The Building Blocks of High-Quality Early Childhood Education Programs

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Abstract

This brief identifies important elements of high-quality early childhood education programs as indicated by research and professional standards. These include:

- Early learning standards and curricula that address the whole child, are developmentally appropriate, and are effectively implemented.
- Assessments that consider children's academic, social-emotional, and physical progress and contribute to instructional and program planning.
- Well-prepared teachers who provide engaging interactions and classroom environments that support learning.
- Ongoing support for teachers, including coaching and mentoring.
- Support for English learners and students with special needs.
- Meaningful family engagement.
- Sufficient learning time.
- Small class sizes with low student-teacher ratios.
- Program assessments that measure structural quality and classroom interactions.
- A well-implemented state quality rating and improvement system.

These high-quality building blocks should be the foundation of any early childhood education system.

External reviewers

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When it comes to early childhood education programs, quality is critical. High-quality preschool gives children a strong start on the path that leads to college or a career. Research shows that all children benefit from high-quality preschool, with low-income children and English learners benefiting the most.[1] A substantial number of studies demonstrate the benefits of high-quality pre-k programs. These include long-term research on Perry Preschool, the Abecedarian Project, and the Chicago Child-Parent Centers, as well as ongoing studies of the preschool programs in Tulsa and Boston and New Jersey's Abbott Preschool Program, among others. Economists also have shown the benefits of early education investments, which generate approximately $7 for every dollar invested.[2] However, the potential of preschool can only be realized if programs are of high quality.

This brief summarizes the substantial body of research on programs demonstrating positive results, as well as the professional standards for early education, identifying important elements of quality. It focuses on factors that contribute to meaningful teacher-child interactions. These findings are important for the nation. Of the country's 8.1 million preschool-aged children, nearly four million live in or near poverty.[3] Low-income children are most likely to benefit from high-quality pre-k, pointing to the need to improve the overall quality of early learning programs.[4]

The Building Blocks of Quality

Comprehensive early learning standards and curricula

High-quality programs have curricula that are based on comprehensive early learning standards, address the whole child, are developmentally appropriate, and are effectively implemented.

According to professional standards, high-quality pre-k programs are based on early learning standards that address multiple domains of development—academic, social-emotional, and physical—to ensure children are growing in all the ways that enable them to be healthy and ready for school.[5] They also implement developmentally appropriate curricula, which emphasize guided learning opportunities that are language-rich and hands-on.[6] Research finds that students who are engaged with content in deep ways while developing conceptual understanding are better able to develop skills in specific areas, such as math or language development.[7] However, a curriculum must be well implemented if it is to be effective. Strong preservice teacher preparation and in-class coaching for teachers increase the likelihood that curricula will be used effectively.[8]

Appropriate child assessments

High-quality early childhood education programs assess the whole child.

The National Research Council stresses the importance of using well-planned and effective assessments of children in early learning classrooms in order to improve instruction and program planning. These assessments should encompass the whole child—academic, social-emotional, and physical—and should be part of a coherent system of educational, medical, and family support services.[9] For example, many states have adopted the research-backed Teaching Strategies GOLD assessment, which prompts teachers to collect observational data ranging from children's physical and social-emotional development to their literacy and math skills.[10] These data can be used to track children's progress over time and plan instruction tailored to students' strengths and needs.

Professional knowledge and skill

Strong programs ensure that staff know how to support children's learning and development.

Nearly all programs with a track record of success, including the public preschool programs in Tulsa, Boston, New Jersey, and Michigan, require their lead teachers, who not only instruct children but manage the classroom, to have a bachelor's degree with a specialization in early childhood education.[11] Studies have found that teachers' specialized knowledge about child development and instruction for young children is particularly important.[12] Both the Institute of Medicine and the National Research Council recommend that states align qualifications for educators of children from birth to age eight, with all lead teachers having a bachelor's degree and specialization in early childhood.[13] Well-prepared teachers have the knowledge and skills to provide engaging interactions and classroom environments to support children's learning.

A strong teacher preparation pipeline can help ensure a sufficient supply of qualified teachers. When New Jersey expanded its preschool program, for example, it created multiple pathways to licensure, including more teacher preparation programs, a post-baccalaureate degree for teachers with bachelor's degrees in other fields, and scholarships for current early educators to gain greater knowledge and skill. Retaining high-quality staff is also important. Increasing compensation for early learning providers can reduce turnover, as well as attract high-quality candidates. Teacher turnover in early education is high, with low compensation a primary factor in teachers' decisions to leave.[14]

Ongoing support for teachers

Coaching and mentoring can improve teaching quality.

Strong early education systems support teachers throughout their career by providing coaching and mentoring. While research is in the early stages, coaching appears to be linked to improved student-teacher interactions, less teacher burnout, and increased teacher retention in the field.[15] One study in Washington State, for instance, showed that programs that offered coaching had significantly lower teacher turnover, as well as higher quality ratings.[16] Coaching is integral to many programs that show strong results. For example, both Boston's and Michigan's demonstrably effective public preschool programs employ county- or district-based coaches who work one-on-one with teachers and with entire staffs.

Support for diverse learners

High-quality early learning programs meet the needs of all students, including English learners and students with special needs.

