

How Family Background Influences Student Achievement



Can schools narrow the gap?

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This article is part of a new Education Next series [commemorating the 50th anniversary of James S. Coleman's groundbreaking report, "Equality of Educational Opportunity."](#) The full series will appear in the Spring 2016 issue of Education Next.

On the weekend before the Fourth of July 1966, the U.S. Office of Education quietly released a 737-page report that summarized one of the most comprehensive studies of American education ever conducted. Encompassing some 3,000 schools, nearly 600,000 students, and thousands of teachers, and produced by a team led by Johns Hopkins University sociologist James S. Coleman, "Equality of Educational Opportunity" was met with a palpable silence. Indeed, the timing of the release relied on one of the oldest tricks in the public relations playbook—announcing unfavorable results on a major holiday, when neither the American public nor the news media are paying much attention.

To the dismay of federal officials, the Coleman Report had concluded that "schools are remarkably similar in the effect they have on the achievement of their pupils when the socio-economic background of the students is taken into account." Or, as one sociologist supposedly put it to the scholar-politician Daniel Patrick Moynihan, "Have you heard what Coleman is finding? It's all family."

The Coleman Report's conclusions concerning the influences of home and family were at odds with the paradigm of the day. The politically inconvenient conclusion that family background explained more about a child's achievement than did school resources ran contrary to contemporary priorities, which were focused on improving educational inputs such as school expenditure levels, class size, and teacher quality. Indeed, less than a year before the Coleman Report's release, President Lyndon Johnson had signed the Elementary and Secondary Education Act into law, dedicating federal funds to disadvantaged students through a Title 1 program that still remains the single largest investment in K–12 education, currently reaching approximately 21 million students at an annual cost of about \$14.4 billion.

So what exactly had Coleman uncovered? Differences among schools in their facilities and staffing "are so little related to achievement levels of students that, with few exceptions, their effect fails to appear even in a survey of this magnitude," the authors concluded.

Zeroing In on Family Background

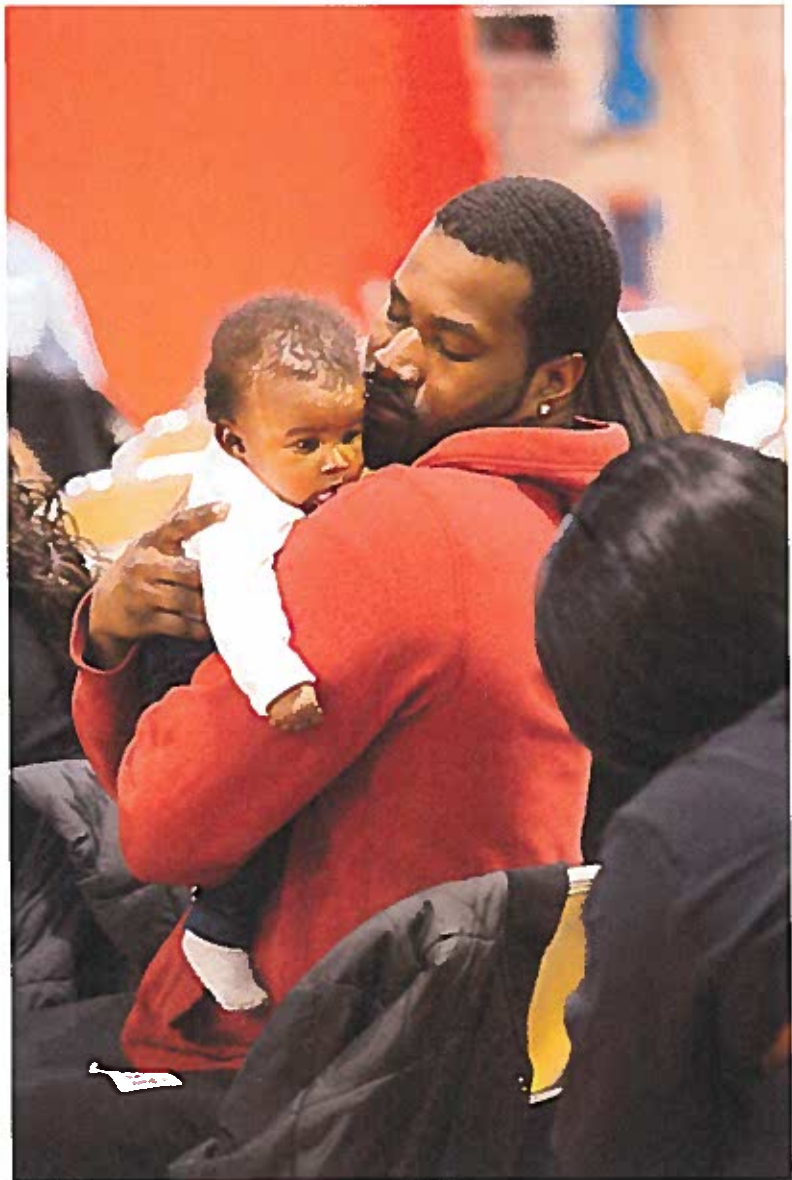
Family income may have a direct or indirect impact on children's academic outcomes.

