



# Let's Start at The Very Beginning: A Very Good Place to Start!

**W**e tend to think of the achievement gap as something that appears in school-age children and is revealed through the battery of standardized tests that they endure every year. In reality, much of this gap has its roots in early childhood experiences. It is the inevitable result of inequitable pre-school-age experiences. Research finds that by the time children begin kindergarten, black and Hispanic children are already far behind their white peers statistically in math and reading readiness. Quality early childhood programs have the potential to reduce this disparity by leveling the playing field from the start. Although there is no single cause of the achievement gap between children of color and their white classmates, these “inequalities in early care and education may be responsible for much of the inequality in later educational outcomes in the United States,” according to W. Steven Barnett of Rutgers University. Unfortunately, only a small percentage of all licensed child care programs in Wisconsin meet the standard of high quality. In this brief, we outline the components of quality programming that can be a part of mitigating these inequities and providing all children with the opportunity to be successful.

## **Why this stuff matters—A quick review of brain basics**

Children are born ready to learn. Eighty-five percent of a child's brain develops from birth to 3 years old. These first months and years of life set the stage for lifelong development. With the neuroscience of brain development unfolding, we now know that the way a brain develops hinges on the complex interplay between the genes a person is born with and his experiences.



While it actually takes until the mid-20s for the brain to become fully organized, we know that the quality of an infant's relationship with his primary caregivers has a decisive impact on the architecture of the brain, affecting the nature and extent of his adult capabilities. Those early interactions do not merely create a context for development; they directly affect the way the brain is “wired.”

Preschool children's brains have a lot of plasticity and are vulnerable to their environment. They continually adapt to what they are exposed to. Environments that are chaotic, disorderly, highly stressful or lack stimulation have a direct negative influence on brain development. So for the 71 percent of children under age 6 with both parents in the workforce, the time they spend away from their parents every day are critical hours in which they can flourish or languish. What happens in early childhood centers, family childcare and other settings has a tremen-

dous impact on the development of children's brains, and consequently on their readiness to succeed in school. Unfortunately, a study by the Wisconsin Child Care Partnership found that the vast majority of childcare in Wisconsin (74 percent) was mediocre, and more alarming, 11 percent was of poor quality.<sup>1</sup>

## What Works and Why

Fortunately, there is a vast body of research now available on the characteristics of early childhood programs that, when combined, constitute a high-quality setting for children. Further researchers assert that substantially increasing the number of Hispanic and black children in high-quality preschool settings, has the potential to reduce the current gaps in school readiness. Data demonstrate six core elements that make up a quality early childhood program.

### Class size

To develop the higher areas of the brain, children must be able to experience things for themselves and feel the sense of accomplishment that goes along with completing tasks independently. To support this, adults need to allow enough time for children to try things over and over again, without forcing them to do so. In this way, the brain is reassured that what is learned is true. Thus children need someone available to help and encourage them when things get overwhelming, and to support them in new situations. Children feel comfortable and develop

a continued sense of excitement toward learning when caring adults provide structure and appropriate stimulation. The National Research Council's report, *Eager to Learn: Educating Our Preschoolers*, concluded that both group size and adult-child ratios are correlated with greater program effects. After three years of research review, the Council's panel of experts found that low ratios of children to adults are associated with more extensive teacher-child interaction, more individual attention, and less restrictive and controlling teacher behavior. The panel also found that small group size correlated with more child initi-

ations, more opportunities for the teachers to help children develop language proficiency, and more development of children's exploration and problem-solving skills. Self-initiated learning is seen by most early childhood experts to be a crucial feature of early learning. In smaller groups, child-initiated activities were found to be more common, with teachers following the children's lead.

### Highly qualified teachers

It is clear that the education and training of the adults who guide children's development in out-of-home settings contributes to the way they relate to children. Well-trained caregivers are more responsive to children, provide active learning experiences, interact more and focus on each child's progress. They are also more likely to intentionally design their programs to enhance healthy development and learning.<sup>2</sup> Most studies have found that teachers with two- or four-year degrees, combined with specialized training in early childhood development, provide a significantly higher quality experience for children in their care. In Wisconsin, nearly all public school teachers and staff at Birth to 3 intervention programs (which serve children with disabilities) have earned at least a bachelor's degree, and 85 percent of Head Start teachers hold at least a two-year degree. Only 29 percent of child care teachers in licensed child care centers and 24 percent of family child care providers have earned a two-year associate degree or higher.<sup>3</sup> In addition, a study by UW-Extension found that centers that served children from low-income families had the lowest percentages of teachers with degrees.

