

Key Elements of High-Impact Preschool Programs: What Research Tells Us



KNOWLEDGE BRIEF

An abundance of evidence shows that high-impact preschool programs help promote school readiness, especially for children living in poverty and others at risk of falling behind. Also, growing evidence indicates that preschool programs can have lasting benefits on later school performance and adult life, including higher lifetime earnings, improved health, and reduced dependence on social welfare programs. While a major purpose of publicly supported preschool is to help close the achievement gap for children from low-income families, the programs have also been found to benefit children whose families do not qualify for means-tested programs but still have difficulty affording quality programs. The following brief summarizes research findings on the impact of preschool and highlights the elements of the programs that have been found to have the greatest benefits and their implications for preschool policy in California.

Initial interest in publicly supported preschool programs was largely based on evaluations of three early childhood programs that began in the 1960s and 1970s: the Abecedarian Project, the Chicago Child-Parent Centers, and the Perry Preschool Project. As Meloy, Gardner, and Darling-Hammond (2019) point out in a recent review of preschool research, these

high-quality programs served a relatively small number of children from low-income families and were established at a time when most preschool children had a non-working parent at home.¹

Not only were the programs found to improve children's school readiness, they were also linked to fewer special education placements, higher rates of school

¹ Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

completion, more total years of education, lower rates of incarceration, and higher rates of employment and median earnings. Based on longitudinal studies, cost analyses estimated that the programs saved from \$7 to \$17 for every dollar invested.^{2,3,4}

Prompted by these findings on the promise of preschool, over the last 20 years, many states and localities have embarked on much larger-scale publicly supported preschool initiatives. All but six states now offer some support for preschool.⁵ Most of these contemporary preschool programs have not been around long enough to offer the kind of longitudinal findings provided by the original programs. However, a substantial body of research underscores the impact of more recently implemented programs on school entry and school performance, and suggests the key elements of successful programs.

Impact of Contemporary Programs on Child Outcomes

Studies of more recently established preschool programs supported by states or municipalities consistently show a strong impact on multiple domains of school readiness. A review of 18 well-respected studies of preschool programs

found substantial benefits.⁶ All of the studies used either a regression discontinuity design, whereby children who qualify for a program based on their birthdays are compared with children who just miss the age cutoff, or a randomized control trial, where children are assigned to attend a particular program by means of a random number generator. The review of the studies by Meloy, Gardner, and Darling-Hammond (2019) showed:

- clear evidence of benefits in 17 out of 18 programs on early literacy, such as children’s phonological awareness or ability to identify letters and sounds;
- positive impact on early mathematical skills in 14 out of 16 programs evaluated on this criterion;
- positive impact in a majority of programs on children’s early language abilities, such as oral language skills and receptive vocabulary;
- significantly fewer children retained in-grade in a majority of the programs where this outcome was studied; and
- significantly lower rates of special education placements in a majority of the programs where this factor was evaluated.⁷

2 Cannon, J., Kilburn, R., Karoly, L. Mattox, T., Muchow, A., & Buenaventura, M. (2017). *Investing early: Taking stock of outcomes and economic returns from early childhood programs*. Santa Monica, CA: RAND Corporation.

3 Yoshikawa, H., Weiland, C., Brooks-Gunn, J. M., Burchinal, M. R., Espinosa, L. N., Gormley, W. T., Ludwig, J., Magnuson, K., Phillips, D., Zaslow, M. J. (2013). *Investing in our future: The evidence base on preschool education*. Ann Arbor, MI: Foundation for Child Development.

4 Reynolds, A. J., Temple, J. A., White, B. A., Ou, S., & Robertson, D. L. (2011). Age 26 cost-benefit analysis of the Child-Parent Center early education program. *Child Development*, 82(1), 379–404.

5 Friedman-Krauss, A., Barnett, W. S., Garver, K., Hodges, K. S., & Weisenfeld, G. G. (2020). *The state of preschool 2019*. New Brunswick, NJ: Rutgers Graduate School of Education.

