Unlocking the Potential of Children before Kindergarten Entry

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If education is truly going to support upward mobility, it should start to do so at birth—because the first years of life are when a great education can make the biggest difference. Research is very clear that the time from when a child is born through age five is a critical period of brain development and provides the foundation for later learning. We also know that high-quality early learning can have a significant, long-term impact on children. However, we don't yet have consensus on how best to scale those early learning experiences to reach high numbers of low-income children while maintaining quality. But because we know that low-income kids can't wait until kindergarten to start their education, it's time to take what we know about the learning and developmental needs of young low-income children and come up with policy solutions that meet those needs.

This chapter discusses how families and teachers can work together to help upward mobility get off to a great start in the years from birth through kindergarten entry. This work has no simple solutions or silver bullets, because it requires numerous connections that traditional education systems have not always fostered: between "academic" and "non-academic" skills, between families and professionals, and—importantly—between early learning providers and the public schools. Best practices in the early years can put kids on a positive trajectory heading into kindergarten and, ideally, inform best practices in kindergarten and beyond.

Pathways to Prosperity Begin at the Beginning

Research shows that a language gap between low- and high-income children begins to open in the first year of life. Early education can help close that gap, but only if it is high quality and fosters a language-rich environment and interactions.

Infants learn language from the environment around them and from the grownups in their lives, a fact that can lead to significant variation in how much language children pick up. A seminal Hart and Risley research study shows that children raised in a family of professionals hear eleven million words per year—compared to six million words per year in working-class families and three million words per year in families on welfare.[1] Researchers have now measured a language gap in children as young as nine months old.[2]

Though the raw number of words to which a child is exposed matters, so too does the nature of that interaction. Research is also showing that the quality of the words and how they are used matters, not just the quantity.[3] In the early years, when the brain is still developing, responsive engagement with adults can actually have a long-term impact on the brain's architecture.[4] Similarly, stressful life experiences in childhood associated with living in poverty—including violence and lack of medical care, among other risk factors—can have an adverse effect on brain development, including the vital areas that enable a child to learn language.[5]

Because language acquisition is a dynamic process, getting off to a slow start impacts a child's ability to learn as he get older.[6] If a child starts out behind, it can be hard to catch up; Hart and Risley found a connection between the number of words a child hears between birth and age three and his academic success at ages nine and ten.[7] That draws a direct line

between language development in the infant–toddler years and third-grade reading scores—and children who are behind in third grade are less likely to graduate from high school and are disproportionately in poverty.[8]

The bottom line: children who enter kindergarten behind in school readiness tend to remain behind throughout their schooling.[9] But although low-income children are more likely to enter kindergarten less prepared than their peers, it doesn't have to be that way.

What Great Early Learning Looks Like

A fundamental premise of all education-improvement efforts is that improving the quality of public education can influence long-term outcomes. That premise applies with even more force before the age of five. Quality early-childhood programs can make a difference in helping low-income children reach kindergarten readiness and establish stronger academic trajectories. These programs can begin addressing the language gap even in the first few months of life, if they are properly designed and engage children for a sufficient duration.[10] The best early learning programs—like the best K–12 schools—depend on effective teachers having the skills, knowledge, competencies, and supports to utilize well-designed standards and assessments to promote learning and development. However, developmentally appropriate best practices used in developing early language and literacy look a lot different than most K–12 teaching, and these practices are most effective when they engage adults in children's lives.

I.   *Early learning blurs lines between academic and nonacademic skills*

Whereas teachers may talk about "academic" and "nonacademic" skills with regard to older children, in early learning the best programs and teachers focus on integrating both types of skills. Early learning programs recognize that children can only learn "academic" skills, such as reading, math, and science, if they have the social and emotional skills to thrive in the classroom. For many children, emotional and behavioral difficulties make it difficult to succeed in school. In a national survey of kindergarten teachers, the respondents reported that 16 percent of children entering kindergarten had a difficult transition and exhibited serious problems, such as difficulty following directions, difficulty working independently, difficulty working as part of a group, and problems with social skills. The results of this study are consistent with the findings of existing research. Child Trends's analysis of the Early Childhood Longitudinal Survey Kindergarten Cohort identified that four out of five children entering kindergarten demonstrate developmentally appropriate learning-related social skills. The analysis also found that social-emotional skills vary depending on income levels: 70 percent of low-income children showed pro-social behaviors, compared with 84 percent of children from higher-income families.

In the adult world, it is clear that academic skills alone do not fully explain a person's success. The same is true in all aspects of education, starting with early learning. There is evidence that low-income children are more likely to struggle in the nonacademic areas, a fact that can contribute to ongoing inequality. When early learning programs succeed at helping children develop academic and nonacademic skills, they do so using the same

infrastructure that undergirds K–12 education: standards, curricula, and assessments that support great teaching. But how the best early learning programs strive to implement those standards, curricula, and assessments can look a lot different than what happens in many schools—and there is no question that, as in K–12, the impact of the teacher and supportive leadership is essential to the success of a classroom.

