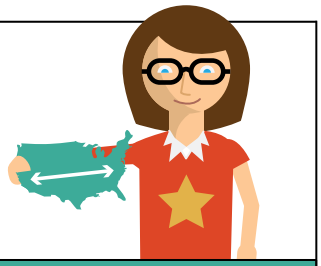
ROCKETSHIP EDUCATION

PIONEERING CHARTER NETWORK INNOVATES AGAIN, BRINGING TECH CLOSER TO TEACHERS

AN OPPORTUNITY CULTURE
CASE STUDY



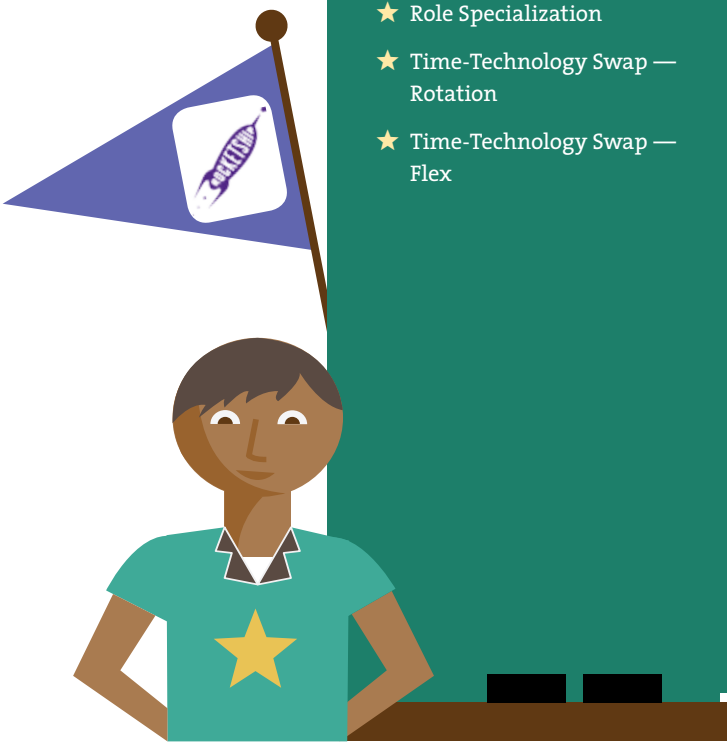
SPRING 2013 VIEW

Reach Models in Use

- ★ Subject Specialization
- ★ Role Specialization
- ★ Time-Technology Swap — Rotation
- ★ Time-Technology Swap — Flex

Fact File

- ★ Seven schools in San Jose, California, collectively serving 3,800 students
- ★ Will open two more schools in 2013–14 — one in San Jose and one in Milwaukee, Wisconsin
- ★ Approved to open 20 new schools in the Bay Area and seven more in Milwaukee, and to expand to five additional cities in four states
- ★ Plans to serve at least 25,000 students by 2017
- ★ Rocketship aims for students to make an average of 1.5 years of growth annually, and tracks this figure internally to spur improvements
- ★ **Results:** Rocketship is the top public school system in California for low-income elementary students, with 90 percent of its students coming from low-income homes, and 70 percent from non-English-speaking homes. Eighty-two percent of its students scored "proficient" or "advanced" on the California Standards Test for math in 2011–12, compared with 87 percent of students in California's highest-income districts. About 90 percent of Rocketship's lowest-performing students move out of the bottom quartile within a year.



SUMMARY

Rocketship Education is a network of seven public charter elementary schools in San Jose, California. With a Milwaukee school set to open in fall 2013, the network will expand outside California, with future schools approved for Indianapolis, Memphis, Nashville, Washington, D.C., and New Orleans. Rocketship plans to serve at least 25,000 students by 2017.

The network has shown outstanding results with its "Rocketeers," becoming the top public school system in California for low-income elementary students, with 90 percent of its students coming from low-income homes, and 70 percent from non-English-speaking homes. Eighty-two percent of its students scored "proficient" or "advanced" on the California Standards Test for math in 2011–12, compared with 87 percent of students in California's high-income districts. About 90 percent of Rocketship's lowest-performing students move out of the bottom quartile within a year.

