average age of entry to education is older, between six and eight years of age.²² Without universal ECE programs, children are missing classroom time that can positively affect brain development related to learning.

In addition to policy differences across states, there are significant disparities in ECE access and enrollment that reflect racial and income differences. This is particularly problematic because minority and lower-income children often start behind other children. For example, a study by the National Institute for Early Education Research found that upon entering kindergarten, African American and Hispanic children are already far behind their white peers in math and reading, from nine to 10 months behind in math and seven to 12 months behind in reading (see Tables 3 and 4 below).²³ Children from higher-income families also are more likely to be enrolled in a preschool program than their lower-income peers. This affords them many educational benefits that boost them to a higher degree of readiness and sets them up for a lifetime of higher achievement that is hard to achieve without such early support. Achievement gaps that occur early in a child's education produce a learning deficit that is hard to overcome.

²⁰ "Data Snapshot: Early Childhood Education, Issue Brief No. 2," *U.S. Department of Education Office for Civil Rights*, March, 2014, <https://www2.ed.gov/about/offices/list/ocr/docs/crdc-early-learning-snapshot.pdf>

²¹ Emily Parker, Louisa Diffey, and Bruce Atchison, "Full-Day Kindergarten: A look across the states", *Education Commission of the States*, September 2016, <http://www.ecs.org/ec-content/uploads/Full-Day-Kindergarten-A-look-across-the-states.pdf>

²² "Compulsory School Age" *Education Commission of the States*, March 2014, <http://ecs.force.com/mbdata/mbquestRT?rep=Kq1401>

²³ Allison Friedman-Krauss, W. Steven Barnett, and Milagros Nores, "How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps?", *Center for American Progress*, April 2016, <https://www.americanprogress.org/issues/education/reports/2016/04/05/132750/how-much-can-high-quality-universal-pre-k-reduce-achievement-gaps/>

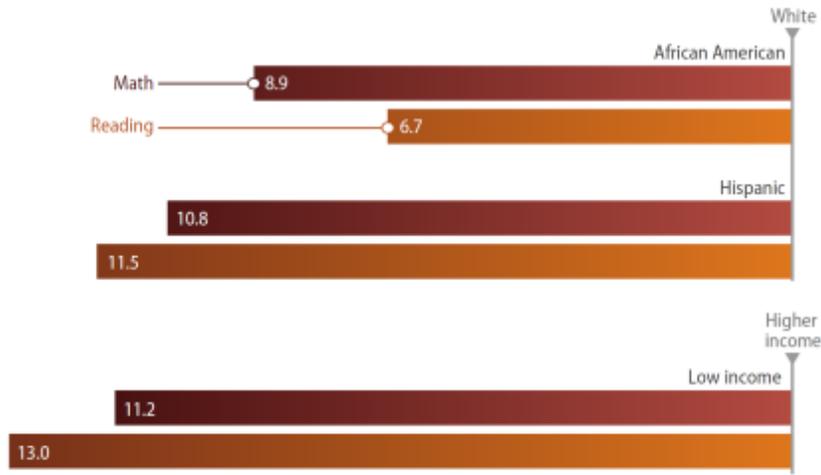
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Figure 3: Kindergarten Achievement Gaps in Months of Learning, 2010

FIGURE 1

African American, Hispanic, and low-income children lag behind their white and more affluent peers in math and reading at kindergarten entry

Kindergarten achievement gaps in months of learning by subgroup, 2010



Note: "Low income" refers to children whose household incomes are at or below 200 percent of the federal poverty guidelines, or FPG. "Higher income" refers to children whose household incomes are above 200 percent FPG.

Source: Authors' estimates are based on Milagros Nores and W. Steven Barnett, "Access to High Quality Early Care and Education: Readiness and Opportunity Gaps in America" (New Brunswick, NJ: Center for Enhancing Early Learning Outcomes and National Institute for Early Education Research, 2014).