II.   *Great teaching in early learning*

As in K–12 education, superlative early learning requires superlative teachers. An effective teacher should possess knowledge on the principles of early childhood development and have the skills to engage with both children and parents in a caring and respectful manner.[11] Teachers who are successful in promoting academic gains for children in early learning settings are responsive to a child's individual needs and create language-rich learning environments.[12]

In quality early childhood programs, learning should be child initiated. Practices that embody quality instruction in early learning environments include planned activities based on curriculum goals; individualized activities tailored to each child's unique developmental status; individual, small-group, and large-group activities; supportive classroom environments and learning materials; engaging with families to promote learning at home; developing and maintaining secure attachments between children and teachers; and using classroom data to determine children's progress toward curriculum goals.[13]

In all birth-to-five programs, addressing the language gap requires an interactive environment and proactive, meaningful engagement with children. This will look different across ages, and practitioners' approaches may vary with special populations. With the youngest children, a process called joint attention occurs when caregivers and infants focus on the same object or event and the adults put into words what the infant is observing or hearing.[14] In later years, one common practice (used in Head Start) is for teachers to explain uncommon words before starting to read a book and flag the word again during and after the book.[15] Throughout these years, it is essential for adults to conduct conversations with children in which they maintain eye contact and respond thoughtfully to what a child has said; this is a key to language development.[16]

Language acquisition for dual language learners is complex and rich, as they may experience multiple languages and cultures in varying settings. Research and best practice indicate that children should be encouraged to retain and develop their home language as they learn English.[17] For these learners, early education programs must support and respect the child's home language and culture, and teachers should demonstrate an understanding of the child's family culture—and, whenever possible, speak the child's language and use linguistically and culturally appropriate assessments in both languages.[18]

There are important systemic choices that affect teachers' ability to impact children. The research base on small class sizes and low teacher-child ratios is particularly strong in the birth-to-five years,[19] which is important for individualizing instruction. One benefit of smaller class sizes is the ability to conduct more effective assessments, because the teacher

primarily administers the assessments in early learning. Unfortunately, systems of ongoing professional development in early learning are often inadequate,[20] which may also sound familiar to policymakers and practitioners focused on K–12.

Sidebar: An example of great teaching

Jackie Green, who teaches infants and toddlers at Educare Seattle, applies many of the elements of great teaching to her daily interactions with young children. She creates a language-rich environment, even with infants, by verbalizing her actions and responding to babies' gestures and babbling as if they were in a conversation. She also makes sure to hold eye contact with the infants during their interactions. Her effective teaching strategies extend beyond the individual relationships she develops with the infants and toddlers, as she aims to create a classroom environment that supports learning and social-emotional growth. She stocks her classroom with objects, like blocks and geometric shapes, with which children can explore and play. In these instances of child-directed learning, she lets the child decide what aspects of the classroom to explore and uses their interests to engage with them.

For example, a child may decide to play with a ball and tube. After seeing the child play with rolling the ball down the tube, she may take turns with the child in exploring different ways to play with those two objects. This activity also serves the purpose of promoting social-emotional growth, because the child explores in a safe environment and learns how to take turns.

Green balances child-directed learning with special, teacher-directed classroom activities. One such activity involved the children tasting the kiwi fruit. Extending the activity over the course of two days, Green had the children touch and play with kiwi on the first day and then had the children try the kiwi on day two. On the day the children tasted the kiwi, she created a visual chart that tracked whether the children liked or disliked how the new fruit tasted. Over the course of the entire activity, she continued to nurture vocabulary development by offering new words that children could use to describe their experiences.

Through using all of these teaching approaches, Green says she hopes to "plant the seeds for future learning" by creating a solid foundation in a child's early years.[21]

III.   *Standards and assessments*

Learning standards are essential for scaling up high-quality early learning programs. All states now have learning standards for preschoolers, and almost all have them for infants and toddlers.[22] As in K–12, individual programs use those learning standards to choose a curriculum and, ideally, as the basis of formative assessments. When early learning standards cover the full range of developmental domains—both academic and nonacademic—early learning programs provide the kind of comprehensive developmental experience children need to be truly ready for kindergarten.

All states that have early learning and development standards have standards that cut across multiple domains. Even though different states give them somewhat different names, they generally include titles like reading, language, math, science, social skills, behavioral control, motivation, and problem solving. States have sought to put these into developmentally appropriate progressions, beginning at birth, and then align them with their state K–12 standards.[23]

Although great progress has been made in early learning standards, there is still a long way to go. States have claimed that their standards across early learning and K–12 are aligned,[24] but alignment is not universal—and where there is alignment, it may be primarily in the academic domains. Meanwhile, curriculum choices at the K–12 level are difficult enough in the Common Core subjects,[25] even before considering how to address multiple domains of learning. As for choosing curriculum in early learning, research on specific curricula is still limited, particularly for dual language learners and children with disabilities. The creators of the major evidence-based early learning curricula—including the widely used *Creative Curriculum* and *HighScope*—have made efforts to align to Common Core standards. However, policies that allow for great local flexibility in developing and choosing curricula[26] make the early learning curriculum landscape perhaps even more varied than that of K–12.