### Intentional curricula that is intellectually rich and sufficiently broad to address all developmental needs

For children's brains to become highly developed for learning, repeated developmentally appropriate experiences are essential. These connections are also made stronger when children have daily opportunities to develop both large- and small-muscle skills, have the chance to practice developing social skills, and interact directly with their environment. It is also vital to incorporate rich language into all of these activities, since exposure to rich language creates the foundation for a child's use and understanding of words, and increases the likelihood of eventual reading success. Intentional curriculum is content-driven and research-based. It emphasizes active engagement with children, including attention to social and emotional skills, and is responsive to cultural diversity and to children from non-English speaking homes.<sup>4</sup>

### Partnership with parents

Naturally, parents and family are the primary influence on a child's development. Parents, grandparents, foster parents and





others who take on parenting roles strongly affect a child's language development, emotional growth, social skills and personality. High quality early childhood programs build on these relationships by engaging parents as partners in early education, encouraging them to volunteer in programs, read to their children at home, or be involved in curriculum design. Good programs maintain strong communication with parents; learn more about the child from the family and work together to meet the child's needs. Most studies on parental involvement show a high correlation between the level of parent involvement and children's educational achievement. Research shows that when parents and other family members take an interest in what children are learning, provide opportunities to do learning activities at home, and encourage a child's learning efforts, it leads to higher self-confidence and greater vocabulary.<sup>5</sup> It appears that the earlier parents are engaged in their children's learning, the more likely that pattern will continue.

#### **Begin no later than 3 years old**

The roots of the school achievement gap can reach back as early as infancy, when the physical conditions and stresses of poverty can take their toll on the child's developing brain. Poor nutrition, unsafe housing, unstable family situations as well as poor health and stress related to racism can all have a negative impact on brain development in infancy, continuing into the preschool years.<sup>6</sup> Research demonstrates that high quality childcare programs for young children and Early Head Start can be a significantly positive tool in mitigating these negative affects.

#### **Focus resources on disadvantaged children**

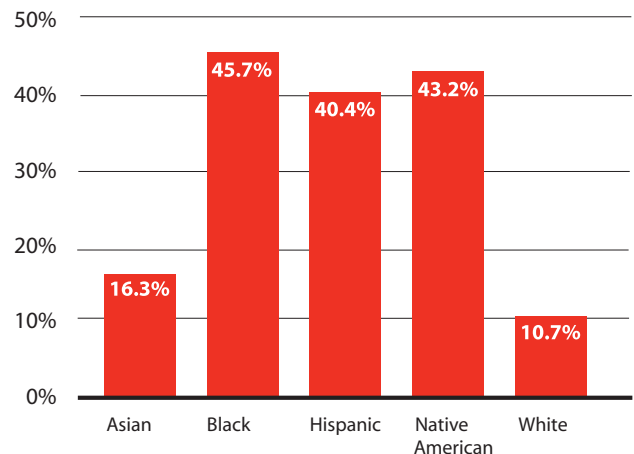
Research consistently shows a sizable achievement gap between children from economically disadvantaged families and their classmates from more affluent families. Poverty puts children at a disadvantage from the start. Research demonstrates that by age

4, children who live in families with incomes below poverty are 18 months behind what is normal for their age group. By the time they are 10, that gap is still there, and for children living in the poorest families, the gap is even larger.<sup>7</sup> Young children of color in Wisconsin are many times more likely to be living in low-income families.

A study using the U.S. Department of Education's Early Childhood Longitudinal Program (ECLS-K) data showed that although children enrolled in some type of center-based care performed better on tests of reading and math skills than those not enrolled, these effects were even larger for children who lived in poverty, had mothers who did not graduate from high school or speak English, or were single parents. Another recent study of children who were able to enroll in a high-quality urban Head Start program showed they had faster rates of growth in vocabulary, phonemic awareness, and pre-literacy skills than those who were waitlisted and unable to enroll. Studies reveal that without Head Start, the racial achievement gap would likely be even larger.<sup>8</sup> Similarly, an evaluation of the Michigan School Readiness Program (MSRP) found that kindergartners who had attended MSRP scored significantly higher on five out of six domains of the High/Scope Child Observation Record and received higher ratings from their teachers than those who did not have this—or any other—preschool experience.<sup>9</sup>

