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Replicating High-Performing Public Schools

Lessons from the Field

Kimberly Wicoff

Don Howard

Jon Huggett

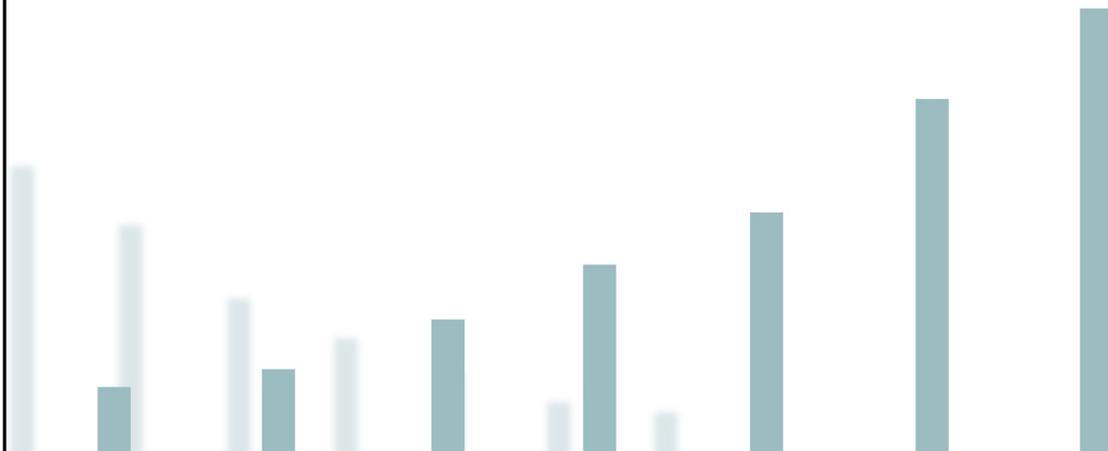


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The fact that far too many students leave high school unprepared to become contributing members of society is hardly news. What is news is the growing number of schools that are proving public education can work for every student. Unlike a decade ago, when it was hard to find more than a handful of high-performing public schools, today many such schools exist. As a result, the goal posts have shifted. The question is no longer, “Can we create schools that will achieve outstanding results for all their students?” but rather, “How can we replicate schools that we know can work, without sacrificing quality outcomes and within the constraints of the existing funding environment?”

School developers across the United States are committed to finding real-time answers to this question, but the challenges they face are huge. On the one hand, quality is non-negotiable. Successful schools, by definition, are those where all students graduate prepared to take the next step into the future, whether that is additional schooling, training, or work. On the other hand, tradeoffs are an inherent and inescapable part of the replication process. New-school developers seldom, if ever, have access to enough financial and human resources to reproduce every aspect of their original school with absolute fidelity. And even were such fidelity possible, differences in local circumstances inevitably would require some degree of adaptation.

In the past few years, Bridgespan has had the privilege of working with a number of school developers who are tackling the challenges of replication. Their experiences provide considerable insight into the hard work of achieving both high-quality educational outcomes and economic sustainability. This set of short papers highlights some of the practical lessons they and we are learning in our work together.

“Quality Outcomes and Sustainable Cash Flows” provides an in-depth look at how one school developer, the New Technology Foundation, aligned its academic and financial priorities by identifying the absolute “must-haves” in its educational model.

Finding ways to ease the financial burdens of replication is the subject of “Trimming Costs, Not Results.” In many cases, developers are finding that small changes in school or class size or in their approach to opening new schools can

produce prudent cost savings—savings that don't compromise educational outcomes.

In "The Role of the Center," we look at how the developer's central office can best support schools to sustain quality, and hence deliver results, without breaking the bank. Experience here suggests that hiring key staff ahead of growth and establishing simple metrics that everyone can watch and lead by are critical priorities.

Finally, in "The Five Cs of Clustering," we look at why some school developers are choosing to cluster schools geographically. Their interest is driven partly by efficiency, but even more by effectiveness in areas such as ensuring fidelity to the school model, developing professional staff, and recruiting new students.

The lessons collected here reflect the experience of a number of trail-blazing school developers. We hope that others who are in the thick of this work will add to, challenge, and amend them so that together we can build a body of knowledge about what is working, and what is not. Today, too many kids are still falling through the cracks and failing. They may not even appreciate their own talents, let alone have a hope of achieving their full potential. The more quickly we crack the code on replicating good schools, the more swiftly all students will be able to do—and be—their best.

Quality Outcomes and Sustainable Cash Flows

Visit the classes or walk the halls of a high-performing school, and it is easy to tell that you're in a place where students and teachers are deeply engaged in learning. Harder to discern are the particular elements of the school's educational model that are critical in achieving this result, or how susceptible to modification the model may be in another location where the economics and environment are different. Suppose, for example, you are a developer whose schools have a distinctive structure and culture. How do you respond when a reform-minded superintendent wants to replicate your school, but the district's union rules won't allow teachers to work all the hours your model stipulates? Do you agree to open the school, even though it will fall a few hours per week short of your requirements? Or do you say "no" and walk away, because this "small" divergence may have big consequences?

Tough choices like these are a school developer's reward for success. As more and more school developers confront them, many are finding that in order to prescribe the "must-haves" in their model they need a finer level of definition than initially they might have thought. To illustrate, consider the experience of the New Technology Foundation (New Tech) in Napa, California.

QUALITY IS JOB ONE

New Tech's history is rooted in that of the Napa New Technology High School (NTHS), a non-charter district school. Business and community leaders launched the small, technology-focused high school in 1996, hoping to attract more high-tech jobs to the Napa Valley. In line with this goal, the school's educational model was designed not only to help students master the academic content necessary for post-secondary work or education, but also to develop the skills (such as collaboration and problem solving) that are essential for 21st century careers. The model's project-based approach to learning, which demonstrates the relevance of education, is particularly well-suited to engage students who have had difficulty with more traditional teaching methods.