Research is clear that preschool has positive academic effects for English learners, who make academic gains equal to or greater than those of other preschoolers.[17] Native Spanish speakers who participated in Tulsa's preschool program or Head Start, for instance, progressed more in their language development by the end of kindergarten than non-English learners.[18] One way to accelerate English learners' development may be to provide some instruction in their home language. A study of pre-k programs in 11 states showed that native Spanish speakers' reading and math scores improved more when they received more instruction in their native language, particularly when their teacher was caring and supportive.[19]

Many long-term studies show that preschool can reduce the likelihood that a student will need to participate in costly special education programs.[20] Emerging evidence also suggests that preschool may have particularly positive effects for students who have already been identified as having special needs. For example, a large study showed that three-year-olds with special needs who enrolled in Head Start had reduced inattentive behavior, fewer learning problems, and better teacher-child relationships by first grade than similar non-participants.[21] There is some evidence that inclusion programs, in which students with special needs learn alongside their peers, benefit students more than programs that pull them out of the classroom.[22]

Meaningful family engagement

High-quality programs engage families in meaningful ways.

Positive family-program connections have been linked to greater academic motivation, grade promotion, and socio-emotional skills across all types of young children, including those from diverse ethnic and socioeconomic backgrounds.[23] Research finds that high levels of family engagement often result from strong program-family partnerships characterized by trust, shared values, ongoing communication, mutual respect, and attention to the child's well-being.[24] For example, one study on the impact of program-family partnerships for Early Head Start showed program families were more likely to support their children's development and literacy skills than families not in the program.[25] Professional standards promote acceptance of all families by incorporating parents as role models and by celebrating the cultures of all families. They also recommend working with families in ongoing, collaborative goal setting for children.[26]

Sufficient time

Children benefit from more learning time, including year-round programs over multiple years.

Research shows that more daily instructional time can yield bigger benefits for children.[27] While some part-day programs have shown strong results, most highly effective programs provide full-day preschool. Full-day preschool appears to be particularly effective for low-income children. An evaluation of the long-term impact of the Chicago Child-Parent Centers, for example, showed that children attending the program for a full day scored better on measures of social-emotional development, math and reading skills, and physical health than similar children attending the program part day.[28] An analysis of national Head Start data also suggests that children who enrolled in the program full day performed better in reading and math.[29]

Attending preschool for more than one year can also benefit children. While children appear to reap the greatest benefit from their first year in a program, most studies find that children who attend preschool for two or three years do better than those who attend for one year.[30] A recent study of the Chicago Child-Parent Centers, for instance, showed that children who enrolled at age three and stayed for two years were less likely to need special education services and less likely to commit crimes later in life compared with children who started preschool at age four.[31]

Appropriate class size and teacher-student ratio

The most successful preschool programs have small class sizes and low teacher-student ratios.

Having fewer students in a classroom and more staff facilitates high-quality interactions between teachers and children. Although there is little research on the optimal number, a class size of 20 with a student-to-staff ratio of 10:1 is the largest acceptable by general professional standards.[32] Programs that have shown very strong child outcomes, including Perry Preschool and New Jersey's Abbott Preschool Program, have class sizes with low student-to-staff ratios. Perry Preschool capped classes at 12 students, with two teachers per class. New Jersey's Abbott Preschool Program allows for a maximum of 15 students per classroom, also with two staff members.

Comprehensive program assessments

Exemplary early childhood systems assess program quality in terms of both structure and classroom interactions.

Structural features and classroom interactions are important indicators of program quality. Traditionally, assessments of program quality primarily have relied on structural measures such as the National Institute for Early Education Research's 10 benchmarks of quality, which include indicators like class size and teacher qualifications.[33] Recent research highlights the importance of also including measures of the quality of educational experiences, such as the nature of child-teacher interactions and the types of learning activities in which children engage.[34] A review of the literature finds inconsistent evidence that structural quality features alone lead to improved child outcomes. However, a structural quality element such as small class size can facilitate learning when it is paired with high-quality teacher-child interactions, leading to improved outcomes for children.[35]

Quality rating and improvement systems

Many states use a QRIS to improve the quality of early education programs.

A quality rating and improvement system (QRIS) establishes quality standards and supports continuous improvement efforts. It can provide the basis for states to build a well-supported system that includes the quality building blocks this brief describes. An emerging body of research examining the design and implementation of QRIS standards finds mixed evidence linking QRIS rating levels to child outcomes, and the degree to which a QRIS is well implemented appears to be a critical factor in achieving positive outcomes.[36] These systems are designed to specify quality, provide a basis for program accountability, and support program improvement. That support can take the form of technical assistance, such as on-site coaching or consultation; financial incentives, like tiered child care subsidy reimbursement rates and quality improvement grants; and workforce supports, like wage subsidies or scholarships for teachers pursuing higher education.[37] Forty states are using a statewide quality rating and improvement system.[38]

Policy Implications

The research and professional standards presented in this brief identify elements of early education programs that contribute to strong academic and social-emotional outcomes for children. All states must determine a funding strategy for their early childhood programs. One cost model estimates that high-quality programming costs in the range of $8,521 per child with a class size of 20 to $10,375 per child with a class size of 15, if the program is a full-day, year-round, and led by a teacher with a bachelor's degree in early childhood education.[39] Early education programs typically combine funding from a variety of federal, state, and local sources. Additionally, the per-child cost of high-quality programs varies depending on specific program features and regional cost-of-living differences.

Clearly policymakers have an interest in ensuring that any investments they make enable strong outcomes that produce the desired benefits of stronger learning and school success, along with savings from reduced needs for special education, grade retention, remediation, or dropping out. As policymakers consider ways of strengthening their early education systems, the building blocks of high-quality early childhood education programs should be at the forefront of their minds.

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