



The **ECONOMIC IMPACTS**
of **INVESTING** in
EARLY CHILDHOOD
EDUCATION IN INDIANA

SEPTEMBER
2016

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Special thanks to Amanda Lopez, Transform Consulting Group, for editing this report.



Prepared for the Indianapolis Chamber of Commerce, the Office of Education Innovation in the Office of the Mayor of Indianapolis, the United Way of Central Indiana, and the Eugene & Marilyn Glick Family Foundation.

Executive Summary

In recent years, leaders in politics, business, policy, and communities across the state of Indiana have come together to strategize the development of a statewide public early childhood education program that invests in Indiana's economy and the earning power and quality of life of future generations.

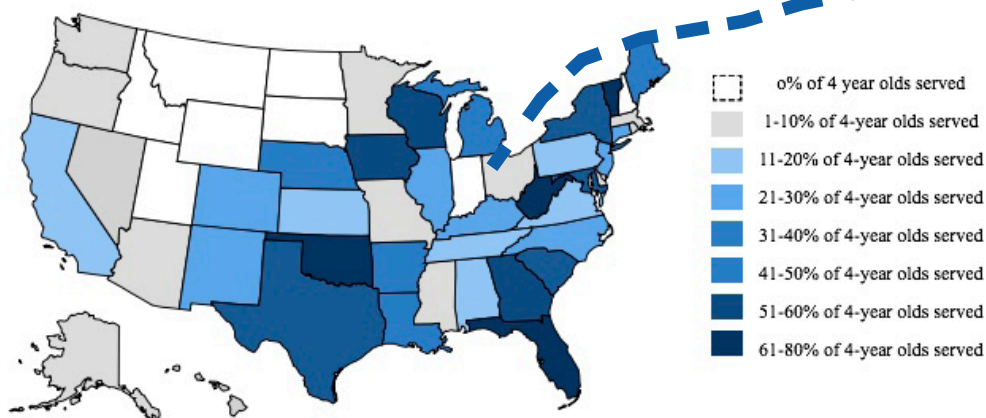
Rigorous evaluations demonstrate that high quality early childhood education programs have the potential to provide academic, social, and economic benefits to program participants and cost savings to government agencies and taxpayers.

However, Indiana remains one of eight states today without a publicly-funded state pre-K program, and data from recent studies suggest that Hoosier families are unable to access, afford, or realize the benefits associated with high quality programs without an expanded state role in funding and regulation.

Indiana remains **one of eight** states today without a publicly-funded pre-K program.

State Pre-K Program Service and Utilization, 2014-15

Figure 1. PERCENT OF 4-YEAR-OLDS SERVED IN STATE PRE-K

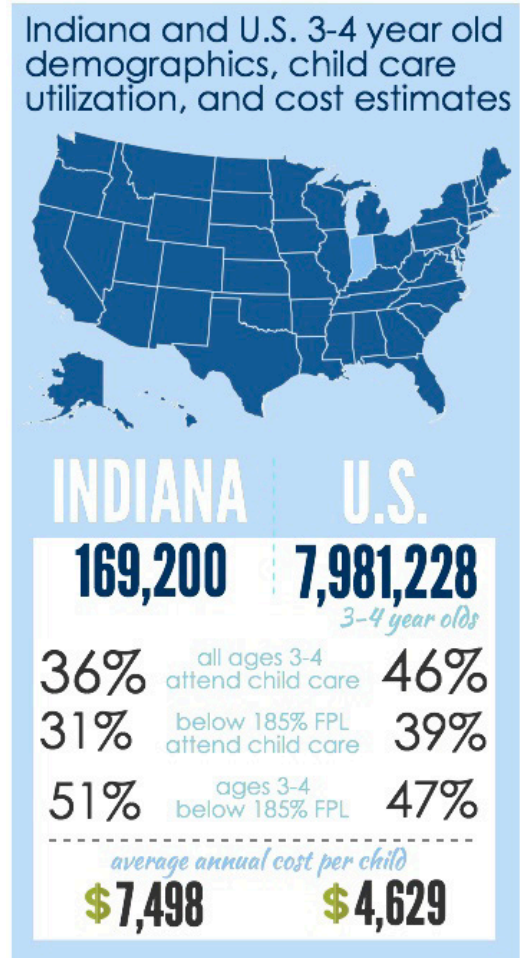


Source: The State of Preschool 2015, NIEER

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While demand is high, children in Indiana utilize early childhood education at relatively low rates and spend more on it when compared to national averages. The impact of these inequities is exacerbated for low-income families. Low-income families in particular exhibit the lowest rate of early childhood education utilization and spend a disproportionately high share of their income on early childhood care and education.