NTHS' student outcomes were and are extraordinary: 100 percent of its students graduate from high school college-ready as compared to an average of less than 25 percent at other Napa Valley high schools. As the school's performance became more widely known, interest in NTHS' approach mounted. In 1999 the New Technology Foundation was created to support the flagship high school in Napa and to assist district reformers and charter-school developers who wanted to replicate its educational model.

By the time that Bridgespan began working with New Tech in 2004, 10 sites in four states were using the model, which provides both curriculum and infrastructural support. While several sites were notable successes, others were not yet meeting New Tech's quality targets. When the New Tech-Bridgespan team looked at the struggling schools, they found a common denominator: Each of the sites had been unable to adopt certain elements of the NTHS educational model. Although the reasons for these partial adoptions—fundraising challenges, staffing issues, difficult relations with the district—were understandable, the underlying issues usually had been present when the sites started up. Had New Tech been more prescriptive about the model's must-haves at the time, some of these sites might have opted not to adopt it, or New Tech might not have agreed to bring them into the network.

New Tech's leadership was committed to helping the struggling schools get back on track (a goal that was capped when two of the schools were named California Distinguished Schools in 2005, an honor given to fewer than 200 schools in the state) and eager to forestall similar problems in the future. Accordingly, the team decided to step back and elucidate what in their model was absolutely core. To structure this process, they asked themselves the following five questions, cycling back and forth among them as necessary:

- What makes our schools unique?
- What is critical for each student to achieve the outcomes we seek?
- What do our schools require to achieve these outcomes?
- Where must we invest scarce resources?

- What must we walk away from, even when students are in need or funding is available?

The answer to the first question was straightforward: New Tech's model and educational philosophy are predicated on the belief that project-based learning provides a better way for students to learn, because it makes education relevant and shares the responsibility for learning between the student and teacher. But in light of their experience with replication sites, it also triggered a host of practical follow-on questions: How much project-based learning is enough? Could some subjects such as math, where project-based curricula are hard to develop, be taught by traditional methods? Do all teachers have to design their course work entirely around projects? Does the approach have to be used with every student, even those in need of remedial work?

To answer questions such as these, the New Tech team created a rubric outlining all the elements of the original Napa New Technology High School. Next, they assessed how faithfully each of the sites had replicated each of the elements. Finally, they compared the assessments to the performance data for each school to see where deviations from the model had made a particularly notable difference. In this process, the essential elements of the model—such as individual laptop computers, internships with local businesses and community organizations, and exposure to college-level work—became increasingly clear.

New Tech emerged from this process with a set of quality indicators that were invaluable for assessing the existing sites and evaluating progress as they worked to improve student outcomes. (See Exhibit 1.) In addition, the indicators provided the foundation for a comprehensive set of criteria to which every new school would have to commit. Maintaining a 1:1 student-to-computer ratio is a case in point. New Tech believes high-level computer skills are an essential and integral part of a 21st century education. NTHS students use them for everything from producing their daily assignments, to creating their independent learning portfolios, to communicating with their teachers and school administrative staff. Relaxing this requirement, by allowing a new school to put multiple computers into every classroom but at a ratio lower than 1:1, say, would undoubtedly ease the financial burden of replication. But it would also lead to considerable down time in the

Exhibit 1: Quality indicators for current replications

High Achievement	<ul style="list-style-type: none"> • Leadership and staff have stabilized • Student recruitment has resulted in waiting lists • School's financial resources have been secured over the long run (three to five years) • Large, school-wide projects are happening on a regular basis
Proficient Achievement	<ul style="list-style-type: none"> • School has a 1:1 computer ratio in all classrooms • Team teaching is taking place in several areas • The Learning System is fully implemented • Real world experiences such as internships are incorporated • Authentic assessment practices are in place • Curriculum and practices developed onsite are being captured and shared in the network • Partnerships with higher education are allowing students to start college work while in high school
Minimum Achievement	<ul style="list-style-type: none"> • School is small (under 400 students) • School has developed a separate identity distinct from neighboring schools • A dedicated staff and principal are in place • Facilities support the small school culture • Project-based learning is the primary curriculum methodology in the classrooms • Technology supports PBL methodology (not just content delivery) • Positive culture of professional respect and responsibility exists
Failed School	<ul style="list-style-type: none"> • School has more than 400 students or an identity that is blurred with larger school • School's methodology relies on traditional lecture/text book based instructional strategies • Technology does not play a significant role in supporting non-traditional instructional strategies • Culture does not reflect a professional environment

students' learning experience, dilute the development of their skills, and undermine strong student-teacher relationships. Last but hardly least, the indicators underscored the handful of things, such as a school that was larger than 400 students or that lacked a separate identity distinct from neighboring schools, which would cause New Tech to walk away from a potential site.

THERE IS NO JOB IF YOU CAN'T PAY THE BILLS: PLANNING FOR SUSTAINABILITY

Asking must-have questions without considering real-world costs is asking for trouble, as New Tech's leadership was well aware. So the team also gathered data to analyze the true cost of the model and the infrastructure required to support it.¹ Here, too, they relied on a simple set of questions to structure the process:

- What is the full cost of each element of our model?
- Will this number change when we open a new site?
- How does each of our costs grow?
- Are there predictable peaks and valleys in our expenses and therefore in our cash flows?