Coleman's advisory panel refused to sign off on the report, citing "methodological concerns" that continue to reverberate. Subsequent research has corroborated the finding that family background is strongly correlated with student performance in school. A correlation between family background and educational and economic success, however, does not tell us whether the relationship between the two is independent of any school impacts. The associations between home life and school performance that Coleman documented may actually be driven by

disparities in school or neighborhood quality rather than family influences. Often, families choose their children's schools by selecting their community or neighborhood, and children whose parents select good schools may benefit as a consequence. In the elusive quest to uncover the determinants of students' academic success, therefore, it is important to rely on experimental or quasi-experimental research that identifies effects of family background that operate separately and apart from any school effects.

In this essay I look at four family variables that may influence student achievement: family education, family income, parents' criminal activity, and family structure. I then consider the ways in which schools can offset the effects of these factors.

Parental Education. Better-educated parents are more likely to consider the quality of the local schools when selecting a neighborhood in which to live. Once their children enter a school, educated parents are also more likely to pay attention to the quality of their children's teachers and may attempt to ensure that their children are adequately served. By participating in parent-teacher conferences and volunteering at school, they may encourage staff to attend to their children's individual needs.



PHOTOGRAPH / COURTESY HARLEM CHILDREN'S ZONE



PHOTOGRAPH / SHUTTERSTOCK

In addition, highly educated parents are more likely than their less-educated counterparts to read to their children. Educated parents enhance their children's development and human capital by drawing on their own

advanced language skills in communicating with their children. They are more likely to pose questions instead of directives and employ a broader and more complex vocabulary. Estimates suggest that, by age 3, children whose parents receive public assistance hear less than a third of the words encountered by their higher-income peers. As a result, the children of highly educated parents are capable of more complex speech and have more extensive vocabularies before they even start school.

Highly educated parents can also use their social capital to promote their children's development. A cohesive social network of well-educated individuals socializes children to expect that they too will attain high levels of academic success. It can also transmit cultural capital by teaching children the specific behaviors, patterns of speech, and cultural references that are valued by the educational and professional elite.

In most studies, parental education has been identified as the single strongest correlate of children's success in school, the number of years they attend school, and their success later in life. Because parental education influences children's learning both directly and through the choice of a school, we do not know how much of the correlation can be attributed to direct impact and how much to school-related factors. Teasing out the distinct causal impact of parental education is tricky, but given the strong association between parental education and student achievement in every industrialized society, the direct impact is undoubtedly substantial. Furthermore, quasi-experimental strategies have found positive effects of parental education on children's outcomes. For instance, one study of Korean children adopted into American families shows that the adoptive mother's education level is significantly associated with the child's educational attainment.



Even small differences in access to the activities and experiences that are known to promote brain development can accumulate.

Family Income. As with parental education, family income may have a direct impact on a child's academic outcomes, or variations in achievement could simply be a function of the school the child attends: parents with greater financial resources can identify communities with higher-quality schools and choose more-expensive neighborhoods—the very places where good schools are likely to be. More-affluent parents can also use their resources to ensure that their children have access to a full range of extracurricular activities at school and in the community.

