

Evaluations of State-Funded Pre-Kindergarten Programs

State-funded pre-kindergarten programs serve 1.3 million children annually, and at \$5.1 billion, represent a larger investment than federal or local pre-k programs.¹ In the past decade student enrollment in state-funded pre-k has nearly doubled to over 28% of our nation's four-year-olds. Currently, 40 states provide financial support for pre-k programming. These existing state commitments to pre-k show promising signs for future growth, with over half of the states increasing funding in 2012-13.²

As the number of children served through state-based pre-k programming has increased, so has the evidence base of program effectiveness. There is now a growing collection of studies evaluating pre-k programs in several states. These studies have supported the overall conclusion that effective pre-k programming can improve academic and social-emotional outcomes for students in both the short and long term.

Increased Kindergarten Readiness

Many research studies and program evaluations have found state-funded pre-k programs to be effective in preparing students to be successful in kindergarten. A growing body of research provides evidence that pre-k promotes the successful acquisition of pre-reading and pre-math skills.³ While there are differences in program characteristics across the various state-funded pre-k programs, many program evaluations have found that students participating in state pre-k programs begin kindergarten more academically prepared than non-participating peers.

- Students who participated in the **Arkansas Better Chance (ABC)** program scored higher on kindergarten measures of vocabulary, math skills, and understanding of print concepts than students who had non-ABC preschool experiences.⁴
- **Georgia's Pre-k Program** found a positive effect for children who had participated in measures of letter and literacy, math, and general knowledge at kindergarten entry when compared to students of a similar age who had not yet participated.⁵
- **New Mexico PreK** has been found to be associated with a number of positive benefits. The four-year-old children who participate have been found to have improved outcomes on kindergarten measures of vocabulary, math and early literacy when compared to students who had not yet attended pre-k.⁶
- An evaluation of **Oklahoma's Universal Pre-k** found large academic benefits for students of differing racial and ethnic groups across socioeconomic backgrounds. Participating students had significantly improved performance on cognitive tests of reading, writing, math reasoning and problem solving abilities.⁷

Long-term Academic Outcomes

Students who have participated in a high-quality state-funded pre-k program have been found to have improved academic outcomes lasting into elementary, middle and high school. Several longitudinal studies have examined well-established state pre-k programs, comparing participating students' outcomes on state assessments to those of similar control groups of students who did not participate in state-funded pre-k.

- A longitudinal study of **Louisiana's LA 4** public pre-kindergarten program compared the academic outcomes of participating students to non-participating students on the Louisiana Educational Assessment Program (LEAP) test in eighth grade. The study found that at-risk students (as determined by family income) outperformed at-risk non-LA 4 students in all eighth grade measures.⁸
- **New Jersey's Abbott Preschool Program Longitudinal Study (APPLES)** has measured the academic outcomes of participating students in kindergarten, second, fourth and fifth grades. At all levels of measurement, the Abbott preschool program has been shown to improve achievement in literacy, language arts and math.⁹ While the study demonstrate improved outcomes for all participating students, there were increased growth opportunities for students who attended two years of pre-k (associated with closing 20-40% of predicted achievement gap) compared to students who attended only one year (closing 10-20% of achievement gap).¹⁰
- An evaluation of state-funded pre-k in **Texas** found that participating students outperformed non-participating students in assessments of math and reading proficiency in third grade. This effect was largest for students who were both economically disadvantaged and limited English proficient.¹¹

Decreased Grade Retention and Special Education Referrals

The benefits associated with participating in state-funded pre-k have been found to not only impact cognitive performance measures like test scores, but also costly educational interventions like special education and retention.

- Longitudinal studies measuring the effectiveness of state-funded pre-k in **Louisiana, New Jersey, and Texas** all found that participating students had reduced rates of grade retention and special education referrals.
- Students who participated in the **Michigan Great Start Readiness Program (GSRP)** were less likely to be retained in-grade between 2nd and 12th grade. Additionally, GSRP participants were more likely to graduate from 12th grade on time than non-participants (58.3% compared to 43.0%). The positive association with on-time graduation and decreased grade retention were even higher for students of color who participated in GSRP.¹²
- Typically expected rates of special education placement were significantly reduced for students who participated in the **Pennsylvania's Pre-K Counts (PKC)** program as they transitioned into kindergarten. Additionally, nearly 20% of pre-k students who had been identified to have, or be at-risk for, developmental delays were evaluated to be in the typical range of functioning after PKC.¹³

As more state-funded programs develop and mature, new research will continue to add to our understanding of pre-k's impact on student learning outcomes. What is clear from current research, is that high-quality state-funded pre-k programs are working to improve school readiness and narrow the achievement gap in the early years.