Source: "National Institute for Early Education Research: How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps?", 2016

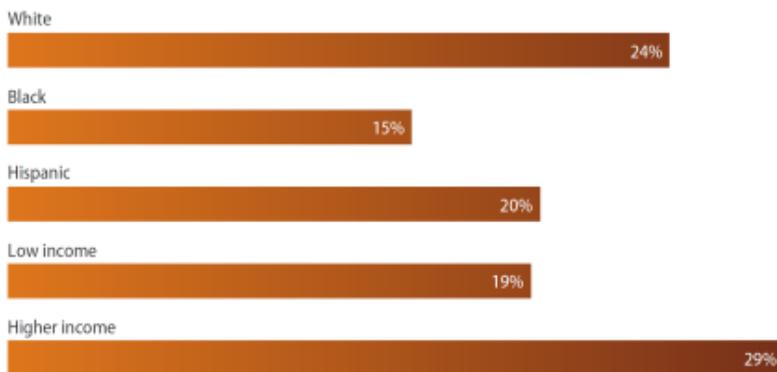
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Figure 4: Estimated Rate of Current National Enrollment in High-Quality Center-Based Early Childhood Programs

FIGURE 2

African American, Hispanic, and low-income children access high-quality programs at lower rates

Estimated rates of current national enrollment in high-quality center-based early childhood programs



Note: "High-quality" classrooms were those rated as a 5 or higher on the Early Childhood Environmental Rating Scale.

Sources: Author's calculations are based on data from National Center for Education Statistics, *Early Childhood Longitudinal Study: Birth Cohort (ECLS-B)* (U.S. Department of Education, 2009); National Center for Education Statistics, *Early Childhood Longitudinal Study: Kindergarten Class of 2010-2011 (ECLS-K)* (U.S. Department of Education, 2014).

Source: "National Institute for Early Education Research: How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps?", 2016

Finally, cost can be a prohibitive factor when parents make the decision about enrolling children in high-quality programs. Public preschool programs are often geared toward low-income children but cannot serve every eligible child, forcing families to either pay out-of-pocket for private daycare or education programs, which in some states can consume up to 85 percent of a family's income.²⁴ For single mothers, the costs often average more than 40 percent of median income in every state.²⁵ One estimate places year-round private care at \$18,000 annually for two children; but across the country, 13 percent of families pay more than \$30,000 annually — costs that have come to rival in size college tuitions and median yearly rent.^{26, 27} Even though costs are high, prospects for providing more affordable care are dim. Preschool teachers are typically paid low wages, with a median annual salary of approximately \$28,000. Thus, incentives to enter the field are weak. To recruit more teachers will likely require offering higher salaries, which would increase costs to enroll. Moreover, it can be difficult to create quality early education

²⁴ Lillian Mongeau, "Why Does America Invest So Little in Its Children? How the U.S. became one of the worst countries in the developed world for kids under 5", *The Atlantic*, July 12, 2016, <https://www.theatlantic.com/education/archive/2016/07/why-does-america-invest-so-little-in-its-children/490790/>

²⁵ Chrisi West, "Cost and Availability of Child Care Continues to Burden American Families," *Child Care Aware of America*, December 8, 2015, <http://www.usa.childcareaware.org/2015/12/cost-and-availability-of-child-care-continues-to-burden-american-families/>

²⁶ Mongeau, "Why Does America Invest So Little in Its Children?", 2016

²⁷ West, "Cost and Availability of Child Care", 2015

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programs with limited resources.²⁸ Even if public ECE programs could be expanded to accept more children, it does not necessarily mean the programs would be high quality; and lower-quality programs may not produce many of the benefits noted above.²⁹

State of Early Childhood Education in Colorado

While Colorado continues to make strides in funding and prioritizing education, significant gaps in accessibility remain. Coverage of early childhood education is not universal. The state does not require children to attend kindergarten, although it does require enrollment in school by the age of six, with a birthday on or by August 1st of the year attending school.³⁰ There are currently more than 338,000 children under the age of five living in Colorado, yet only about 32,000 preschool age children are enrolled in district-operated public preschool.³¹ Preschool programs are operating in 82 percent of Colorado school districts, but 65 percent of the districts with preschool programs offer only part-day programs, which typically are available to low-income children but not always open to all district children.³²

