



Starting  
**SMALL**  
for **Big**  
**School**  
Improvement

### Teams identify a high-leverage skill gap for a small group of struggling students.

They analyze how current learning conditions work to produce this gap.

The information is used to close gaps for those students and to improve learning conditions schoolwide.

In the Scaffolded Apprenticeship Model (SAM), a school improvement strategy in place in New York City; Boston, MA; and Oakland, CA, teacher teams improve their schools by studying and closing high-leverage learning gaps for small groups of struggling students as a strategy for systemic change.

SAM's goal is for each school to continually expand its sphere of success—that is, the number of students for whom current practices are working. SAM's strategy is for teams to study the school in microcosm—specifically, for them to identify and close specific skill gaps for struggling students, understand how schoolwide learning conditions allowed those gaps to persist, and make strategic improvements to schoolwide learning conditions that will benefit all students.

Three years of preliminary research supports SAM's theory of change—namely, the power of “staying small” as a lever for systemic improvement. One finding showed the effectiveness of this strategy for large high schools, a sector historically unchanged by reform. A second finding was that it works best when there is strong collaboration between a principal and an external facilitator who understands that getting small is not an end in itself, but a strategy for larger change (Talbert et al., 2009; Talbert & Scharff, 2008).

#### The Model

The core of SAM is action research in which a team of practitioners:

- Identifies a high-leverage learning gap for 15–30 struggling students at their school—

something specific that these students need to learn that they have not learned.

- Studies the current learning conditions that have resulted in those outcomes. The team may find, for instance, that the current curriculum assumes prior mastery.
- Designs, implements, and monitors the impact of small, strategic changes that are designed to make a big difference for students in the target group and for one specific learning condition schoolwide.

As with other programs that promote evidence-based inquiry, the goal is for the cycle to become embedded in standard practice so that students in the targeted group will continue to learn and the sphere of success will continue to grow. What's different in SAM is that the primary reason for studying a small group of students is to illuminate how the school works as a system for the students who are outside the sphere of success as well as for the students who are successful.

Studying the system through the lens of students for whom it is not working clarifies which decisions lead to patterns in curriculum and instruction that consistently fail to meet specific students' needs. The tight focus on a small group of students makes facing and addressing those conditions manageable; shifts the conversation from generalities and assumptions about why struggling students can't learn to specific information about what they don't know and how teachers can help them learn it; and illuminates places where a small, strategic system change can make a big difference.



## About SAM

The Scaffolded Apprenticeship Model (SAM) was jointly developed by the School of Public Affairs at Baruch College of the City University of New York and New Visions for Public Schools and funded by the Carnegie Foundation. For a detailed description of the inquiry team process, see [www.childrenfirstintensive.com](http://www.childrenfirstintensive.com). A streamlined version of the model has been adapted to the inquiry team process that is now mandated in New York City schools as part of the current wave of Children First reform.

The following conditions best support SAM's success:

- A principal who is focused on closing achievement gaps as a core strategy for school improvement.
- Partnership with a well-trained external facilitator who has a deep understanding of program principles and strategies.
- Strong collaboration between the principal (and other school leaders) and the external facilitator when deciding how best to move between staying small and getting big. A principal's job is to keep an eye on the big picture. A facilitator can keep the focus small. The partnership allows for strengths in both areas and strategic moves between those perspectives.
- A new conception of the principal's role. The principal's job in this framework becomes lead learner—supporting the ongoing leadership development and collective learning of teachers throughout the school.

## New Dorp High School

For five years, New Dorp High School in Staten Island, NY, has participated in SAM to produce dramatic, steady improvement in student outcomes within and beyond the identified group of students and to foster a culture of continual, evidence-based improvement (Talbert et al., 2009; Talbert & Scharff, 2008). The school provides a stunning example of using SAM. In 2006, New Dorp transformed itself in one year from a traditional comprehensive high school into eight theme-based smaller learning communities (SLCs).

Each new leadership team, one per SLC, became a team in SAM. So while the eight leadership teams (each composed of an assistant principal, two teacher leaders, and a guidance counselor) were developing the structural components of their SLCs from scratch, they were also being asked to become data-savvy and to study and improve the achievement of a group of students with whom the school had not previously succeeded.

At first, there was a collective outcry of "not enough time." But after one year, all eight leadership teams advocated making time for SAM. In the second year, they decided to implement SAM schoolwide by leading colleagues through the process during the daily SLC common periods. Now, four years into the redesign, every New Dorp teacher is part of an ongoing, SLC-based inquiry team that is studying and closing skill gaps for the school's most-challenging students. A central inquiry team aggregates findings across SLCs and recommends system changes to be implemented and monitored schoolwide.