The developmental state of early learning child assessment also lags significantly behind K–12. Leading researchers have found that it is developmentally inappropriate to use assessments on children under age eight for accountability purposes.[27] Therefore, in early learning, teachers generally administer assessments in early learning, which are used to help inform instruction for children.[28]

A major trend in early learning assessment is kindergarten-entry assessments. These assessments can inform instruction, and they can also help provide a picture of how children are doing at kindergarten entry.[29] About half of all states have a statewide policy requiring kindergarten assessment.[30] The best practice in kindergarten-entry assessment is to assess the full range of developmental domains;[31] while eleven states implement assessments that address the full range of domains covered in their learning standards, others use assessments focused only on reading or a more limited set of domains.[32]

Sidebar: A great preschool at work

John Kocher, a preschool teacher at Educare Milwaukee, finds ways to make learning playful for his three-year-old students, such as incorporating music and movement into lesson plans. "Music is fun," Kocher says. "If you can make learning concepts fun, it can help with children's memory and retention."

Kocher and his fellow teachers use a singing game called "Shape Shop." They give each child in a group a shape, such as a circle, heart, or diamond, made from felt. Then teachers and children sing the "Shape Shop" song, calling out a different child's name with each verse. When a child hears his name in the song, he stands up and places his shape on a felt board. The children practice listening skills, taking turns, and shape recognition, all while singing.

Modeling positive relationships and behaviors in the classroom is critical to helping young children develop strong social-emotional skills. For instance, if one child takes a toy from another, Kocher will intervene and ask each child to consider the feelings of the other. He asks the child who grabbed the toy how she would feel if someone grabbed her toy. And he asks the child who originally had the toy if she would give it to the other child when she is finished. Kocher helps the children find the words to express their feelings and come to an agreement about the toy. And, before long, he'll see one child giving the toy to the other. "It's important to show them how to look at the situation from their friend's perspective," Kocher says. "That's not always easy for young children."

Kocher and other teachers at Educare Milwaukee are also trained in the Wisconsin Pyramid Model for Social and Emotional Competence. The teachers learn strategies on how to help children manage emotions and maintain positive relationships with their peers and teachers.

Engaging parents in the classroom is also key to helping young children succeed. Teachers at Educare Milwaukee have take-home activity folders in the classrooms for parents. The activities are linked to classroom lesson plans and are projects parents can easily do at home with their child. "The activities help the parent build a relationship with the child and give the child extra education at home," Kocher says.

Through these and other intentional teaching methods, Kocher says he "gives children and families the tools to help them succeed in the future."[33]

IV.   *Family engagement in early learning programs*

The best early learning programs partner actively with families to facilitate both child and parent success. Many low-income parents[34] lack access to information about child development, which means that early learning programs often focus on partnering with families about how they can be most effective in supporting their children. Early learning providers can take important steps to engage families—and, indeed, federal and state program requirements often require them to do so.

The best early learning teachers think of parents as essential partners in supporting child development. Teachers should regularly solicit information from parents about their children and their home experience and invite parents to spend time in the classroom.[35] Staff should focus on building trust with parents through interactions that are respectful of the family's background and culture and, in particular, are sensitive to the dynamics of the community the school serves.[36] This includes not only asking parents about the child but sharing data about the child—and then working with parents to develop effective strategies for meeting a child's needs.[37] This kind of ongoing engagement takes time and requires that center-based programs and schools have sufficient staffing to allow for regular attention to engaging with families.[38] Parental advisory councils and support groups provide time for leadership development and networking among parents, which gives parents a stronger sense of connectedness.[39]

Early learning providers can also help train parents to advocate for their children. Parents can be advocates at home, in their children's schools, and in their communities.[40] Parents who are involved in such advocacy not only experience personal growth but also can serve as important role models for their children.[41] The benefits of this type of family engagement are far reaching, and schools that provide opportunities for leadership and input from families are better able to meet the needs of their students.[42] However, low-income families often face daily pressures and economic barriers that can limit their time, energy, and access to critical information and connections that support their engagement in their child's school.[43] And schools and districts, too, often lack the staff, resources, and strategies to effectively engage parents. Early learning can be an opportunity for preparing parents to engage and advocate for their children throughout their children's K–12 schooling and a model for how schools can effectively engage parents.[44]

Having early learning programs prepare parents to advocate on behalf of their children takes on particular relevance in communities that have school options or choice. Parents of all socioeconomic backgrounds seek to utilize school choice, but research shows that less-educated parents may be more likely to identify lack of knowledge about the choice process as a barrier to getting their children to the right school.[45] One support that early learning programs can provide is helping parents understand and navigate their choice options. For example, Educare Schools initiate transition planning meetings with parents and a multidisciplinary team of staff at least six months before the child moves on to a new school.[46]

Two-generation strategies that offer supports for children and their parents are emerging and have shown positive results for entire families.[47] Beyond sharing knowledge, family engagement can help parents connect to health and nutrition services, work and housing supports, and mental health services—all of which can help improve children's home environments.[48] Strategies such as providing job training or linking families to additional income supports that increase family income during the early childhood years can improve children's academic success in both the short and long term.[49] Home-visiting programs that include case management support connecting parents to community-based resources, including mental health treatment, can improve the child's socioemotional and cognitive development[50] and reduce maternal stress.[51] Center-based early childhood programs that are combined with job training programs have improved children's attendance and socioemotional health, while also increasing maternal well-being.[52]

Sidebar: How centers engage families

Supporting the parent-child relationship is central to the family engagement and support philosophy at Educare Schools across the country. "My role is to help parents understand their child and what they need to do to continue to help their child grow," says Nena Cunningham, a family services coordinator at Educare Central Maine. Cunningham begins building a strong relationship with parents by coordinating with classroom teachers to share information about how their children are doing at school.

