

BRAINY BUT EASILY DISTRACTED, *the author barely made it through high school and dropped out of college. Would a program like New York's new School of One, which uses technology to tailor learning to each student's style and pace, have made all the difference?*

THE LITTLEST SCHOOLHOUSE

By TA-NEHISI COATES

SOMEWHERE AROUND FOURTH grade, I started fantasizing about dropping out of school. I was in the midst of accumulating the initial marks on what would become a lengthy scholastic rap sheet. I had no trouble keeping up in my class of 30 or so. But I talked whenever the mood struck me, flicked paper footballs across the room, and instead of practicing subject-verb agreement, daydreamed about being reborn as Tony Dorsett. Among my favorite tricks was raising my hand for the lavatory pass, and then heading out for an epic schoolwide spin. I was evolving into the kind of kid who knew the line between hijinks and delinquency, but had no sense of how easily the first led to the second.

This was the mid-'80s—violent crime was rising, while the job pool for high-school dropouts was shrinking. A kind of mania gripped black parents in Baltimore. For black boys, there seemed to be only two roads—college or jail—and my parents would go to any ends to ensure that I took the former. I was the sixth of seven kids, and in my house, school was virtually the only way to elicit parental approval. My mother, herself a teacher, checked my notebook every night, and created progress reports for my teachers to fill out with categories like “paid attention in class,” “finished assignments,” “did not talk out of turn.” My father approached PTA meetings the way a patient approaches an oncologist. Every report of my acting out—and there were many—was treated as an early symptom of “Amount to Nothing” disease.

Each year, I started school resolved to ward off the diagnosis. But by the third week, I'd revert back to type by clowning in class or lying about homework. My roller-coaster ride through the Baltimore-area schools included two suspensions, two expulsions, and an arrest by school police. In 11th grade, after I was kicked out of the local magnet school, my dad just shook his head and told me I'd disgraced his name. I went on to pull something decent together in my last year of high school and make it to college. But after several years of on-and-off attendance, I finally fulfilled my fourth-grade fantasy and dropped out. In so doing, I achieved a dubious distinction—I became the only one of my father's seven kids not to graduate from college.

I left college with a sense of impending doom, partly convinced that I would immediately start accumulating felony convictions and make the old black-boy prophecy come true. In fact, I went on to a creditable career in journalism. I started a family that has held together, and became a tax-paying (if occasionally delinquent) citizen.

In 2005, I was hired by *Time* magazine. I had an office 23 floors in the air, in Midtown Manhattan. I used to look down on Sixth Avenue and wonder about the distance between my scholastic and professional lives. How could I utterly fail in practice and then succeed in the game? People constantly tell me that I should wear my dropout badge with pride. But I never have. I really wanted to succeed in school. More troubling to me: I've always known that the unquestioning support from my parents allowed me to bridge the gap between

school and the world; but all my life, I saw bright kids who couldn't count on that support. What about them? What, I wondered, were schools doing to help them? And if I went to school today, would I find a classroom better able to cope with a student like me?

I took these questions with me to I.S. 339, a middle school in the South Bronx operating a promising after-school math pilot program called School of One. The biggest difference between my work life and my school life is that my job allows for a high level of personalization. Unlike my teachers in school, my editors don't unilaterally insist that I do a story a certain way; instead, we come to an agreement. Intriguingly, School of One attempts to apply that same kind of personalization to the teaching of math. To put that in the edu-speak vernacular of Joel Klein, the chancellor of New York City's schools and one of the program's biggest boosters, School of One tries to "move from the classroom as the locus of instruction delivery, to the student as the focus of instructional attainment."

School of One is the brainchild of a Teach for America vet named Joel Rose. A former Houston-area elementary-school teacher, Rose watched the kids who left his class graduate to everything from high school to the county jail. He wanted to know why educators were able to reach some kids but not others. So he tracked down his former students and talked with them about how their experiences in his class had affected their future. After hours of conversation, Rose began wondering about the possibilities of an individualized curriculum.