## An Example: Big Results in Mathematics

### IDENTIFYING A SMALL SKILL

The team from the Academy of Communication and Media Arts SLC

identified mathematics as the subject area that their students struggled with most. Team members selected 25 ninth-grade students in one team member's class as their target group, all of whom had entered high school with below-level scores on the standardized eighth-grade New York State mathematics exam. Then they set out to identify a specific, high-leverage skill that the students lacked.

First, they analyzed past Regents exams to find out where students with similar profiles were having trouble (i.e., what kinds of problems they typically missed), and they isolated a difficulty with word problems that involved algebra. Second, they analyzed the students' class work, which confirmed that the identified group of students struggled with word problems involving algebra. Third, they developed their own scaffolded assessment to provide more specific information about exactly where each student was getting stuck. They discovered that 17 of the students in the group lacked a basic understanding of what the teachers termed "verbal translation." The students could do basic math computation when it was in the context of a word problem, but they could not translate key "signal" words from the written version into a mathematical form.

### THE CONDITIONS OF LEARNING

According to SAM, the conditions in which students are expected to learn the identified skill are determined largely by decisions in the following four areas:

- What to teach (curriculum)
- Who teaches (patterns in teacher assignment)
- How teaching occurs (lesson design and pedagogy)
- How well it is taught (assessment for learning tools, supervisory focus, and professional learning opportunities).

To understand these systemwide learning conditions, the team looked at the curriculum and discovered what almost every high school team in SAM has discovered: what the identified group of students did not know—and needed to learn next—was not in the current curriculum and was not taught. Although word problems were in the curriculum, verbal translation was not. This misalignment makes sense: struggling students tend to lack one or more foundational skills, but because teachers are under pressure to follow a pacing calendar that is mapped to a high-stakes exam, they may not address foundational skills directly.

The team also explored patterns in teacher assignment, and they discovered something else that is typical across high schools—the most experienced teachers tended to teach the oldest and highest-achieving kids. Until then, the team hadn't thought about the cumulative effect that this pattern had on the students. They realized that what had seemed like individual teaching decisions that were based on personal preference cumulatively maintained the status quo.

### MOVING FORWARD BY STAYING SMALL

The team moved forward with a two-pronged approach. First, they studied what it would take to close the identified skill gap for the students in the target group, keep them on track, and prepare them to pass a high-stakes exam the following year. The team decided that the ninth-grade mathematics teacher would explicitly teach verbal translation—and other foundational skills, as needed—in her class, and her team members would visit and create low-inference (verbatim) transcripts of what took place and later analyze those transcripts in light of student performance data to understand what worked. Once they better understood what worked, they could use effective strategies more broadly.

Meanwhile, the team pursued two deeper changes as a result of flaws in the system that they had already unearthed. First, there was a lack of alignment between what students outside the sphere of success needed to learn and the current mathematics curriculum, so they partnered with the assistant principal who was in charge of mathematics to alter what happened at regular department meetings. Future meetings would be used to look at the results of common unit assessments and to collectively adjust the pacing calendar in response to students' needs.

Second, they decided to experiment with looping. Using what they had learned about the impact of current teacher assignment practices on student achievement, the team encouraged teachers in all subject areas who taught the current ninth-grade cohort to keep the same students the following year. This yielded dramatic improvement for struggling students. The mathematics teacher kept her class a second year, and every single student in that class passed the corresponding mathematics Regents exam one semester earlier than originally scheduled.

### Some Lessons Learned

The problems that schools face are big, layered, and resistant to change. Those complexities can distract from an unfaltering focus on improving the core of teaching and learning—namely, improving the information that teachers have available to them to inform their daily and moment-to-moment decision making about what and how to teach next.

We believe that putting a team's focus on a small group of students who were previously unsuccessful in one essential skill helps those students get the instruction that they need and illuminates how teachers collectively participate in behaviors and practices that produce current patterns in stu-

dent performance.

We know that “getting small” is a counterintuitive strategy for addressing big problems—that at first people wonder how starting so small can get students where they need to be or help a school improve enough to meet current accountability mandates. We believe—and research supports the idea (Talbert et al., 2009; Talbert & Scharff, 2008)—that it is precisely because it is focused and manageable that SAM works in schools of any size and structure and with varying levels of administrative involvement and investment. **PL**

### REFERENCES

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**Authors' note:** Low-inference transcripts are a key SAM tool. Conducting and analyzing these transcripts helps participants shift their focus from teaching to learning, see instruction through the lens of the students, and understand patterns in instructional practices schoolwide (Talbert & Scharff, 2008). For a more detailed description of this tool and the steps of the inquiry process, see [http://is239.schoolwires.com/14031072702333890/lib/14031072702333890/\\_files/Inquiry\\_Team\\_Handbook.pdf](http://is239.schoolwires.com/14031072702333890/lib/14031072702333890/_files/Inquiry_Team_Handbook.pdf)



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