

The achievement gap

What early childhood educators need to know

By Barbara A. Langham

Perhaps the most important challenge in education today is how to overcome the achievement gap. Although generally applied to public schools, the achievement gap is an issue that early childhood educators in both the public and private sectors need to know about and understand.

The reason is simple: Early care and education will likely play an increasingly critical role in attempts to close the gap.

What is the achievement gap?

The achievement gap is the lagging academic performance of one group of students compared to another. Usually it refers to the lower scores of blacks and Hispanics compared to whites, and the lower scores of low-income students compared to upper or middle class students on standardized tests and other measures of educational achievement.

One recent national report, for example, said the average math scores of black 9-year-olds lagged behind those of their white peers by 22 to 32 points

on a 0-500 scale during the years from 1978 to 2004. Scores of black youngsters rose during the period from 192 to 225, but black students did not catch up to whites, whose scores also rose (National Center for Education Statistics 2009).

Besides test scores, the gap can describe the difference in other measures such as high school completion, enrollment in advanced courses, and enrollment in college. A recent Texas report, for example, said that only 54.2 percent of Hispanic seventh graders in 1995 went on to graduate from a Texas public high school, compared with 61.3 percent of all students (Texas Higher Education Coordinating Board 2009)

In analyzing such gaps, one can compare performance measures not only by race/ethnicity and income but also other categories such as grade level, age, gender, and enrollment in public or private schools. With respect to age, for example, one recent national report of long-term trends found that since the early 1970s the average reading and math scores for all 9- and 13-year-olds have increased. Scores for 17-year-olds, however, have remained about the same (National Assessment Governing Board 2009).

On the positive side, analysts have noted improvements and a narrowing of gaps on many measures. What's disturbing, however, is the persistence of gaps and the question of whether we will ever close them.

Why does it matter?

Some may assume achievement gaps are a problem only for those in the public schools or for the families whose children are enrolled there.

But the fact is that these gaps affect all of us. Our system of public schools is a fundamental institution of American society. For generations, public schools have educated the vast majority of our people and

prepared them for the workforce. Schools have helped create a sense of community and enabled us to participate in a democratic society.

As education advocate Tom Luce (1995) has pointed out, our future is “inextricably tied” to the future of our public schools. Anyone concerned about crime, jobs, and taxes, he says, should be concerned about our schools.

Crime. About 75 percent of the nation’s state prison inmates are high school dropouts. On average, it costs roughly \$22,600 a year to house an inmate compared to \$9,644 a year to educate a child who stays in school (Alliance for Excellent Education 2006). “We can pay now for quality education,” says Luce, “or pay later for dead-end warehousing of people who contribute little beyond crime and violence.”

Jobs. Half of all jobs today require education beyond high school. Another third require a college degree (The Workforce Alliance 2009). Gone are the days when a hard-working young man or woman could drop out of school, go to work in a factory or a store, and earn enough to provide for a family.

Equally worrisome, employers in recent years have complained about the lack of basic skills in prospective employees. According to the National Commission on Adult Literacy (2008), more than half of the U.S. workforce face at least one education barrier: limited English proficiency, no high school diploma, or no college.

The need for an increasingly skilled workforce means that schools must educate all children. It also means that schools must encourage more girls and minority students to study science, math, technology, and engineering.

Taxes. According to Census data, the average annual income of a high school dropout is \$18,900 a year compared to \$25,900 for a high school graduate and \$45,400 for a person with a bachelor’s degree (Day and Newburger 2002). As the saying goes, “The more you learn, the more you earn.”

When students perform well in school, they’re more likely to stay off the streets and out of unemployment lines as adults. With more education, students become taxpayers instead of tax consumers. In addition, more workers earning higher incomes—and thus paying more taxes—can contribute to the Social Security trust fund, which today’s workers expect to draw upon in retirement.

But the consequences of the achievement gap go beyond crime, jobs, and taxes. McKinsey & Company (2009), an international consulting firm, cites two others.

Health. Less educated people tend to have less healthy lifestyles, especially when it comes to smoking and obesity. In addition, because they are less likely to have health insurance, they have less preventive care and therefore require more emergency room care when a disease or chronic condition reaches an advanced stage, thereby driving up health costs.