6 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

7 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

These studies showing the benefits of publicly supported, large-scale preschool initiatives are particularly notable because they were conducted in a different context than the programs established 50 or more years ago. In the early programs showing significant preschool benefits, the children in the control groups did not participate in any preschool program. However, the children enrolled in contemporary, publicly supported preschool programs fare better on many indicators than the children to whom they are being compared, even though most of the children in the comparison groups now have some kind of formal preschool experience.

Impact of Contemporary Programs on Diverse Populations

There is a substantial and growing body of research that indicates that high-impact preschool programs may produce especially meaningful benefits for children whose backgrounds and needs have historically put them at risk of falling behind their peers before and after school entry. Specifically, research shows high-quality preschool has similar, sometimes larger, impacts on school readiness for children who need it most—children experiencing poverty, children of color, children who are dual language learners (DLLs), and children with disabilities.

For children experiencing poverty and children of color, research suggests the impact of high-quality preschool is greatest when those programs create mixed-income and racially diverse learning settings, rather than segregated learning experiences.^{8,9} Families experiencing poverty and children of color often have inequitable access to high-quality learning experiences. Yet even when accounting for differences in instructional quality, students isolated in highly segregated non-white and low-income programs fare significantly worse than their counterparts in more integrated settings.¹⁰ Furthermore, integrated learning settings have demonstrated a positive impact on children's racial awareness and "intergroup attitudes," especially in early childhood—a critical consideration given the context of racism and power in California and the nation.¹¹

For children who are DLLs, the evidence that high-quality preschool experiences are critical to their school readiness and later school success is striking. A study of California's Transitional Kindergarten (TK) program found that Spanish-speaking DLLs demonstrated significant gains in several developmental areas from TK participation, including English language proficiency and language, literacy, and math skills.¹² Furthermore, studies have also shown that DLLs not only benefit from high-quality preschool experiences, they may benefit more from their time in a high-quality early learning program than their English-only speaking

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- 8 Reid, J., Kagan, S.L., Hilton, M., & Potter, H. (2015). *A better start: Why classroom diversity matters in early education*. New York City: Century Foundation.
 - 9 Reid, J. (2012). Socioeconomic diversity and early learning: The missing link in policy for high-quality preschools. In Kahlenberg, R., *The Future of School Integration*. Century Foundation.
 - 10 Reid, J., Kagan, S.L., Hilton, M., & Potter, H. (2015). *A better start: Why classroom diversity matters in early education*. New York City: Century Foundation.
 - 11 Piazza, P. & Frankenberg, E. (2019). *Segregation at an early age: 2019 update*. State College, PA: Center for Education and Civil Rights, Penn State College of Education.
 - 12 Holod, A., Ogut, B., de los Reyes, I. B., Quick, H. E., & Manship, K. (2018). The effects of prekindergarten for Spanish-speaking dual language learners: Evidence from California's transitional kindergarten program. *Early Childhood Research Quarterly*.

peers.¹³ Likewise, growing evidence confirms that supporting home language development while teaching English promotes optimal development of both languages and overall achievement.¹⁴ Preschool may be the ideal time to provide young children with high-quality language interactions in both their home language and English, which studies have shown supports bilingualism and biliteracy—that carries significant advantages in multiple areas of development in the short- and long-term.¹⁵

Finally, research demonstrates that high-quality inclusive preschool programs carry significant benefits for children with disabilities. Studies have found comparable benefits of preschool participation for children who are later identified as needing special education supports.¹⁶ Studies have also revealed that children with disabilities who spend more time in general education classes tend to: (1) be absent fewer days from school; (2) have higher test scores in reading and math; and, (3) demonstrate more social interactions and competencies as compared to children in separate settings.^{17,18}

Furthermore, children without disabilities also benefit from inclusive preschool programs. Studies indicate typically developing children can show positive developmental, social, and attitudinal outcomes from inclusive experiences.¹⁹

Key Elements of Programs with Greatest Benefits

Research on the more recent large-scale publicly supported preschool programs, as well as on the pioneering early programs, suggests that the programs with the greatest impact share the following key elements:^{20,21,22}

- Early learning and development standards and developmentally appropriate curricula
- Well-prepared teachers who engage children in responsive interaction in classroom environments that support learning
- Well-compensated teachers who are incentivized to remain in the field

13 Yazejian, N., Bryant, D., Freel, K., & Burchinal, M. (2015). High-quality early education: Age of entry and time in care differences in student outcomes for English-only and dual language learners. *Early Childhood Research Quarterly, 32*, 23–39.