The schools blow past the state's target of 800 for its Academic Performance Index as well, with an average score of 851 in 2012 — and Rocketship's oldest school, Mateo Sheedy, scoring 924.

They outperform low-income schools in the state by nearly 100 points, and they were on par with schools that were not low-income in 2011–12. High-income schools (those with less than 10 percent of their students designated as free or reduced-lunch recipients) averaged a score of 922.

"The achievement gap is something we can eliminate," says John Danner, Rocketship co-founder and former CEO.

Founded in 2006, Rocketship has made its reputation on its use of blended learning, combining online learning with face-to-face instruction—similar to the Opportunity Culture **Time-Technology Swap—Rotation** model. Through the 2012–13 school year, Rocketeers spent part of each day in a learning lab, learning basic skills online, freeing their teachers to reach more students and focus their teaching on higher-order, enriched instruction. Rocketship teachers have also specialized in subject pairs (language arts/social studies or math/science), which aligns with the Opportunity Culture **Subject Specialization** model.

In 2013–14, Rocketship will adjust its structure, using an open, flexible classroom space for its fourth- and fifth-graders only. Instead of reporting to a separate computer lab, students will move within this classroom between digital learning and in-person instruction, with those moves based on their individual needs and the roles that specific excellent teachers are best suited to play—similar to the Opportunity Culture **Time-Technology Swap—Flex** model and the **Role Specialization** model.

"Excellent teachers and school leaders are at the foundation of transformational schools, and there are not enough excellent teachers to go around," says Rocketship CEO Preston Smith. "At Rocketship, we focus on developing novice teachers and extending the reach of excellent teachers to more Rocketeers through collaboration and flexible learning spaces. This extends the reach of teachers in powerful ways, and, in turn, leads to transformational academic outcomes for our Rocketeers."

HOW ROCKETSHIP'S CURRENT MODEL EXTENDS EXCELLENT TEACHER REACH & CREATES AN OPPORTUNITY CULTURE

In the 2012–13 year, most Rocketship students spent about half of their instructional time each day in traditional classrooms of 20 to 25 students focused on English, language arts, and social studies (other students participated in a pilot of the new model). They split the remainder of the day between learning math and science in traditional classes and going to a learning lab in groups of anywhere from 30 to 115 students for computer-based instruction, small-group learning, and independent reading time, overseen by "individualized learning specialists"—tutors, lab monitors, and providers from community-based organizations.

Rocketship has shown outstanding results with its "Rocketeers," becoming the top public school system in California for low-income elementary students.

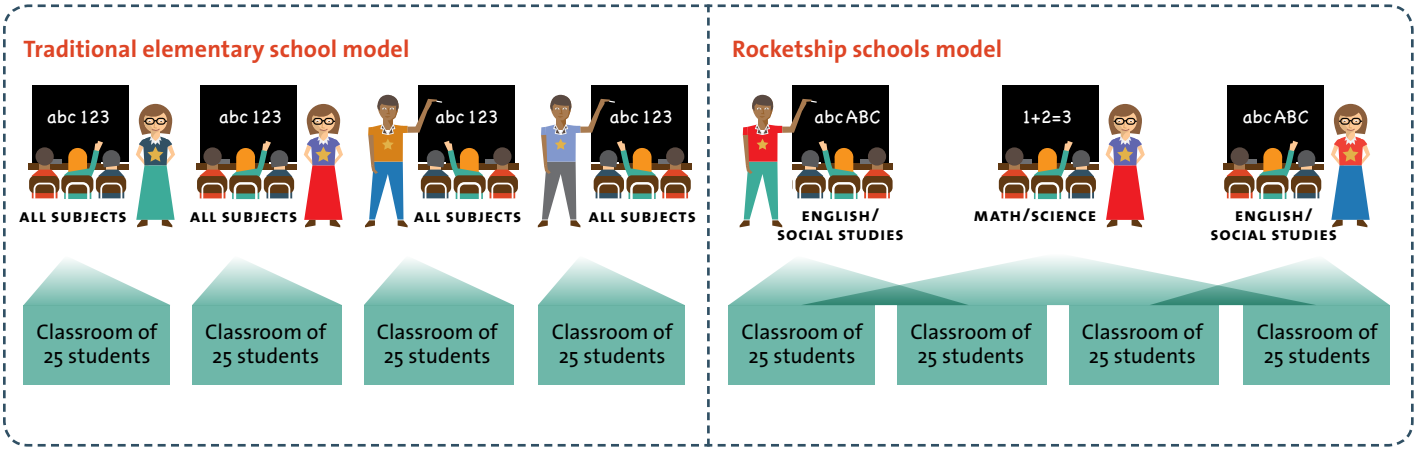
Rocketship's teachers and school leaders collaborate to tailor the learning lab experience to meet students' individual needs, engaging students in areas in which they need additional instruction and practice. In this **rotation model of a Time-Technology Swap,** even though students learn for part of the day through online work and tutoring, in-person teachers are accountable for all students' learning. Rocketship schools, which run from 8 a.m. to 4 p.m., also offer after-school tutoring for struggling students.

