New research shows that universal prekindergarten returns about half its cost in later savings to school systems.

While most everyone agrees that early education benefits child, parent, and society, Pre-K’s critics often decry adding a year of free prekindergarten to public school as an unaffordable luxury. An education economist’s report analyzing Pre-K costs and benefits shows otherwise.

Clive R. Belfield, Ph.D., reviewed 19 published research studies of early childhood education programs from around the nation, and analyzed their outcomes relevant to New York State school spending. He concludes that making quality prekindergarten universally available to the state’s 4-year-olds would result in later savings in remedial costs and other school services that would pay back 41% to 62% of the Pre-K investment.

Comparing Costs and Benefits of Early Education

To evaluate education spending, we use a balance sheet format that compares costs with benefits. The benefits of early education range from immediate improvement in school readiness, to mid-range cuts in school spending, to long-term impacts on job-holding, income and home-ownership. (See Page 3.)

The analysis presented in this study focuses on medium-term benefits to school system efficiency, through reductions in special education and grade repetition and increases in learning productivity. Based on analysis of outcomes from published studies, we calculate the size of cost-savings related directly to education.

Because New York has higher rates of special education placement and grade retention than the national average, the state would benefit even more from early childhood education programs. On the other hand, the effects calculated for targeted programs for at-risk children are likely to overstate the impacts of a universal program. Accordingly, we apply more conservative estimates to New York data and use two calculation models to show a likely range for cost-savings.
Summary of Cost-Savings for New York State

In 2003, about 240,000 children entered the school system. They will receive present value expenditures over their public school career of $108,431 if they follow a normal track, $114,520 if they repeat a grade, and $185,593 if they receive special education services, according to state Department of Education data.

Effects of universal prekindergarten include reduction of grade repetition, which we estimate would fall 9.3% to 13.0% and yield savings of $22 million to $51 million over the course of prekindergartners’ school careers. Special education spending would drop 8.5% to 12.0%, for savings of $241 million to $340 million. We also forecast an improvement in learning productivity that will create a 1.0% to 1.5% cost-savings system-wide, achieved by lowering teacher turnover, reducing classroom disruptions and school vandalism, improving use of curriculum materials, and so forth. Productivity gains would represent savings of $291 million to $437 million. Overall, these savings total $555 million to $828 million in net present value.

To calculate costs, we use $7,000 per student for one year of prekindergarten. (This is roughly double the current allocation for 2.5-hour-a-day state-funded prekindergarten.) If 80% of families participate, total expenditures for the state’s 4-year-olds would be about $1.3 billion.

Overall, Pre-K benefits offset 41% to 62% of total spending on early childhood education. These benefits represent savings of about 1.9% to 2.8% of total education expenditures in New York State.

Contribution to a Sound Basic Education

Viewed as part of New York State’s overall education budget, a commitment to universal prekindergarten represents a modest investment. What’s more, redistribution of funds no longer needed for remedial education programs because of Pre-K effects, recoups between two-fifths and three-fifths of the investment.

Turning to New York State’s mandate to provide each student with a “sound basic education,” we note that the state Supreme Court decision of 2001 refers fundamentally to outcomes that students obtain, not merely sufficiency of inputs. It follows that in the future, the State must justify education programs their ability to produce the types of benefits set out in the balance sheet above.

Given their strongly positive impacts on children’s cognitive development and educational achievement, early childhood education programs are an important way to satisfy the mandate of a sound basic education. Besides, as the purpose of a sound basic education is to cultivate productive citizens, studies of the long-term effects of good early education programs show that their long-term payback in social terms is even greater than their big cost-savings to the education system.
### New York State Early Education Balance Sheet

#### Investment

Early childhood education program cost assumptions:
- Children: 240,180
- Participation rate: 80%
- Per child cost for 1-year of Pre-K: $7,000

Present value* total spending $1,345.01 million

#### Benefits and Cost-Savings

**Short-Term (within a few years)**
- **For child:** Enhanced academic achievement, improved health/nutrition, increased well-being/less abuse
- **For parent/family:** Child-care time free for parent
- **For society/economy:** Income tax revenues from parents

**Medium-Term (within a decade)**
- Greater school system efficiency:
  - Reduction in special education
  - Reduction of grade repetition
  - Higher student learning productivity

Present value* cost-saving $554.54 million – $827.74 million

Offset against expenditures 41.23% – 61.54%
- Reduction in abuse/neglect
- Lower reliance on public healthcare

**Long-Term (during adulthood)**
- **For child:** Higher likelihood of graduation/college enrollment, higher wages/employment probability, lower teen-pregnancy and delinquency rates
- **For society/economy:** “Sound Basic Education,” increased income tax revenues, lower welfare dependence, reductions in delinquency/crime

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*This assumes a 3% discount to present value figures over a child’s K-12 education span.

### The Pre-K Payback

- School efficiency cost-savings: $555 million–$828 million
- One year of expanded universal prekindergarten: $1,345 million

### Pre-K Effect on Remediation Needs

- **Students repeating one grade (%)**
  - Without Pre-K: 16.5%
  - With Pre-K: 13.0%

- **Students requiring special education (%)**
  - Without Pre-K: 15.3%
  - With Pre-K: 13.5%
Early Education Research Reviewed for the Belfield Study


The complete Belfield study is available at www.winningbeginningny.org

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Research Briefing: **The Pre-K Payback**

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The Center for Early Care and Education, created in 1999, is a collaboration of Child Care, Inc., of New York City and the Albany-based Schuyler Center for Analysis and Advocacy. CCiE sponsors Winning Beginning NY, a statewide campaign stressing the importance of quality early care and education to all New Yorkers—children, families, employers, and society at large. The campaign receives support from the Trust for early education (TEE), which is part of The Pew Charitable Trusts’ initiative to advance high quality prekindergarten for the nation’s 3- and 4-year-olds through objective, policy-focused research in conjunction with state public education campaigns and national outreach.

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