

## Research Snapshot

# Pre-K Benefits: 2018 Update

*A key result of SREB's 2015 Commission on Early Childhood Education was a series of publications pointing to the positive effects of pre-K on educational outcomes. Research conducted since then generally continues the positive trend; in fact, four prominent studies reinforcing the value of pre-K programs were released in 2017. This snapshot presents their most important takeaways.*

SREB's March 2015 summary of recent research, *Pre-K Benefits: The Facts on Fade-out*, concluded that pre-K programs produce both academic and nonacademic benefits for participants. These gains result in better performance in school, higher graduation rates and lifetime earnings, and higher levels of educational achievement. Pre-K participants also benefit from lower rates of crime, teen pregnancy, enrollment in special education, and retention in grade. Some studies have found evidence that the positive effects of pre-K spill over to non-participant peers in kindergarten, ultimately benefitting other students, too.



The newest research on pre-K programs is more likely to find positive effects than past research because program practices have improved as scientists continue to develop a better understanding of how young children learn. Experts now know that the interactions between early childhood teachers and their students are key to the sustainability of pre-K benefits. Alignment between pre-K curricula and curricula in kindergarten through third grade is also important so children can build upon their pre-K gains in the early grades. Program practices already reflect these changes in many places, so newer research may be more likely to find lasting advantages for children who attend pre-K. The four studies summarized here are excellent additions to the current body of research illuminating the benefits of pre-K participation.

### **High-quality pre-K programs help prepare children for school and are especially beneficial for dual language learners and children from low-income families.**

*Phillips, D.A., Lipsey, M.W., Dodge, K.A., Haskins, R., Bassok, D., Burchinal, M.R., Duncan, G.J., Dynarski, M., Magnuson, K.A. & Weiland, C. (2017). The current state of scientific knowledge on pre-kindergarten effects. Washington, DC: Brookings Institution. Retrieved from <https://www.brookings.edu/research/puzzling-it-out-the-current-state-of-scientific-knowledge-on-pre-kindergarten-effects/>*

The Brookings Institution and Duke University recently brought together a large group of prominent and interdisciplinary scientists from institutions including Vanderbilt University, the University of Virginia and the University of North Carolina at Chapel Hill to create a Pre-Kindergarten Task Force. These researchers conducted an extensive review of the available evidence on the impact of state-funded pre-K programs. In April 2017 they

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released a report explaining their conclusions on key issues important to pre-K, including the content of curricula, the research basis for universal versus targeted pre-K programs, and the relative benefits of pre-K for various groups of children. The task force ultimately developed a six-point consensus statement. In summary, it reads:

- Studies generally find that economically disadvantaged children and dual language learners benefit more from pre-K than their peers.
- The most successful pre-K programs have well-implemented, evidence-based curricula, orderly but active classrooms, and coaching for teachers.
- Elementary school classrooms should individualize and differentiate learning to sustain and build on pre-K gains.
- Convincing evidence shows that children who attend public pre-K programs improve in literacy, numeracy, social-emotional skills, and self-regulation.
- More research is needed to convincingly determine the long-term impacts of scaled-up pre-K programs.
- Ongoing evaluation and innovation are both important for determining the factors that result in long-term positive impacts for pre-K participants.

The task force report clarified the current trends in pre-K research and emphasized the importance of scientifically evaluating pre-K programs to determine effective practices. Researchers also reinforced the importance of focusing on both **access** to pre-K and program **quality** in state policy and practice.

## Head Start programs can disrupt the cycle of poverty and produce benefits for multiple generations.

*Barr, A. & Gibbs, C.R. (2017). Breaking the Cycle? Intergenerational Effects of an Anti-Poverty Program in Early Childhood (EdPolicyWorks Working Paper No. 61). Charlottesville, VA: University of Virginia. Retrieved from [https://www.irp.wisc.edu/newsevents/workshops/2017/participants/papers/8-Barr-Gibbs\\_intergen%20HS\\_JuneSRW2017.pdf](https://www.irp.wisc.edu/newsevents/workshops/2017/participants/papers/8-Barr-Gibbs_intergen%20HS_JuneSRW2017.pdf)*

Past research on Head Start, a federally-funded pre-K program for children from low-income families, has often failed to find many lasting effects for program participants. In this study, however, scientists from Texas A&M University and the University of Notre Dame used national

*“Each disadvantaged child society helps now will lead to fewer who require assistance in the future.”*

*Barr and Gibbs (2017)*

longitudinal survey data and an innovative research strategy to examine long-term, intergenerational impacts of Head Start. Barr and Gibbs compared the outcomes of two groups of individuals: those whose mothers were likely Head Start participants as children in the 1960s and 1970s, and those whose mothers probably did not participate in Head Start because it was not funded in their county of residence.

The researchers found that individuals whose mothers likely attended Head Start as children had lower rates of teen pregnancy and criminal activity than individuals whose mothers did not have access to it. The children of likely Head Start participants also tended to have higher educational attainment. Barr and Gibbs conclude that Head Start availability “appears to have been quite successful at breaking the cycle of poor outcomes for disadvantaged families.” The positive

findings in the second generation indicate that programs like Head Start may produce greater benefits than researchers have previously been able to document. This study also provides evidence that pre-K programs can make long-lasting differences both educationally and socially.