- Approximately 505,090 children in Indiana are under the age of six, and about 111,672 of the state's 169,200 three- and four-year-olds require access to child care due to parental labor force participation.²
- Just 36 percent of Indiana's three- and four-year-olds are enrolled in pre-K programs, versus 46 percent nationally.³
- Program enrollment reflects a socioeconomic divide among Indiana children—just 31 percent of low-income three- and four-year-olds attend public or private preschool/pre-kindergarten programs, as compared to 41 percent of their peers from higher-income families.⁴
- Indiana's share of children from low-income families is substantially higher than the national average—62 percent of children ages 0-5 are from low-income families, compared to a national average of 47 percent.⁵
- Without public funding, the price of early childhood education—an average of \$7,498 annually for children under five—becomes unrealistic for many Hoosier families. This means that Hoosier families currently spend a higher share of their incomes on early childhood care and education than do families in other states.⁶
- Single mothers in Indiana already spend roughly 27 percent of their income on childcare, a figure that is the second highest in the country and growing at a rate that outpaces wage growth.⁷



Indiana's current mixed-delivery early childhood education industry comprises an important sector of the state's economy. The industry will be able to expand, build capacity, improve quality, and better compensated the early education workforce if supplemental funding is made available.

Hoosier families currently spend a higher share of their incomes on early childhood care and education than do families in other states.

State leaders have taken the first steps to implement a statewide pre-k/On My Way Pre-K program. In 2014, Indiana lawmakers created a voluntary Early Education

Pilot Program that offers pre-kindergarten in five counties to children whose family income is at or below 127 percent of the Federal Poverty Level (FPL). Its implementation signifies a significant step toward developing a permanent state-funded pre-K program rather than the goal.

To supplement the state program, the City of Indianapolis and Mayor Greg Ballard launched the Indianapolis Preschool Scholarship Program, a public-private initiative that provides access to high quality early childhood education to three- and four-year-old children whose family income is at or 127-185 percent of the FPL.



As policymakers develop the next steps for improving the state of early education in Indiana, this report can serve as a guide to better understand the costs and benefits of investing in early childhood education and how it will affect Indiana's short- and long-term economic wellbeing. Indiana policymakers, opinion leaders, and the public at large recognize the need to expand high quality learning opportunities for those with limited access. With a guide to the economic effects of best practice programs in hand, Hoosiers can recognize how to maximize benefits to the state and its taxpayers.

Purpose and Findings of the Economic Impact Report

The purpose of this economic impact report is to assess the estimated benefits and costs of investing in high quality, state-funded preschool programs for three- and four-year-old Hoosier children.

The report evaluates the landscape of early childhood education in Indiana and demonstrates how an expanded state role in funding high quality Early Childhood Education may benefit Hoosier families and taxpayers. The report then surveys the best available Early Childhood Education research to estimate the return on investment associated with adopting a high quality program.

The research shows that high quality Early Childhood Education programs produce positive and long-lasting outcomes that can reduce government spending and save taxpayer dollars in the long run. In particular, this report finds that Indiana could realize cost savings because participants in high quality Early Childhood Education programs are less likely to need special education and academic remediation, more likely to earn higher lifetime wages and contribute to a larger tax base, and less likely to commit crimes, thereby reducing state spending on the criminal justice system.

Implementing a high quality, state-funded early childhood education program in Indiana will yield an anticipated benefit of **\$3.83 to \$4 per dollar invested.**

Drawing on the best available research and using Indiana data, the benefit-cost analysis indicates that a high quality, state-funded early childhood education program in Indiana will yield anticipated benefits of \$3.83 to \$4 per dollar invested.

Further, these ratios do not capture other general economic benefits, such as those associated with expanding the early childhood education industry (expanded human capital formation, improved worker wages, and tax base increases).