Economy. Low educational attainment slackens invention and productivity of workers, lessening the nation’s potential output and slowing its growth. Simply stated, significant gaps in achievement

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between and across various groups of students drag down the nation's economy, in effect, creating "the equivalent of a permanent, deep recession."

Finally, the achievement gap raises an ethical and moral issue. Is it right that some students get stuck in a cycle of poverty because they can't get a good education? "There is no better way to 'love thy neighbor,'" says Luce, "than by helping to create schools in which all our children can flourish and realize their potential."

Teachers have long recognized that students from poor, disadvantaged families did worse in school than students from more affluent families. In 1966, sociologist James Coleman, in a pioneering use of test scores, documented the achievement gap between white and black students. Although Coleman's findings might seem, on the surface, to suggest a racial component to the gap, later researchers have determined that the overriding factor is economic status, rather than race.

One major insight from Coleman's study was the huge impact of a child's family background on later school performance (Clark 1996).

In the years since, researchers have studied the gap from two perspectives: the schools and early childhood. Of the massive research conducted, the studies reported below represent only a sampling.

Closing the gap: K-12 schools

In the 1950s, schools began receiving increased attention, notably with the launch of *Sputnik* by the Soviet Union in 1957 and new emphasis on math and science courses. Other changes followed.

Civil rights. The achievement gap is often considered a vestige of slavery and segregation. In 1954, the U.S. Supreme Court in *Brown v. Board of Education* declared that segregated schools denied equal educational opportunity to black children. Desegregation came slowly and in some cases only by court order, resulting in forced busing of students in large cities.

With forced busing came white flight, the exodus of white families to private schools or to public schools in suburban areas. As the Civil Rights Movement gained momentum, housing patterns changed too, and busing was phased out. By the 1990s, many large public schools had become racially and ethnically imbalanced again, this time with high proportions of black and Hispanic students.

Poverty. Americans have long regarded education as the ticket out of poverty. In 1965, in the federal government's first foray into public K-12 schooling, Congress passed the Elementary and Secondary Education Act (ESEA). Title I of the act directed funding at improving education for poor students (Hanna 2005). The law has been reauthorized many times, with amendments that expanded aid to students with language barriers and students with disabilities.

Improving education alone, however, was not enough. As recent experience has shown, reducing poverty also requires a healthy economy and plentiful jobs. Economists argue that workers in low-wage jobs can rise out of poverty if given work supports, such as an increased minimum wage, the Earned Income Tax Credit, assistance with health care, and subsidized child care (Bernstein 2007).

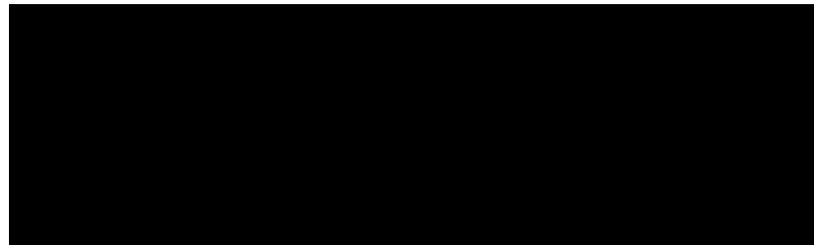
Schools in decline. Public schools have always had detractors. In the mid 1960s, for example, Boston educator John Holt, in *How Children Fail*, asserted that schools made children afraid of giving wrong answers and being mocked by teachers and their friends. His ideas and those of others opposed to compulsory school attendance helped give rise to homeschooling (HoltGWS.com n.d.).

By the 1970s the effectiveness of public schools had come into question. One indication was a steady decline in college admission test scores. Public support also faltered, notably in 1978 with California's Proposition 13. The ensuing taxpayer revolt adversely affected the budgets of many school districts across the country (Sack 2005).

In 1983, a federal commission claimed that the "average achievement of high school students on most standardized tests is now lower than 26 years ago when *Sputnik* was launched." The report, *A Nation at Risk*, contained this often-quoted line: "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves."

A number of states instituted school reforms. These included a more rigorous curriculum, periodic testing, extended school day and year, career ladders for teachers, and better campus leadership.