But it's not hard to imagine direct effects of income on student achievement. Parents who are struggling economically simply don't have the time or the wherewithal to check homework, drive children to summer camp, organize museum trips, or help their kids plan for college. Working multiple jobs or inconvenient shifts makes it hard to dedicate time for family dinners, enforce a consistent bedtime, read to infants and toddlers, or invest in music lessons or sports clubs. Even small differences in access to the activities and experiences that are known to promote brain development can accumulate, resulting in a sizable gap between two groups of children defined by

family circumstances.

It is challenging to find rigorous experimental or quasi-experimental evidence to disentangle the direct effects of home life from the effects of the school a family selects. While Coleman claimed that family and peers had an effect on student achievement that was distinct from the influence of schools or neighborhoods, his research design was inadequate to support this conclusion. All he was able to show was that family characteristics had a strong correlation with student achievement.

Separating out the independent effects of family education and family income is also difficult. We do not know if low income and financial instability alone can adversely affect children's behavior, emotional stability, and educational outcomes. Evidence from the negative-income-tax experiments carried out by the federal government between 1968 and 1982 showed only mixed effects of income on children's outcomes, and subsequent work by the University of Chicago's Susan Mayer cast doubt on any causal relationship between parental income and child well-being. However, a recent study by Gordon Dahl and Lance Lochner, exploiting quasi-experimental variation in the Earned Income Tax Credit, provides convincing evidence that increases in family income can lift the achievement levels of students raised in low-income working families, even holding other factors constant.



Two percent of U.S. children have a parent in federal or state prison.

Parental Incarceration. The Bureau of Justice Statistics reports that 2.3 percent of U.S. children have a parent in federal or state prison. Black children are 7.5 times more likely and Hispanic children 2.5 times more likely than white children to have an incarcerated parent. Incarceration removes a wage earner from the home, lowering household income. One estimate suggests that two-thirds of incarcerated fathers had provided the primary source of family income before their imprisonment. As a result, children with a parent in prison are at greater risk of homelessness, which in turn can have grave consequences: the receipt of social and medical services and assignment to a traditional public school all require a stable home address. The emotional strain of a parent's incarceration can also take its toll on a child's achievement in school.

Quantifying the causal effects of parental incarceration has proven challenging, however. While correlational research finds that the odds of finishing high school are 50 percent lower for children with an incarcerated parent, parents who are in prison may have less education, lower income, more limited access to quality schools, and other attributes that adversely affect their children's success in school. A recent review of 22 studies of the effect of parental incarceration on child well-being concludes that, to date, no research in this area has been able to leverage a natural experiment to produce quasi-experimental estimates. Just how large a causal impact parental incarceration has on children remains an important but largely uncharted topic for future research.

Family Structure. While most American children still live with both of their biological or adoptive parents, family structures have become more diverse in recent years, and living arrangements have grown increasingly complex. In particular, the two-parent family is vanishing among the poor.

Approximately two-fifths of U.S. children experience dissolution in their parents' union by age 15, and two-thirds of this group will see their mother form a new union within six years. Many parents today choose cohabitation over marriage, but the instability of such partnerships is even higher. In the case of nonmarital births, estimates say that 56 percent of fathers will be living away from their child by his or her third birthday. These patterns can have serious implications for a child's well-being and school success (see Figure 1). Single parents have less time for the enriching activities that Robert Putnam, Harvard professor of public policy, has called "Goodnight Moon" time, after the celebrated bedtime storybook by Margaret Wise Brown. The U.S. Census Bureau reports that 1- to 2-year-olds who live with two married parents are read to, on average, 8.5 times per week. The corresponding statistic for their peers living with a single parent is 5.7 times. And it's likely that dual-parent families in general have many other attributes that affect their children's educational attainment, mental health, labor market performance, and family formation. More-rigorous quasi-experimental evidence also documents significant negative effects of a father's absence on children's educational attainment and social and emotional development, leading to increases in antisocial behavior. These effects are largest for boys.