"I see students who are growing at such an incredible rate," says Ernie Duque, a Rocketship individualized learning specialist. "I see students who [were] so far behind and are now at grade level or above grade level, because of how Rocketship educates the individual. We're not educating just a roomful of children. We're educating every single individual in that room."

Through the use of online learning, Rocketship can extend the reach of its **subject-specializing** teachers to more students, and employ about 25 percent fewer certified teachers than traditional schools without increasing class size. Where a traditional elementary school would employ about four teachers to reach 100 students, Rocketship generally has three (sometimes four)—two for literacy/social studies and one for math/science—for 95 to 115 students. A literacy and social studies teacher reaches about 50 students, twice the number of students reached by the typical

> "At Rocketship, we focus on developing novice teachers and extending the reach of excellent teachers."—Preston Smith

FIGURE 1. EXTENDING REACH: COMPARING TRADITIONAL AND ROCKETSHIP ELEMENTARY SCHOOLS



> "We think the reinvestment in the development of our teachers is the best way we can spend the money."—John Danner

elementary school teacher. A math and science teacher reaches about 100 students—four times the number reached by the typical teacher (see Figure 1). Additionally, specializing allows teachers to more quickly become experts in their subjects than if they had to teach all core subjects every day.

Individualized learning specialists working as tutors and lab monitors play important roles in Rocketship schools. They help students with basic skills to supplement their online instruction, freeing teachers' time to engage students in higher-order learning. Some schools also get assistance from community organizations, such as Recess 101, which recruits and trains enrichment coordinators, or the YMCA, which provides after-school help and homework support. In addition, Rocketship's computer-based assessments and system of accessible, well-organized, curriculum-aligned instructional resources jump-start teachers' planning and leave them more time to collaborate with other teachers and learning specialists to analyze and respond to individual student needs.

By using these school models, Rocketship's ongoing operations are financially sustainable through per-pupil funding without grant support. (It does use philanthropic funding for school start-up costs, much as some districts use special taxes and bonds to build new schools.) Through its strategies of extending teachers' reach and using learning specialists and technology, the network is able to put $500,000 per school per year into such key areas as higher teacher salaries, after-school programs, facilities, teacher development, and training of principals for future Rocketship schools.

"We think the reinvestment in the development of our teachers is the best way we can spend the money," says Rocketship founder Danner.

By extending their reach, Rocketship teachers earn 10 percent to 30 percent more than their peers in the local public school system. At Si Se Puede, a K–5 San Jose school, the principal offered the school's excellent third-year teachers salaries of about $70,000, nearly 30 percent higher than their peers in a neighboring district.

Having about 25 percent fewer teaching slots to fill also enables Rocketship leaders to be more selective as they search for excellent teachers. Higher teacher pay and increased time to focus on higher-order learning, collaboration, and planning increase teachers' enjoyment of their work, which Rocketship believes will help it retain the excellent teachers it hires.