Children of color, particularly black and Hispanic children, in Wisconsin are as likely to be enrolled in preschool and kindergarten as white non-Hispanic children. However, it is clear that there is a disparity in the quality of early learning environment attended by each. According to a study by the University of Wis-

**Children under age 6 in families living below poverty, 2006**





### Impact on training teachers

| Components                            | Understand Knowledge & Skills | Actually Learn Skills | Apply Skills in Classroom |
|---------------------------------------|-------------------------------|-----------------------|---------------------------|
| <b>Presentation of Theory</b>         | 85%                           | 15%                   | 5% - 10%                  |
| <b>Modeling</b>                       | 85%                           | 18%                   | 5% - 10%                  |
| <b>Practice and Low Risk Feedback</b> | 85%                           | 80%                   | 10% - 15%                 |
| <b>Coaching feedback peer visits</b>  | 85%                           | 90%                   | 80% - 90%                 |

Source: Joyce & Showers.

consin and Columbia University, policies that make universal preschool available for all three- and four-year-olds in poverty combined with increasing the quality of those programs could close the black-white school readiness gap by as much as 24 percent and the white-Hispanic gap by up to 36 percent.<sup>10</sup>

#### Infrastructure to support best practice, evaluation and accountability

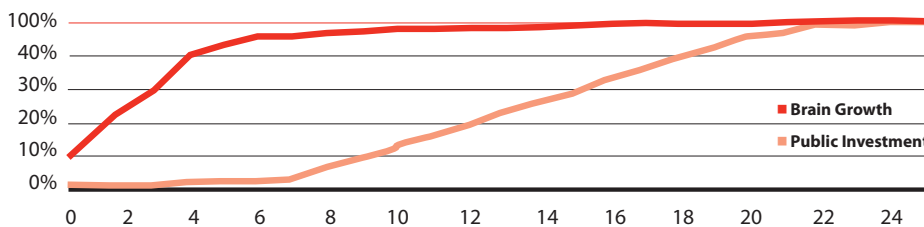
Intentional curriculum development, staff education and training, and retention are all supported by infrastructure within the early learning community to support best practice with children. The current T.E.A.C. H Early Childhood scholarship program and REWARD wage supplement program recognize the importance of providing ongoing educational opportunities for early childhood teachers and compensating them fairly for their efforts. In addition, teachers benefit from on-the-job evaluation of their work in the classroom and the opportunity to learn from their experiences. Research supports the importance of on-site technical assistance as the most effective way to change teacher behavior. Research by Joyce and Showers demonstrates that direct coaching with teachers has by far the most impact in improving teaching.<sup>11</sup>

### State investments in early childhood

Wisconsin has been a national leader in early care and education, ranking high among the states in providing support for child care subsidies, pre-kindergarten programs, Head Start and services to children with disabilities. However, a child's access to high quality education from birth through graduation is still determined far too much by the wealth of the community he or she lives in. Currently, less than half (about 46 percent) of Wisconsin's 3- and 4-year-olds are enrolled in an early care or education program. While the Wisconsin Shares child care subsidy program, the SAGE program, and other state investments help to reduce the financial disadvantage many children face, Wisconsin needs a more systematic approach to giving all children a foundation for success, regardless of family income.

Not only is it important to invest more in children; we should target a larger share of that investment toward younger children, reaching them with high quality experiences at the ages at which their brains are developing fastest. The following chart shows that we have been doing it backwards, spending more on children as they grow older, instead of investing in the first five years, when the impact may be greatest.

#### Children's brain growth and Wisconsin's public investment by age



Source: *Early Learning Left Out*, *Voices for America's Children* and the *Child and Family Policy Center*, 2004



## Long Term Effects

High-quality childcare settings improve a child's classroom, social, and thinking skills, language ability, and math skills. These benefits persist from the preschool years into elementary school. Children who receive high-quality care also tend to grow up to become more successful adults. In addition, children who finish pre-school programs are half as likely to need special education services in later grades. The results of standardized testing from the Wisconsin Department of Public Instruction confirm that students from economically disadvantaged families and students of color in Wisconsin are achieving at rates lower than those of their non-disadvantaged, white peers. A 2008 study by the Schott Foundation for Public Education found that the gap in high school graduation rates between white and black boys in Wisconsin is the largest disparity in the nation.<sup>12</sup> However, studies such as the Abecedarian Project and the Chicago Child-Parent Center Longitudinal Study show that children exposed to a nurturing, stimulating environment in the first five years of life achieve higher results in elementary and secondary education. Other studies have found that children

from low-income families who attend high-quality pre-school programs are more likely to graduate from high school and attend college and less likely to go to jail, become teen parents or qualify for welfare.<sup>13</sup>