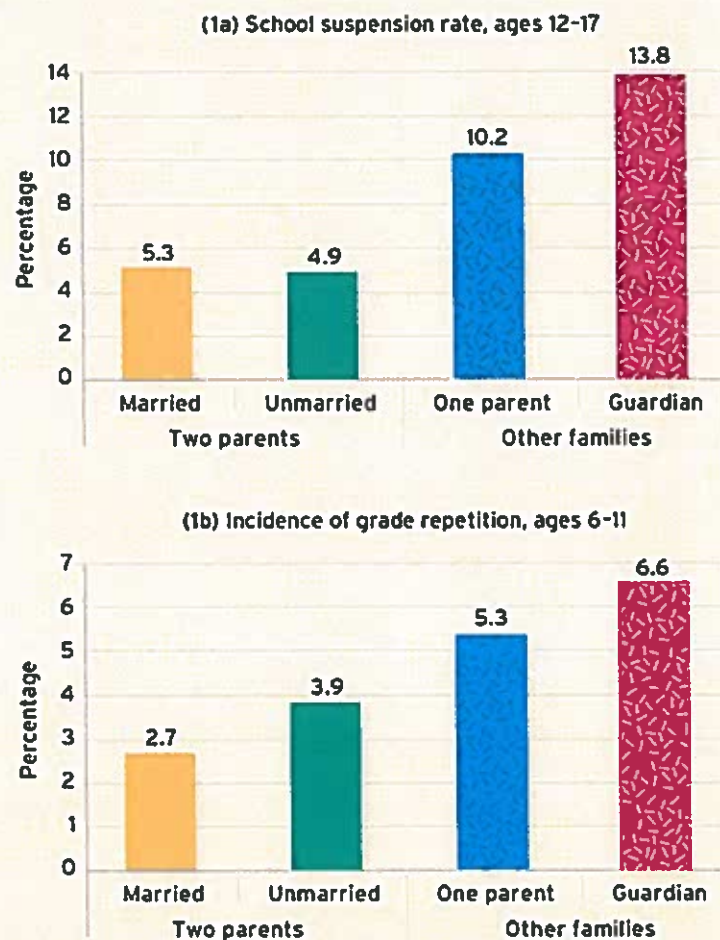
Recent research by MIT economist

David Autor and colleagues generates quasi-experimental estimates of family background by simultaneously accounting for the impact of neighborhood environment and school quality to investigate why boys fare worse than girls in disadvantaged families. Comparing boys to their sisters in a data set that includes more than 1 million children born in Florida between 1992 and 2002, the authors demonstrate a persistent gender gap in graduation and truancy rates, incidence of behavioral and cognitive disabilities, and standardized test scores.

Policies to Counter Family Disadvantage

Suspension Rates and Grade Repetition (Figure 1)

Children ages 12 to 17 who live with just one parent or a guardian are at a higher risk of school suspension than their peers who live with two parents. Similarly, 6- to 11-year-olds who live with one parent or a guardian are more likely to repeat a grade than children of the same age in two-parent families.



SOURCE: U.S. Census Bureau, Survey of Income and Program Participation, 2008 panel

Policymakers who are weighing competing approaches to countering the influence of family disadvantage face a tough choice: Should they try to improve schools (to *overcome* the effects of family background) or directly *address* the effects of family background?



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The question is critical. If family background is decisive regardless of the quality of the school, then the road to equal opportunity will be long and hard. Increasing the level of parental education is a multigenerational challenge, while reducing the rising disparities in family income would require massive changes in public policy, and reversing the growth in the prevalence of single-parent families would also prove challenging. And, while efforts to reduce incarceration rates are afoot, U.S. crime rates remain among the highest in the world. Given these obstacles, if schools themselves can offset differences in family background, the chances of achieving a more egalitarian society greatly improve.

For these reasons, scholars need to continue to tackle the causality question raised by Coleman's pathbreaking study. Although the obstacles to causal inference are steep, education researchers should focus on quasi-experimental approaches relying on sibling comparisons, changes in state laws over time, or policy quirks—such as policy implementation timelines that vary across municipalities—that facilitate research opportunities.

Given what is currently known, a holistic approach that simultaneously attempts to strengthen both home and school influences in disadvantaged communities is worthy of further exploration. A number of contemporary and past initiatives point to the potential of this comprehensive approach.