HOW ROCKETSHIP'S NEW MODEL FOR FOURTH AND FIFTH GRADES WILL EXTEND EXCELLENT TEACHER REACH & CREATE AN OPPORTUNITY CULTURE

In the 2012–13 school year, Rocketship piloted some changes to its learning lab structure, to further strengthen its already solid model. The leaders wanted to fix a disconnect they saw between what happened in the lab versus the classroom by bringing the online work closer to the teachers, giving them more control over the digital learning students experienced and letting them integrate it more into their teaching, to further individualize the teaching.

Teachers wanted more control, says Lynn Liao, chief programs officer.

"Some of the online programs are adaptive and meant to be run without any teacher intervention" Liao says. "It's a little bit at odds with the direction of the current model, where teachers really want to be able to assign kids certain lessons."

Some of the digital programs Rocketship now uses give teachers greater control in both assigning content and making decisions based on the data the programs provide.

Through this individualization, Rocketship leaders believe they can better target student needs.

"[Although that] happens a bit through the [existing lab rotations], we felt like we could do more," Liao says. "So that prompted some further conversation around what our instructional model should look like. And the simple idea of just putting more time in the learning lab, and less time with the teachers, didn't sound that appealing to us, instructionally, given the current capabilities of online programs."

So in a few classrooms in various grades, Rocketship tested a more open, flexible classroom space, rather than sending students down the hall to a lab—a model similar to the Opportunity Culture **Time-Technology Swap—Flex**. In these pilot classes, they removed some classroom and lab walls and installed sliding, partially glass walls instead, so that computers were within one large classroom with multiple teachers and classes of students. In addition, not only was the space flexible, but so were the teachers: Now they specialized not just by subject, but by role, whenever possible.

For example, some teachers continued to specialize in one subject, while others specialized within a subject—such as a teacher who excelled in planning and leading small-group, differentiated reading instruction focusing on guided reading.

The pilot led to a decision to use the flexible, open-space model in all of Rocketship's fourth- and fifth-grade classes in 2013–14. This model will put up to about 115 students (but typically fewer) in one large space, with three teachers and a full-time individualized learning specialist, spending variable amounts of time online depending on students' needs. Kindergarteners through third-graders will continue to follow the set rotation between classroom and learning lab time—about 80 minutes of online lab time—with other rooms in the buildings being reconfigured as smaller learning labs.

Rocketeers spend part of each day in a learning lab, learning basic skills online, freeing their teachers to reach more students with higher-order, enriched instruction.

The New Model in Action

For fourth- and fifth-graders, how will this flex model work—and how could it change teachers' roles and free even more of Rocketship's teachers' time than its rotation model? Here are several examples from Rocketship:

- While one teacher works with 20 students for a full-group exercise, 30 students focus on projects with another teacher's supervision, and 15 students work in small groups with the third teacher's oversight. Meanwhile, 40 students work online while 15 others work independently, with an assistant monitoring both groups.
- Or, two teachers teach the same objective to different groups within one grade, using different approaches and amounts of time. Simultaneously, a third teacher and a tutor pull out small groups for intervention work.

Adam Nadeau, principal of Rocketship Mosaic, a K–5 San Jose school, offers another example that he used successfully during the pilot phase:

- One excellent, engaging teacher leads all of the upper elementary students in a grade level for approximately 75 minutes each day on math instruction; Nadeau took this role.
- That frees the time of the other two teachers, who can pull out small groups of students or focus on other activities, such as collaboration or planning time.
- The first teacher also gains time by teaching all students at once for 75 minutes, rather than teaching the same lesson to 30 students at a time for a total of five hours of teaching each day.

Nadeau emphasizes, however, that "extra-large group instruction" will not always be the best approach. Rocketship aims to use it strategically, to let the best large-group instructors reach more students and save time, and to free other teachers' time to target high-need students and go more in-depth with smaller groups.

And of course, less-experienced teachers may not yet be able to manage such a large group; Rocketship will need to train teachers

Each student will focus different proportions of time on digital learning, independent work, and group work.

in this so it can take advantage of extra-large groups' potential to free other teachers' time.

Nadeau also emphasizes how much this flex instruction focuses on students' needs. Many students in a literacy classroom, for example, may benefit most from being with a teacher conducting a reading workshop, while other struggling students need to focus on phonics. In the rotation model, all students were put into a reading workshop at a certain time, and phonics happened later. In Rocketship's flex model, students from two classes who would benefit from the workshop can be grouped together under one teacher, while the other teachers work in much smaller groups on phonics.