For example, Cunningham and classroom teachers noticed that a two-year-old boy at the school struggled with articulation in his speech development. At first, his mother declined to have her son evaluated. But as the staff continued to share their observations with her, she finally acknowledged that she had trouble understanding what he said and that she wanted help. "She really had to feel comfortable with us to admit that, and she had to want to make that decision on her own," Cunningham says. Cunningham set up an evaluation for the boy, who is now receiving speech therapy for articulation. The mother later sent an email to classroom teachers thanking them for looking out for her son and being a second family.

Cunningham is confident that by giving parents tools to ensure their children's healthy development and advocate for their children's education, parents will carry those skills with them beyond Educare. She sees this happen when parents whose children attended Educare and are now in elementary school come back to visit. They update her on their children's development and ask for advice on how to address any challenges their children are facing at school.

"You can't build a house without a solid foundation," Cunningham says. "That's what our program prides itself on: helping build that base so that families have the tools they need to be successful later on in whatever they do."[53]

The Programs Serving Early Learners

Scientific research makes clear that the first five years of life are incredibly important to brain development and long-term outcomes and that the interactions children have with adults in those five years have an enormous impact on their development—even permanently influencing the architecture of their brains. Though these developmental concepts are widely accepted, what is much more actively debated is whether the large-scale programs currently serving young children are having a positive impact. There are, in fact, numerous and varied programs serving young children, each of which is designed and funded to accomplish different goals. The research on these programs largely reflects their different purposes.

     I.   *Major early childhood education funding supports*

          A.   Home visiting

Because so much of children's language development occurs in the home, a major support for early literacy is a parent-coaching program known as home visiting. In home visiting, trained professionals work with mothers in the home environment to provide mothers with information on child development and parenting practices, which include child language development.[54] Though there are multiple program models and curricula for home visiting, there are commonalities in the different programs' approaches. Models generally start with a coach and parents setting goals together, covering a range of outcomes. From then on, the home visitor sets a regular schedule of visits with the family to help build parental understanding of key child development concepts and to enhance parent-child connections. Home visitors also serve as key referral points, helping parents

find and connect with community-based resources of which they may not have been aware.[55] These programs can help parents improve their skills and can be particularly useful for low-income parents, who face obstacles that may impact their ability to support their children's language development during these critical years.[56]

Sidebar: The two-generation impact of home visiting

A home visitor's job, providing support services in the homes of families, requires successful family engagement. Some home visitors go above and beyond in order to connect with and engage parents and their children. In addition to offering information on child development topics and positive parenting strategies, home visitors can cultivate strong connections with families by addressing their unique needs. Home visitors who make intentional efforts to tailor curricula to families' circumstances have been more successful at creating lasting relationships with the parents and children.[57] A Nurse Family Partnership home visitor working in Dallas shows how a flexible approach to home visiting and family engagement can produce results for both the children and parents. She responded to the family's specific needs by accompanying the parents to get health insurance, working to find stable transportation and employment, and even meeting at a different location that was more convenient on certain days. All of these extra efforts paid off. The parents, now graduated from the program, have found jobs and are making plans to get college degrees, while the child is enrolled in child care.[58] By providing these concrete supports along with the standard curriculum, home visitors can develop better relationships with the families, increasing the likelihood that the family will remain enrolled in the program and receive its full benefit.

B.   Early Head Start (birth through age 3)

For children who receive center-based care, Early Head Start—which serves children in poverty under the age of three—is a model that has shown an impact on language development. Compared to children who had not participated in the program, Early Head Start children scored higher in an assessment of cognitive development and were less likely to fall in the "at-risk" range for developmental functioning and for language development. Early Head Start produced more positive impacts for minority children and helped to reduce the gap in developmental outcomes. The impact of Early Head Start is enhanced through increased dosage, as children of parents who enrolled in the program while pregnant showed better outcomes. Further, parents of children in Early Head Start programs are more likely to enroll their children in other childcare programs, such as Head Start or state pre-K. [59]

C.   Head Start and state pre-K (ages three through five)

Head Start and state-funded pre-K serve low-income children who are three and four years old:

- According to 2013 data, Head Start enrolls 529,774 four-year-olds and 390,814 three-year-olds[60]—about 38.7 percent and 3.5 percent of the eligible populations, respectively. Head Start eligibility is restricted to children who are in poverty or

have other special needs, but state pre-K programs have a wide range of eligibility requirements. Head Start does not require bachelor-certified teachers, although 66 percent of teachers currently have a bachelor's degree.[61] Head Start costs vary substantially from site to site, but overall the program in 2013 spent $7,573,095,000 to fund 903,679 enrollment slots for children, an average of $8,380 per child.[62]

- Nationally, 1,100,000 four-year-olds and 238,737 three-year-olds are served by state pre-K programs. The sizes of state programs vary considerably, with the largest program for four-year-olds in Florida (serving 78 percent of children) and the largest program for three-year-olds in Vermont (serving 80 percent of children). Ten states have no state pre-K program at all, and fourteen states that serve four-year-olds do not serve any three-year-olds.[63] The quality of state pre-K varies considerably from state to state.[64] State-funded preschool is delivered in both school- and community-based settings.[65]