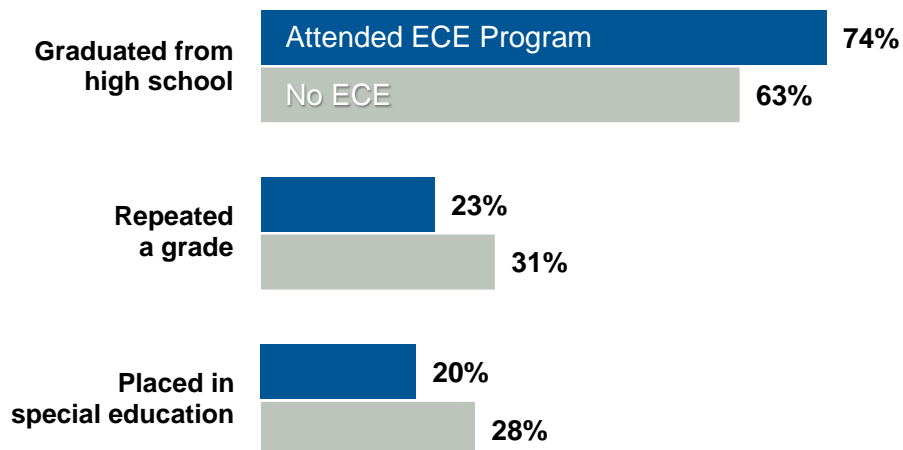
## **Enrollment in an early childhood education program can reduce the chances that children will qualify for special education or repeat a grade and increase their likelihood of graduating from high school.**

*McCoy, D.C., Yoshikawa, H., Ziol-Guest, K.M., Duncan, G.J., Schindler, H.S., Magnuson, K., Yang, R., Koepf, A. & Shonkoff, J.P. (2017). Impacts of Early Childhood Education on Medium- and Long-Term Educational Outcomes. Educational Researcher, 46(8), 474-487. Retrieved from <http://www.aera.net/Newsroom/Recent-AERA-Research/Impacts-of-Early-Childhood-Education-on-Medium-and-Long-Term-Educational-Outcomes>*

In this meta-analysis of 22 evaluations, researchers examined the effects of participation in classroom-based early childhood education programs on three long-term outcomes: special education placement, retention in grade, and high school graduation. They found that, on average, children who participated in classroom-based early childhood programs had better outcomes on all three measures examined. Participants were 8 percentage points less likely to be identified for special education services or repeat a grade than individuals who had not attended a classroom-based early childhood education program. Participants were also 11 percentage points more likely to have graduated from high school at the time of follow-up.

**Children who attended classroom-based early childhood education programs had better outcomes than children who did not.**

**They were 11 percentage points more likely to graduate from high school, 8 percentage points less likely to repeat a grade and 8 percentage points less likely to be placed in special education.**



Source: SREB, based on McCoy, et al., 2017.

Past analyses of long-term outcomes for early childhood education have generally focused on long-running programs for which more data are available. The researchers here caution that some of the programs examined in both past evaluations and this meta-analysis, such as the Abecedarian Project and the Perry Preschool Program, provided more comprehensive supports and services and/or provided services for more years than a typical publicly-funded pre-K program. Because of this, McCoy and colleagues were careful to include studies of recent programs that are more representative of current pre-K practices. The overall results show promising evidence that early childhood programs pay off and highlight opportunities for further research.

## **Participation in a high-quality pre-K program can improve students' math achievement and chances of enrolling in honors courses and make them less likely to be retained by seventh grade.**

*Gormley, W.T., Phillips, D. & Anderson, S. (2017). The Effects of Tulsa's Pre-K Program on Middle School Student Performance. Journal of Policy Analysis and Management, 37(1), 63-8. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/pam.22023/full>*

The universal, state-funded pre-K program in Tulsa, Oklahoma has received attention from researchers and the media over the years for its quality and measurable outcomes. In December 2017, Gormley, Phillips and Anderson found new evidence of lasting positive effects of the program. They used data on Tulsa pre-K alumni through seventh grade and compared their outcomes to those of students who did not attend pre-K or Head Start. At the time the participants were enrolled in pre-K, the Tulsa pre-K program served 68 percent of all eligible children. The program's wide reach makes it less likely that significant factors differentiate the children who attended Tulsa pre-K and those who did not, allowing researchers to draw stronger conclusions about the program's overall effects.

*Tulsa pre-K participants were 6 percentage points more likely to enroll in honors courses and 7 percentage points less likely to repeat a grade.*

The study found that seventh graders who had been Tulsa pre-K participants had slightly higher math scores than their peers who did not attend pre-K or Head Start. They were also 6 percentage points more likely to enroll in honors courses and 7 percentage points less likely to repeat a grade. Students whose family income made them eligible for free school lunches were even more likely to enroll in honors courses (by 9 percentage points) and even less likely to be retained in grade (by 10 percentage points) than their peers if they had participated in Tulsa's pre-K program.

The benefits of the pre-K program are impressive because they are broad ranging and especially large for certain groups of students. Most strikingly, English language learners who were Tulsa pre-K alumni were 13 percentage points more likely to enroll in honors courses and half as likely to be retained in grade. They also saw the biggest benefit in math test scores compared to peers who had not attended pre-K.