At the end of the decade, state governors called for national education goals to be met by 2000. The first goal: "All children will enter school ready to learn." Congress made those goals the centerpiece of the Educate America Act in 1994. When the millennial year arrived, however, many observers agreed the goals had been far too ambitious (Rothstein 1999).



In 2001 Congress passed another iteration of ESEA, the No Child Left Behind Act. Title I continued funding to enhance education of low-income students, but the law's main emphasis had shifted to standards, testing, and increased accountability for the academic achievement of all students.

Effective schools. Even before reforms were put in place, some public schools, despite the challenges of poverty and racial imbalance, were outperforming others.

Two researchers who studied this phenomenon, Larry Lezotte and Ronald Edmonds at Michigan State, found that effective schools had common characteristics: 1) instructional leadership, 2) clear and focused mission, 3) safe and orderly environment, 4) climate of high expectations, 5) frequent monitoring of student progress, 6) positive home-school relations, and 7) opportunity to learn and student time on task (Edmonds 1982). Many schools began striving to incorporate these traits.

Alternative programs. Rather than forcing integration, some public school systems in the late 1960s created magnet schools to "attract" a diversity of students to a specialized curriculum. Magnet schools thrived, in part because enrollment was by choice. By the 2001-2002 school year, there were 3,100 magnet schools in the United States (Rossell 2005).

Beginning in 1991, several states, led by Minnesota, passed legislation authorizing charter schools. These schools received public funding but were exempt from certain state or local regulations

so they could experiment with innovative methods. In the 2006-2007 school year, the nation had more than 4,100 charter schools, most of which served large proportions of black and Hispanic students (National Center for Education Statistics, n.d.).

Four charter schools—as well as one Catholic school and a neighborhood public school—were profiled by David Whitman in *Sweating the Small Stuff: Inner-City Schools and the New Paternalism* (2008). All six secondary schools had been successful in raising students' test scores. Whitman described them as "paternalistic" because, like a firm, but loving father, they maintained discipline and urged hard work to reach high expectations.

Some groups decided that choice and private schools were the answer. In 1990 the city of Milwaukee started a voucher system that allowed low-income families to enroll their children in private schools (U.S. Department of Education n.d.).

In studying schools, educators could not escape one critical fact: The achievement gap existed before children started school. According to current figures, for example, the cognitive skills of 4-year-olds who live below the poverty line are 18 months behind what is typical for their age group. By age 10, they're still behind (Klein and Knitzer 2007).

It's no surprise then that many educators focused on the child's early years, including the home and family.

Closing the gap: Early childhood

In the late 1950s, home life for children underwent many changes including a shift from rural to urban lifestyle, a rising divorce rate, and the movement of greater numbers of women into the workforce.

Preschool programs. In the 1960s and 1970s, preschool programs proliferated to accommodate the growing number of working mothers. While some researchers studied the effect of day care on children, others developed programs specifically aimed at poor and minority children.

In 1962, for example, David Weikart, a special education director in Ypsilanti, Mich., created the Perry Preschool Project. This program served low-income, 3- and 4-year-old black children identified as high risk for later school failure.

A decade later, child development researchers at the University of North Carolina began the Abecedarian Project, a five-year investigation of a full-day, full-year program for poor black children from infancy to age 5.

Both were high-quality programs with well-trained teachers. Results from both programs were positive: less placement in special education, less grade retention, and increased high school graduation. Follow-up of Perry preschoolers, in particular, revealed that at age 40 they had higher educational attainment, higher earnings, and lower crime compared to non-enrolled peers. Significantly, the project showed a high return on every dollar invested, ranging from \$5.15 to \$17.10 (Isaacs 2008).

Head Start. A number of researchers, including pediatrician Julius Richmond and University of Arkansas professor Bettye Caldwell, investigated the effect of poverty on babies. The conclusion: High-quality infant and toddler care could enhance a child's emotional and cognitive development (Weber 2008; University of Arkansas for Medical Sciences 2001).

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Impressed by such findings, the federal government tapped Richmond and others, notably Yale psychologist Edward Zigler, to create Head Start in 1965 (Yale University n.d.). Head Start provided comprehensive early childhood services to poor 3- and 4-year-olds, in most cases for half a day. The program branched out to include services to pregnant women, infants, and toddlers (Early Head Start). Despite positive results, funding levels allow Head Start to serve less than 40 percent of eligible children, and Early Head Start, less than two percent (National Head Start Association 2008).