D. Child care

Although Head Start and state pre-K intentionally focus on education, many parents of children younger than school age rely heavily on subsidized child care as a work support—including for children enrolled in Head Start and pre-K, which frequently do not provide custodial care for the duration of parental work days.[66] The federal government supports child care through the Child Care and Development Block Grant, which requires that states add their own funding; in total, the program serves roughly a million children from birth to age six nationwide.[67] Childcare subsidies are generally provided on a sliding scale, with parent copays increasing at higher income levels.[68] Although many childcare providers seek to provide educational content, states generally do not fund child care at a level that allows providers to retain a high-quality workforce and provide standards-based education.[69] According to a study of childcare centers, those programs that paid wages above the median wage were able to hire a workforce where 51 percent of the employees had a bachelor's degree, while centers paying below the median wage hired a staff with less educational background—only 27 percent had a bachelor's degree.[70]

II. *The impact of early education*

It is generally acknowledged that high-quality early learning can have a meaningful long-term impact. The work of Nobel Prize–winning economist James Heckman has focused on the long-term benefits to society that early learning can provide, based in significant part on the landmark Perry Preschool study.[71] Although more recent studies, by definition, have not produced results spanning a similar duration, evaluations of Educare Centers (a high-quality model focused on at-risk children) have shown a significant impact on kindergarten readiness.[72]

There are also positive research results from programs of a larger scale. Early Head Start has shown positive impacts in social and emotional development, parental engagement, and language development; the program has helped reduce the development gap for minority children, and greater dosage of the program increases its impact.[73] Head Start has

shown positive impacts on kindergarten readiness[74] and long-term outcomes,[75] although famously its most recent impact study did not show an increase in third-grade test scores.[76] Evidence-based home visiting has shown a positive impact for participating families.[77] Also, increasingly, a large body of evidence positions providing early learning experiences as an essential strategy for mitigating the effects of poverty on children's health.[78] Participation in high-quality early education programs has been linked to a variety of short-term and long-term health benefits, including improved physical, oral, and behavioral health in adulthood.[79]

As noted, state preschool programs vary in quality, but some of the better ones have exhibited promising research results. The Early Childhood Longitudinal Study finds that children from low-income families who attend preschool show persistent gains.[80] New Jersey's well-regarded Abbott preschool program showed an impact on its graduates in elementary school language arts and literacy and math.[81] Oklahoma's state pre-K program has shown an impact on vocabulary scores and print awareness, with low-income children particularly benefiting from preschool attendance.[82]

Researchers have differed on the methodologies used in these studies. The regression discontinuity design used to analyze preschool programs in New Jersey and Oklahoma has been attacked for not being a randomized design and for not appropriately accounting for attrition, which some argue produces bias in results and overestimates effects.[83] And the methodology of the Head Start Impact Study that showed no benefits in third grade has been criticized for not adequately accounting for the number of children in the control group who may have actually gotten the treatment.[84] A major challenge in the field is that while both supporters and critics of early learning investment agree that long-term outcomes are relevant to the impact of early learning, existing data systems are generally inadequate to determine exactly what happens to children between when they leave early learning programs and when they take accountability tests in later years. And even though advocates and detractors will both point to accountability test scores to make a point,[85] early learning supporters point to research—including Dr. Heckman's—showing impacts beyond test scores.[86]

There is still a great deal that is unknown about which children stand to benefit the most from which programs, allowing for increased efficiency in early learning investment; there is also a great deal that isn't yet known about early learning participants' subsequent learning experiences between kindergarten entry and third grade,[87] making it difficult to isolate the impacts of early learning. These questions ultimately need better answers. For the moment, though, what is clear is that the achievement gap begins opening long before kindergarten and that early learning done correctly can make a positive difference for low-income children.

III.   *Strengthening the impact of early learning*

Fundamentally, the most critical difference between early learning and K–12 is that children have an obligation to attend K–12 schools and those schools are obligated to enroll them—neither of which are true in early learning. All early learning programs are

voluntary, and the vast majority are not designed to be universal. Both K–12 and early learning schools face difficult choices about how to provide a high-quality education with limited resources, but early learning faces the additional challenge of trying to expand access.

This is one of the major reasons that debates about the early learning research base take on such a sharp edge. In K–12, research about effectiveness doesn't seriously threaten the underlying idea that children are entitled to a public education, so the whole reform conversation is about how good that education is going to be. In early learning, debates over research tend to be about whether children will have access to any early learning at all. But even analysts seen as critical of early learning generally concede that high-quality early learning can have a positive impact for the most at-risk children.[88] Therefore, it is important to frame the early learning research debates correctly. The issue is not whether the early years matter (they do) or whether program quality can affect long-term outcomes (it can). Rather, the issue is whether government can deliver high quality at scale and which children should be the beneficiaries of government spending.