The Colorado Preschool Program

The *Colorado Preschool Program (CPP)* was created in 1988 as a temporary educational program to assist young children with language development delays in getting up to speed with their peers. CPP was made a permanent program in 1992 via Colorado Senate Bill 92-189, which opened the eligibility requirements to serve students with other complex needs, such as those from low-income families and families with multiple risk factors.³³ To be eligible for the program, younger children (between ages 3 and 4) must meet multiple eligibility tests, while older children (ages 4 and 5) need to meet only one test. The program is free for children who qualify. These eligibility criteria include whether the child:

- is eligible for free or reduced-cost meals at school
- is homeless
- has abusive caregivers
- has drug or alcohol abuse in the immediate family
- has a caregiver who did not complete a high school education
- lives with a family that frequently relocates to new residences
- has a parent who was under age 18 and unmarried at the time of the child's birth.³⁴

Children also can be eligible if they are in need of language development or are receiving supports from Social Services as neglected or dependent children.³⁵

The CPP is a capped program, meaning there are only a set number of slots available per year, although children can continue to receive CPP funding for a second year if they still have any of the noted risk factors. Given an enrollment limit of approximately 28,000 students, many children and families are left without a low-cost or free preschool program. In the 2015-2016 school year, 26,907 children were

²⁸ Ibid.

²⁹ Ibid.

³⁰ "Compulsory School Attendance Law", Colorado Department of Education, https://www.cde.state.co.us/choice/homeschool_attendanceclaw

³¹ "Kids Count Data Center", *Annie E Casey Foundation*, <http://datacenter.kidscount.org/data#CO/2/0/char/0>

³² Ibid.

³³ "CPP Facts", Colorado Department of Education, January 26th, 2017, <http://www.cde.state.co.us/cpp/cppfacts>

³⁴ "Legislated Eligibility Criteria for the Colorado Preschool Program", Colorado Department of Education, May 3rd, 2016, <https://www.cde.state.co.us/cpp/cpphandbookonline/eligibility1>

³⁵ Ibid.

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enrolled in the program, with some children using two available slots to attend full-day programs. The CPP is currently operating in 175 of the 179 Colorado school districts, making it widely available, if not always accessible, to families who may need the program. However, given the strict eligibility criteria, this is not a universal program, and a high percentage of the more than 140,000 three- and four-year-olds in Colorado do not have access to a preschool program.³⁶ While Colorado spends more than \$6 billion per year on K-12 education, only 17 percent of that spending goes to early childhood programs (total CPP funding is \$106,283,804), indicating that more funding could help to expand the program.

Denver Preschool Program

The Denver Preschool Program (DPP) is a taxpayer-funded initiative aimed at increasing access to high-quality preschool for Denver's four-year-old children. DPP operates on the premise that preschool plays an important role in the academic and social-emotional development of children and that participating in a high-quality preschool experience can have a positive impact on a child. The initiative is funded through a \$0.0012 sales tax increase that was voted into law in 2006 and allowed the city to collect more than \$5 million in the first half of 2007. The tax revenue is used for tuition credits for families, outreach, a quality improvement system, evaluation, and administration. The funding for DPP was renewed in the 2016 election, and voters approved the City of Denver to retain and spend all revenues collected by the tax for the DPP. This funding will allow the program to be relatively financially stable through 2026.³⁷

DPP encourages families to enroll their children in preschool by providing tuition credits to offset the cost of preschool. The size of the tuition credit each family receives is determined by the family's income, the size of the family, and the quality rating of the preschool the child attends. DPP also provides funding for preschools serving children who live in Denver to obtain a DPP quality rating through its quality improvement system. Participating programs have access to professional development opportunities (e.g., training and coaching) and quality improvement grants to assist them in their efforts to improve quality. This program offers a strong case study of an initiative focused on increasing access to high-quality preschool in Colorado.

Program Case Studies and Initiatives in ECE

There are a wide variety of initiatives across the country that focus on providing ECE, mainly through pre-K and kindergarten programs. The aim of these programs is often split between targeted initiatives—programs that target specific populations, such as low-income children—and universal initiatives—programs open to all children. There are more targeted than universal programs because the cost of supporting universal access is high. Yet support for universal access is growing because of the demonstrated benefits of high-quality ECE programs.

