

## Closing Achievement Gaps

*Ron Haskins and Cecilia Rouse*

By the time black and Hispanic children reach kindergarten, they are on average already far behind their more advantaged peers in reading and math readiness. Such disparities in achievement persist or even increase during the school years. Educational programs for parents and preschool education programs for children have the potential to narrow these disparities by at least half.

Test score disparities among racial and ethnic groups are a prominent feature of today's educational landscape, with black and Hispanic children regularly falling far behind white children. Although the achievement gaps narrowed somewhat during the 1970s and 1980s, they have since proved stubbornly resistant to closing further. If the nation is to achieve the goal of equal education as "a fact and a result," to borrow President Lyn-

**ABOUT THE AUTHORS:** Ron Haskins is a senior fellow in the Economic Studies program and co-director of the Initiative on Children and Families at the Brookings Institution. Cecilia Rouse is a professor of economics and public affairs and the director of the Princeton University Education Research Section. Both are senior editors of *The Future of Children*.

To read the full report on school readiness, go to [www.futureofchildren.org](http://www.futureofchildren.org).

don Johnson's words, we must commit ourselves to overcoming the substantial racial and ethnic differences in educational achievement that remain.

Although the achievement gap is normally seen as a problem affecting school-age children, in fact the gap first opens during the preschool years. The Early Childhood Education Longitudinal Study, Kindergarten Cohort (ECLS-K), a nationally representative sample of nearly 23,000 kindergartners, shows that black and Hispanic children score substantially (more than half a standard deviation, or the equivalent of 8 points on an IQ test with a standard deviation of 15) below white children at the beginning of kindergarten on math and reading achievement. The Family and Child Experiences Survey (FACES), an assessment administered to children entering Head Start, shows that the program's children, disproportionately minorities from low-income families, already fall well short (up to a standard deviation, or 15 points on an IQ test) in vocabulary, early reading, letter recognition, and early math by ages three and four.

Finally, Christopher Jencks of Harvard and Meredith Phillips of UCLA, using nationally representative data from the National Longitudinal Survey of Youth–Child Data, found that about 85 percent of black three- and four-year-olds scored lower on a vocabulary test than did the average white child of the same age.

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### **Preschool Gaps Signal Poor Outcomes Later in Life**

These studies consistently show that poor and minority children have already fallen behind well before they enter the public schools. Such disparities are a serious breach in the nation’s commitment to equality of opportunity because children who score poorly on tests of intellectual skills during the preschool years do less well in elementary and high school and are more likely to become teen parents, engage in criminal activities, suffer from unemployment, and become clinically depressed as adults.

The latest issue of *The Future of Children*, a scholarly journal devoted to research on programs and policies related to child well-being, examines the preschool origins of these racial and ethnic achievement gaps. Edited by Cecilia Rouse, Jeanne Brooks-Gunn, and Sara McLanahan, the issue features comprehensive reviews of research on how differences in children’s socioeconomic background, parenting, brain development, and health contribute to racial and ethnic disparities in school

readiness and also considers strategies for closing the gap. Three strategies hold special promise.

In the long run, research on brain development may prove to be important. Researchers are now making great strides in understanding how the brain develops and what aspects of experience help or hinder development. Educational interventions are already able both to raise children’s scores on tests of reading and to increase activity in the brain regions most closely linked with reading. The areas of the brain that are most critical for school readiness may thus prove responsive to therapeutic interventions. Because the field of neuroscience is still in its infancy, however, we think it wise to temper grandiose predictions until large-scale studies confirm the success of brain-related interventions in boosting school readiness.

The two remaining strategies emerge from the consistent finding that poor and minority children as young as three years already perform far below average on tests of school readiness. Unless one believes that this poor performance is due entirely or primarily to genetic factors, it follows that the preschool environments of poor and minority children are deficient in supplying the types of experiences that promote school readiness. And as a careful examination of evidence on behavioral genetics in the journal’s current issue, by William Dickens of the Brookings Institution, concludes, “the evidence argues against a significant genetic role in explaining the gap.” Thus, the search for ways to alter children’s preschool environment to improve school readiness is well justified.

### **Teaching Both Parents and Children**

Two types of programs seem most promising—those that help parents learn the behaviors that promote child development and school readiness and those that directly teach poor and low-income children school readiness skills, both intellectual and behavioral.

Another article in the issue, by Jeanne Brooks-Gunn of Columbia and Lisa Markman of Princeton, reviews extensive research showing that black and Hispanic mothers engage less often in important parenting behaviors than do white mothers and that these parenting differences parallel racial and ethnic differences in school readiness. Brooks-Gunn and Markman attribute as much as half the gap in school readiness to differences in parenting. Most strikingly, black and Hispanic parents have been found to be less likely to talk responsively and to read to their infants and young children and to have fewer books and other educational materials in their homes—important dimensions of parenting that contribute to child development.