The research on early learning may reflect the reality that we know what works but that governments sometimes fund programs at a level of quality lower than what we know works. Existing programs have had some positive impacts on children, but they can do more. The Head Start of today is a better program than the Head Start of a decade ago studied in the Impact Study, but it will be better still if ongoing efforts to improve quality are successful. In state pre-K programs, pressure to increase enrollment can mean that new dollars are used for expansion at the expense of quality improvement, which can reduce the impact on the children who need help the most. Sound design and execution of early learning programs takes resources, and too many scaled programs have simply not been adequately funded to produce results for young children.[89]

Take teacher quality, which is widely accepted as a central part of achieving long-term outcomes. In K–12, there may be a vigorous debate about the quality of teacher-preparation programs,[90] but there is no serious suggestion that someone without a bachelor's degree of some kind could conduct the work of K–12 teaching. By contrast, some of the largest early learning programs in the country—including Head Start and state pre-K programs in California and Florida—do not require bachelor's degrees for all teachers,[91] although many teachers in those programs have bachelor's degrees anyway (including 66 percent in Head Start[92]). But even for teachers with bachelor's degrees, salaries in early learning lag well behind K–12 salaries.[93] This means that the best teaching prospects are unlikely to enter the field and are unlikely to remain in it if they do; financially, they would be much better off teaching older children.

Skeptics of the early learning research base are often justified in accusing elected officials of bait and switch: politicians use impressive research results to justify early learning investment and then fund programs that look nothing like those that produced the impressive research results. These skeptics also correctly point out that universal preschool is not actually a strategy for closing the achievement gap.[94] Universal preschool has benefits that these skeptics may undersell,[95] and given emerging research on child

development, it may be time to revisit the societal compact that calls for public education to begin with kindergarten. But at this point, one of the best strategies for states and communities focused on closing the achievement gap—or preventing it before it occurs—is to provide high-quality early learning to the children with the highest needs, starting at birth and with sufficient quality and dosage to make a difference.

Providing Continuity for Young Children

If education begins before the age of five, there must be an intentional approach to connecting prekindergarten education with the education children receive in kindergarten and beyond. Transitions can be tough on young children and their families—but though early learning practitioners frequently seek to make a child's transitional experience as seamless as possible, federal and state policies can make it difficult to give children the continuity they need in the first five years. Given the fractured nature of early childhood funding and the fact that all children will at some point transition into K–12 schools, the ability to manage transitions for young children is critical. Entry into kindergarten presents its own set of challenges, but there are best practices schools and early learning providers can use to increase the likelihood of children succeeding in their kindergarten year.

   I.   *Continuity within early learning*

Research shows that continuity of care benefits both children and parents. It benefits children because it gives them more time to form trusting relationships with adult teachers and staff, which is critical to their early development.[96] It benefits parents by providing them with a steady point of contact who understands their child's needs.[97] Unfortunately, due to economic, job, and housing instability, families in low-income communities face complex challenges and also are often mobile,[98] which means that children may experience multiple environments in their early years.

Early education funding alone can't reduce child mobility, but unfortunately, policies governing early learning programs often exacerbate the problem by increasing the number of transitions children encounter before kindergarten entry.

- Although subsidized childcare funding is generally insufficient to fund standards-based early education, many providers of standards-based early education rely on childcare funds to keep children enrolled, because pre-K and Head Start funding on its own is insufficient to provide the full-workday coverage that parents need. But state policies regarding eligibility for subsidized childcare often require that parents whose incomes increase lose access to the subsidy, which may mean that they can no longer afford child care.[99] Parents whose incomes fluctuate may find themselves in and out of eligibility, making it difficult to provide consistent early care and education services for their children. Setting policies that allow for continuous eligibility through income fluctuations would create greater stability for parents and children.
- For low-income children, two years of preschool (at ages three and four) generally leads to better results than just one year.[100] But fourteen states with preschool for

four-year-olds do not fund preschool for three-year-olds.[101] Not only does this mean that low-income children will have less access to early learning services, but it also likely means that they will be in different settings as three-year-olds and four-year-olds—adding at least one significant transition to their early education.

Even children who remain in the same program may have trouble establishing trusting relationships when staff turnover is high. Because of a variety of factors—low wages in the early childhood workforce, lack of professional supports, negative school climate, and teacher stress[102]—staff turnover in many programs is indeed quite substantial. The turnover rate for childcare staff is 29.5 percent per year, much higher than the 9.8 percent rate of turnover for elementary school teachers.[103]

Where possible, early learning programs provide stable environments with consistent relationships, including practices like looping, where children have the same preschool teacher as three-year-olds and four-year-olds (a practice that can also be used for children from birth through age three).[104] But funding structures can make that difficult and can lead to children having to change settings many times before they enter kindergarten.

II. *Best practices for kindergarten transition*

Managing a successful transition to kindergarten requires cooperation from lots of sources. District leaders, school leaders,[105] teachers, parents, and partners in the community can all contribute toward helping children make a smooth adjustment to kindergarten.

District-level leaders can support school-level personnel by ensuring that the district has a clear and shared definition of kindergarten readiness. State learning standards that actually align between early learning and kindergarten help but are not enough on their own; local leaders need to make sure that there is a definition of kindergarten readiness that is clearly understood by parents, principals, teachers, and early learning providers other than the school district. To that end, the definition should be developed with all of those stakeholders so that they all feel ownership of it.

With that framework in place, school-level leaders and teachers in elementary schools can ensure that they are reaching out to early learning providers, and the leaders and teachers in early learning settings can reach out to their school colleagues. This can be challenging, because early learning providers typically do not use school district attendance boundaries—meaning that a receiving school may be bringing in children from dozens of places and an early learning program may be sending children to multiple schools. But there is a lot schools can do to work with early learning providers to help get kids ready for their new environment and new expectations. Planning for the transition should start months before kindergarten entry and should engage parents.[106]

Professional educators can work together in numerous ways to facilitate effective transitions. Aligned professional development and professional learning communities for early learning and early elementary staff in the same districts, when possible, supports alignment of standards and curricula and can help provide aligned experiences for children

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and families across this transition. Data sharing across early learning and early elementary informs planning for instruction.

