

## Early childhood education program yields high economic returns, researchers find

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For every \$1 invested in a Chicago early childhood education program, nearly \$11 is projected to return to society over the children's lifetimes -- equivalent to an 18 percent annual return on program investment, according to a study led by University of Minnesota professor of child development Arthur Reynolds in the College of Education and Human Development.

For the analysis, Reynolds and other researchers evaluated the effectiveness of the Chicago Public Schools' federally funded Child Parent Centers (CPCs) established in 1967. Their work represents the first long-term economic analysis of an existing, large-scale early education program. Researchers surveyed study participants and their parents, and analyzed education, employment, public aid, criminal justice, substance use and child welfare records for the participants through to age 26.

"Our findings provide strong evidence that sustained high-quality early childhood programs can contribute to well-being for individuals and society," said Reynolds, director of the Chicago Longitudinal Study and co-director of the Human Capital Research Collaborative at the University of Minnesota. "The large-scale CPC program has one of the highest economic returns of any social program for young people. As public institutions are being pressed to cut costs, our findings suggest that increasing access to high-quality programs starting in preschool and continuing into the early grades is an efficient use of public resources."

The CPC program in the project provided services for low-income families beginning at age three in 20 school sites. Kindergarten and school-age services are provided up to age nine (third grade). Funded by Title I of the Elementary and Secondary Education Act, CPC is the second oldest (after Head Start) federally funded preschool program. The analysis appears in the January/February issue of *Child Development*, the journal of the Society for Research in Child Development. Co-authoring researchers included Judy Temple, Barry White and Suh-Ruu Ou at the University of Minnesota and Dylan Robertson from the Chicago Public Schools.

Reynolds and his colleagues did the cost-benefit analysis of the CPC using information collected on about 900 children enrolled in the 20 centers starting when they were three and first enrolled in a preschool program. The study continued until the children were nine and taking part in a school-age program that featured smaller classes, teacher aides, and instructional and family support. Follow-up interviews were done in early adulthood and information was collected from many sources until age 26. These children were compared to a group of about 500 comparable children who didn't take part in the CPC but participated in the usual educational interventions for disadvantaged youths in Chicago schools.

The CPC resulted in significantly higher rates of attendance at 4-year colleges and employment in higher-skilled jobs and significantly lower rates of felony arrests and symptoms of depression in young adulthood.

The program's economic benefits in 2007 dollars exceeded costs, including increased earnings and tax revenues, averted costs related to crime and savings for child welfare, special education and grade retention. The preschool part showed the strongest economic benefits providing a total return to society of \$10.83 per dollar invested -- equivalent to an 18 percent annual return on program investment. Gains

varied by child, program and family group.

When the researchers included the benefits from reductions in smoking, total returns rose to more than \$12 per dollar invested. The school-age program yielded a return of about \$4 per dollar invested (annual rate of return of 10 percent) and the combined preschool and school-age program (preschool to third grade) yielded returns of \$8.24 per dollar invested (annual rate of return of 18 percent), based on average net benefits per child of \$38,000 above and beyond less extensive intervention.

Children at higher levels of risk experienced the highest economic benefits, including males (\$17.88 per dollar invested; a 22% annual return), children who had taken part in preschool for a year (\$13.58 per dollar invested; a 21% annual return) and children from higher-risk families, including those whose parents had not graduated from high school (\$15.88 per dollar invested; a 20% annual return).

The researchers identified five key principles of the CPC that they say led to its effectiveness, including providing services that are of sufficient length or duration, are high in intensity and enrichment, feature small class sizes and teacher-student ratios, are comprehensive in scope and are implemented by well-trained and well-compensated staff. A further unique feature of the research is that the origin of the economic returns can be empirically traced through a chain of early educational advantages to cumulate in long-term effects.

The findings from this analysis can be useful to policymakers and school superintendents across the nation as they make funding decisions. A lot of states are thinking of scaling back on early childhood investments, but this analysis suggests the opposite, Reynolds said.

"Access to effective programs like CPC should be increased," Reynolds

said. "In scarce times, policymakers should divest in programs that aren't working and reserve the scarce resources for the most effective."

Provided by University of Minnesota

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