

FOREWORD

By **Chester E. Finn, Jr., Amber M. Winkler, and Janie Scull**

This groundbreaking study is the first ever to examine the achievement of high-performing students over time *at the individual level*. It poses—and seeks to answer—this straightforward question: Do students who outscore their peers on standardized achievement tests remain at the top of the pack year after year? Put differently, how many “high flyers” maintain their “altitude” over time? How many fall back toward Earth as they make their way through school, losing the academic edge they once enjoyed?

The reason this question is important should be obvious: If America is to remain internationally competitive with other advanced nations, we need to maximize the potential of our top students. Yet many analysts worry that various policies and programs, including the federal No Child Left Behind Act (NCLB), tend to “level” student achievement by focusing on the lowest-achieving students and ignoring—or, worse, driving resources away from—our strongest students.

Thanks to previous Fordham research by Tom Loveless, we know that from 2000 to 2007 achievement for the highest-performing students (as measured by the National Assessment of Educational Progress) stagnated, while the lowest-performing students made significant gains (Duffett, Farkas, and Loveless, 2008). Other studies have corroborated this finding. But these earlier analyses examined different cohorts of students—eighth graders in 2000 versus eighth graders in 2007, for example—not individual students over time.

In the present study, analysts from the Northwest Evaluation Association™ (NWEA) examine achievement trends for students who scored extremely well on the NWEA assessment, known as the Measures of Academic Progress™ (MAP). If the schools these students attend are adequately challenging them to continue learning at high levels—and providing them the instruction they need to do so—one would logically expect most of them to maintain their high standing over time. On the other hand, if these youngsters are left to fend for themselves while attention and resources are showered on their lower-achieving peers, one might expect them to drop closer to average.

That said, it would be naïve to expect *all* high-achieving pupils to stay that way forever—just as it’s naïve to expect 100 percent of students to reach “proficient.” Some students, for example, might face life crises that would depress their

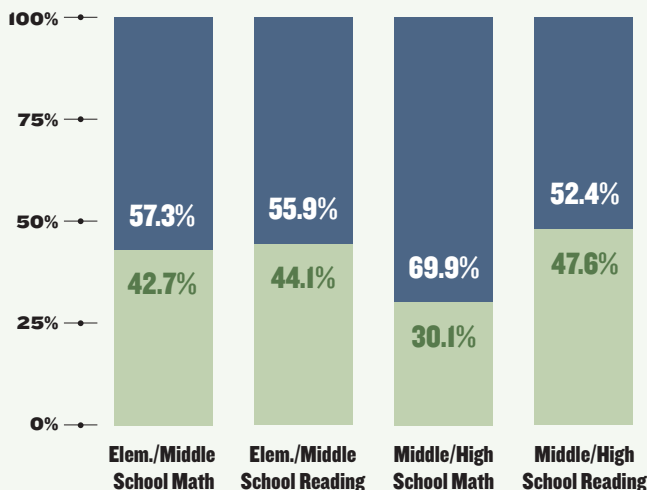


FIGURE ES-1

Outcomes of Initial High Flyers

■ Steady High Flyers ■ Descenders

Note: For each cohort and subject, the figure shows what percentage of the initial high achievers was still high-achieving in the final year of the study (Steady High Flyers), and what percentage was not (Descenders). Students were tracked from grades three to eight in elementary/middle school and grades six to ten in middle/high school. For example, 57.3 percent of the initial high math achievers in the elementary/middle school cohort remained high-achieving from third to eighth grade (i.e., they were Steady High Flyers), while 42.7 percent were no longer high-achieving by eighth grade (i.e., they were Descenders).

achievement, such as a divorce in the family or the loss of a loved one. Moreover, high achievement ought not be a zero-sum game, whereby some students are kicked out of their lofty rank to make room for others. (In this study, we define high achievers as those students who score at the 90th percentile or above according to external norms, but allow for as many students within the subset being tracked to enter those ranks as qualify to do so.) In the end, great schools should be able to take middling students and, over the course of several years, help them to near the head of the class.

How about those who were “high flyers” to start with? Some will surely lose altitude. But if a great many of them do so, this should set off alarm bells. It would be especially concerning if many high flyers within particular groups—say, girls, or minority children, or those attending high-poverty schools—faltered over time.

What did we learn?

Finding #1. A majority of high flyers maintained their status over time, but substantial numbers “lost altitude.” Nearly three in five students identified as high-achieving in the initial year of the study remained high-achieving in the final year (Figure ES-1). Specifically, 57.3 percent of high-achieving third-grade math students remained that way by eighth grade, while 55.9 percent did so in reading (we call them “Steady High Flyers”). A full 69.9 percent of high-achieving sixth-grade math students remained high-achieving by tenth grade; 52.4 percent did so in reading. Of course, that also means that roughly 30 to 50 percent of students in the initial high-achieving group lost their top-tier academic status over time (we call them “Descenders”).

That doesn’t mean the pool of high-achieving students shrank. On the contrary, it grew, thanks to a greater number of students—we call them the “Late Bloomers”—who entered the high-achieving ranks over time. For instance, the percentage of high flyers in math at the elementary/middle school level grew from 12.4 percent of all third graders to 14.1 percent in eighth grade.¹

Finding #2. Most Descenders don’t fall far. Even those students who “lost altitude” (dropped below our 90th percentile cutoff) didn’t glide too far from the high-achieving ranks. Most stayed at the 70th percentile or higher. And those who soared into the high-achieving ranks by eighth grade did not have far to fly. In math, for instance, they performed on average at the 74th percentile in third grade.