"The essential question at the heart of all this is, does every child need every lesson?" Nadeau says. "[You need] the right kids in the right groups, in the right spaces."

The new model allows a shift in focus from teachers teaching students because they happen to be with them at certain times, for certain amounts of time, to teaching based on student needs.

Early Challenges

The pilot phase highlighted several challenges, including scheduling, roles, and time use.

SCHEDULING: In the pilot, Rocketship's students and staff found it hard to shift from the rotation model, with its fixed schedule and routines, to the often-shifting flex model. Carrying out the planning to yield schedules that may be different for each student, and that frequently change for them and their teachers, seemed difficult to manage at the beginning.

For some teachers, that presented an exciting challenge; others, especially in light of the success of the rotation model, feared and did not understand the change—requiring solid communication from the network.

So for the first full year, schedules will stay simpler to start. Students will not change schedules week to week; for now, the overarching schedules will change about every six to eight weeks, with small adjustments to individual students' schedules.

In general, though, each student will focus different proportions of time on digital learning, independent work, and group work. Students will be around the room in groups of all sizes with teachers, with more small-group work on very targeted concepts than in the rotation model, and with more students working independently under the supervision of teachers or individualized learning specialists, and for varying periods of time.

This fits with Rocketship's focus since its founding on individualized education; the new structure allows it to fine-tune that individualization. At the same time, students move toward independence as they monitor more of their own learning, which Rocketship views as solid preparation for middle and high school.

CHANGING ROLES: Rocketship acknowledges the limits of prioritizing teachers' time based on their expertise and interest, which may not align precisely with students' needs. Finding that balance will take priority in the next school year.

Rocketship also sees a continued need to strengthen intervention practices for those students working far behind grade level. Although they get more small-group time with excellent teachers in the flex model, as a whole, they get less in-person instructional time than the K–3 model due to online instruction and individual work time.

TEACHER COLLABORATION: Having all of a pod's teachers work in one space could strengthen the teaching teams and consistency, and increase chances for collaboration.

"We're actually seeing the skill-building part of this really help, because people have access to each other, not just on the 'what did you do?' but on the 'why are you doing it?' They're solving these problems together," Nadeau says. Still, freeing teacher time for collaboration remains complicated, even in a flexible schedule—in some ways, more so in a flexible schedule as teachers try to make all the pieces fit.

Rocketship uses "lead teachers," who maintain a full teaching load, to assist in some of the collaboration. Lead teachers act somewhat like grade-level chairs, planning and setting meeting agendas, as well as planning what to do with data and how students will work doing flex blocks. Rocketship uses this role to help lead teachers develop their instructional leadership skills with other adults, and pays a stipend for taking on this role. In contrast to Opportunity Culture **Multi-Classroom Leadership** positions, these teachers are not accountable for developing other teachers or for other teachers' student outcomes.

Rocketship's teachers and school leaders collaborate to tailor the learning lab experience to meet students' individual needs.

BETTER USE OF TECHNOLOGY: Teachers want online programs they can control and adjust for their students. Rocketship uses some programs that allow this, but many, including several of Rocketship's most-used programs, do not.

And teachers will continue to need to be truly present while students learn online, Nadeau says, because the reality of online learning today is that most students still cannot work independently for long periods online, as too often it fails to hold their attention.

"It's about the culture and motivation," he says. "I mean, online learning is only good if the kids are going to engage in it. And right now, it's not so engaging ... you know, it's not like an Xbox, where the variety of challenge and levels to complete in most of those games means kids could play it for hours and hours [without losing interest]. I think the bigger question is really about, if kids are going to engage with it deeply, if they're going to have the same kind of ethic around it, if they're going to take it seriously."

Additionally, students often get stuck either because of the software's format or because they lack a vital skill for the problem at hand. Thus, they need teachers nearby to quickly teach what they need to get "unstuck."

In the learning lab rotation model, an issue would be flagged by a lab monitor or in a data report, causing a time gap before the student gets help. In the flexible, open-space classroom, quick response could become easier, with individual help or small-group interventions from a teacher or tutor who notices that one or more students need help immediately.