**“The childhood years have value not only as a preparation time for the later accomplishments in school ... they also have value in their own right as a time of extraordinary growth and change”**

—Deborah A. Phillips, Ph.D. Testimony before the House Committee on Education and the Workforce

## We know the answer—so why wait?

The belt tightening in response to the budget crisis the state now finds itself in only serves to highlight the urgent need to stop our current downstream approach to serving children. Studies too numerous to cite here continue to inform us that what happens to kids in the early years of life sets a foundation for their later growth and learning. High quality early learning programs for disadvantaged children are among the most strongly evidence-based approaches to improving school achievement.<sup>14</sup> We know that children of color in our state are more likely to face barriers to these quality early learning experiences. High quality childcare is at a premium, and in many neighborhoods nonexistent. This lack of opportunity sets children behind their white classmates from the first day of kindergarten. However, we can increase the odds that kids will succeed. The Wisconsin Early Learning Coalition recommends that the state support establishment of the Great Start Initiative, which includes quality standards for strong early learning programs, helping programs meet those standards, and fiscal incentives for programs that meet the higher standards. The Coalition also supports expanding home visiting programs that meet research-based standards to reach children and families at risk; increasing access to 4-year-old kindergarten; and helping families pay for high quality child care through a tax credit tied to use of quality early childhood programs.

<sup>1</sup> Edie, Adams, Riley, Roach, *Improving Child Care Quality*, UW Extension, Report No. 2, March 2003

<sup>2</sup> Teacher/provider educational qualifications data from Wisconsin Department of Public Instruction, Wisconsin Department of Health and Family Services, Wisconsin Head Start Association, and Wisconsin Child Care Research Partnership (UW-Extension).

<sup>3</sup> *ibid*

<sup>4</sup> Klein, Lisa, Knitzer, Jane, *Promoting Effective Early Learning, What Every Policymaker and Educator Should Know*, National Center for Children in Poverty, Columbia University, Mailman School of Public Health, January 2007

<sup>5</sup> Education in the Post-Lake View ERA: What is Arkansas Doing to Close the Achievement Gap?, Arkansas Advocates for Children and Families, February 2008

<sup>6</sup> Nelson, Anne, Closing the Gap: Early Childhood Education, Infobrief, Association for Supervision and Curriculum Development, Issue 45, April 2006, "Unequal Health Outcomes in the United States, Racial and Ethnic Disparities in Health Care Treatment and Access. The Role of Social and Environmental Determinants of Health and Responsibility of the State", A Report to the U.N. Committee on the Elimination of Racial Discrimination, January 2008

<sup>7</sup> Klein, Lisa, Knitzer, Jane, *Promoting Effective Early Learning, What Every Policymaker and Educator Should Know*, National Center for Children in Poverty, Columbia University, Mailman School of Public Health, January 2007

<sup>8</sup> Magnuson, Katherine and Waldfogel, Jane, Early Childhood Care and Education: Effects on Ethnic and Racial Gaps in School Readiness, Vol. 15/ No. 1 / Spring 2005. [www.futureofchildren.org](http://www.futureofchildren.org)

<sup>9</sup> Debra J. Ackerman and W. Steven Barnett, *Prepared for Kindergarten: What Does Readiness Mean?* National Institute for Early Education Research, <http://nieer.org/resources/policyreports/report5.pdf>

<sup>10</sup> *Ibid*. <http://nieer.org/resources/hottopics/naespexecsum.pdf>

<sup>11</sup> <http://www.ncsl.org/media-F7B-94-rannd-engaged-joyce.pdf> and <http://www.fcps.edu/plt/ic/files/ShowersandJoyceResearch.pdf>

<sup>12</sup> Schott Foundation

<sup>13</sup> *Ibid*

<sup>14</sup> Barnett, Steven W., "School Reform Proposals the Research Evidence", Rutgers University, Center for Early Education

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