

Misplaced

Why are **students who succeed** in algebra being left behind?

Math seems like a natural progression. Addition leads to subtraction; multiplication flows into division; whole numbers give way to fractions and decimals.

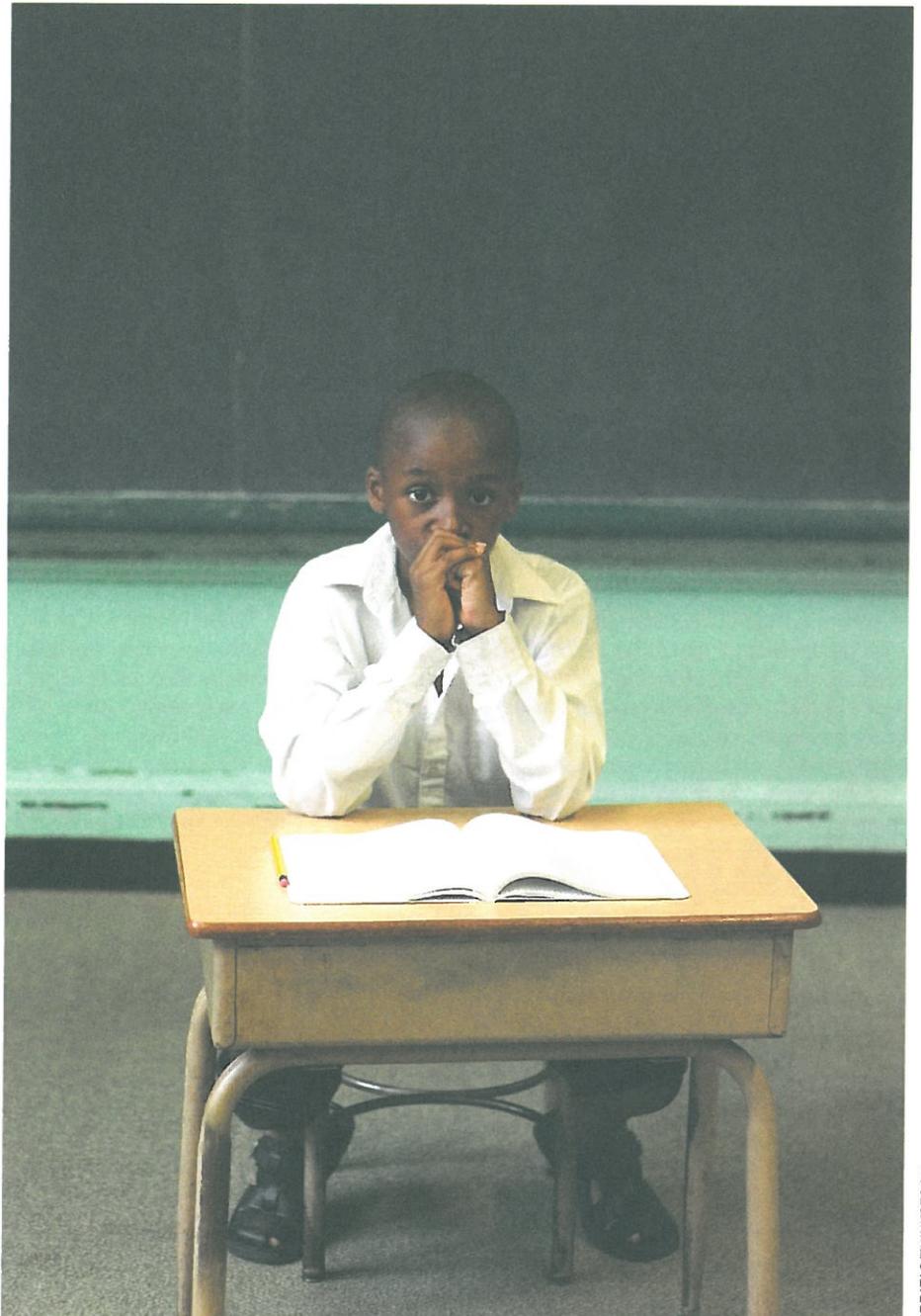
Then, with algebra, letters replace numbers, and formulas appear in place of simple arithmetic. Algebra is regarded as a challenging hurdle on the academic racetrack. But it is not insurmountable.