Financial Implications

Like the rotation model, the flex version uses three teachers to cover a group of students that in a conventional school would have four teachers. It thereby allows funds to be reallocated towards higher salaries, stronger professional development, and leadership training.

Rocketship has made some adjustments to its schools as it moves to the fourth- and fifth-grade flex model:

- It will add an operations manager; as schools have grown to 600 or more students, their operational needs have also grown significantly.
- Traditionally, its administrative staff has consisted of a principal; an assistant principal who oversees the learning lab and individualized learning specialists, as training for becoming a principal; a dean, who focuses on coaching and professional development; and an office manager. Now, as the schools get larger, the staff will no longer have deans, but will consist of a principal; a business operations manager; an office manager; and two assistant principals. Every principal and assistant principal will oversee at least one grade level, including coaching all its teachers, and will be accountable for the results of that group of teachers and students. Like principals, assistant principals will coach and develop, observe, and occasionally teach; Rocketship sees this as a better path to a principal job than the narrower dean position.

How Rocketship Compares Itself to Traditional Expenditures, Per School

	TRADITIONAL CLASSROOM MODELS	ROCKETSHIP'S MODEL
Classroom costs ($18,000 per class)	$378,000	$288,000
Compensation ($85,000 per teacher)	$1.785 million	$1.36 million
Additional services (such as RtI, principal training, higher salaries, facilities, research and development)	$0	$500,000
Number of teachers per school	21	16
TOTAL BUDGET	$2.1 million	$2.1 million

Learn More about Rocketship

FROM ROCKETSHIP:

Rocketship Education
Video: Rethinking Elementary School from the Ground Up
Video: Excellent Teachers and Leaders
Video: Personalized Learning
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REPORTS ON ROCKETSHIP AND BLENDED LEARNING:

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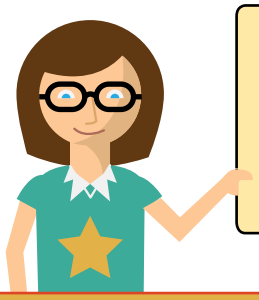
Contact Public Impact using the Opportunity Culture Feedback Form, or e-mail us at: opportunitycultureinput@publicimpact.com.



How Rocketship's Model Will Meet the Reach Extension Principles of an Opportunity Culture

Reach Extension Principles		Rocketship's Plans
Reach more children successfully with excellent teachers.	✔	With about 25 percent fewer teaching slots to fill, Rocketship can be more selective in hiring excellent teachers, who reach about 33 percent more students than is typical through Time-Technology Swaps and (in K–3) Subject Specialization (even without class size increases).
Pay excellent teachers more for reaching more children successfully.	✔	By extending their reach, Rocketship teachers earn 10 percent to 30 percent more than their peers in the local public school system. At Si Se Puede, the principal offered the school's excellent third-year teachers salaries of about $70,000, nearly 30 percent higher than their peers in a neighboring district.
Achieve permanent financial sustainability, keeping post-transition costs within the budgets available from regular per-pupil funding sources.	✔	Rocketship is able to reallocate $500,000 toward higher pay for teachers, teacher development, and other priorities by using its staffing model.
Include roles for other educators that enable solid performers both to learn from excellent peers and to contribute to excellent outcomes for children.	✔	In the new model for fourth and fifth grades, teachers work in the same room in teams. New teachers can play different roles as needed to quickly improve their skills, while paraprofessional learning specialists continue to support a team of teachers within the open classroom space.
Identify the adult who is accountable for each student's outcomes, and clarify what people, technology, and other resource (s)he is empowered to choose and manage.	✔	In K–3, literacy/social studies teachers are accountable for about 55 students each, while math teachers are accountable for about 95 to 115 students. In the new fourth- and fifth-grade model, the principal or assistant principal overseeing that grade will be accountable, as will the classroom teachers. "Lead teachers" plan for a grade, but are not accountable for other teachers' outcomes.

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BUILDING AN OPPORTUNITY CULTURE FOR AMERICA'S TEACHERS

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