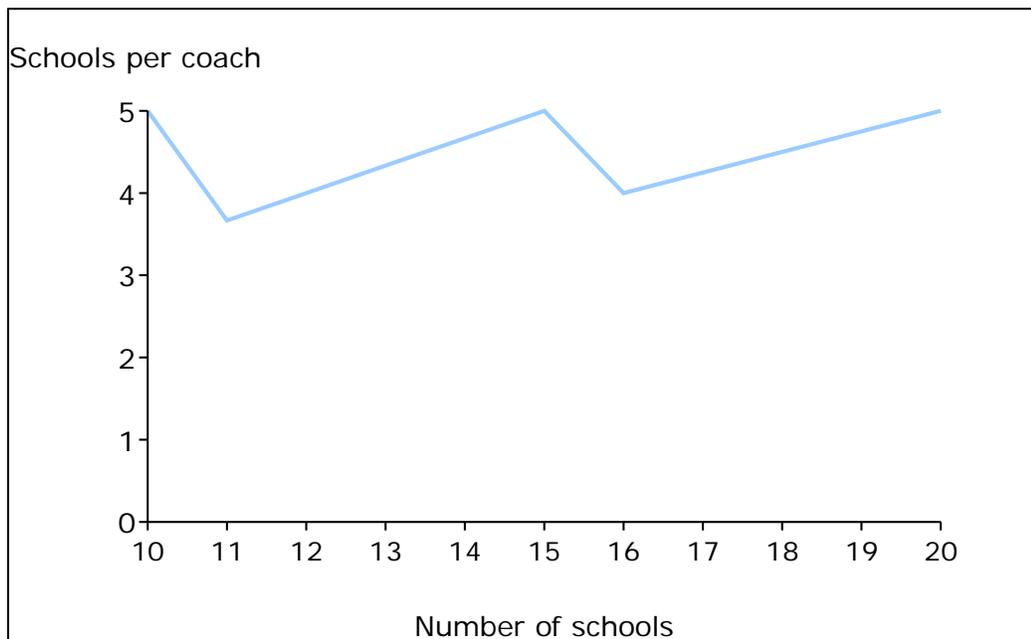
Once again, the devil was often in the details. Consider the cost of providing professional development and support for the teachers. At first blush, determining the full cost seemed simple: salaries for the trainers and compensation for the time teachers spent in the sessions. In practice, this simple equation quickly got more complex. In addition to all the indirect costs associated with the training (the teachers' prep time, for example, and the trainers' own professional development), as the network expanded, there would be additional costs such as the trainers' travel time, accommodations, and meals.

¹ For a discussion of full-cost analysis, please see "Costs are Cool: The Strategic Value of Economic Clarity," which is available on the Bridgespan website, www.bridgespan.org.

Understanding how costs change with growth is crucial to managing replication successfully. Some costs grow with every new student or every additional class. Others are start-up costs, incurred only when a new school opens. Some grow very swiftly as the organization becomes more complex. Still others grow in a step function with the number of schools, which can create opportunities for economies of scale or, conversely, demands on cash flow.

For New Tech, the cost of math coaches fell squarely into this last bucket. With one coach able to support five schools, the organization would need to hire another coach with the opening of every sixth school. (See Exhibit 2.) Attuned to such cost drivers, New Tech was able to set growth targets that would even out some of the ups and downs in its cash flow.

Exhibit 2: Relationship between number of New Tech coaches and schools



KNOWLEDGE IS POWER

Equipped with heightened clarity about its educational model and costs, New Tech made a number of key changes. Several focused on professional development and staff training. As we have seen, project-based learning is at the heart of New Tech’s model. Implementing it is challenging, however, even for experienced teachers. Teachers new to the approach can take up to three years to become proficient. As a result, New Tech decided to invest in hiring more lead trainers and adding additional on-site training sessions for established schools as well as new recruits.

Qualifying new schools was another area where significant change occurred. Previously, New Tech’s staff had done most of the work of evaluating the readiness of potential new sites. Now, the sites could use the newly-codified replication criteria and—with the help of a small planning grant from New Tech—do much of the work themselves, including developing their own “school success rubric” so that they own the responsibility for quality and success themselves. The change not only freed up staff time that had formerly been devoted to evaluation, but also provided a way to test potential schools’ commitment and capabilities.

Because school developers are breaking new ground, a certain amount of trial and error is an essential part of the replication process. That said, what distinguishes successful pioneers like New Tech is their commitment not only to learning from their experience but also to sharing that experience with others, so that they can learn as well. By asking the tough questions, digging into the data, and being willing to make difficult decisions such as turning down a potential replication partner that isn’t quite aligned with the model, New Tech is demonstrating how it is possible to open a high performing network of schools that are sustainable with public funds.

Trimming Costs, Not Results

As developers wrestle with the challenges of replication, many are finding ways to ease their financial constraints without sacrificing the quality of their schools' results. Re-thinking some of the assumptions embedded in their school model and/or their approach to opening new schools is often the catalyst for these cost savings. And while such opportunities must always be carefully assessed, it is not unusual to find that they can help reduce fundraising burdens and contribute to plans for long-term financial sustainability without compromising student outcomes.

IDEA 1: TWEAK THE CLASS SIZE AND/OR SCHOOL SIZE

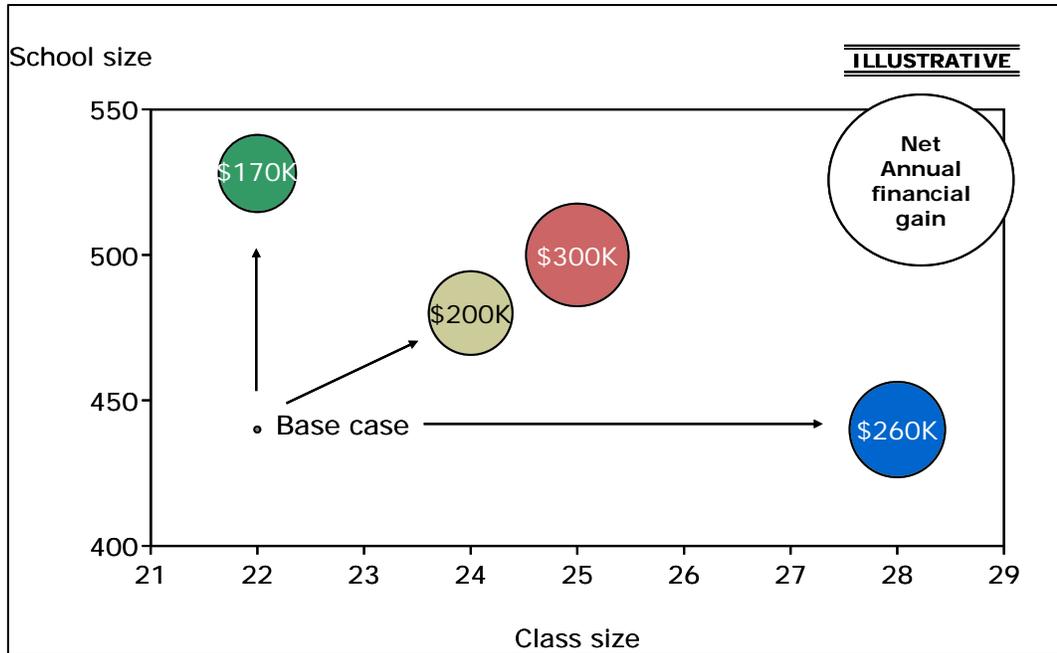
What is the idea?