14 National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the educational success of children and youth learning English: Promising futures*. National Academies Press.

15 Genesee, F. (2010). Dual language development in preschool children. In E.E. García, S. Ryan, & E.C. Frede (Eds.), *Young English language learners: Current research and emerging directions for practice and policy* (pp. 59–79). Teachers College Press, Teachers College, Columbia University.

16 Phillips, D. A., & Meloy, M. E. (2012). High-quality school-based pre-k can boost early learning for children with special needs. *Exceptional Children, 78*(4), 471–490.

17 Rafferty, Y., Piscitelli, V., & Boettcher, C. (2003). The impact of inclusion on language development and social competence among preschoolers with disabilities. *Exceptional Children, 69*(4), 467–479.

18 Barton, E. E., & Smith, B. J. (2015). Advancing high-quality preschool inclusion: A discussion and recommendations for the field. *Topics in Early Childhood Special Education, 35*(2), 69–78.

19 Odom, S. L. (2000). Preschool inclusion: What we know and where we go from here. *Topics in early childhood special education, 20*(1), 20–27.

20 Friedman-Krauss, A., Barnett, W. S., Garver, K., Hodges, K. S., & Weisenfeld, G. G. (2020). *The state of preschool 2019*. New Brunswick, NJ: Rutgers Graduate School of Education.

21 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

22 Wechsler, M., Melnick, H., Maier, A., & Bishop, J. (2016). *The building blocks of high-quality early childhood education programs* (policy brief). Palo Alto, CA: Learning Policy Institute.

- Ongoing professional development, including coaching and mentoring
- Sufficient learning time
- Small class size and favorable teacher-to-child ratios
- Health screening and referral
- Meaningful family engagement

Examples and Features of Preschool Programs with Highest Impact

Several publicly supported preschool programs rise to the top in terms of having the highest impact on school readiness and later school success.

Boston Public Schools Universal Pre-K. Boston's universal program is available to all four-year-olds in the city regardless of family income. Now, it serves more than 2,000 children. An evaluation of the program using a regression discontinuity design showed that the program has a high impact on children's receptive vocabulary, print awareness, applied problems, and executive function.²³ Executive function—including self-control and mental flexibility—has been linked to success in school.²⁴ The Boston program offers a full day in a school-based setting with teachers who hold a bachelor's degree and must earn a master's degree

within five years. Teacher compensation is on the same salary scale as K–12 teachers, and there are provisions for coaching on the curriculum from a master educator.

New Jersey Abbott Preschool Program. The Abbott program was established in 1999 based on a state Supreme Court ruling and is available to all children, regardless of family income or other risk factors, in the state's lowest-income school districts. It offers one or two years of full-day, calendar-year preschool across a range of settings. The program serves more than 40,000 three- and four-year-olds. Lead teachers are required to have early childhood education certification. An evaluation showed a positive impact on receptive vocabulary, print awareness, and applied problems at school entry. Children up to fifth grade have demonstrated positive academic outcomes and a reduction in special education placements and grade retention.^{25,26,27}

Oklahoma's Four-Year-Old Program. The state's preschool program became universal in 1998 and now serves more than two-thirds of all four-year-olds in the state. While administered by school districts, Head Start and private child care providers may implement the program in conjunction with public schools. Lead teachers are required to have a bachelor's degree with specialized training in early childhood education. An evaluation of the program in Tulsa showed that

23 Weiland, C., & Yoshikawa, H. (2013). Impacts of a prekindergarten program on children's mathematics, language, literacy, executive function and emotional skills. *Child Development*, 84(6), 2,112–2,130.

24 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

25 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

26 Frede, E., Jung, K., Barnett W. S., Lamy, C., & Figueras, A. (2007). *Year one of New Jersey's longitudinal study of the effects of Abbott Preschool*. New Brunswick, NJ: Rutgers University, National Institute for Early Education Research.