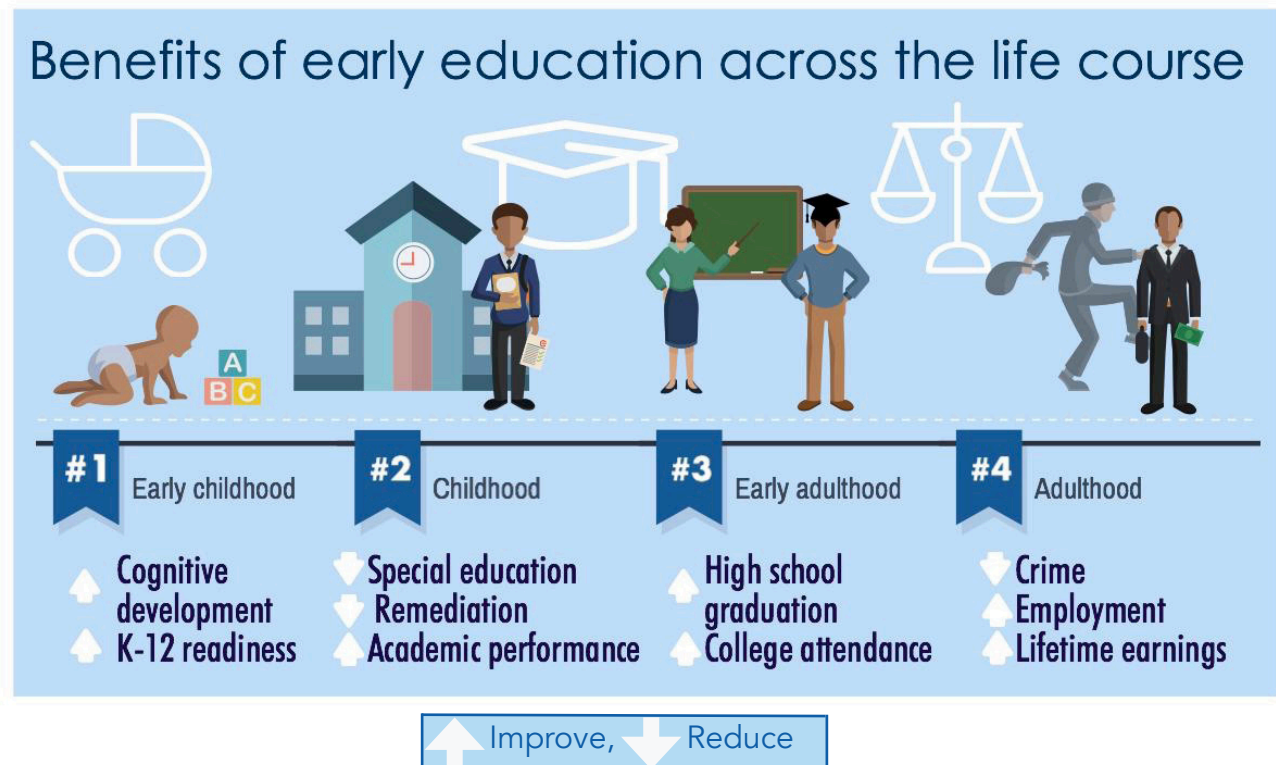
Basic Methodology

The benefit-cost ratio estimates reported in this study depend on estimated program costs, utilization rates, and benefits. The report estimates the costs and benefits associated with providing a high quality, state-funded Early Childhood Education program modeled after state-funded programs that currently yield a positive return on investment. The analysis simulates the benefit-cost ratio associated with replicating those programs in Indiana.

While many high quality, state-funded programs operating at scale yield a positive benefit-cost ratio, the estimates provided in this report reflect those that could reasonably be expected if Indiana adopted a system similar to those operating in Oklahoma and Georgia. In addition to being widely regarded as model programs, experts believe that adopting an Early Childhood Education program similar to the programs in Oklahoma and Georgia is likely to be practically, politically, and economically feasible in Indiana.

The analysis also relies on estimates of potential benefits and cost savings derived from high-quality studies of Early Childhood Education interventions in other states. Because most state programs have not been in place for a sufficient length of time over which to demonstrate long-term benefits, some estimates use evidence of short-term benefits in combination with estimates of longer-term benefits obtained from other sources.

These estimates are then used to calculate the ratio of total benefits to costs, using actual data from Indiana and Indianapolis on population demographics, the early childhood education industry, and actual costs whenever possible. This report presents benefit-cost estimates associated with both universal and targeted programs aimed at children from families with incomes falling below 185 percent of the FPL.