Because school revenues come largely from government per-pupil funding, even small changes in the number of students in a classroom or the size of the school overall can have a big influence on economic sustainability. Increasing class size by one or two students (from 25 to 27, say), or adding another class per grade (for example, three classes in 9th grade rather than two) can increase revenue substantially.

What is the financial impact?

While the precise financial impact will vary depending on a state's per-pupil funding, it can be significant even in states such as California with low funding levels. For a California-based school with 440 students, adding two students per class (from 22 to 24) and thereby increasing the size of the school to 480 pupils can produce an annual net financial gain of \$200,000. Similarly, keeping the class size small (at 22), but adding one more classroom per grade (e.g. from five classes to six) will increase the school size from 440 to 528, leading to a potential annual net financial gain of \$170,000. Exhibit 3 shows these relationships.

Exhibit 3: Financial impact of changing class and school size



Will this work for us?

In considering changes to their class or school size, most of the developers with whom we have worked asked themselves the following questions:

- Can our educational model accommodate a bigger class or school size?
- Can our facilities support more students and/or classes?
- Can we hire the additional teachers required for more classes?

Example: Aspire Public Schools

When Bridgespan began working with Aspire Public Schools, they were operating eight elementary schools and two secondary schools (grades 6-12). The elementary schools all had three classes with 20 kids each in grades K-3 (reflecting government funding incentives to keep class size under 20) and two

classes with 28 kids each in grades 4 and 5, for a school of 356. The secondary schools also had a class size of 28, with two classes per grade, for a school of 392.

While the elementary school model was breaking even, the secondary school model was incurring a small financial shortfall. So the team explored two options for improving Aspire's economics: increase the class size by one to 29 (for an overall school of 406), or increase the number of classes per grade from two to three (for a total of 588 students). The first option would increase net operating income by more than \$70,000, while the second would increase it by over \$65,000.

As the Aspire team considered the two options, their primary concern was the impact of each on the school's model and culture. The team believed strongly that a small school was a critical element of their model. For Aspire that meant 400 students or less, because in their experience, more than that number made it very hard for the teachers and administrative staff to know each of the students personally. This immediately ruled out option two, which would increase the school to 588.

The first option, increasing the class size, seemed more promising, but still there were questions. A class of 29 would put an additional load on the teachers, and even one more student made a class feel bigger. When the team scanned the landscape, however, they found many successful models with 29 students per class. While keeping a small-school feel was essential, the tradeoff between the financial impact and the cultural impact made the choice clear: Aspire would increase its class size to 29.

After two years experience with the larger classes, Aspire's established schools have achieved remarkable performance gains. In the 2004-2005 school year, every Aspire school exceeded its state performance targets, improving an average of 50 points per school as compared with the statewide average of 20 points. Moreover, every Aspire school is financially viable—ensuring that they will be able to create more such successes in the years to come.

IDEA 2: OPEN SCHOOLS WITH MORE THAN ONE GRADE ENROLLED

What is the idea?

Most new schools open with one grade at a time to give the developer, administration, and faculty an opportunity to “get the kinks out,” and to ensure that all students attend the school through its full grade progression. Opening a school with two grades (e.g., a high school starts its first year of operation enrolling both 9th and 10th graders) increases the revenue (by bringing in more per pupil funding) and thus reduces the fundraising burden required to start up the school.

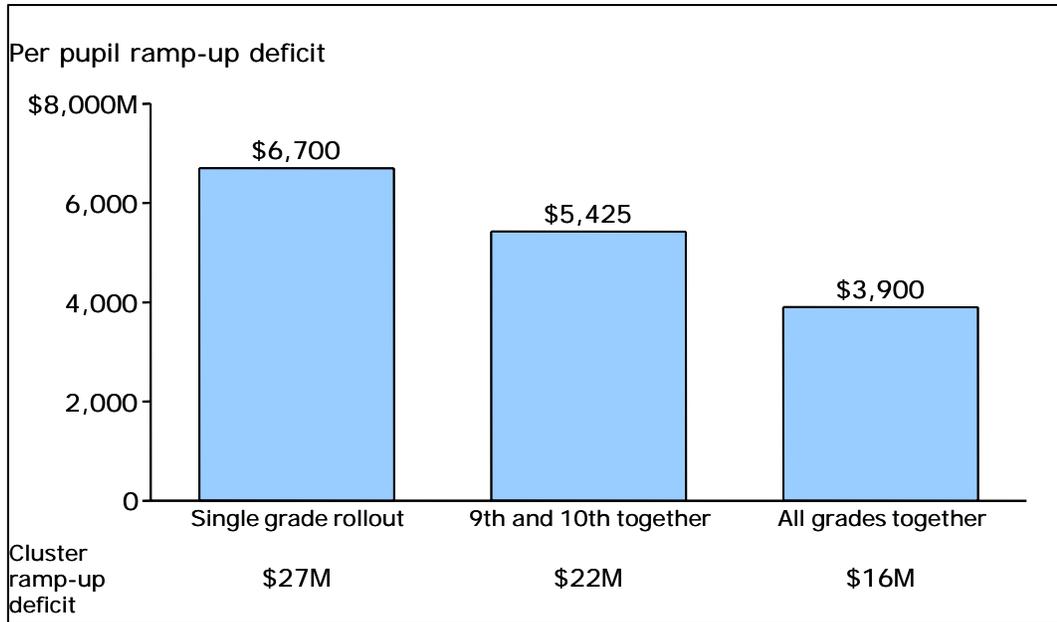
This roll-out model also has some intangible benefits. For example, with a larger student body it is possible to make better use of a larger building, thereby possibly precluding the need to find a smaller facility for the first year of enrollment (a tactic some developers use to lessen the facilities’ burden in the early years of ramp-up). Starting with two grades also provides 10th grade role models for students in the 9th grade.

