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Science, politics and preschool

Experts agree: Kids need early education programs. But how early?

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April 27, 2008

A tide of recent research on early childhood development is inspiring prominent scientists and politicians to argue for an unprecedented investment in schooling that begins virtually at birth.

But as decades of academic studies on brain development start to land in the real world, experts are divided on whether to focus new funding on infants and toddlers, or conventional preschool. Many now think some policies popular with politicians and the public, such as universal prekindergarten, may fail to reach at-risk kids at a young enough age.

The scientific controversy also is spilling into the presidential contest, where the Democratic candidates have taken divergent positions on universal preschool and other early childhood issues.

Studies have suggested that intervening before children start preschool improves academic outcomes for low-income kids and may reduce the risk they will end up in prison. Such interventions stem from the theory that experiences in the first five years of life set a lifelong course for brain development.

Chicago has become a national proving ground for schooling during the first three years, and is home to prominent advocates such as Nobel Prize-winning economist James Heckman of the University of Chicago, who said reaching kids before preschool could offer the best long-term economic return.

"Even at age 4 or 5 you may be starting too late," Heckman said. "I wouldn't say it's hopeless to help kids after those early years, but it's extremely expensive."

Backers of universal preschool say the evidence for even earlier intervention is not yet solid and offering conventional prekindergarten to everyone would help build popular support for early education.

Although each Democratic hopeful is proposing dramatic increases in funding for Early Head Start, the federal program aimed at children younger than 3, they disagree on the importance of universal preschool.

Sen. Hillary Clinton's proposals focus on extending universal prekindergarten by requiring that states offer preschool to all 4-year-olds to receive certain federal funds. Sen. Barack Obama would direct more money to the years before preschool and quadruple the size of Early Head Start, which now serves just 3 percent of eligible children. Obama describes his plan as "a preschool agenda that begins at birth."

Officials for Sen. John McCain said the research has convinced the Republican nominee of the value of investing in early development, but he has not yet proposed changes to existing policies.

In theory, starting to intervene soon after birth should help kids more because that's when experience starts to shape their brains, many experts said.

Children's brains change more between conception and kindergarten than at any other time. U. of C. neuroscientist Peter Huttenlocher showed in studies over the last 30 years that connections between cells in most brain areas peak by age 3, then decline gradually as experiences mold the brain's circuitry.

The zero-to-3 period is not necessarily a magical and irreplaceable window for teaching children. But studies show that babies raised in poverty get fewer of the early experiences that spur vocabulary growth and good social judgment, making it harder for them to catch up later on.

For example, toddlers whose parents speak more words to them develop bigger vocabularies than children who hear less speech, studies have found. One University of Kansas study concluded that kids from upper-income backgrounds hear 30 million more words by age 3 than those from welfare families.

Early intervention with enrichment programs can narrow that gap, researchers and advocates say.

"The basic science of brain development says you need to start as early as possible for kids in the greatest danger to get the best outcomes," said Jack Shonkoff, director of the Center on the Developing Child at Harvard University.

That involves more than just listening to adults read stories. At the Educare Center on Chicago's South Side, which serves infants and toddlers from low-income families, caregivers engage the children in a constant dialogue about their activities—a type of interaction kids cannot get from television or even books.

The staff also talks to parents, often first-time teen mothers, about how to give consistent rewards and punishments, which can foster a child's emotional development.

"If you can't regulate your emotions you can't get anything done," said Diana Rauner, executive director of the Chicago-based Ounce of Prevention Fund, which runs the Educare Center.

Such programs can change children's prospects dramatically. Arthur Reynolds, director of the Chicago Longitudinal Study, has published numerous studies this decade on kids who were born in 1980 and went through Chicago's Child-Parent Centers, which offer educational services and family support for low-income children ages 3 to 9.

Reynolds found these kids scored better on math and word analysis tests and were more likely to finish high school than those who lacked that early experience. The benefit was greatest for kids who took part by age 3 or 4.

"There's a big critical mass of evidence that preschool for 3- to 4-year-olds makes a difference," Reynolds said.

Some experts think programs for even younger kids would help more, but Reynolds disagrees, noting that few studies have evaluated the effects of zero-to-3 programs later in a child's life.

Still, Shonkoff thinks the huge amount of brain development that happens from birth to 3 makes it crucial to intervene during that window. "If you start at age 4 for kids who are at a disadvantage, you're not starting early," he said. "You're playing catch-up."

One of the best cases for starting at birth comes from the Abecedarian Project, a 1970s enrichment program in North Carolina that enrolled 111 low-income, African-American infants. Children in the program did better on reading and math tests, were more likely to attend college and were less likely to have babies at an early age than others.

Bruce Fuller, a professor of education and public policy at the University of California-Berkeley, said he feared focusing on universal prekindergarten—making preschool a middle-class entitlement—could divert help from low-income families that need it most.

"Why would we use scarce public dollars to subsidize all families if we know the biggest impact is with poor kids?" he said.

The notion of intervention before age 3 even draws qualified support from author Charles Murray, who has argued that Head Start programs in general do little to improve children's outcomes. Murray is skeptical about any government-run intervention, but said early investment makes the most sense.

Still, he said, "There is no way on God's green earth that these select programs can be expanded to a national level."

That's the challenge for politicians like Obama and Clinton and their boosters in the research world.

Both Democrats propose spending $10 billion more on early childhood education, citing Heckman's work and studies suggesting each dollar spent on early interventions yields a return of at least $7 thanks to reduced spending on special education and incarceration, as well as increased economic productivity.

All efforts at early eduction are only a partial solution to problems that keep disadvantaged kids from succeeding, most experts agree. But, Heckman said, starting at birth is better than waiting until children encounter trouble at school or with the law.

"It's very difficult to make people whole again once they've been damaged," Heckman said.

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