panels have reviewed cognitive, social, emotional, and neuro-physiological research and come to consensus about our current scientific understanding of how children learn and how learning is best facilitated. Few of these findings, however, have been used to drive recently developing school readiness initiatives. This must change if these programs are to succeed.

Developmental research shows that young children learn cognitive skills in ways that are integrated with, not separate from, their social and emotional growth and other aspects of healthy development. What counts for early learning is not expensive toys or explicit early instruction but seemingly ordinary interactions in child-adult relationships that can be deliberately structured to support growth and learning. Simply teaching a child to recite the alphabet, for example, is profoundly insufficient for developing early literacy. Required instead is an environment that addresses the gamut of developmental needs — as happens when a child is “read to every night and becomes interested in letters and words because they are associated with the joy of being on her father’s lap, seeing beautiful pictures, and hearing a wonderful story.” Experts point out that without deliberate provision of such supportive environments, no amount of skill-building activities will carry children, especially those from adverse home circumstances, to “readiness.”
The approach to teaching and learning engages and builds on Cognitive, social-emotional (mental health), and physical development all receive active attention. Moreover, once on the job, the vast majority of pre-K teachers have little high-quality supervision. The curriculum encourages children to reflect, predict, question, and hypothesize (e.g., How many will there be after two numbers are added? What happens next in the story? Will it sink or float?). Responsive interpersonal relationships with teachers are the program’s cornerstone.

Class size and adult-child ratios are small. Curricular aims are specified and integrated across domains. The curriculum encourages children to reflect, predict, question, and hypothesize (e.g., How many will there be after two numbers are added? What happens next in the story? Will it sink or float?). The curriculum encourages children to reflect, predict, question, and hypothesize (e.g., How many will there be after two numbers are added? What happens next in the story? Will it sink or float?).

Teacher professional development is ongoing and includes time for planning and reflection on practice. Teachers have high-quality supervision. The approach to teaching and learning engages and builds on children’s existing understandings. Key concepts from each domain of preschool learning (e.g., representational systems in early literacy; causation in the physical world) go hand in hand with skill acquisition (e.g., identifying numbers and letters).

Such adult-child interactions lay the foundation on which a child builds confidence, friendliness, and key skills (e.g., how to develop good relationships with peers; persist at challenging tasks; effectively communicate frustration, anger, and joy). Several risk factors for early school problems appear to be related to difficulties in just such social-emotional areas of development. Especially in disadvantaged circumstances, school readiness requires strengthening the ability of family, peers, and community to support the developing child.

**Inadequate Teacher Workforce**

The key to implementing research-based preschool programs is a well-trained teacher workforce. Yet across the United States, despite recent attention to providing better teacher preparation, a minimum of training is still the norm. Moreover, once on the job, the vast majority of pre-K teachers have little high-quality professional development. Linking recent research findings to preschool teaching practice is barely underway. Notably absent is systematic preschool training that equips preschool teachers with fundamental knowledge. Teachers must be well-grounded in child development and pre-K pedagogy so that they can help young children develop needed knowledge and skills. They also need supervised experience that gives them a chance to practice essential instructional strategies, for example, how to structure learning environments that allow each child to pursue learning interests, with the teacher functioning as a “more competent other” who uses a broad range of interactive styles to support development of specific cognitive, attention, and language skills.

But even states that have begun to address preparation issues face a second major barrier to good preschool programs: Low pay makes it hard to attract and keep good teachers. The average pay for a preschool teacher is about $19,000 a year versus $35,000 for kindergarten teachers—a strong incentive for people to leave preschool for K-12 teaching jobs.

The resultant lack of continuity of care is particularly damaging to young children since a crucial component of preschool learning is the children’s relationships with trusted teachers. Young children look to their teachers for social rules, learning strategies, and emotional support. Too often, these early relationships happen with constantly changing individuals whose role is that of babysitter rather than teacher or role model.

**Limited Systemic Response**

The biggest barrier to ensuring school readiness nationwide is the absence of a delivery system for child care and preschool services. At the federal and state levels, piecemeal investments with no grand plan result in a hodgepodge of programs marked by inadequate supply, limited access, and inconsistent quality. Developing an effective system will require drawing from expertise in multiple disciplines, including child care and education, family and child health and nutrition, family support and child welfare, mental health, and early intervention. System planning needs to address all three components of school readiness identified by the National Educational Goals Panel (NEG): readiness of the individual child; a school’s readiness for children; and family support and community services that contribute to readiness. Such a comprehensive approach is especially critical for children at high risk for later school failure. For example, research demonstrates that difficulties such as family instability, domestic violence, drug addiction in the home, and a child’s witnessing violence in the community can lead to chronic stress, which severely inhibits a child’s ability to acquire new skills and remember information. Rarely are these issues addressed as part and parcel of school readiness—a gap that often results in adding school struggles to the child’s list of stressors.