Interestingly, the proportions of minority students within the high-achieving group proved relatively stable (albeit smaller than one would hope) over time. In terms of gender, however, boys were overrepresented among high achievers in math and girls in reading, but high-achieving boys were more likely to lose ground in *both* subjects.

Finding #3. High flyers grew academically at similar rates to low and middle achievers in math, but grew at slightly slower rates than low and middle achievers in reading. We compared the growth rates of high-achieving students in reading and math in relation to middle achievers (those performing between the 45th and 54th percentiles, inclusive) and low achievers (those below the 10th percentile). In math, the gaps between high, middle, and low achievers changed very little over time. In reading, however, low- and middle-achieving students demonstrated faster rates of improvement than high achievers.



Finally, NWEA conducted a separate analysis that used a different definition of high achievement. Instead of using an external standard, they defined high-achieving students as those whose math or reading scores placed them within the top 10 percent *of their individual grades and schools*. In those analyses, NWEA researchers were primarily interested in examining the impact that school-level factors might have on student growth. They tracked both an elementary school cohort from third grade to fifth grade, and a middle school cohort from sixth grade to eighth grade.

¹ The external benchmark for high-achieving status was set at the 90th percentile, but since the study sample and normed sample are independent, more than 10 percent of students could qualify in the former as high-achieving at either the beginning or ending point.

This analysis was exploratory due to a non-representative sample (plus analysts were not able to fully account for student mobility). Still, they uncovered a surprising and encouraging trend: **High-achieving students attending high-poverty schools made about the same amount of academic growth over time as their high-achieving peers in low-poverty schools.** For example, high flyers at low-poverty schools performed on average at the 97th percentile in third-grade math, while high flyers at high-poverty schools scored at the 83rd percentile—a difference representing over a year’s worth of growth. By fifth grade, however, they scored at the 97th and 82nd percentiles, respectively. While high achievers in high-poverty schools grew slightly less than those in low-poverty schools, the difference was very small. It appears that the relationship between a school’s poverty rate and the growth of its highest-achieving students is weak. In other words, attending a *low-poverty* school adds little to the average high achiever’s prospects for growth.

Implications

What to make of all this? We see four takeaways.

First, many students maintained their high-flying status and many lost it. Hence you can choose to view the results as a glass half-empty or half-full. Some may say there’s no good reason that a child who initially performed at the head of the class shouldn’t continue doing so. And they’d be right. There are real consequences for graduates who descend from the 90th to 70th percentile in terms of merit-based aid and choice of college. It is up to the parents, schools, teachers, and so on, they’d say, to ensure that a child with that much demonstrated potential maintains buoyancy.

On the other hand, we ended up with more high achievers overall than we started with. The proportion of “Late Bloomers” surpassed the “Descenders” at both grade-level bands and in both reading and math. Surely that’s good news.

Second, and more distressing, the progress of the high achievers didn’t keep up with that of their lower-achieving peers, at least in reading. (In math, the performance gaps between high, middle, and low achievers changed very little with time.) In fact, high achievers grew about half as fast from third grade to eighth grade as low-achieving elementary/middle school students, reducing the gap between the two groups by over a third. One could celebrate such gap-closing, but one could also be dismayed by the “leveling” at work. We can hypothesize that many factors contributed to these results—perhaps NCLB’s focus on low-performing schools or Reading First’s focus on struggling readers. We simply don’t know. But we are concerned nonetheless.

Third, poverty amongst one’s schoolmates may not be the thief of high performance that we once thought. Exploratory findings here cast doubt on the notion that wealthy suburban schools produce greater academic gains for students than their poorer counterparts. These findings carry echoes of the original 1966 Coleman report. Perhaps growth over time for the highest-achieving students has little to do with the schools they attend and much to do with what’s happening for them personally and at home. Perhaps.

Finally, while the progress that many students made in this study is praiseworthy, it’s not staggering. Yes, let’s laud our “Late Bloomers.” But keep in mind that most of these kids were already above average at our starting point, with nearly all performing between the 50th and 89th percentiles in third grade. (By definition, they could not perform in the 90th percentile or above). Even our “Descenders” aren’t altogether pitiable; while they no longer performed at or above the 90th percentile as they did in third grade, the vast majority remained above the 70th percentile in eighth grade.

What we’re not seeing is students scrape and claw their way into the high-achieving ranks from the 20th, 30th, even 40th or 50th percentiles. Instead, students come in and out of the top decile but basically stay within the top third of students. These are our high-achieving “bubble kids,” standing between academic fit and stretch; between sufficient and life-changing opportunities; between adequate and stellar futures. No, these aren’t the kids that education-reform outfits fuss about. They aren’t catalysts for campaigns to expand school choice, or initiate weighted student funding, or end

last-in-first-out policies. They don't tug at the heartstrings like the needy children in our most wretched school systems. (Some of them reside there, but most don't.) But they deserve attention, too: Eight, ten, twelve, seventeen years old, with little more than a coin toss determining whether they wind up their school careers simply "above average" or among the country's top achievers and brightest hopes for the future.

What will we do to bolster their odds?

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