Families, too, should be provided with opportunities to engage with educators from both the early learning setting and the school. Schools can engage in "bridging activities" that bolster the connections between home and school environments, which requires both intentional outreach from schools and parental involvement.[107] Bridging activities can include parents attending the new school during the first days or weeks of class or teachers making home visits to the family.[108] Some schools offer specialized programs for families and children during the summer before the kindergarten transition. These programs, two to three weeks in duration, provide time for children to meet their new teachers, make new friends, and learn about kindergarten routines and allow parents to learn more about kindergarten and ways they can be involved to promote their children's learning.[109] Studies analyzing the impact of transition practices show that these activities can have a positive impact on student outcomes and that the effect is greater for children from low- or middle-socioeconomic backgrounds.[110]

Community leaders outside of schools can help facilitate connections among schools, parents, and early learning providers by hosting events and support groups. Not only can these help connect parents to education professionals, but these can also help parents connect with each other—and those connections can provide parents with more confidence in their dealings with schools. For example, community organizations have hosted panel discussions on kindergarten registration that create an opportunity for parents to ask questions, voice concerns, and learn about school processes.[111] And it can reinforce to school officials the importance of partnering with communities they serve as well as engaging in transition activities.

In some cities, charter schools provide an opportunity to reduce the number of transitions for children. Washington, D.C., has been at the vanguard of this movement, which is not surprising: the District of Columbia ranks second behind Arizona for having the highest percentage of students enrolled in charter schools[112] and ranks ahead of all states for the percentage of its students enrolled in preschool (both three-year-olds and four-year-olds).[113] Unlike in some other jurisdictions, charter schools in the District of Columbia can enroll three- and four-year-olds and receive full funding for them. This allows charter schools to add three- and four-year-olds to their program, which many of them have done.[114] It has also led to successful charter schools focused on early learning, most notably the schools administered by the AppleTree Institute.[115]

Sidebar: An example of successful transition

Teachers at Earl Boyles Elementary in Portland, Oregon, facilitate successful transitions through the Kindergarten Counts Early Kindergarten Transition Program, a two-week summer class for children and families. Children with an increased risk of struggling during the transition to kindergarten participate in daily half-day classes, and parents join five of those classes. During the two-week session, teachers like Andreina Velasco lead group activities that serve the joint purposes of helping children become familiar with the

kindergarten environment and teaching parents ways to support their children in the new school year. In one group activity, Velasco, children, and parents join to form a human knot and then work together to untie themselves. After completing the human knot activity, Velasco then talks with the children and parents about what they learned.[116] These fun group activities ease children's anxiety around the new school year by creating a space for them to develop friendships with their future classmates.[117]

Both children and parents benefit from participating in the program. Children exhibit growth at home and in the classroom: parents report that their children are better behaved, and teachers describe how these students become leaders for their classmates. Parents are better able to help their children because they gain knowledge on child development and learn strategies they can use to support their children throughout the kindergarten school year and beyond.[118]

Key Public Policies Supporting Best-Practice Instruction and Family Engagement

The first five years are a critical period for child development and are potentially a launching point for upward mobility. But to realize that potential, policymakers must take a number of important steps.

Keep family needs front and center in policymaking. Policymakers have significant influence on how local educators engage with families. Do state education accountability policies require educators to engage families? Do state childcare funding policies allow families to remain in programs consistently and allow providers to combine childcare funds with other sources to meet child educational needs, while supporting the low-income workforce? Are early learning programs designed and funded to serve as gateways for parents to supports they may need—like health care and job supports—that help create a better home environment for children?

Act before kids turn three. There's no question that the period before a child turns three—including pregnancy—is an incredibly important time developmentally. Prenatal health supports, home visiting, and quality center-based education can all play a role in supporting low-income parents as they nurture their children through these critical years.

And keep acting when kids turn three. Many low-income children would benefit from two years of preschool, but a lot of states fund only one. Although universal preschool for four-year-olds can be a good thing developmentally (and politically), it's not actually a long-term strategy for closing the achievement gap; that comes from investing earlier in the kids who need it most—which includes three-year-olds, forgotten in many states.

Put in place a framework for quality. In early learning, as in K–12, standards, assessments, and accountability play an important role in shaping local practice and decision making. And as in K–12, doing those things well at the state level doesn't guarantee success at the local level—but it can go a long way toward supporting local educators. States already have in place standards and accountability policies, and many are moving toward having early

learning assessments; getting these policies right is an important step toward improved programs at the local level.

And fund programs to deliver quality. Great standards and assessments only come to life in the hands of effective teachers, and historically, early learning providers haven't been funded to hire and retain those great teachers. States can structure their preschool and childcare funding to deliver quality—and, importantly, quality in the first five years doesn't mean putting kids at desks. Great teachers in the early years keep it fun and help kids learn through play, and in all likelihood many K–12 teachers would be better off doing the same. State programs typically get what they pay for, and programs that don't pay for educational outcomes generally won't get them. And if providers are paid to provide educational outcomes and still can't deliver, then funding should be moved to other providers.