27 Barnett, W.S., Jung, K., Youn, M., & Frede, E. (2013). *Abbott Preschool Program longitudinal effects study: Fifth grade follow-up*. New Brunswick, N.J.: National Institute for Early Education Research.

teachers are well paid compared with preschool teachers in other settings. An evaluation of the program statewide showed a significant positive outcome on receptive vocabulary at school entry and, in adulthood, a reduction in crime.^{28,29} A follow-up study on the preschool program in Tulsa showed reduced grade retention and higher enrollment in honors courses.³⁰

Georgia's Pre-K Program. Georgia's pre-K program was established in 1995 and is one of the first universal preschool programs in the nation. An evaluation shows that the program has significant positive outcomes on children's letter knowledge, letter-word identification, phonemic awareness, applied problems, and social awareness at kindergarten entry. Children in Georgia's pre-K program show significant increases in math scores as late as eighth grade among children eligible for free or reduced-price lunch.³¹ Offered in schools, child care centers, and Head Start, the program now serves more than 80,000 children, and every classroom must use an approved curriculum. Lead teachers in each classroom must have a bachelor's degree in early childhood education and assistant teachers must have a child development associate (CDA) certification.³² Salaries are set by the state.

California Transitional Kindergarten (TK). The TK program is a school-based program taught by credentialed teachers and offered to all children, regardless of family income or other risk factors, whose birthdays fall within a three-month window after the age cutoff for kindergarten. An evaluation based on a regression discontinuity design showed significant positive outcomes for measures of letter-word identification, phonological awareness, expressive vocabulary, quantitative concepts, and teacher reports of student engagement. Especially noticeable gains were observed for children from low-income families and DLLs.³³ The findings were notable because 80 percent of the children in the comparison group attended some other type of preschool program.

Common Features of National Preschool Programs with Highest Impact

This section identifies the key features that are common across all of the preschool programs described above.

They all have quality standards and curricula. For example, the Boston Public Schools Universal Pre-K program includes exposure to

28 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

29 Wong, V. C., Cook, T. D., Barnett, W. S., & Jung, K. (2008). An effectiveness-based evaluation of five state pre-kindergarten programs. *Journal of Policy Analysis and Management*, 27(1), 122–154.

30 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), 63–87.

31 Peisner-Feinberg, E. S., Schaaf J. M., 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 2012–2013 evaluation study*. Chapel Hill, NC: University of North Carolina, FPG Child Development Institute.

32 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

33 Manship, A., Holod, A., Quick, H., Ogut, B., Brodziak de los Reyes, I., Anthony, J., Jacobson Chernoff, J., Hauser, A., Martin, A., Keuter, S., Vontsolos, E., Rein, E., Anderson, E. (2017). *The impact of Transitional Kindergarten on California students: Final report*. San Mateo, CA: American Institutes for Research.

research-based language, literacy, and mathematics curricula. In the Georgia pre-K program, every classroom must implement an approved curriculum. The California TK program uses the state kindergarten standards as a curriculum guide.

They all have well-prepared, well-compensated teachers. The Boston, New Jersey, Oklahoma, Georgia, and California programs require lead teachers to have a bachelor of arts degree, and most programs require some level of specialized training or credential. Compensation is high; for example, in the Boston Public Preschool and in the California TK program, teachers are on the same salary schedule as K–12 teachers. The California TK study by Manship et al. (2017)³⁴ suggests that likely factors leading to positive findings for children include credentialed teachers that have pay parity with K–12 teachers.