Summary of Findings

If Indiana provided universal preschool for four-year-old children, the state could expect to spend \$187 million annually on a model that resembles Georgia's voluntary program (based on Georgia's 59 percent utilization rate) or \$226 million annually on a model that resembles Oklahoma's voluntary program (based on Oklahoma's 79 percent utilization rate). In the Georgia model scenario, the state could expect to save about \$38.8 million in lifetime savings per cohort on special education, remediation, and in-grade retention, as well as 69 cents per dollar invested due to crime reduction. In the Oklahoma model scenario, the state could expect to save about \$48.7 million. Under either scenario, the state could also anticipate cost savings of 69 cents per dollar invested due to crime reduction.

Low-income program participants could anticipate an average **lifetime earning benefit of \$3.09 per dollar invested**

Special Education, Remediation, and In-Grade Retention

Each dollar invested in high quality early childhood education contributes to an estimated 12 percent reduction in the incidence of special education and an 18 percent reduction in the incidence of remediation and grade repetition among children who attend a high quality program. High quality, state-funded preschool would save approximately between \$19.8 and \$48.8 million in lifetime spending per cohort on special education, remediation, and grade repetition, amounting to a 3-8 percent reduction in annual spending on special education and remediation.

High quality early education reduces the incidence of disability by **12 percent** and remediation and grade repetition by **18 percent**

Average Lifetime Earnings

Several evaluations find that attending a high quality preschool leads to positive labor market outcomes, including employment gains and earnings benefits; however, evaluations of state-funded programs operating at scale must rely on projections to future employment benefits for program beneficiaries because they have not fully entered the labor market.

These lifetime earnings benefits amount to an average of \$3.09 per dollar invested among low-income participants, and \$2.79 per dollar invested among relatively high-income participants. Low-income participants could benefit from a 10.4 percent increase in the value of future earnings, and higher income participants could see a 5.4 percent increase in the value of future earnings.

Indiana's program participants could reasonably expect to achieve similar lifetime earnings gains if the state adopts an early education program of similarly high quality to those operating in Georgia and Oklahoma. These estimated economic benefits do not include additional potential reductions in poverty and associated reliance on public assistance, and do not include potential increases in consumer spending or the state income tax base.



Crime Reduction

Several early childhood education evaluations find that attending a high-quality preschool reduces the likelihood that participants will commit crimes later in life. State and local governments also benefit from reduced spending on law enforcement and corrections.

A meta-analysis of these evaluations finds that cost savings due to reductions in crime range from \$0 to \$11.30 per dollar invested in early childhood education, with an average cost savings of 69 cents per dollar invested. These cost savings result from reduced costs to taxpayers and crime victims.

Depending on the state-funded ECE program model adopted, Hoosiers could expect to see reductions in crime costs ranging from about **\$63 to \$162 million in lifetime crime costs per cohort.**

Depending on the model of state-funded early childhood education adopted in Indiana, Hoosiers could expect to see a reduction in lifetime crime costs per cohort ranging from about \$63 to \$162 million annually.

**Summary of findings:
per student cost savings by benefit**

Cost	Special Education	Remediation K-12, GQE, IREAD-3	Lifetime earnings	Crime costs
\$7,498.00	\$3,111.00	\$28.61, \$132.68, \$11,230.00	\$2.79- \$3.09	\$0.69
Indiana	annual student cost, if applicable		per dollar invested	
\$28,492 - \$29,992*				

Reflects lower and upper bound range of estimated cost multiplied by \$3.83-\$4.00 ROI estimate

Summary

Indiana remains one of eight states today without a publicly-funded pre-K program. Implementing a high quality, state-funded early childhood education program in Indiana will yield an anticipated benefit of \$3.83 to \$4 per dollar invested in present value terms. The total annual cost required to adopt a high quality, state-funded early education program constitutes just 0.8-2 percent of Indiana’s current total spending on K-12 education.

High quality early education will reduce future state spending on K-12 education and crime. Low-income participants could realize \$3.09 in lifetime earnings benefits per dollar invested, and higher-income participants could realize \$2.79 in lifetime earnings benefits per dollar invested.

Indiana will not realize these benefits unless it expands state funding for high quality ECE. State funding is needed to provide Hoosier families—and low-income families in particular—with access to affordable, high quality ECE providers.

References

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- ⁵ U.S. Census Bureau's American Community Survey, 2015 .
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