Engage schools. Too many superintendents and principals think of early learning as "other"—it's not education, and it's not part of their mission. Even when there are preschools in school buildings, they ignore them. There's a lot more states could do to help K–12 leaders engage successfully with early learning, potentially starting with making sure that K–12 leaders actually understand child development.[119] There are great examples of districts that have shown tremendous leadership on early learning issues,[120] and state accountability and support policies can help stimulate more.

And engage community providers. Even in states with primarily school-based preschool programs, the percentage of time children spend in school settings prior to kindergarten entry is quite small. Community-based preschool programs, childcare settings, and Head Start are all essential parts of the early childhood system, and policymakers should utilize them thoughtfully. Many state preschool programs already ensure a place for them and encourage them to collaborate with school districts.[121]

Partner with philanthropies. Many states have philanthropic communities that contribute significantly to the early learning system. In some states, there are formal public-private partnerships.[122] In many states, philanthropies have played a key role in supporting advocacy and research that has helped create the right conditions for state government success. State governments and philanthropies are both limited in what they can achieve, but working together is the best way for each to maximize their impact.

Early childhood education alone can't break the cycle of poverty, but it can play a critical role in helping to do so at the starting point. It can help ensure that schools serving primarily children in poverty aren't playing catch-up from when children first walk in the door. Starting early is key, as is being thoughtful about the actual needs of children and families and then really striving to meet them. Education doesn't begin in kindergarten, and neither should policy efforts to unlock the potential of children.

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[113] W. Steven Barnett, et al., *The State of Preschool 2013: State Preschool Yearbook*, 8.

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[119] Kirsty Clarke Brown, et al., *What Do We Know About Principal Preparation, Licensure Requirements, and Professional Development for School Leaders?* CEELO Policy Report (New Brunswick, NJ: Center on Enhancing Early Learning Outcomes, 2014), http://ceelo.org/wp-content/uploads/2014/07/ceelo_policy_report_ece_principal_prep.pdf. Illinois recently required early childhood content to be included in its principal-preparation programs. In addition to receiving a generalized certification that must include early childhood content, candidates can pursue a B-3 endorsement that prepares them to be instructional leaders in early childhood and early elementary settings. Starting in 2013, Connecticut's Office of Early Childhood, in partnership with the University of Connecticut, began offering a pre-K–3 Executive Leaders certificate through its 3 to 3 Institute. After a competitive selection process, participants in the program attend a full-day symposium on pre-K–3 issues and received continued support from a trained facilitator as they adopted lessons learned from the training session.

[120] Katia Riddle and Marina Merrill, *Leading the Way: Why Four Oregon Superintendents Embraced Early Learning* (Portland, OR: The Children's Institute, 2014), http://www.childinst.org/images/stories/ci_publications/leading-the-way2014.pdf. For example, leaders in school districts across Oregon have made notable efforts in prioritizing early learning. Although the superintendent of the Galdston School District chose to direct school district funds to an early learning center, the superintendent of the David Douglas School district has aligned early learning with early elementary schooling for some district schools. The former superintendent of Maryland's Montgomery Public Schools aligned early learning with the K–12 system.

[121] Bette Hyde and Linda Sullivan-Dudzic, *Starting Early for Success: Early Childhood Care and Education: A Community Working Together* (Bremerton, WA: Bremerton School District), http://bremertonschools.schoolwires.net/cms/lib/WA01001541/Centricity/Domain/75/ThriveByFive9-4-07rev.pdf; "Creating the Future Through Collaboration," All Our Kids Early Childhood Networks, accessed September 3, 2014, http://www.aoknetworks.org. An Oregon school district superintendent facilitated collaboration between community-based and school-based early childhood programs by inviting all early learning staff in the district to professional development sessions for elementary school teachers. This helped childhood teachers gain an understanding of approaches and standards for children in later grades. The superintendent connected early and elementary learning in an even more intentional manner by facilitating the process by which the community selected an aligned pre-K–3 curriculum. Once the community made the joint decision, the school district bought the curriculum and loaned it to preschools in order to encourage vertical alignment and establish consistent standards. In Illinois, state agencies and local communities have worked to create local networks of connected early childhood systems in which partners work together to provide comprehensive and high-quality services for children and families in the community.

[122] Julie Cohen, et al., *Inspiring Innovation: Creative State Financing Structures for Infant-Toddler Services* (Chicago, IL: ZERO TO THREE and Ounce of Prevention Fund, 2009), http://main.zerotothree.org/site/DocServer/Ounce_brief_Oct6B.pdf?docID=9642; "About Thrive by Five Washington," Thrive by Five Washington, accessed September 3, 2014, http://thrivebyfivewa.org/about. For example, Nebraska created an Early Childhood Education Endowment Fund that is composed of public and private funding, with $40 million from state sources and $20 million in private funding. Interest accrued from

the fund is used to provide grants to schools and community-based organizations offering early childhood services and supports. By passing a constitutional amendment, which included early childhood providers in the definition of a common school, the state ensured that endowment fund can continue to be used to support early childhood programs. In Washington, Thrive By Five Washington and the Foundation for Early Learning joined together in January of 2014; by pooling their resources, this public-private partnership will be able to fund early childhood programming at an annual budget of $16 million dollars per year.