These programs can be funded in a variety of ways. The main funding strategies are as follows:³⁸

- 1) **General Revenue Funding** - This is the most common form of funding for pre-K programs with revenue derived from a combination of sales, income, property, and other taxes levied by state governments. This approach can provide steady funding with prospects for occasional moderate increases, but it requires legislative approval, opening it to cuts, as well. This is particularly

³⁶ "Kids Count Data Center"

³⁷ Erica Meltzer, "Denver Question 2A: What you need to know about the Denver Preschool Program tax," *Denverite*, October 24, 2016, <https://www.denverite.com/denver-question-2a-need-know-denver-preschool-program-tax-20526/>

³⁸ Diana Stone, "Funding the Future: States' Approaches to Pre-K Finance 2008 Update", *Pre-K Now Research Series*, February 2008, Seattle, Washington, http://www.pewtrusts.org/~media/legacy/uploadedfiles/pes_assets/2008/pewpknfundingthefuturefeb2008pdf.pdf
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worrisome when funds are not specifically dedicated to ECE programs.

- a) *State School Funding Programs* - One way to ensure funds are being used specifically for pre-K or other ECE programs is to utilize school funding formulas. The formula can take account of such factors as the number of children who attend schools, per-child spending amounts, and area income or special education status of children in the area. As of 2008, 13 states were utilizing this option to fund ECE, either with unrestricted eligibility or capped funding for more targeted interventions.
- b) *Marijuana revenues* - One new possibility in the general revenue category comes from allocating a portion of marijuana taxes to preschool and kindergarten programs. Marijuana taxes are bringing in millions of dollars per year to state and local communities, and a portion could be dedicated to ECE programs. Currently in Colorado, the first \$40 million of retail marijuana excise tax revenue must be distributed to the Colorado Department of Education Building Excellent Schools Today (BEST) program, which supports grants to schools for capital improvements. For SFY 2015-16, excess tax revenue of \$2.5 million (the amount that exceeded the \$40 million cap), was transferred to the Public School Fund.³⁹ The state budget for SFY 2016-17 included \$4.37 million from marijuana tax revenues for the Colorado Department of Education's Early Literacy Competitive Grant Program, which supports enhanced reading initiatives⁴⁰ in K-3 programs.
- 2) **Public-Private Partnerships.** This method has emerged as more private sector leaders have come forward to help jumpstart state investments in ECE. There can be either long-term solutions, where the partnership is meant to ensure constant funding for pre-K programs, or more limited partnerships, where the fund is meant to support start-up of ECE programs or help create quality improvement systems for states.
- 3) **Dedicated Dollars.** This option allows for dedicated funding streams for ECE programs. The sources can vary but often include lottery funds gaming revenue, excise or "sin" taxes, sales taxes, and tobacco settlement monies. These funding mechanisms have the advantages that they do not require repeated legislative approval and they can generate a substantial amount of revenue annually. One disadvantage is that the amount of funding may vary substantially from year to year; not having a predictable amount of funding may make the programs less sustainable. Another disadvantage is that many of the tax sources are regressive, placing a disproportionate burden on lower-income families.

Specific examples of programs that use most of these funding options are described below (except for the CPP and DPP programs described earlier). The intent is to show how states have implemented their ECE programs, along with results from those programs.

Targeted ECE Initiatives

The High/Scope Perry Preschool Project

Several early education intervention programs target at-risk children in an effort to reduce the achievement gap and improve academic, social, health, and other short- and long-term outcomes. One of the first such programs to undergo a longitudinal study of effects of high-quality preschool on at-risk African-American youth was the High-Scope Perry Preschool project in Ypsilanti, Michigan. The study began in the early 1960s to investigate the short-term and long-term effects of providing free, high-quality preschool programs to low-income, minority children and their families. The High-Scope Perry Preschool

³⁹ "Disposition of Marijuana Tax Revenue", Colorado Department of Revenue, 2017, <https://www.colorado.gov/pacific/revenue/disposition-marijuana-tax-revenue>

⁴⁰ "Colorado Marijuana Tax Cash Fund Appropriations and Expenditure Report Nov 1.", Colorado Office of State Planning and Budgeting, <https://drive.google.com/file/d/0B-GHu19KBfjVQ0h4U2dOMGxZYWc/view> HMA9May 22, 2017

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project also encouraged parent and family engagement in education, because parent engagement was thought to greatly increase a child's chances of academic success.⁴¹

The study's assessment of the long-term effect indicated that, not only was the project effective as an educational intervention, but it also demonstrated other positive outcomes, including a significantly lower rate of crime and delinquency and a lower incidence of teenage pregnancy and welfare dependency.⁴² By the age of 27, program participants were nearly three times as likely to own their own homes as the control group and less than half as likely to be receiving public assistance. Longitudinal program evaluations show that for every \$1 invested into the program, there was a return of \$16.⁴³ This program offers an excellent example of a targeted preschool program aimed at at-risk youth and how it can impact children well beyond their early years.