What is the financial impact?

Again, the specifics will depend on the local funding environment. In California, a school with 440 students, a financially sustainable school model, and a home office charge of 10 percent can decrease its per-pupil fundraising burden by over \$1,000 by opening with both 9th and 10th grade enrolled.

As illustrated in Exhibit 4, for a developer with a cluster of 10 schools this could mean reducing the fundraising requirement from \$27 million to \$22 million—a \$5 million difference!

Exhibit 4: Impact of opening a school with multiple grades enrolled



Will this work for us?

When considering a change to roll out, the following questions are helpful:

- Can we recruit enough students to achieve full enrollment of two grades?
- Can we hire enough teachers to start with two grades?
- Will the 10th grade students, coming from another school, have the necessary skills to succeed in our program? If not, are we willing to accept lower outcomes for those 10th graders, and lower outcomes for the school overall in its early years?

Example: Envision Schools

Envision Schools, another California-based charter school developer, operates three successful high schools in the San Francisco Bay Area. Envision began working with Bridgespan while planning for growth, and they have set ambitious targets: opening five more schools in two years to achieve a cluster of eight

schools in northern California. They hope then to launch an additional cluster of eight schools in another geographic location to be determined.

Envision's growth plan clearly will allow them to reach more students and demonstrate a new educational model. It also will require significant amounts of philanthropic investment to get each school up and running. While the organization has support from many foundations and investors, Envision could make that support go further if they were to move to a dual-grade roll-out (i.e., 9th and 10th grade together). Indeed, they estimated that such an approach could save nearly \$750,000 in start-up costs per school. When starting a new eight-school cluster, the total potential cost savings could be as much as \$7 million.

Envision decided *not* to open all five of its initial new schools this way. The economics were undeniably attractive. But they believed they needed to open the first few schools one grade at a time, in order to establish the model, train the staff, and introduce themselves to the community. Now, as they plan for the fifth school, those goals have been accomplished. As a result, the next new school will be opened with both 9th and 10th grades enrolled, allowing Envision to leverage both staff from the original schools and community support to help with student recruiting. This dynamic back and forth allowed Envision not only to think creatively about ways to improve their financial situation but also to make sure they were mitigating possible risks.

IDEA 3: SHARE FACILITIES ON A SHORT-TERM BASIS

What is the idea?

One of the biggest costs school developers face is facilities. When a new school opens with one or two grades enrolled, there is less per-pupil revenue available to cover that cost. Opening two (or more) schools on the same site can provide better facility utilization. Then, once the co-located schools enroll enough grades to make each financially viable, one school moves to its final home and the other remains in the original facility. Similar to the multi-grade roll-out strategy, short-term facility

sharing can minimize traditional start-up costs by increasing the total per-pupil amounts available from districts to cover the overhead of the school and its facility.

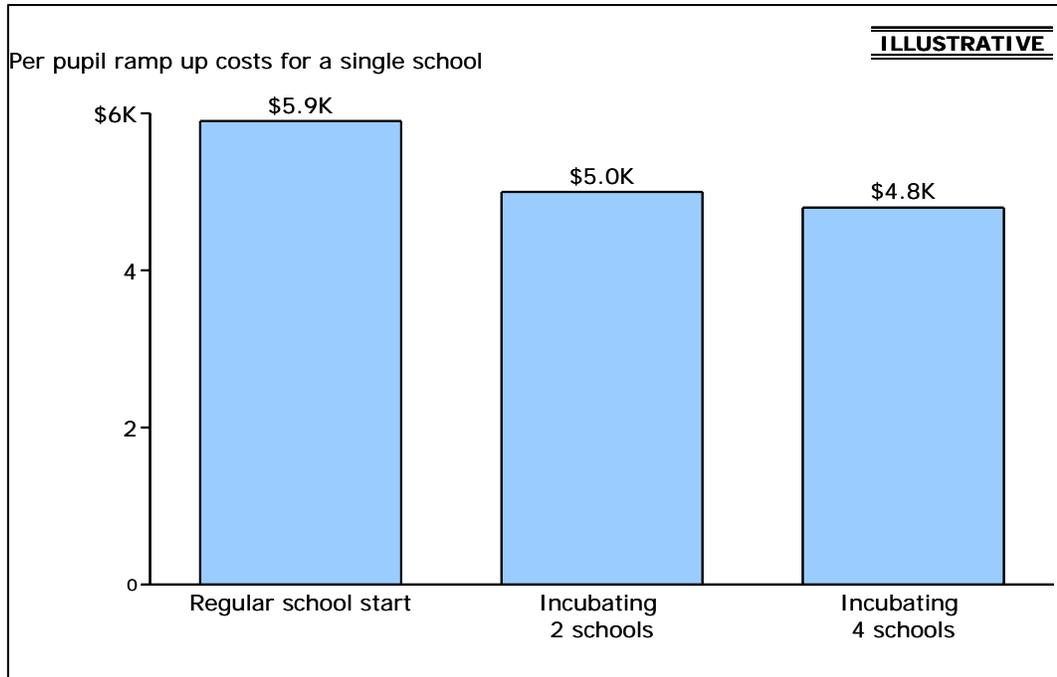
This incubation model also can have the benefit of allowing teachers from each school to share best practices and providing students with a strong introduction to the culture of the school model. And in the case where you are opening two feeder schools (e.g., a high school and a middle school whose students will eventually attend the high school), it can give the younger students both role models and exposure to the environment they will soon be in, potentially easing their transition to high school.

What is the financial impact?

Facilities costs vary widely, depending on the buildings available, the specific technology and space requirements of the model, and the government funding available. However, any building that has revenue from only a quarter of its students in the first year and half of the students the second is unlikely to cover its expenses. By adding a second school you double the number of students and associated per-pupil revenue available to cover your facilities costs.

