

# Silicon Valley aims its tech at helping low-income kids get beyond high school

## New platform gives some students a message they rarely hear: They can go to college

by [Jon Marcus](#)

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On the verge of finishing high school, Allison Dinsmore doesn't know yet what she'll do after she graduates. She says she didn't have relatives with college degrees to nudge her toward college. Photo: Alison Yin for The Hechinger Report

NEWARK, Calif. — It's a few months before she'll graduate from Newark Memorial High School and Allison Dinsmore doesn't have a plan for what will happen after that.

Unlike students in the far wealthier cities and towns surrounding hers, she wasn't prodded since birth by her parents to prepare for college. No one in her family has ever gotten a degree. She never took the ACT or SAT.

"Last year I thought about it a lot because as a junior you start to realize how fast things are going," she said in the library, otherwise empty but for students playing cards. "I didn't know better, and it was too late. I feel like I'm not prepared."

It's largely the same story among Dinsmore's friends, with whom she hangs out most days around a blue metal picnic table in the high school's asphalt courtyard. [Just under half the students here are considered poor, more than half are Hispanic](#) and few of their parents have degrees.

Those are exactly the characteristics of the high school students least likely to go to college. It's not that they have less potential than their counterparts in predominantly white, more affluent communities. What they lack is college-educated relatives, counselors, role models or mentors to

make sure they take the courses and meet the deadlines they need to, or who encourage them to think about their further educations.

**Fewer than one in five children of parents without higher educations end up getting degrees.**

“This is self-perpetuating,” said the superintendent, Patrick Sánchez, who is trying to change that culture and hangs out with students as a mentor and a coach. “These are smart kids, but they’re not seeing themselves in college, and they’re not hearing enough that they can. And kids will act the way you treat them.”

Meanwhile, Sánchez said, “If you look at a wealthy or predominantly Anglo high school, from the time those kids walk in the door they are continually told they’re highly intelligent, that they’re all going to succeed.”

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Newark Memorial does have one thing most high schools don’t: Silicon Valley. And some local entrepreneurs, backed by advisors from nearby Stanford University and elsewhere, think technology can help to solve this problem.

Those entrepreneurs have created a platform, and company, called Siembra — a Spanish word for sowing seeds — that reaches out to low-income, first-generation and racial and ethnic minority high school students on their ever-present smartphones, nagging them to stay on track the same way college-educated parents of wealthier kids do.

“Where do you want to go to college?” asks the very first text, sent to ninth graders.

“No one has ever asked them that,” said Julio Garcia, a consulting senior research psychologist at Stanford working with Siembra, who studies how assumptions people make about them — largely based on stereotypes — have as much of an impact on the success of students as their aptitude and preparation. “Many kids have no expectations that they should go to college. They’re below the radar, for all kinds of reasons.



Patrick Sánchez, superintendent of California’s Newark Unified School District. Photo: Alison Yin for The Hechinger Report

He experienced that himself, Garcia said, when he was growing up, near Sacramento.

“Occasionally somebody would ask me about going to college. But nobody asked my classmates. It was not considered a viable option, so why waste your time asking the question?”

Sánchez, too, said he was “low-tracked” in high school. He went to community college to study automotive and diesel repair. Only later did he become an educator. The first in his own family to go to college, “I was a statistical anomaly,” the superintendent said.

He’s right. Far fewer children of parents who did not finish college — so-called first-generation students — go on to higher educations, [a study released in February by the U.S. Department of Education](#) confirmed: 72 percent, compared to 93 percent of those whose parents have bachelor’s degrees and 84 percent whose parents have any postsecondary education.

Nearly half of first-generation students who did continue went to community colleges, which [spend less per student](#) than many public [primary and secondary schools](#), and where the odds of ever graduating are also comparatively low. That’s twice the proportion of students whose parents have bachelor’s degrees.

“There’s a really tremendous gulf,” said Katie Berger, senior policy analyst for higher education at the nonprofit advocacy organization The Education Trust. “The scope of this problem is huge.”

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It’s not because first-generation, low-income and racial and ethnic minority students are less smart than higher-income whites; the lowest-income students with the highest scores on eighth-grade standardized tests are still less likely to go to selective colleges than the highest-income students with the lowest test scores, [according to The Education Trust](#).