Teachers generally work on a mass-production model—if 30 kids are in the class, the goal is to find a method that will allow the highest percentage of them to succeed. A great teacher can employ secondary methods to get through to laggards, but given the variables that individual students bring to the class, a handful of kids will inevitably be short-changed. Teaching each child at his or her optimal level with

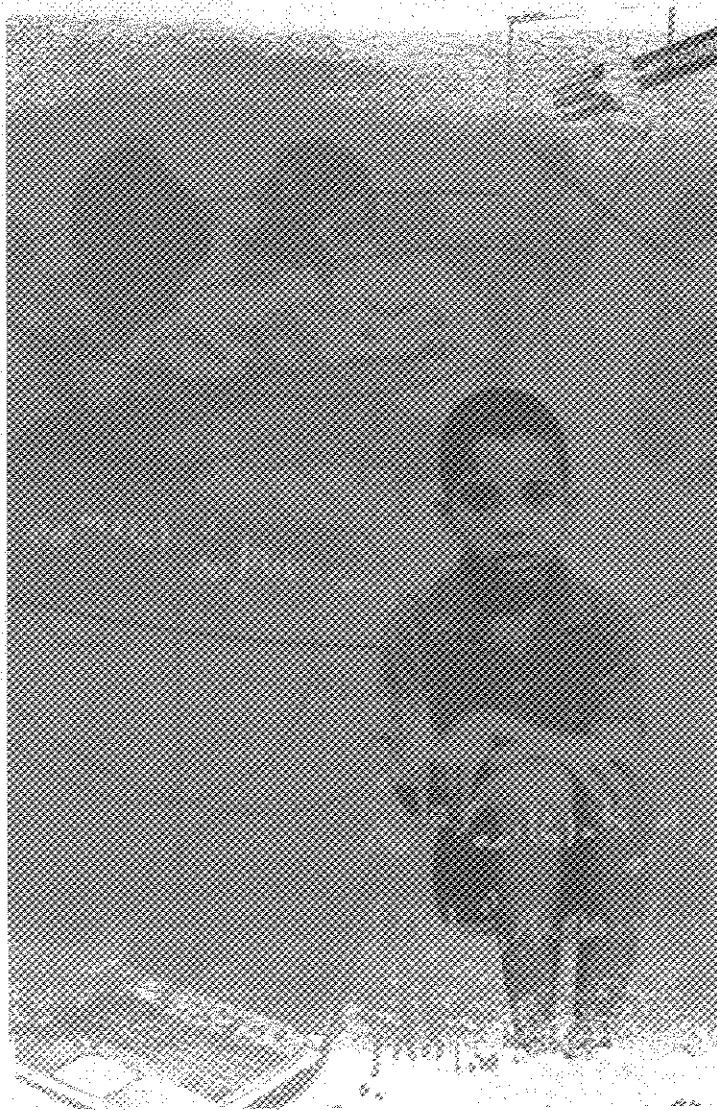
the optimal technique has traditionally been left to private schools and expensive tutors. But with more schools employing computers, Rose saw a chance to bring boutique education to a mass public-school audience.

He envisioned a classroom broken down into stations, each one designed to teach specific skills in different ways. A kid who needs to learn how to calculate the area of a circle could be taught in a group with a teacher, with a virtual tutor, or with a computer program. "The vision I had was a large

open space with different modalities happening at the same time," Rose told me. "I don't know a lot about technology. But I did talk to people who know a lot about technology. I said, 'I've got this crazy idea. Is this even doable?' And they said, 'Yeah.'"

School of One is the tangible result of those conversations. To come up with a way to tailor a lesson plan and teaching method for 320 seventh-graders in a pilot program at three schools, Rose collaborated with Wireless Generation, a Brooklyn computer-programming firm. Together they created an algorithm capable of weighing a student's academic needs, his or her learning preference, and the classroom resources. Here's how it works: first, the student and his parents and teachers are surveyed about his classroom habits. Then the student takes a diagnostic test to see how well he understands basic math. Those data are then sent to the New York Department of Education's headquarters in Lower Manhattan, where School of One's algorithm produces a tentative lesson plan. That lesson plan is then e-mailed to the student's teachers, who revise it as they see fit. At the end of every day, the student takes another short diagnostic, which is used to create another tentative lesson plan that appears in the teachers' inboxes by eight o'clock that evening.

The result is that one student might learn to add fractions at a dry-erase board with a small group, while another student uses the Internet to practice calculating the area of a



Would his own curriculum have helped? The author in second grade.

circle with a tutor in Kentucky, while still another student learns about factoring through a game on his laptop.

Launched in 2009 as a summer program in Chinatown, School of One posted encouraging initial results. An audit by the city school system, weighted for demographics and starting point, found that students' diagnostic scores improved by 28 percent between the beginning and end of the program. Given the school system's intense focus on the achievement gap, the program seemed to Klein and some of his colleagues like a natural candidate for schools with large black and Latino populations.