### A Long History

Interventions to help parents alter their behavior to improve children's development and school readiness have a long history. Many have failed to affect materially either parenting behavior or children's development. But some large-scale and well-designed studies have both changed parental behavior and, through the reshaped behavior, improved children's achievement. A family literacy program designed by Grover Whitehurst, now the director of the Institute for Education Studies, taught parents to read with their children, ask probing questions, and initiate discussions that went beyond the reading material itself. Parents receiving the training changed their reading practices, and their children had higher language scores than children in a control group whose parents had no such training. The Infant Health and Development Program, an eight-site randomized experiment involving nearly 1,000 families with low birth weight babies, provided parents in the treatment group with both center-based care and home visits from their child's birth through age three. At the end of the study black children and their mothers showed more learning and less punitive discipline than comparable children in a control group. Similarly, the seventeen-site national

evaluation of the Early Head Start Demonstration, another randomized study, found that black mothers in a home-based and center-based intervention program were more likely than black mothers in the control group to read to their children, were more emotionally supportive, provided more support for language and learning, and were less likely to spank their children.

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Preschool programs, with or without associated parent programs, have also directly improved children's development and school readiness. The Perry Preschool program in Ypsilanti, Michigan, and the Abecedarian program in Chapel Hill, North Carolina, have been arguably the nation's best model programs. Perry included a home-visiting program during the preschool years; Abecedarian did not. Both produced long-lasting gains in school performance and a host of other outcomes. Although both featured random assignment, multiple measures of outcomes, and long-term designs (meaning that the children were followed for many years)—all marks of high-quality evaluations—most observers agree that their small size calls into question whether large-scale programs could attain similar success.

This problem is overcome to some degree by the Chicago Child-Parent Centers, a long-term study of more than 550 children in the Chicago school system. The children participated in up to six years

of intervention, from preschool through grade 3. Participants scored higher in reading achievement through seventh grade and had lower rates of grade retention and special education placement than comparable children who had not received the intervention. The Chicago study is notable because of its large-scale, long-term follow-up and because it was implemented in regular public school classrooms. It was not based on random assignment, raising some concern about the validity of its findings. Even so, this study suggests that big gains are possible in large-scale programs implemented in regular classrooms by teachers with a minimum of special training.

### **Preschool's Growing Enrollment**

The finding that preschool programs can boost development and school readiness has prompted a steady increase both in the number of such programs and in enrollment. In addition to Head Start, which now enrolls almost a million three- and four-year-olds predominantly from poor families, more than forty states have initiated their own preschool programs. At the same time, steadily increasing pressure from the federal government to move poor mothers off welfare and into jobs and the resulting increase in employment by low-income and never-married single mothers have driven up funding and demand for child care. Child care facilities, however, vary widely in quality. The best reach the moderately high quality of Head Start and the state preschool programs, but many and perhaps most are worse and are, like the home environments of many poor and minority children, inadequate in promoting development and school readiness.

Despite the unevenness of quality, a recent study by Katherine Magnuson of the University of Wisconsin at Madison and her colleagues seems to demonstrate that, taken as a whole for the nation, center-based programs are helping prepare children for school. Using data from the Early Child-

hood Longitudinal Study and controlling for differences in family background and other factors, Magnuson found that children who had attended a center- or school-based preschool program the year before entering kindergarten scored higher on tests of reading and math skills at kindergarten entry than children who had not attended such programs. The differences remained at the end of kindergarten and first grade. In addition, children who attended a center-based program were less likely to be retained in kindergarten.

Both parenting and preschool programs, then, can contribute to closing the achievement gap. The nation has been gradually moving toward universal enrollment of all low-income and minority children in at least one year of preschool. Although there is widespread agreement that high-quality programs that emphasize school readiness and parent involvement can reduce the achievement gap, expanding most existing programs is by no means certain to close the gap appreciably because their average quality is not high enough to produce lasting gains. The FACES study shows, for example, that even after completing the Head Start program, the average poor child still falls short in reading and math. If Head Start and other preschool programs could be improved to achieve the quality of the Perry or Abecedarian program, they could reduce the gap by as much as half. If they could improve to match the quality of the Chicago Parent-Child Centers, an intervention that demonstrates that high-quality programs can be implemented on a much broader scale than Perry or Abecedarian, they would also substantially narrow the gap. If the programs were no better than Head Start or the current state preschool programs, however, the impact on the gap would be modest.

