THE WIDENING ACADEMIC ACHIEVEMENT GAP BETWEEN RICH AND POOR: NEW EVIDENCE AND POSSIBLE EXPLANATIONS

Sean F. Reardon
Stanford University Graduate School of Education
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Without question, the achievement gap has come to play an increasingly important role in the United States educational system in the United States. While the differences in academic achievement according to race are well documented, relatively little is known about the exact impact of family income on achievement. Indeed, most studies of the income-based achievement gap tend to focus on specific sub-groups or geographic regions. Seeking a broader understanding of the income achievement gap and trends over time, Stanford University professor Sean F. Reardon undertook an analysis of the gap during the last 50 years. The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations presents results from his analysis, finding the gap is 75 percent larger for students born in 2001 than those born in the 1940s.

The academic achievement gap between black, white, and Hispanic students plays a central role in education policy discussions. Closing the gap is a major focus of reform initiatives, with a great deal of research around understanding the scope and magnitude of the gap. The achievement gap between students from high- and low-income families, on the other hand, does not receive as intensive focus. The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations, a 2011 study released by Stanford University professor Sean F. Reardon, presents new data and perspective on the academic achievement gap. In particular, Reardon examines differences in achievement outcomes for students at the 90th percentile of the income distribution and those in the 10th percentile, what he refers to as the “90/10” gap, across a fifty-year period. Focusing mainly on the size of the gap and trends over time, as opposed to the causes, Reardon examines “whether and how […] the relationship between socioeconomic characteristics and academic achievement has changed during the last fifty years” (p. 4).

To conduct his analyses, Reardon drew his data from nineteen nationally representative studies, including those from the National Center for Education Statistics (NCES), the Long-Term Trend and Main National Assessment of Educational Progress (NAEP), as well as international studies including data from the United States (p. 5-6). All nineteen studies include data on math and/or reading skills, as well as information about the socioeconomic status of a family, including parents’ income and education.
Size and Scope of the Gap

According to his analysis, Reardon finds the estimated achievement gap for children born in 2001 is approximately 75 percent larger than the gap for students born in the early 1940s. Reardon notes the gap grew in the 1940s and 1950s, stabilized between the 1950s and mid-1970s, and has grown steadily since the mid 1970s. In fact, 40 to 50 percent of the growth has occurred since the 1970s.

In examining the depth of the income achievement gap, Reardon finds the gap in reading grew from 0.75 standard deviations for students born in 1970 to nearly 1.25 for those born in 2001. In terms of math, the income achievement gap rose from a little more than 0.75 standard deviations to more than 1.25 standard deviations in children born over the thirty-one year period. By comparison, a gap of 1 standard deviation corresponds to roughly three to six years of learning in middle or high school. In fact, according to NAEP data, an average student can expect to gain 1.2 to 1.5 standard deviations in math and reading between fourth and eighth grade. Therefore, the income achievement gap has grown to be approximately equal to the average expected growth of a student between the fourth and eighth grade. Reardon finds his results show “a clear trend of increasing income achievement gaps across cohorts born over a nearly sixty-year period” (p. 8).

Next, Reardon compares the income achievement gap to the black-white achievement gap. Based on his analysis, he finds the 90/10 gap is currently almost two times as large as the black-white achievement gap. By comparison, 50 years ago, the black-white gap was one and a half to two times as large as the income gap. Reardon further finds for children born in the 1970s and onward, the 90/10 income achievement gap was two to three times larger than the black-white achievement gap for entering kindergarteners.

To that point, Reardon notes the income achievement gap is large from the start of kindergarten and remains constant over time, neither growing nor shrinking as students’ progress through school. In analyzing this trend, Reardon finds that while rising income inequality may play a role, the gap appears to have grown as a result of the increased association between income and achievement. More specifically, Reardon finds that for families above the median income level, a given difference in family income now corresponds to a 30 to 60 percent larger difference in a child’s academic achievement than it did for children born in the 1970s. That is, parents above the median income appear to invest more time and money into their child’s education, resulting in larger growth of those at the top of the income distribution.