Home visiting programs. In the 1970s, David Olds established the Nurse-Family Partnership in Baltimore. Registered nurses made home visits to low-income, first-time mothers during pregnancy and through the child's second birthday. Nurses taught health practices and parenting skills and helped mothers with plans to finish school and find a job. In 1996, the program branched out to other locations and is now operating in 23 states (Isaacs 2008).

In the early 1980s, Missouri state education officials created Parents As Teachers for first-time parents. It started as a home visiting program, funded through by the state and operated in school districts, in which trained educators visited parents throughout pregnancy and up to age 3. A free, voluntary program, it evolved to include group meetings, screenings, and referrals and was extended to 3- and 4-year-olds.

The program spread to 3,000 sites in 50 states and a dozen other countries. It's often linked with other programs and funding sources, such as Head Start and Title I. Evaluations have shown positive effects on both parents and children, especially in low-income families (Parents as Teachers 2002).

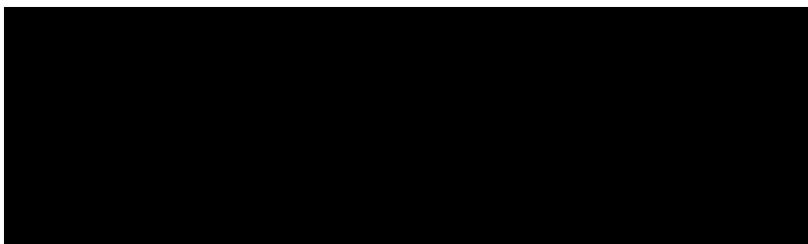
Brain research. Up until the 1990s, it was widely assumed that babies were born with a fixed learning ability—that is, most had average intelligence, a few were genius level, and others had little ability. That notion was dashed, however, when neuroscientists revealed that the brain is actually hard-wired by a child's experiences, especially during the first three years of life (U.S. Department of Education 1999; Carnegie Corporation 1994).

Other research established a direct connection between cognition and language. In the mid 1990s, Betty Hart and Todd Risley, for example, found that children reared by parents in professional careers developed more extensive vocabularies than their peers in working class and poor families. The difference was that professional parents talked more to their children and gave more encouragement (Early Education for All 2003).

Harlem Children's Zone. In 1997, Geoffrey Canada, who had operated social and educational programs for Harlem families for 25 years, created a network of programs for low-income children. The Zone offered a parenting education class for expectant parents and a charter middle school with extended hours that focused on raising students' test scores.

Before long, he developed a "conveyor belt" approach that would carry children from birth through the preschool years and into elementary and secondary school. Early results showed gains (Harlem Children's Zone n.d.). Though convinced that this approach works, Canada believes that older kids, who missed out on the conveyor belt, are worth the extraordinary measures needed to save them (Tough 2009).

Universal pre-K. In the 2007-2008 school year, more than 80 percent of all 4-year-olds in the United States attended some kind of preschool. Roughly half of those were in a private program, and half were in a public program such as state pre-K, Head Start, or special education (National Institute for Early Education Research 2008).



The number and type of publicly funded programs varied widely from state to state. In one ranking, Oklahoma topped the list because it provides free public preschool to nearly 90 percent of its 4-year-olds (NIEER 2008).

National consensus for universal pre-K programs is growing (Pew Center on the States 2009). Most state governors recognize the educational and economic necessity of high-quality pre-kindergarten, but support is mixed. (For a state-by-state list of support, see www.preknow.org/documents/LeadershipReport_May2009.pdf.)

One practical proposal, put forth many times in recent years, is to improve coordination at the local level among the public schools, early childhood centers, and community agencies. The Houston Independent School District, for example, has created early childhood centers, partly with the use of Title I funds (Ewen and Matthews 2007).

Where do we go from here?

Four decades of research have led to a better understanding of the conditions in the home, school, and community that affect children's educational attainment.

We know what early childhood educators have long believed—that high-quality programs that teach parenting skills, enhance infant and toddler development, and expand preschool learning experiences can turn children's lives around. It's time to give these programs the added support they deserve.

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