### **Increasing Enrollment and Quality**

In our view, there are two keys to using preschool programs to reduce the achievement gap. The first is to enroll all children from low-income families,

which are disproportionately minority, in a preschool program; the second is to provide high-quality programs, including well-qualified teachers and systematic school readiness activities that develop appropriate reading, math, and social-emotional skills. An article in the current issue of *The Future of Children* by Magnuson and Jane Waldfogel estimates the effects of various combinations of increased enrollment and increased preschool quality on the gap in school readiness for black and Hispanic children. The authors estimate that if all low-income children (those with family income below 200 percent of poverty) were enrolled in high-quality programs, the black-white gap could narrow by as much as one-quarter; the Hispanic-white gap, by as much as 36 percent. The effect would be greater for Hispanic children primarily because fewer Hispanic than black children are now enrolled in center-based programs.

We estimate that a quality preschool program costs around \$8,000 per child. We also estimate, based on numbers from the Census Bureau and from the Magnuson and Waldfogel article, that a little more than 800,000 low-income four-year-olds are not now in a center-based program. Thus, it would cost around \$6.5 billion a year to provide a high-quality program for all low-income four-year-olds not now in a center-based program. Placing all low-income four-year-olds in a high-quality program would add to the overall cost because many of those now in preschool programs are in lower-quality programs costing less than \$8,000 a year. Improving these programs would require additional money.

### Steps toward Progress

Given the federal government's large budget deficit, such funding is unlikely to be forthcoming soon. But it does not follow that no action is possible. We recommend that the federal government sponsor statewide demonstration programs in several states that agree to enroll all or nearly all low-income four-year-olds or three- and four-year olds

in high-quality programs. To participate, states would have to agree to meet a series of conditions. These include:

- involving the parents to the maximum degree possible,
- coordinating the preschool program with the kindergarten program in the public schools,

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- maintaining standards at least as strong as Head Start standards,
- providing professional development to all teachers in the program,
- outlining a plan for coordinating all state and federal resources for providing quality preschool programs, including Head Start, Title I of the Elementary and Secondary Education Act, the Child Care and Development Block Grant (at state option), and state spending on preschool programs,
- maintaining at least current state spending on preschool programs,
- participating in a third-party evaluation of program impacts.

Clearly such an expansion and improvement of preschool is expensive. But a large portion of the money to pay for such high-quality programs could come from the approximately \$25 billion that the states and the federal government now spend on child care and preschool programs. Under current policies, preschool children are in programs that are paid for by separate funding streams and are operated under separate authorities. Some children are in Head Start, some in a state-sponsored preschool program, some in programs paid for by

Title I, and some in facilities paid for by federal or state child care funds, especially funds from the Child Care and Development Block Grant. A first step toward building expanded and higher-quality programs for all low-income four-year-olds would be to use all these funds to create a single coordinated program. The major goal of the state demonstration programs would be to determine whether it is possible to create and implement a statewide program that effectively increases access and improves quality while efficiently coordinating all sources of funding. Answering the numerous questions encompassed by this goal will require well-designed third-party evaluations. There is simply no way to know whether programs work unless they are subjected to carefully designed evaluations that follow children over a period of years after they leave the program. Only quality evaluations will prevent excessive claims about program effects and administrative efficiency and allow policymakers to make wise decisions about future directions.

Congress should provide the secretary of health and human services with modest additional funding for five years to help participating states implement the demonstrations. The secretary must also have the authority and the funding to hire third-party evaluators to test the effectiveness of the state programs. In addition, Congress should urge the secretary to negotiate with at least one state to provide two years of preschool to a substantial group of children and to evaluate that program as well. The research literature does not permit the confident conclusion that one year of preschool will sufficiently boost school readiness. A comparison of one-year with two-year programs would therefore be wise.

In participating states, the secretary should also have the authority to provide funding for all Head Start programs directly to state officials. Any state that wants to exercise this option, however, must

show that it has negotiated with state Head Start officials. The most important argument against our proposal is that it might damage Head Start without putting a better program in place. For this reason we recommend giving only a few states power over Head Start spending. Before more states can be given the opportunity to coordinate all funds for preschool in their state, it must be demonstrated that coordinated funding improves preschools and boosts the school readiness of children from low-income families. As the FACES data show quite clearly, the current Head Start program is not fully preparing poor and minority children for the rigors of schooling.

### **Making a Vision a Reality**

Justice Sandra Day O'Connor has recently predicted, referring to university-based affirmative action programs, that "25 years from now, the use of racial preferences will no longer be necessary." Although Justice O'Connor did not reveal the evidence or reasoning behind her claim, the implication is that the nation will have achieved equality of educational opportunity within a quarter-century and that affirmative action will no longer be necessary. But such optimism defies the evidence on the preschool and school-age gaps in achievement. We now know, more than four decades into the nation's vigorous pursuit of President Johnson's goal of equal education as "a fact and a result," that there is nothing inevitable about achieving that goal. If the United States is truly committed to equal opportunity, its leaders must find ways to coordinate all preschool funding streams, raise the average quality of preschool programs by training effective teachers, create curriculum activities for reading, math, and social-emotional development, and achieve greater coordination between the preschools and schools. Expanding enrollment in, and raising the quality of, its preschool programs will give the nation the best chance to make Justice O'Connor's—and President Johnson's—vision a reality.