I.S. 339 was the ideal site for a beta test. The school is 67 percent Latino and 31 percent African American. Almost all of its kids are poor enough to qualify for free or subsidized lunches. Its principal, Jason Levy, is an ardent techie who publishes a blog called *Principal 2.0: One Principal's Thoughts on Building a New Kind of School*. When he arrived at I.S. 339 six years ago, he obsessed over how he could use technology to improve the school's woeful test scores.

Levy made the school wireless, gave every kid access to a laptop, and had teachers dispense assignments through e-mail. Perhaps most important, he took a rudimentary stab at personalizing education by grouping his teachers into teams assigned to the same students, enabling them to compare notes and design specific strategies for kids who were faltering. The results were impressive. When Levy arrived, only 9 percent of I.S. 339's kids were at grade level in math, and only 12 percent in English. Last year, 62 percent were at grade level in math, and 40 percent in English.

But Levy wasn't satisfied. "We [had] had, on our best days, flashes of differentiation," Levy says. "But we hadn't been able to sustain something systemwide. We had all the preconditions, but we didn't have the package."

I saw the package on a warm spring day. It was just after 3 p.m., and kids were streaming out of I.S. 339, laughing and joking. Along with a group of education-policy wonks and potential funders, I met up with Rose in a large first-floor classroom, where a sky-blue School of One banner hung from the rafters and 30 or so kids in small groups were hashing out the nuances of seventh-grade math. Some worked by themselves on laptops, with headsets linking them to a virtual tutor. Others were at a dry-erase board with a teacher or high-school tutor. At the front of the room, a large electronic monitor, like an airport arrivals board, identified every student in the room and the station where he or she should be working.

Before Rose showed us the session, he'd stood outside explaining several charts and graphs on the wall, providing some context for what we were about to see. Everyone else listened patiently. I did my best to fit in, but inside I was agitated. I wanted to figure out for myself what I was seeing; I didn't want it explained. I caught myself thinking, *I wish he'd just let us see the damn program*. I was much the same in school—bored by the lectures full of instructions on how to experience content, and desperate to experience it myself.

In my junior year of high school, I was assigned *Macbeth* in English class. I failed English that year—they lost me at *hamartia*—and was kicked out of my magnet school. When I landed at my zoned high school, for my senior year, I had

to retake English and reread *Macbeth*. But this time I got a teacher who simply handed us the book and told us to go to it, and saved the lectures on *hamartia* for after we'd learned to appreciate the text.

"Some students can sit for a long time in a classroom, and then some can't," says Blair Heiser, School of One's math coach. "It's not necessarily a learning disability; they might need [to get] the information in a different way."

I think that what went wrong with me and school, went wrong very early and was never fixed. Daniel T. Willingham, a professor of psychology at the University of Virginia, says that one of the biggest barriers for kids in school is the narrow entryway to success. "You've generally got one shot at school," Willingham says. "And if you're not good at reading and arithmetic, you tune out, and school becomes a place where you're not very happy, where you go to fail."

The problem, Willingham argues, is that the "one shot" is tightly defined—reading in elementary school, for instance, is about pulling the main idea from stories. It's not seen as part of social studies, the arts, or science—classes rarely taught at the elementary level. But the same basic comprehension skills come into play in those areas as well. "I tell music teachers that they need to start telling people that they're reading teachers," Willingham says.

School of One's most promising aspect is the variety of ways it allows kids to succeed at math—the many ways a student is allowed to "get it." Next year, in the three pilot schools, the after-school program will be expanded to replace the current math curricula.

The long-term hope is that the model will prove successful enough to be applied to other subjects. But that will also depend on funding. At the moment, School of One is a public-private partnership. So far, the program has cost \$3.3 million. Thirty percent of that funding has come from New York City's Department of Education. But the other 70 percent has come from venture philanthropists like the Robin Hood Foundation and the Michael and Susan Dell Foundation. For all of Chancellor Klein's support, he is insisting that School of One's implementation at any given school not increase that school's overall budget—a stiff challenge that Rose insists he can meet. School of One also faces technological obstacles—it needs a school that's wireless and has a laptop for every child.

As for the classroom of the past—of my past—I entered school just as educators began grappling with the computer's potential to help teachers and students. By the time I was in high school, we were using the computer lab once a week for math. But we were using it the same way we used pen and paper—a teacher at the front of the class and all of us following along. The computer lab bored me as much as the chalkboard. By then, I knew that I wasn't taking to education-as-mass-production. I thought I was lazy (and maybe I was) and lacking the will to learn. But as I watched the kids at I.S. 339 working at their own pace and in their own way, I wondered if all I had ever really needed was the equivalent of a warm hug from a cold algorithm. ■

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