**Policy Implications**

Following are actions policymakers can take, especially at the state level, to move toward a system of quality preschool education:

**Develop and enforce program standards.** Standards for preschool curricula need to be developed and reviewed periodically to ensure adherence to current research on how children learn and how that learning is best facilitated. Small groups and low child-to-teacher ratios should be mandated. Experts recommend groups of 16 to 20 four- and five-year-olds with two teachers or 14 three-year-olds with two teachers. For younger children, the groups should be smaller.
Demand well-prepared teachers and create professional development and compensation systems. Teachers and child care providers serving preschool children need the support to acquire foundational skills that preschoolers need for academic readiness as well as child development, cultural influences, and pre-K pedagogy. Teaching standards and qualifications need to be defined and collaborations fostered between higher education, including community colleges, and preschools to develop good programs and training incentives (e.g., tuition support or wage supplements). Ongoing teacher development should include provisions for high-quality supervision and time to reflect on practice. Pay needs to be increased, salary systems developed, and special incentives created. Salaries and training should be comparable with those of elementary school teachers. When each of these pieces is provided, teaching quality increases and teachers stay in their jobs longer.

Support interventions that bolster parent involvement and social services. These may include educational activities that support parents as their child’s first teacher, English language support, or helping parents with self-sufficiency goals. Links to health care, nutrition, and needed social services are critical, as is support for children with disabilities and other special needs.

Expand the scope of preschool program evaluation. Besides primary-grade teacher reports on readiness, quality indicators may include how well a program is tailored to each child’s and family’s needs and strengths, staff education and stability, and the availability of needed services.

Develop a seamless comprehensive, strategic plan for early care and early education, birth to age 8. Program regulations, credentialing, monitoring, and accountability need to be part of a larger whole. In many states, different agencies are responsible for the learning that occurs with preschool-age and kindergarten children.

Target resources to increase the availability and quality of preschool programs. Consider the implementation of universal voluntary pre-kindergarten programs for all children. Create a governance structure, identify gaps in service, analyze costs, and develop stable funding. Cost-benefit analyses should include cost savings (e.g., health or learning problems prevented). Funding strategies should seek to bridge across health, education, and social service budgets.

Engage the public. Ensure that the meaning of school readiness and the role it plays in school success are central parts of the public dialogue on increasing student achievement.

Conclusion

An urgent need exists to link major recent scientific findings about how children develop and learn to new federal and state preschool initiatives. Quality pre-K programs give children — especially those at risk for later school failure — the requisite tools to succeed in kindergarten and beyond, thus preventing both frustration and remediation. Research defines quality, showing that social-emotional development and academic learning coexist in good preschools. The key is sophisticated teaching, which requires investment in teacher preparation and salaries. By taking steps to develop and creatively fund systems that ensure strong preschool experiences for at least the most needy 3- and 4-year-olds, policymakers can narrow the achievement gap, increase K-12 savings, and bolster success for generations of youngsters.

Lessons from State Initiatives

No state has yet developed a comprehensive early childhood system, though several are moving in that direction. Promising initiatives follow:

Georgia was the first of now three states to fund “universal” voluntary pre-K for all 4-year-olds. Begun nine years ago and funded by lottery proceeds, the full-day programs operate in schools as well as Head Start and child care centers. Some 70% of eligible children are served. Teachers earn a competitive salary; 85% have four-year degrees or better; and 79% hold early childhood certificates. A study following a sample of 3,600 children showed that after second grade in 2000, 82% were ready, if not “extraordinarily” ready, for third grade.

New York is using state budget funding to build a universal program. Launched in 1997, the half-day program currently targets low-income families and serves about 25% of the state’s 4-year-olds. School districts that participate must use part of the funds to subcontract with other providers — an arrangement fostering public-private collaboration. Beginning in 2002–2003, all teachers must be certified in early education. Pre-K is linked to the state’s K-12 academic standards through performance indicators. This year’s planned expansion has been stalled by budget cuts.

Texas. Since 1984 Texas has required pre-K in school districts with at least 15 four-year-olds who are poor, homeless, or don’t speak English. State general funds pay the cost; strong public support stems from the early literacy focus. The all-day programs serve some 72% of eligible children and follow state curriculum guidelines. Teachers must have specialized early childhood training. A 2000 study cited pre-K as one of four factors leading to the state’s top standing among the states in achievement gains (including among poor children) between 1990 and 1996.

New Jersey offers preschool to needy 3- and 4-year-olds in 30 urban school districts under a 1998 court order. These schools must have certified teachers, classes no larger than 15 students, curriculum standards, and adequate facilities. A statewide task force established rigorous standards, but consistency has been hobbled by problems finding enough certified teachers and classroom space. Though districts can contract with other providers, many kids as yet are in half-day rather than the mandated full-day programs.
ENDNOTES


3 Bowman, B. T., et al., Ibid.

4 Shonkoff, J. P., et al., Ibid.

5 Shonkoff, J. P., et al., Ibid.


7 Peth-Pierce, R., Ibid.

8 Bowman, B. T., et al., Ibid.


10 Bowman, B. T., et al., Ibid.


12 Shonkoff, J. P., et al., Ibid.

13 National Association for the Education of Young Children (NAEYC) position statements. See www.naeyc.org.