Promise Neighborhoods

"Promise Neighborhoods," which are funded by a grant program of the U.S. Department of Education, serve distressed communities by delivering a continuum of services through multiple government agencies, nonprofit

organizations, churches, and agencies of civil society. These neighborhood initiatives use “wraparound” programs that take a holistic approach to improving the educational achievement of low-income students. The template for the approach is the Harlem Children’s Zone (HCZ), a 97-block neighborhood in New York City that combines charter schooling with a full package of social, medical, and community support services. The programs and resources are available to the families at no cost.

Services available in the HCZ include a Baby College, where expectant parents can learn about child development and gain parenting skills; two charter schools and a college success office, which provides individualized counseling and guidance to graduates on university campuses across the country; free legal services, tax preparation, and financial counseling; employment workshops and job fairs; a 50,000-square-foot facility that offers recreational and nutrition classes; and a food services team that provides breakfast, lunch, and a snack every school day to more than 2,000 students.

Research by Will Dobbie and Roland Fryer demonstrates that the impact of attending an HCZ charter middle school on students’ test scores is comparable to the impressive effects seen at high-performing charter schools such as the Knowledge Is Power Program (known as KIPP schools). Students who win admission by lottery and attend an HCZ school also have higher on-time graduation rates than their peers and are less likely to become teen parents or land in prison. Although some community services are available to HCZ residents only, results show that students who live outside the HCZ experience similar benefits simply from attending the Promise Academy. That is, Dobbie and Fryer do not find any additional benefits associated with the resident-only supplementary services that distinguish the Promise Neighborhoods approach. (In many instances, the mean scores for children who live within the zone are higher than those for nonresidents, but these differences are not statistically significant.)

There are two caveats to keep in mind in regard to this finding that support the case for continued experimentation with and evaluation of Promise Neighborhoods. First, many of the wraparound services offered in the HCZ are provided through the school and are thus available to HCZ residents and nonresidents alike. For instance, all Promise Academy students receive free nutritious meals; medical, dental, and mental health services; and food baskets for their parents. The services that nonresidents cannot access are things such as tax preparation and financial advising, parenting classes through the Baby College, and job fairs. It may be that both groups of students are accessing the most beneficial supplementary services.

The second caveat is that the HCZ is a “pipeline” model that aims to transform an entire community by targeting services across many different domains. Therefore, we may have to wait until a cohort of students has progressed through that pipeline before we can get a full picture of how these comprehensive services have benefited them. The first cohort to complete the entire HCZ program is expected to graduate from high school in 2020.

The main drawback of the Promise Neighborhoods model is its high cost. To cover the expenses of running the Promise Academy Charter School and the afterschool and wraparound programs, the HCZ spends about \$19,272 per pupil. While this price tag is about \$3,100 higher than the median per-pupil cost in New York State, it is still about \$14,000 lower than what is spent by a district at the 95th percentile. If future research can demonstrate that the HCZ positively influences longer-term outcomes such as college graduation rates, income, and mortality, the model will hold tremendous potential that may well justify its costs.



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Early Childhood Education

Early childhood programs can provide a source of enrichment for needy children, ensuring them a solid start in a world where those with inadequate education are increasingly marginalized. Neuroscientists estimate that about 90 percent of the brain develops between birth and age 5, supporting the case for expanded access to early childhood programs. While the United States spends abundantly on elementary and secondary schoolchildren (\$12,401 per student per year in 2013–14 dollars), it devotes dramatically less than other wealthy countries to children in their first few years of life.

Four years before James Coleman released his report, a group of underprivileged, at-risk toddlers at the Perry Preschool in Ypsilanti, Michigan, were randomly selected for a preschool intervention that consisted of daily coaching from highly trained teachers as well as visits to their homes. After just one year, those in the experimental treatment group were registering IQ scores 10 points higher than their peers in the control group. The test-score effects had disappeared by age 10, but follow-up analyses of the Perry Preschool treatment group revealed impressive longer-term outcomes that included a significant increase in their high-school graduation rate and the probability of earning at least \$20,000 a year as adults, as well as a 19 percent decrease in their probability of being arrested five or more times. Similar small-scale, “hothouse” preschool experiments in Chicago, upstate New York, and North Carolina have all shown comparable benefits.