Completing Algebra I before high school significantly increases a child's chances of earning a high school diploma and attending a four-year college. Because college graduation has become a prerequisite to career success, California's Board of Education voted in 2008 to phase in mandatory algebra courses for all eighth-grade students.

Unfortunately, some children clear the algebra hurdle only to be sent back to the starting line.

A REPEATED PROBLEM

California students who succeed in eighth-grade Algebra I should move into Geometry for their freshman year. But research shows that disproportionate numbers of minority and disadvantaged students



are being pushed into Algebra I again when they get to high school — even when grades or standardized test scores indicate they should advance. This misplacement derails a child from the college track.

“While it is technically acceptable for a college applicant to take Algebra I in ninth grade, the most competitive students begin ninth grade in Geometry and graduate having taken Calculus or another college-level mathematics class,” notes *Held Back*, a report issued by the Lawyers’ Committee for Civil Rights and funded by SVCF.

“We don’t get the hand-offs right in education,” says Erica Wood, senior vice president of community leadership and grantmaking at SVCF. “Every time a kid makes one of those transitions — from pre-K to kindergarten, or from elementary to middle school and then on to high school — the transition is a point of vulnerability where a student can be set up for success or can be misplaced and set up for more challenges.”

A SOLUTION FOR WRONG ANSWERS

Holding students back in math can have devastating consequences that cascade forward for years.

“The number one goal, especially in Silicon Valley, is to close the achievement gap,” says Dr. Morgan Marchbanks of Stanford University’s Graduate School of Education. “But how are we going to do that if we keep lowering expectations?”

A 2010 study from the Noyce Foundation, called *Pathways Report: Dead Ends and Wrong Turns on the Path Through Algebra*, revealed some troubling truths.

Nearly two-thirds of students were being held back after they completed eighth-grade algebra, including many students who had received good grades. “Progression was more uncertain for students from some ethnicities than from others,” the report noted.

At the time, Marchbanks was assistant superintendent for educational services at Sequoia Union High School District in Redwood City. After reading the report, she and fellow administrators investigated where Sequoia placed successful eighth-grade algebra students.

What they discovered shocked her.

“We found that the students for whom lower

placement occurred were almost exclusively kids of color who had attended the Ravenswood School District previously,” she says. “Their test scores indicated higher ability, but their teachers were recommending different placement.”

Why? The reasons varied, she says. Some teachers expressed concern about students who didn’t regularly complete homework. Others were worried that students didn’t pay close enough attention in class. And still others said the students simply weren’t ready to face academic challenges.

Sequoia set aside such subjective considerations and placed students in math courses according to their test scores. Within a year, the district had achieved “accurate placement” between 96 and 99 percent of

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the time. On behalf of SVCF, Marchbanks now is preparing a template other districts can follow.

“It is a social justice and an equity issue,” she says. “We need to make sure every kid gets a high-quality education with rigorous standards.”

SVCF FIGHTS MISPLACEMENT

The community foundation also has

commissioned a follow-up analysis of data gathered in 2012 on more than 24,000 students at 24 unified school districts throughout California. The original data, reported by WestEd, revealed that few students who repeated Algebra I improved their test scores after a second year of algebra study. Many actually scored lower.

Wood notes that based on an initial look at the follow-up analysis, black, Latino and low-income students were more likely to be held back in Algebra I for a second year than were white, Asian and high-income students.

With new Common Core State Standards coming (see page 3), “Now more than ever proper placement needs to be front and center,” Wood says.

Learn more about SVCF’s education grantmaking at siliconvalleycf.org/spring-2014/education-grants.

Algebra Advocates

The push for algebra success is nothing new for SVCF. Below are four highlights from past work.

1 From 2010 to 2012, the community foundation awarded nearly \$3.8 million to nonprofits working on in-school and out-of-school strategies for improving performance.

2 Student-focused programs reached 6,340 students, who in turn were more than twice as likely to be on track for college than non-participating peers.

3 More than 80 percent of teachers in professional-development programs said their teaching skills improved as a result of training.

4 Students whose teachers received training outperformed their peers on standardized tests, with 56 percent scoring proficient or higher, compared with 31 percent of students whose teachers did not receive training.

(Source: *Closing the Middle School Achievement Gap in Mathematics*, SVCF Education Impact Brief)