There are diminishing returns to this strategy, though, as Exhibit 5 demonstrates. In this illustrative example, incubating two schools for their first two years (the second school moves to its own facility when it enrolls an 11th grade class) can save nearly \$1,000 per pupil. For a school of 400 students, that is \$400,000. However, incubating four schools together (four schools share the same facility in the first year, two move to a second facility when they all enroll grade 10, and all get their own facilities when they enroll grade 11) saves little additional money, involves a lot of logistics, and thoroughly disrupts the school culture for the students who end up moving the most.

Exhibit 5: Impact of incubating multiple new schools in a shared facility



Will this work for us?

Several developers with whom we have worked have considered short-term facility sharing based on the success of others who have tried it. To date, however, only one of them has decided to experiment with it: YES College Preparatory Schools. Those developers who decided not to pursue this option often did so because they had found low cost facilities solutions that made the benefits of facilities sharing less pronounced.

In evaluating short-term facility sharing, the developers considered questions related primarily to logistics and culture:

- Can students from both schools be transported easily to the shared facility?
- Does the facility have separate-enough space for each school to establish its own identity?

Example: YES College Preparatory Schools

YES College Preparatory Schools (YES), based in Houston, Texas, began working with Bridgespan when it had one 6-12 school that had been running successfully for 10 years and two more that had opened recently. Their model had shown great results with a very challenging population: Most of the students came from low-income families; their parents had low levels of educational attainment; and they themselves came in one-to-two grade levels behind. YES required significant investment to support the essential elements of the model, from a longer school day to alumni supports that help students succeed beyond graduation.

To help decrease the fundraising burden associated with opening new schools, YES is considering using an incubation model. Given the potential savings from this approach, it could allow the YES management team to concentrate more on raising funds to support the core elements of the model.

In each of these cases—adjusting the class or school size, opening a school with more than one grade enrolled, and incubating more than one school in the same facility—there is a balance to be struck between finding creative ways to decrease costs or fundraising burdens and maintaining the essentials that make a school work. While every school developer will make decisions based on what works for their model, adding a few tools to the cost-saving kit can make it possible to invest more in the “must-haves.”

The Role of the Center

Maintaining quality across the network is a key challenge of growth. Getting the educational model right—in essence providing the blueprint a new school should follow to give students the educational experience they need—is one piece. But new schools also need people in the home or regional offices who can help them read the blueprint and provide the support they need to build the model correctly. In addition, both the school staff and the center need measures and checkpoints along the way: to let them know whether they are headed in the right direction; and, when necessary, to allow them to redraw parts of the blueprint as the features of the new environment become clear. Hiring the right staff and identifying the right metrics are critical investments in ensuring quality outcomes across the network.

IDEA 1: HIRE AHEAD OF GROWTH

What is the idea?

In our experience, most school developers know that they ought to be strengthening their central office. But, given the pressure to keep overhead low and the difficulty of raising funds for infrastructure, they struggle with the decision of when to invest. As a result, they either minimize home-office and regional staff, or they delay their hiring in order to put resources into the schools.

Unfortunately, this approach tends to create problems with quality down the line, because schools do not have proper support or the organization lacks the infrastructure to support its growth. Almost universally, the developers we have worked with wish they had identified the right home-office positions sooner, and that they had invested in getting those staff in place earlier in their growth. While there is no magic formula for knowing which staff to hire when, hiring ahead of growth helps keep the organization strong during the many transitions that occur during growth and replication.

Why is it important?

Keeping the house in order

Back office functions become increasingly critical as an organization grows and becomes more complex. Indeed, some developers have found that delaying critical hires in finance and HR created operational and even legal problems for their organizations. Employing a controller or chief financial officer, for example, allows the organization to stay on top of such things as payments to vendors, lease agreements, and IRS requirements. Some developers who have put off making this hire have missed payments or not foreseen the cash flow consequences of payment schedules they have set up with a district or funders. The human resources function similarly becomes critical with growth, as each additional school needs good teachers, talented administrators, and support staff to keep it running. Several school developers have found that keeping pace with hiring needs is the number one thing that slows them down during growth. Others have been burned by hiring mistakes that proved costly for both the students and the organization.

Key staff positions

- **Chief Executive Officer** develops the vision for the organization; works with funders, districts, and communities to identify new school sites; and builds the necessary support to get them up and running
- **Chief Academic Officer** develops the educational model with the CEO; and works with the school leaders to train them in the model, to share experiences from the other schools, and to provide coaching and feedback as necessary
- **Chief Operating Officer** oversees the business and operational tasks for the organization, including setting strategy and growth targets, negotiating contracts, and ensuring that day-to-day tasks such as waste management services get done
- **Controller and/or Chief Financial Officer** manages the cash flow; monitors fiscal and legal responsibilities; and provides information required for grant reports and auditors
- **Director of Human Resources** is responsible for recruiting needs (including teachers); and manages turnover, staff development, payroll, and benefits
- **Knowledge Management staff** help teachers share best practices across schools; and administrators support each other as they learn more about how best to implement the organization's educational model
- **Student Information Manager** tracks detailed results for each student, teacher, and school, and provides reports: to schools to improve education; to the home office to spot problems early; and to funders, districts, and communities to demonstrate the organization's success

Supporting quality and consistency

Capturing and tracking data on student, school, and organization performance, as well as on best practices within the system, helps the organization at all levels. First, it gives everyone in the school the knowledge they need to improve education and spot problems early. Second, it gives the organization the information it needs to demonstrate its success to funders, districts, and communities—helping it both protect its current schools and build the case for opening new schools. Collecting and tracking this information allows the organization to frame the dialogue. As one school developer put it, “If you can’t define success yourself, others will define it for you.” Especially for school developers that have non-traditional models, such as project-based learning, being able to quantify success beyond limited state testing standards allows them to fully demonstrate the benefits of their approach and to gain support for continued growth. Finally, being part of a learning organization is often an important component of staff retention. Capturing and codifying the school model makes it easier to understand the critical elements of success and to share those with both new replication sites and other like-minded school developers.