All but one of the programs have a small class size and low teacher-to-child ratio. The National Institute for Early Education Research (NIEER) Preschool Benchmarks recommends that class sizes not exceed 20 and staff-to-child ratios not exceed 1:10, effectively meaning a lead teacher and an assistant are recommended in every class. Boston, Abbott, Georgia, and Oklahoma all meet this standard. California’s TK program is a bit of an outlier. At the time the TK evaluation was conducted, the average class size was 20, ranging from eight to 30. Half of the classes had another teacher or aide for

at least a portion of the day. However, the children enrolled were all older four-year-olds within three months of the age eligible to enter kindergarten; the study authors cautioned that the positive findings might not apply if the program served a younger group of four-year-olds. Some school districts, such as the Los Angeles Unified School District, have used Local Control Funding Formula funds to establish Expanded TK programs for younger four-year-olds, using a 1:12 ratio with up to a quarter of the classroom open to children with special needs. The investment of additional funds has paid off, increasing the percentage of children who enter regular kindergarten classes and who do not need special education.³⁵

They all operate at least 6.5 hours a day and no less than the school calendar year. The length of the pre-K day and year is important not only to the impact on learning, but also to the ability of many children to participate at all. According to a study by NORC at the University of Chicago,³⁶ participation in the Chicago Child-Parent Centers increased dramatically when the program hours changed from part-day to full-day. Participation rates increased especially for Black children, who were three times as likely to attend after the program hours increased. The New Jersey Abbott program is an outlier in that it operates on the calendar year. All of the programs described in this brief make some provisions for extended-day care.

34 Manship, A., Holod, A., Quick, H., Ogut, B., Brodziak de los Reyes, I., Anthony, J., Jacobson Chernoff, J., Hauser, A., Martin, A., Keuter, S., Vontsolos, E., Rein, E., Anderson, E. (2017). *The impact of Transitional Kindergarten on California students: Final report*. San Mateo, CA: American Institutes for Research.

35 American Institutes for Research and California Department of Education. (2019). *California Preschool Development Grant Birth Through Five Program needs assessment*. Sacramento, CA, & Washington, DC: California Department of Education and American Institutes for Research.

36 Ehrlich, S. B., Connors, M. C., Stein, A. G., Francis, J., Easton, J. Q., Kabourek, S. E., & Farrar, I. C. (2020). *Closer to home: More equitable pre-K access and enrollment in Chicago* (Research Snapshot). Chicago, IL: University of Chicago, NORC at University of Chicago, and Start Early.

Programs are available to all children, regardless of income or other risk factors, although they may use a “targeted universal” approach or phase-in. All programs mentioned in this brief are “universal,” available to all children who meet the age requirements within the geographical area where they exist, and the programs are free. For example, the New Jersey Abbott program is available in 31 of the state’s lowest-performing school districts, but it is available to all children regardless of income within those districts.

Evidence indicates that children fare better in programs with a socioeconomic mix, and that parents prefer not having to complete extensive eligibility determination forms that are not only time-consuming, but may be perceived as stigmatizing. Cascio, a Dartmouth economist who has participated in evaluations of both the Oklahoma and Georgia pre-K programs, used Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) data from across the nation to compare child outcomes in states where there was a universal program and those where the program was targeted. Children in states with universal access performed 1.16 standard deviations better than those in states with targeted preschool programs. The benefits applied not just to the overall population of children, but specifically to low-income children.³⁷

Lessons for Implementation from the Highest-Impact Preschool Programs

Both school-operated and mixed-delivery systems can be successful. The five high-quality programs cited in this brief have delivery services that differ in a variety of ways. For example, in Boston and in California’s TK, programs are administered by school districts. Oklahoma’s program is administered by school districts, but Head Start and private programs may implement the program in conjunction with public schools. Georgia’s pre-K program is operated in schools, child care centers, and Head Start. Finally, New Jersey Abbott uses a variety of settings and made an extensive investment in teacher education to achieve that goal. However, the state committed to monitoring implementation of high standards across the settings and benefitted from a court-ordered investment in workforce development.

The more recently implemented universal preschool program in New York City uses a mixed-delivery system. An evaluation has found pros and cons: The school-based programs score better on instructional quality, whereas the non-school programs offer more comprehensive services and may have hours that better meet the needs of families. Although the program has made a commitment to equitable compensation across settings, salaries vary widely. The non-school-based settings lose teachers to the school-based programs, which pay better salaries and offer better benefits.³⁸

37 Cascio, E. U. (2010). *Does universal preschool hit the target? Program access and preschool impacts*. NBER Working Paper. Cambridge, MA: National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w23215/w23215.pdf

38 Reid, J., Melvin, S., Kagan, S. L., & Brooks-Gunn, J. (2019). *Building universal quality to universal access: A Teachers’ College Study making recommendations for New York City’s Pre-K for All*. New York, NY: Teachers’ College, Columbia University.