Based on these findings, and the longitudinal findings from model pre-k programs, Massachusetts should increase its own investment in high-quality early education. According to the National Institute for Early Education Research (NIEER), in 2013 Massachusetts only enrolled 14% of four-year olds, and 4% of three-year-olds in state-funded pre-k.¹⁴ Meanwhile, more than 11,000 preschool-age children are on the state's waitlist for income-eligible subsidies (40,000 children total, birth – school age). It is critical that state policymakers increase state funding for pre-kindergarten. By doing so more Massachusetts three and four-year-olds will have access to critical early learning opportunities that prepare them for success in school.

¹ Barnett, W.S., Carolan, M.E., Fitzgerald, J., & Squires, J.H. (2012). *The state of preschool 2012: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research.

² Griffith, M. (2013). State pre-k funding: 2012-2013 school year. Denver, CO: Education Commission of the States. Retrieved from: <http://www.ecs.org/clearinghouse/01/06/90/10690.pdf>

³ Isaacs, J. (2008). *State Pre-Kindergarten: Impacts of Early Childhood Programs*. Brookings Institute. Retrieved from: http://www.brookings.edu/~media/research/files/papers/2008/9/early%20programs%20isaacs/09_early_programs_brief1.pdf

⁴ Jung, K., Barnett, S., Hustedt, J., & Francis, J. (2013). *Longitudinal effects of the Arkansas Better Chance Program: findings from first grade through fourth grade*. Rutgers University & The University of Delaware. Retrieved from: <http://nieer.org/sites/nieer/files/Arkansas%20Longitudinal%20Report%20May2013n.pdf>

⁵ Peisner-Feinberg, E., Schaaf, J., LaForett, D. R., Hildebrandt, L. M., & Sideris, J. (2014). *Effects of Georgia's pre-k program on children's school readiness skills: Findings from the 2013-2013 evaluation study*. University of North Carolina at Chapel Hill. Retrieved from: http://decal.ga.gov/documents/attachments/GAPreKEval_RDDReport%203-4-2014.pdf

⁶ Hustedt, J. T., Barnett, W. S., Jung, K., & Friedman, A. H. (2010). *The New Mexico PreK Evaluation: Impacts from the fourth year (2008-2009) of New Mexico's state-funded preK program*. National Institute for Early Education Research.

⁷ Gormley, W. t., Gayer, T., Phillips, D., & Dawson, B. (2005). *The effects of universal pre-k on cognitive development*. Journal of Developmental Psychology. 41 (6) 872-884.. Retrieved from: <http://www.iapsych.com/wj3ewok/LinkedDocuments/Gormley2005.pdf>

⁸ Cecil J Picard Center for Child Development and Lifelong Learning. (2013). *Eighth-grade outcomes for LA4 cohort 1 students*. (Technical brief). Retrieved from: <http://www.louisianaschools.net/lde/uploads/11515.pdf>

⁹ Barnett, W. S., Jung, K., Youn, M., & Frede, E. C. (2013). *Abbot preschool program longitudinal effects study: fifth grade follow up*. National Institute for Early Education Research. Retrieved from: <http://nieer.org/sites/nieer/files/APPLES%205th%20Grade.pdf>

¹⁰ Ibid.

¹¹ Andrews, R. j., Jargowsky, P., & Kuhne, K. (2012). *The effects of Texas's targeted pre-kindergarten program on academic performance*. National Center for Analysis of Longitudinal Data in education. Retrieve from: <http://www.caldercenter.org/publications/upload/wp-84.pdf>

¹² Schweinhard, L. J., Xiang, Z., Daniel-Echols, M., Browning, K., & Wakabayashi, T. (2012) *Michigan Great Start Readiness Program evaluation 2012: High school graduation and grade retention findings*. HighScope educational Research Foundation. Retrieved from: http://www.highscope.org/file/Research/state_preschool/MGSRP%20Report%202012.pdf

¹³ Bagnato, S., Salaqay, J., & Suen, H. (2012). *Pre-k counts in Pennsylvania for youngsters early school success*. Early Childhood Partnerships- Specs Research.

¹⁴ National Institute for Early Education and Care. (2014) *Executive Summary: The state of preschool 2013*. New Brunswick, NJ: National Institute for Early Education Research. [Updated, May 2014]