Freeing up the CEO to work on the growth and vision

Some of the CEO’s most important tasks are building external relations with districts and funders, building community, and providing inspirational vision and leadership for the organization. These tasks ensure that the school has a stable environment to work in at the district level, the resources it needs to grow, and the community support required to help it grow and weather any storms. Before positions such as the chief operating officer, chief financial officer, and director of human resources are filled, however, CEOs spend just as much, if not more, of their time working on those internally-facing roles. Most CEOs with whom we have spoken regretted not bringing on a senior management team sooner to support them as they grew the organization.

How do we decide which staff to hire when?

Looking across the organizations we've worked with and benchmarking several others, we have not found any set hiring formulas. Different models and situations will dictate different hiring plans for each school developer. However, the following set of questions can help guide the development of a prudent staffing plan:

- What positions do we need immediately to maintain quality education and operations?
- Are there any gaps in our staffing that could put the organization at risk?
- What positions will help us prepare for the future?
- Can we make a solid case to funders to support growth positions?

Hiring the right people is instrumental in getting your organization where it needs to be. Determining what staff are needed and then having an open dialogue with funders, board members, and the community about why that investment is important can help marshal the necessary support for additional staff and the resources to pay for them.

IDEA 2: KEEP ON TRACK WITH METRICS

What is the idea?

Every plan has an element of uncertainty, a hypothesis to be tested about how particular actions will achieve specific results and your overall vision for change. As the day-to-day difficulties of opening new schools and growing the organization take center stage, however, keeping an eye on ultimate goals becomes more challenging. Without a mechanism in place to ensure that the quality is staying high, the organization is keeping pace with growth, and the needle is moving on the big-picture issues, it is possible to wake up 10 schools or 10 years later and realize that some of the essentials you need to achieve your vision are missing.

Accordingly, most developers build quality metrics into their plans to keep things on track. To be most useful, metrics need to track student and school performance on the key elements of the educational model. They also should include milestones indicating the timeframes in which you expect to hit specific targets. Such metrics and milestones help developers see whether students at their schools are doing as well as hoped, and allow the center to intervene with appropriate support when schools are struggling.

What kinds of metrics should we consider?

While developers use a number of different types of metrics, depending on their specific model and goals, most keep their eye on three levels of metrics: student, school, and network. (See Exhibit 6.)

Exhibit 6: Sample metrics

Type of metric	Example
Student level	
Student achievement	<ul style="list-style-type: none"> • Performance on standardized tests • Performance relative to grade level • Annual yearly improvement
Student engagement	<ul style="list-style-type: none"> • Student attendance • Student participation in school activities
School level	
School quality	<ul style="list-style-type: none"> • Performance on NCLB and state defined metrics • Performance on internally defined metrics • Graduation rates
Teacher engagement	<ul style="list-style-type: none"> • Teacher recruitment and retention rates • Teacher development
Community engagement	<ul style="list-style-type: none"> • Student recruitment and enrollment • Satisfaction (students, staff, parents)
Network level	
Network quality	<ul style="list-style-type: none"> • Student achievement across all schools • Recruitment and retention of school leaders
External influence	<ul style="list-style-type: none"> • Student achievement in neighboring schools, across the district, or other relevant geography • Policy changes at the district, state, and federal levels

Different metrics will be particularly meaningful for people at different levels in the organization. For example, the principal will likely be keeping an eye on a greater number of school level metrics than the management team, and the management team may be watching more metrics than funders or the board. But in every case, it is important for the metrics to be:

- **Controllable:** those responsible for delivering them have reasonable mechanisms to influence changes in the results;
- **Measurable:** the data are available, objective, and comparable over time;
- **Focused:** duplicative metrics are eliminated to simplify data collection and management;
- **Comprehensive:** collectively the metrics cover each of the key elements for success, from quality to community to finances.

These metrics paint a picture of where things are going well, flag potential problems, and identify areas in which practices need to be altered. In total, they monitor the health of the organization and serve as a tool for continually improving outcomes.

How do we decide which metrics to use?

When developing metrics keep the following questions in mind:

- What metrics will best help us track quality in the network?
- What metrics are required by funders? What metrics will help make our case to potential funders and supporters?
- What investment is required to collect these metrics? What is the cost of not collecting them if they become necessary hereafter?

Good metrics provide a language with which to discuss successes and challenges, and a tool to help you see where your hypotheses—whether they be about the critical elements of the educational model or the pace at which you can open and sustain schools—are bearing out or need adjustment.

Both of these ideas—hiring ahead of growth and tracking metrics—underscore the value of planning carefully for growth and developing the staff and tools which allow you to do that. Most school developers we have worked with find that investing time and money to do these things well pays multiple dividends down the line. It gives them the people to support quality growth; the metrics to demonstrate that quality to funders, policy makers, and the community; and the milestones to navigate the inevitable bumps that come with even the best-laid plans.

The Five Cs of Clustering

What is the idea?

As school developers strive for scale, some are turning to clustering as a model for network configuration. Although specific definitions vary, a cluster is generally defined as a group of schools that both are physically close (often within an hour's drive) and share common management, leadership, or support structure. A cluster also may be defined as a group of schools within the same district, schools that feed students to each other, or schools that share a campus or facility.

Developers interested in clusters often cite “economies of scale” as the reason. This phenomenon, which occurs when increased production allows a business to lower its average unit cost by sharing its fixed costs over a larger number of goods or services, does have parallels in education; but many of the developers with whom we have worked have discovered that the cost savings are smaller than they expected. At the same time, many of them have found that other benefits of clustering make the concept worthwhile.

For example, developers whose school designs require careful execution find that clusters ease management, in part because it is easier for leadership to work with schools that are close by rather than far away. Clusters also can ease relationship management and fundraising for developers who rely on districts for their contracts and resources. Finally, clusters can ease the transmission of a specific pedagogy, culture, or environment essential for replication, because trainings can be held jointly, staff can visit one another's schools, and it can be simpler to transfer personnel from one site to another.

The benefits of clustering do not occur automatically, however. Locating schools near each other is necessary but not sufficient. The value of clustering varies depending on whether or not developers own the schools, how much peer sharing and joint technical assistance are provided, how much philanthropy and

community support are required, and how geographically dispersed in general the network is.