North Carolina - Carolina Abecedarian Project (ABC) and Carolina Approach to Responsive Education (CARE)

In the 1970s North Carolina conducted two identical, randomized-controlled preschool experiments that offered comprehensive developmental resources to disadvantaged African-American children from birth to age five.⁴⁴ Children were randomly assigned into either the treatment group or control group, which had access to lower quality center-based care or in-home care. The resources provided to the treatment group included access to nutrition, health care, and high-quality early learning. The results showed that "high-quality birth-to-five programs for disadvantaged children can deliver a 13 percent per year return on investment," while also providing other long-term benefits, including reduced crime, reduced rates of drug addiction, better income, and more stable employment.⁴⁵ This educational program also demonstrated the benefit of reaching out to specific at-risk populations for children's early childhood years.

National Head Start Program

Head Start, one of the longstanding programs in ECE in the United States, was launched in 1965 by President Lyndon B. Johnson. It is the only nationally funded school readiness program that is targeted to children from low-income families and to children with disabilities. Through both the Head Start and early Head Start programs (which began in 1995), eligible children are engaged in programs geared toward comprehensive development, early learning, health, and wellbeing from birth (meaning pregnant mothers can also be enrolled in the program) to age five.⁴⁶ For the 2016 fiscal year, Head Start received just over \$9 billion in funding, disseminated to each program based on a formula.⁴⁷ In 2014, Head Start enrolled just over 1 million participants, with 49 percent of the funding going to center-based full-day programs.⁴⁸ Nearly 5 percent of children enrolled in Head Start experienced homelessness, 2 percent were in foster care, and 12 percent had disabilities. In 2015, Colorado received \$88 million dollars in Head

⁴¹ Schweinhart, "The High/Scope Perry Preschool Study"

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Jorge Luis Garcia et al., "Research Summary: The Lifecycle Benefits of an Influential Early Childhood Program," *Human Capital and Economic Opportunity Global Working Group, University of Chicago*, December 2016, https://heckmanequation.org/assets/2017/01/Garcia_Heckman_Leaf_etal_2016_life-cycle-benefits-ecp_r1-p.pdfhttps://heckmanequation.org/assets/2017/01/Garcia_Heckman_Leaf_etal_2016_life-cycle-benefits-ecp_r1-p.pdf

⁴⁵ Ibid.

⁴⁶ "Head Start Program Facts, Fiscal Year 2015," Office of Head Start, <https://eclkc.ohs.acf.hhs.gov/hslc/data/factsheets/2015-hs-program-factsheet.html>

⁴⁷ Ibid.

⁴⁸ "Office of Head Start - Services Snapshot, National, All Programs, 2013-2014," Office of Head Start, https://eclkc.ohs.acf.hhs.gov/hslc/data/psr/2014/NATIONAL_SNAPSHOT_ALL_PROGRAMS.pdf
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Start funding and enrolled just under 11,000 children and pregnant women.⁴⁹

Many studies have shown that participation in the Head Start program has long-term academic benefits. Benefits include increasing the probability that participants graduate from high school (by nearly 5%), and receive a post-secondary degree (by nearly 10%).⁵⁰ Further, African American participants were more likely to develop social, emotional, and behavioral skills that result in greater self-control, self-esteem, and positive parenting practices later in life. Overall, Head Start participation resulted in increased positive parenting practices for all participants, particularly for mothers who did not have a high school degree, demonstrating the benefit of the program beyond the child participants.⁵¹

Universal ECE Initiatives

Oklahoma's Early Childhood Four-Year-Old Program

Oklahoma is one of the only states in the country offering free, universal preschool and kindergarten for all children. While programs are voluntary, they have a high rate of participation, with 75 percent of Oklahoma's four-year children attending public school, for a total of 39,405 students enrolled in 2017, the highest in the nation.^{52, 53} Oklahoma's programs adhere to several quality measures, including an Early Childhood Certified Teacher, a 10:1 child to teacher ratio, comprehensive school services, and state-adopted curriculum standards. Both full-day and half-day programs are available to families, with 81 percent of students enrolled in full day and 19 percent in half day. The program is widely accessible, as 99 percent of school districts in Oklahoma offer it.