## Additional Reading

Brooks-Gunn, Jeanne, Pamela Klebanov, and Fong-Ruey Liaw, "The Learning, Physical, and Emotional Environment of the Home in the Context of Poverty: The Infant Health and Development Program," *Children and Youth Services Review* 17, no. 1/2 (1995): 251.

Brooks-Gunn, Jeanne, and Lisa Markman, "The Contribution of Parenting to Ethnic and Racial Gaps in School Readiness," *The Future of Children* 15, no. 1 (2005): 139–68.

Campbell, Frances A., and others, "Early-Childhood Programs and Success in School: The Abecedarian Study," in *Early Care and Education for Children in Poverty*, edited by W. Steven Barnett and Sarane Spence Boocock (State University of New York, 1998), pp. 145–66.

Campbell, Frances A., and others, "Early Childhood Education: Young Adult Outcomes from the Abecedarian Project," *Applied Developmental Science* 6, no. 1 (2002): 42–57.

Coleman, James, and others, *Equality of Educational Opportunity* (U.S. Government Printing Office, 1966).

Jencks, Christopher, and Meredith Phillips, eds., *The Black-White Test Score Gap* (Brookings, 1998).

Lee, Valerie E., and David T. Burkham, *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin Kindergarten* (Washington: Economic Policy Institute, 2002), p. 14.

Magnuson, Katherine A., and Jane Waldfogel, "Early Childhood Care and Education: Effects on Ethnic and Racial Gaps in School Readiness," *The Future of Children* 15, no. 1 (2005): 169–96.

Magnuson, Katherine A., and others, "Inequality in Preschool Education and School Readiness," *American Educational Research Journal* 41, no. 1 (2004): 115–57.

Mathematica Policy Research, Inc., "Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start (Executive Summary)" (U.S. Department of Health and Human Services, 2002).

Reynolds, Arthur J., and Judy A. Temple, "Extended Early Childhood Intervention and School Achievement: Age Thirteen Findings from the Chicago Longitudinal Study," *Child Development* 69, no. 1 (1998): 231–46.

Schweinhart, Lawrence J., and David P. Weikart, *Young Children Grow Up: The Effects of Perry Preschool Program on Youths Through Age 15* (Ypsilanti, Mich.: High/Scope, 1980).

Whitehurst, G.J., and others, "Outcomes of an Emergent Literacy Intervention in Head Start," *Journal of Educational Psychology* 86, no. 4 (1994): 542–55.



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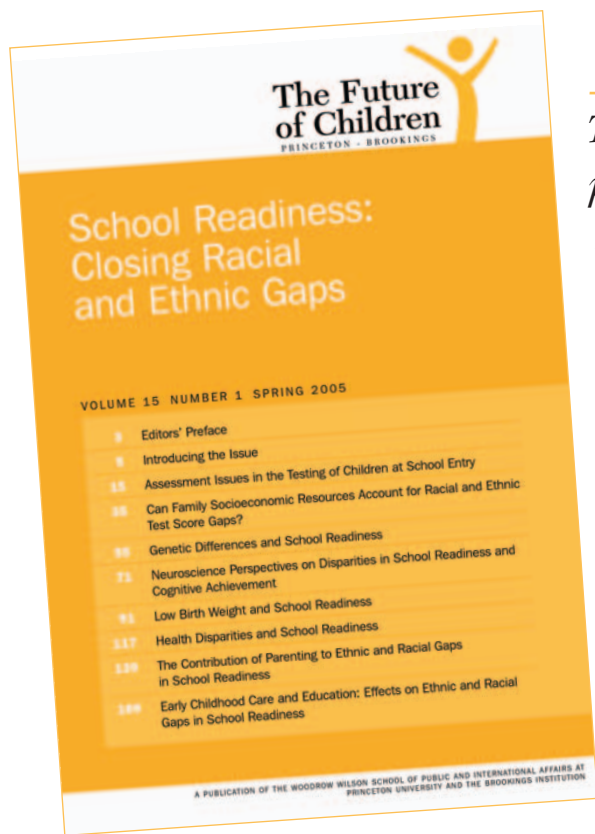
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There are achievement gaps in all levels of an educational organization. In order to be effective in improving performance, closing achievement gaps, and meeting accountability standards in diverse settings, educational organizations must effectively analyze social, political, and economic dynamics. There are many things that must be considered in order to do this. Source. The Acknowledgment Gap. David Laws, Schools' Minister, delivers his 'Closing the achievement gap' speech to the Association of School and College Leaders. David Laws, Schools' Minister, delivers his 'Closing the achievement gap' speech to the Association of School and College Leaders. Published 5 March 2013. From