But compared to the children of parents with bachelor’s degrees who can help them navigate the complex college application process, far fewer first-generation students take courses in high school such as trigonometry or statistics, often required for college, the Education Department found; only a third as many take calculus and fewer than half as many enroll in Advanced Placement classes.

The high schools they attend are also much less likely to have many college counselors. The average public school counselor in the United States is responsible for 483 students, [according to the American School Counselor Association and National Association of College Admissions Counselors](#), nearly twice the caseload the association recommends. In California, it’s one counselor to 760 students.



Students at the Luis Valdez Leadership Academy, a charter school on San Jose’s low-income east side. Students here are strongly encouraged to go to college. Photo: Alison Yin for The Hechinger Report

The result is that fewer than one in five children in the U.S. of parents without higher educations end up getting degrees themselves, [the Organization for Economic Development and Cooperation reports](#). That helps contribute to the fact that students from high-income families are nearly five times more likely to get bachelor’s degrees by the time they’re 24 than those from low-income families, [according to the Pell Institute for the Study of Opportunity in Higher Education](#).

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Siembra, a for-profit company that’s paid by participating colleges, has only early results to share. It says students are reading their college reminder texts about 80 percent of the time, and 10 percent respond with follow-up questions for their counselors. In an unrelated project, [researchers at the universities of Virginia and Pittsburgh](#) found that text messages sent during the summer after high school graduation improved the likelihood that high school students would follow through on plans to go to college by up to 7 percentage points. \*

Still, there are inherent shortcomings, Berger said. For example, she said, “It’s not going to help a student to text them to take AP algebra if their high school doesn’t offer it.”

Constant reminders are among the many ways Hispanic young people are being pushed to go to college by a charter school called Luis Valdez Leadership Academy, spread among some prefabricated buildings in San Jose’s low-income east side. College banners plaster the walls, the teachers double as college counselors and the sponsoring foundation raises money to take students on campus tours. Angela Rascon, a senior here and part of the first class, which will graduate this spring, enthusiastically describes her plans to head for college next year. But when she went to take the SAT at a private school in a wealthier town, Rascon said, she realized that “I was the only Latina in the room.”

That’s more than just a sad statistic. With one-third of college-age students now coming from first-generation backgrounds, it’s a big problem for places starved for educated workers — including Silicon Valley, where three-quarters of math and computer workers aged 25 to 44 had to be imported from abroad, according to the [2016 Silicon Valley Index](#).



Allison Dinsmore and her boyfriend, Grant Montgomery, students at California's Newark Memorial High School. Montgomery says college recruiters seldom come to their school. Photo: Alison Yin for The Hechinger Report

In Newark, the water heater and Peterbilt truck factories have closed or moved away and most of the largest employers now are small tech companies that are starting to arrive. Yet [only about 30 percent](#) of Newark Memorial graduates meet the requirements for admission to the public University of California system

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“There is increasing recognition that there’s an economic imperative to increasing college attainment,” Berger said.

It’s also increasingly a concern for colleges and universities that need to fill seats.

“This problem has been around for a while, but it’s becoming more urgent,” said Garcia. “Because the demographics are changing so rapidly, if your system excludes this group of people, you are condemning your system to mediocrity.”

Siembra uses its proprietary algorithms to provide early actionable intelligence from its partner schools and districts to unearth prospects for its client colleges and universities seeking out, say, female Hispanic sophomores who are good at math and science. Some of the students who might otherwise have never gone to college boast grade-point averages as high as 4.2, said founder Timothy Michael Kral, a former corporate finance director at software companies whose own Mexican-American daughter asked him to help the classmates she saw getting little college-going help.

“These students are invisible to the [college] recruiters,” Kral said. “No one is telling them how valuable they are.”

It’s true, said Grant Montgomery, Dinsmore’s boyfriend and fellow senior, back at Newark Memorial High School. “No one comes and looks at Newark.”

A running back for the Cougars (2-8 this season) Montgomery wears a knee brace from a football injury. He’s thinking about going to community college to become a firefighter or electrician. When the team played wealthier schools, he said, he saw students who were bound for four-year colleges and universities, and bachelor’s degrees.

“Their school gives them the pride,” Montgomery said. “It’s more money over there, and that’s the difference.”

*This story was produced by [The Hechinger Report](#), a nonprofit, independent news organization focused on inequality and innovation in education.*