Two years of preschool are often better than one.

Four of the above five programs have as yet not universally expanded to serve three-year-olds. However, the New Jersey Abbott program demonstrated dramatically better results for children attending two years. Children who attended two years of preschool outperformed those who attended only one year. Scores nearly doubled on receptive vocabulary and were 70 percent higher on the Applied Problems measure. Similar findings came from the Chicago Child-Parent Center program, although the level of the increased benefit on some measures was less pronounced.³⁹

Preschool impact is best sustained with quality early elementary education. Studies of contemporary preschool programs find preschool participation does not always yield sustained impacts. Rather, it is clear that access to preschool can change the academic and life trajectories of children. Meloy, Gardner, and Darling-Hammond (2019) addressed the mixed results from studies of two key programs that have led some to raise questions about a phenomenon they call “fadeout.” Their comprehensive review of these studies reaffirms the potential of preschool and calls on policymakers to consider a different question altogether: Under what conditions does preschool access make a long-term difference?⁴⁰

What these studies underscore, they say, are the findings of a substantial body of research that

identifies the key elements of preschool quality that matter for long-term outcomes reviewed above. Furthermore, the research highlights that it may be unreasonable to expect a single year of preschool to permanently change the developmental trajectory of children who matriculate to low-quality, under-resourced schools. In fact, research has demonstrated a clear link between the quality of elementary school experiences and the sustainability of preschool gains.⁴¹ Investments in the quality of both early learning and later educational opportunities, as well as the alignment of those efforts, are vital to sustaining the gains children make in preschool.

Scale, time, and resources matter. Most of these state- and city-offered preschool programs took at least a decade to implement.⁴² The length of time needed to phase-in preschool access depends not only on the funds available. Leaders of preschool programs that have been implemented rapidly urge allowing enough time for workforce development and for renovation of facilities to ensure sufficient indoor and outdoor space and architectural features that promote children’s learning.

Implementing a high-quality preschool program well is complex and often expensive.⁴³ These programs offer compensation and support that attract and retain a highly qualified workforce, provide adequate, productive learning time and activities, and use child assessments to

39 Reynolds, A. J. (1995). One year of preschool intervention or two: Does it matter? *Early Childhood Research Quarterly*, 10, 1–31.

40 Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence of preschool effectiveness: Insights for policymakers*. Palo Alto, CA: Learning Policy Institute.

41 Johnson, R. C., & Jackson, C. K. (2017). Reducing inequality through dynamic complementarity: Evidence from Head Start and public school spending (No. w23489). Cambridge, MA: National Bureau of Economic Research.

42 Muenchow, S., & Weinberg, E. (2016). *Ten questions local policymakers should ask about expanding access to preschool*. Washington, DC: American Institutes for Research. <https://www.air.org/sites/default/files/downloads/report/Ten-Questions-Policymakers-Should-Ask-About-Expanding-Access-to-Preschool-May-2016.pdf>

43 Meloy, B., Gardner, M., Wechsler, M., & Kirp, D. (2019). What can we learn from state-of-the-art early childhood education programs? In Reynolds, A. R., & Temple, J.A. (Eds.), *Sustaining Early Childhood Learning Gains: Program, School, and Family Influences* (pp. 101–132). Cambridge: Cambridge University Press.

meaningfully individualize learning. Without adequate resources to support a robust program, preschool participation cannot be expected to produce the large and lasting benefits for children that high-quality contemporary programs promise.

Conclusion

In summary, research underscores the benefits of high-quality preschool programs on children's school entry and longer-term school performance. Programs that offer sufficient learning time and a socioeconomic mix have been especially beneficial. While many "universal" programs begin in neighborhoods where there is a higher proportion of low-income families, they are, from the outset, made available to all children, regardless of family income, within those neighborhoods.

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