Reardon also considers other factors or variables that may have contributed to or influenced the increasing gap. In particular, he examines whether the changing racial and ethnic composition of the U.S. population could explain the increase. He discovers the income achievement gap has grown regardless of race and location. His research also shows the gap is not affected by gender.

Finally, Reardon examines two factors known to influence a child’s academic achievement: parents’ education and parents’ income. He finds that while the achievement gap has grown significantly for students with high- and low-income parents, the achievement gap has remained relatively stable for children with highly educated parents and those with less educated parents. In fact, family income is now nearly as strong a predictor of academic achievement as parental education.
Possible Explanations for Income Achievement Gap Based on Previous Research

After detailing the growth of the income achievement over time, Reardon conducts a literature review to consider possible explanations for the increase in the gap, exploring four possible reasons:

**Rising income inequality.** Reardon finds no direct correlation between rising income equality and the achievement gap, indicating the income achievement gap is not the result of income inequality. Rather, the rate of academic growth for children from families at the top of the income distribution has far outpaced the growth of those near the bottom. As such, the gap is largely witnessed as a sharp gain at the top compared with a relatively slower gain at the bottom. However, it is worth highlighting the achievement of all students has increased over time, albeit at different rates.

**Differential investments in cognitive development.** Over the past 50 years, families with higher incomes have begun investing more financially in a child's education, such as with private tutors, enrichment programs, and test preparation. Since lower income families often do not have access to quality preschools or private tutors, the income achievement gap grows. It is important to note the income achievement gap begins before kindergarten, emphasizing the critical role preschool plays in a child's cognitive development.

**Changes in the relationships among family income, family socioeconomic characteristics, and children's achievement.** As is widely known, high-income students often have access to a range of other familial and social resources. These resources can include, for example, parents' educational attainment and social backgrounds that allow them to foster greater intellectual development of their children. While a family's income is becoming an increasingly important factor, the highest level of education attained by the parents remains the strongest indicator of a child's future academic achievement.

**Increased segregation by income.** An increase in residential segregation, a result of rising income inequality, has created high- and low-income neighborhoods, and vast differences in the quality of local schools. Schools in low-income neighborhoods, with fewer resources and students often coming from families struggling with poverty, often do not provide the same quality education as a school in a more affluent neighborhood.

While more research is necessary, Reardon's findings demonstrate the increasingly important role income plays in a child's academic achievement. As income disparities continue to rise, it will be all the more important to target high quality interventions and programs to low-income students.

*This research brief summarizes work published in “The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations” by Sean F. Reardon of Stanford University. This summary is intended for educational and informational purposes as a service to members of the National Partnership for Educational Access. All content in this brief is attributed to the authors. The National Partnership for Educational Access is an initiative of The Steppingstone Foundation. The views expressed in this brief do not necessarily reflect those of the National Partnership for Educational Access, its members, or The Steppingstone Foundation. A copy of this full report, including bibliographic information, can be found on the Stanford University website.*
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NPEA is unique in two ways: first, our members serve students all along the continuum of grades, beginning in early elementary through high school and college. Second, the diverse membership provides a forum for sharing different perspectives and ideas in order to bolster the field of college access and close the achievement gap that prevents so many children from realizing the benefits of a college degree.

Lack of academic preparation, limited understanding of the complex college admission and financial aid application processes, and rising tuition costs combine to keep millions of capable yet underserved students locked out of the opportunities provided by a college education; at the same time, the demand for a college-educated workforce continues to grow. While many organizations exist to increase opportunities for traditionally underrepresented students, they often work in isolation, struggling with challenges that a program on the other side of the country or even around the corner has already solved. By bringing organizations together to build connections and share lessons learned, NPEA is strengthening the pipeline to college on a local and national scale.