Oklahoma launched a precursor to its current program in the late 1980s, when the state was seeking to address a lack of early childhood education for all young children, regardless of income or risk factors. The effort was widely successful and in 1990 received funding to be implemented statewide. Oklahoma added pre-K to its school funding formula, creating a more stable funding source to allow for the universal pre-K system.⁵⁴ Since the program's inception, it has utilized comprehensive Early Learning Standards that address multiple domains of children's development and limit class sizes to 20 children with one lead and one assistant teacher, for a minimum teacher-to-child ratio of 1 to 10. Oklahoma offers an example of how universal free pre-K could be implemented in a state so that all children have access to ECE.

Abbott Preschool Program in NJ

The Abbott Preschool Program is a state-run preschool initiative, administered through New Jersey's Department of Education and Department of Human Services. This program consists of full-day preschool classes, with a six-hour a day, 180-day curriculum, operating in 84 of New Jersey's poorest urban school districts.⁵⁵ It is open to all three- and four-year old children in each of the selected school districts, as well as to low-income children in all other districts statewide. The program is funded through state aid under a formula instituted in 2008, like Oklahoma's, called the School Funding Reform Act. It is based on a New Jersey Supreme Court decision (*Abbot v. Burke*) which stipulated that children in

⁴⁹ "Head Start Program Facts, Fiscal Year 2015", 2015

⁵⁰ Diane Whitmore Schanzenbach and Lauren Bauer, "The long-term impact of the Head Start program," *The Brookings Institute*, August 19, 2016, <https://www.brookings.edu/research/the-long-term-impact-of-the-head-start-program/>

⁵¹ Ibid.

⁵² "Four-Year-Old Program", Oklahoma Department of Education, <http://sde.ok.gov/sde/four-year-old-program>

⁵³ "Early Childhood Fast Facts 2017", Oklahoma Department of Education, <http://sde.ok.gov/sde/sites/ok.gov.sde/files/documents/files/Early%20Childhood%20Fast%20Facts%202017.pdf>

⁵⁴ Ibid.

⁵⁵ "New Jersey Abbott Preschool Program", *Teachers College at Columbia University*, September 30, 2010, http://blogs.tc.columbia.edu/transitions/files/2010/09/30.New-Jersey_Abbott-Preschool-Program_profile_.pdf

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economically disadvantaged districts must have access to high-quality early childhood programs.⁵⁶

One study found that the program had beneficial effects on children's academic achievement, particularly in the areas of language, literacy, and math through at least second grade, and that this benefit is strengthened for children who are enrolled in the program for two years.⁵⁷ While the program has seen success in terms of some its outcomes, it has also had trouble enrolling all eligible students, with 15 of the 84 districts not meeting the minimum requirement of enrolling 90 percent of eligible children in 2014.⁵⁸ The bulk of this problem comes from funding issues. The state has not provided additional funding for the expansion from the original 31 districts to the expanded 84, which was to be completed by 2014. The state has not altered the original funding formula to allow for the expansion. The Abbott Program has high aims but also highlights one of the issues with relying on state funding for universal programs in that it can ebb and flow depending on the focus and priorities of changing governors and state legislators.

NYC 3-K for All program

On April 24, 2017, New York City (NYC) Mayor Bill De Blasio announced a new initiative to provide universal preschool programs for all New York City children. Officials estimate that the program will serve approximately 62,000 children a year, making it one of the largest efforts in the country once it is fully implemented.⁵⁹ As an expansion of the mayor's universal pre-K program that serves all four-year-olds in the city, providing them with six-hour classes during the school week, this effort builds on existing school infrastructure.⁶⁰ The funding for this venture is not yet secured, with the mayor saying that the city would add \$36 million to the state budget to finance the program until the full scale-up was reached. The program is expected to cost \$177 million annually, not including the \$200 million that currently goes to paying for three-year-olds from low-income families to attend preschool programs.⁶¹ However, the total program costs are expected to be astronomically higher, possibly over \$1 billion, so the city likely will need additional funding, which may or may not be forthcoming from the federal government or from the state, which may be more interested in creating universal pre-K programs in other parts of New York state before helping to expand New York City's program. As it stands today, the program will be piloted in only two districts; beyond that, the city has funding for only eight of the city's 32 school districts. While certainly an ambitious effort, it remains to be seen whether it will succeed given the funding challenges.