Preschoolers at the Harlem Children's Zone

Unfortunately, attempts to scale up such programs have proved challenging. Studies of the Head Start program, for instance, have uncovered mixed evidence of its effectiveness. Modest impacts on students' cognitive skills mostly fade out by the end of 1st grade. Such results have led many to question whether quality can be consistently maintained when a program such as Head Start is implemented broadly. Indeed, recent research has revealed considerable differences in Head Start's effectiveness from site to site. Variation in inputs and practices among Head Start centers explains about a third of these differences, a finding that may offer clues as to the contextual factors that influence the program's varying levels of success.

Although the policymaker's challenge is to figure out how to expand access to such programs while preserving quality, evidence suggests that investment in early childhood education has the potential to significantly address disparities that arise from family disadvantage.

Small Schools of Choice

Traditional public schools assign a child to a given school based exclusively on his family's place of residence. As Coleman pointed out, residential assignment promotes stratification between schools by family background, because it creates incentives for families of means to move to the "good" school districts. Under this system, schools cannot serve as the equal-opportunity engines of our society. Instead, residential assignment often replicates within the school system the same family advantages and disadvantages that exist in the community.

The most promising social policy for combating the effects of family background, then, could well be the expansion of programs that allow families to choose schools without regard to their neighborhood of residence. An analysis of more than 100 small schools of choice in New York City between 2002 and 2008 revealed a 9.5 percent increase in the graduation rate of a group of educationally and economically disadvantaged students, at no extra cost to the city. Positive results have also been observed with respect to student test scores for charter schools in New York City, Boston, Los Angeles, and New Orleans.

Small schools of choice might also build the social capital that Coleman considered crucial for student success. First, small schools are well positioned to build a strong sense of community through the development of robust student-teacher, parent-teacher, and student-student relationships. Helping students to cultivate dense networks of social relationships better equips them to handle life's challenges and is particularly vital given the disintegration of many social structures today. While schools may not be able to compensate fully for the disruptive effects of a dysfunctional or unstable family, a robust school culture can transform the "social ecology" of a disadvantaged child.

A small school of choice also engenders a voluntary community that comes together over strong ties and shared values. Typically, schools of choice feature a clearly defined mission and set of core values, which may derive from religious traditions and beliefs. The Notre Dame ACE Academy schools, for instance, strive for the twin goals of preparing students for college and for heaven. By explicitly defining their mission, schools can appeal to families who share their values and are eager to contribute to the growth of the community. A focused mission also helps school administrators attract like-minded teachers and thus promotes staff collegiality. A warm and cohesive teaching staff can be particularly beneficial for children from unstable homes, whose parents may not regularly express emotional closeness or who fail to communicate effectively. Exposure to well-functioning adult role models at school might compensate for such deficits, promoting well-being and positive emotional development.

Implications for Policy

Determining the causal relationships between family background and child well-being has posed a daunting challenge. Family characteristics are often tightly correlated with features of the neighborhood environment, making it difficult to determine the independent influences of each. But getting a solid understanding of causality is critical to the debate over whether to intervene inside or outside of school.

The results of quasi-experimental research, as well as common sense, tell us that children who grow up in stable, well-resourced families have significant advantages over their peers who do not—including access to better schools and other educational services. Policies that place schools at center stage have the potential to disrupt the cycle of economic disadvantage to ensure that children born into poverty aren't excluded from the American dream.

In opening our eyes to the role of family background in the creation of inequality, Coleman wasn't suggesting that we shrug our shoulders and learn to live with it. But in attacking the achievement gap, as his research would imply, we need to mobilize not only our schools but also other institutions. Promise Neighborhoods offer cradle-to-career supports to help children successfully navigate the challenges of growing up. Early childhood programs provide intervention at a critical time, when children's brains take huge leaps in development. Finally, small schools of choice can help to build a strong sense of community, which could particularly benefit inner-city neighborhoods where traditional institutions have been disintegrating.

Schools alone can't level the vast inequalities that students bring to the schoolhouse door, but a combination of

school programs, social services, community organizations, and civil society could make a major difference. Ensuring that all kids, regardless of family background, have a decent chance of doing better than their parents is an important societal and policy goal. Innovative approaches such as those outlined here could help us achieve it.

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