Georgia Lottery for Education

In 1995, Georgia became the first state to offer pre-K to all four-year-olds through its Georgia Pre-Kindergarten Program. The program was fully paid for via the state lottery, which has helped keep funding stable but somewhat limited. As a result, Georgia has adopted a lottery system for students to participate in the program because of inadequate classroom space.⁶² In 2015, Georgia saw its pre-K

⁵⁶ Ibid.

⁵⁷ Ellen Frede et al., "The APPLES Blossom: Abbott Preschool Program Longitudinal Effects Study (APPLES) Preliminary Results through 2nd Grade Interim Report", *National Institute for Early Education Research Graduate School of Education*, June, 2009, <http://www.nj.gov/education/ece/research/apples2.pdf>

⁵⁸ Danielle Farrie, "The Abbott Preschool Program: A 15-Year Progress Report", *Education Law Center*, May 2014, <http://www.edlawcenter.org/assets/files/pdfs/publications/AbbottPreschool15YearProgressReportMay2014.pdf>

⁵⁹ Valeri Strauss, "New York City mayor announces plan to provide free pre-K for all 3-year-olds," *Washington Post*, April 24, 2017, https://www.washingtonpost.com/news/answer-sheet/wp/2017/04/24/new-york-city-mayor-announces-plan-to-provide-free-pre-k-for-all-3-year-olds/?utm_term=.2c7de7f8bddf

⁶⁰ Kate Taylor, "Is '3-K for All' Good for All? De Blasio's Preschool Plan Troubles Some", *New York Times*, May 10, 2017, https://www.nytimes.com/2017/05/10/nyregion/free-preschool-deblasio-new-york-city.html?_r=1

⁶¹ Ibid.

⁶² April Lentini, "Free Pre-K in Georgia: How Does It Work?" Georgia State Government, June 16, 2016, <https://georgia.gov/blog/2016-06-16/free-pre-k-georgia-how-does-it-work>

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enrollment numbers drop by a thousand children despite the state's continued investment in the program. The program has faced some quality challenges as well in terms of professional development and center-based care. Addressing the challenges has been made more difficult because the program relies on lottery funding, which cannot be systematically increased year-by-year.⁶³ Studies have shown that 82 percent of former participants in the pre-K program had higher scores on third grade readiness tests, and there were indications that Georgia students saw moderate gains in reading and math after the program was instituted.⁶⁴ The state also has shown that its pre-K program can help reduce the school readiness gap for at-risk children. While the program has challenges, it offers another way for states to look at providing universal ECE for children.

Conclusion

There are many initiatives, funded through an assortment of mechanisms, that are designed to increase access to early childhood education programs, both in Colorado and across the country. While legislative barriers, racial inequalities, and high cost still prevent many children from accessing high-quality ECE programs, the programs produce a wide variety of individual, family and societal benefits. These include better academic performance, social and emotional skill improvements, increased incomes later in life, and long-term beneficial effects on health and wellness. The gains from ECE can last well beyond early childhood years, and the benefits of the programs justify investing in ECE.

⁶³Kelly Maxwell et al., "Georgia study of early care and education: Findings from Georgia's Pre-K Program," *The University of North Carolina at Chapel Hill, FPG Child Development Institute*, 2009, http://dec.al.ga.gov/documents/attachments/PreK_Report.pdf

⁶⁴Eileen M. O'Brien and Chuck Dervarics, "Pre-kindergarten: What the research shows," *Center for Public Education*, March 2007, <http://www.centerforpubliceducation.org/Main-Menu/Pre-kindergarten/Pre-Kindergarten/Pre-kindergarten-What-the-research-shows.html>