What are the benefits?

Bridgespan's experience with school developers suggests that the benefits of clustering can usually be found in five areas:

- **Control:** ensuring fidelity to the model;
- **Continuity:** feeding students between schools;
- **Community:** securing resources and having impact by working locally;
- **Capital:** raising money among people already known;
- **Cost:** sharing costs among schools.

Control

Control as used here means ensuring fidelity to the model. Clustering can help set up sites for success in many ways. For example, proximity makes it easier to manage the replication of the must-haves in the model. Home or regional office staff can get to school sites more quickly to help when problems arise. They can visit more regularly to see how replication is progressing.

Clusters also can help develop the school staff—individuals who are key to achieving fidelity. First, they can help developers nurture and retain teachers and leaders by providing more opportunities for professional development and career advancement without the need to relocate. Having numerous schools in one area also can make it easier to promote a good teacher from an existing school to be the principal of a new school, thereby adding from within the network to the often-limited supply of qualified candidates. Second, educators in a smaller geographic area can visit one another more easily, facilitating the sharing of best practices. Teachers at new schools within a cluster have the opportunity to learn directly from experienced teachers at nearby schools, promoting greater fidelity to the model.

Finally, the additional opportunities for development and advancement can lead to higher job satisfaction and lower undesired turnover among teachers and leaders.

Continuity

Clustering can help foster continuity in students' educational progression and thereby help to increase the odds that students are prepared at each stage along the way. There are two main ways that clustering promotes continuity. First, if a cluster includes multiple school levels, students can travel from school to school within the cluster. A cluster's elementary schools can feed its middle schools, and/or its middle schools can feed its high schools. Second, clustered schools can invest collectively in developing relationships with local feeder schools (and also with colleges).

Community

Clustering within a geographic area can make it easier to gain community support. It takes time to develop relationships in each district and to help districts recognize the benefits of a different school model. Clustering ensures that school developers do not have to learn community politics afresh each time they open a new school. Moreover, if a charter is necessary, knowing what it took to get the first charter can inform the process of getting a second (or more) within the same jurisdiction. If charter schools face an unfriendly district, clustering can help parents achieve greater critical mass to make their voice heard in the political debate.

A good local reputation also allows student and parent interest to flow from one school to another. The success of one school can drive interest in another through word-of-mouth support. Clustering also enables students and their parents to choose among locations and allows students to transfer between schools when others are oversubscribed.

These community-based effects of clustering can make it easier to have an impact at the district-level. When a school developer is able to achieve significantly better results than the district's schools, it both demonstrates that better outcomes are possible and leads parents and community members to ask the district why its

schools are not performing as well. That community pressure can often lead to positive changes in the district.

It is important to note, however, that some developers believe this strategy is self-limiting. Becoming too big in one district can invite unwanted attention, making it difficult to “fly under the radar.” This is particularly true for charter schools, where the impact on the economics of a district can make multiple schools impossible to ignore, whereas a lone school would miss the glare. Not surprisingly, therefore, whether to cluster schools and how tightly to cluster them are decisions that need to be weighed on a district by district basis.

Capital

Raising capital is always difficult. But just as clustering can enable school developers to build a strong reputation among community leaders, it can help them attract the attention and support of local grant-makers, foundations, and donors. Many funding sources are local and therefore easier to access through a cluster with combined community support. Working with the community also can help attract other resources tied to the local political process, thereby helping all the schools in a cluster. And because community members can see the model working in their own backyard, the success of one school often helps the developer raise funds for another school in the same area. While not all capital is locally controlled, and there will be limits on what local sources are willing to contribute, building relationships with funders once and leveraging them for multiple schools is often easier than trying to navigate a different pool of local resources for every school.

Cost

Cost economies are another reason to consider clustering. For developers that manage their schools tightly, it is not only easier to provide and control educational support to a cluster of schools, but also often less expensive. Schools located within a cluster can share supplementary staffing and services. If the schools are within a reasonable drive of one another, teachers can be trained together. Similarly, back office and operational costs can be trimmed within a cluster. Scale economies exist in payroll, benefits, recruiting, IT, food, transportation, and

procurement. A cluster may also be able to share certain facilities, such as gymnasiums or theaters, and may even be able to share faculty, including special subject teachers.

These benefits can be significant. One charter management organization calculated that it cost ~\$300,000 to support a stand-alone school but only ~\$250,000 to support a school within a cluster. A developer with a franchise model reported similar savings: \$150,000 to support a stand-alone school versus \$90,000 for one within a cluster. However, because other cost issues—such as finding cost-effective facilities in close proximity to one another—can dwarf the economies of scale achieved through clustering, few school developers choose to cluster purely for economic reasons.

Will this work for us?

There is no single template for what a cluster should look like. The appropriate structure depends on the educational model, how tightly it must be replicated, and the geographic and political circumstances the school developer finds itself facing. However, the following checklist can be helpful when creating a cluster of schools:

- Identify the elements critical to replicating the school design and determine how clustering may help **control** execution. Hire and develop educational leaders for a cluster, not just a school.
- Pick the best “feeding patterns” from elementary schools to middle schools and onto high schools. Decide how to work with other schools to ensure **continuity**, so that students at each stage are well prepared.
- Locate a new school in the same **community** as an existing school, so that it can benefit from the existing school’s “halo effect” with parents, students, and leaders in the community.
- Develop major **capital** sources for the cluster, not just one school.
- Analyze the **cost** of each element of the model and identify how and where it can be most efficiently managed.

Example: Aspire Public Schools

Aspire Public Schools long has recognized the benefits of clustering. Believing that geographic concentration is essential to maintaining high quality, ensuring operational efficacy, and maximizing potential impact, Aspire has identified four strategic clusters in California. They include three areas where Aspire already has a strong presence (i.e., Oakland, Sacramento, and Stockton), and one new area into which Aspire has just begun to expand (i.e., Los Angeles).

Aspire envisions that once fully complete, each cluster will have eight to 12 schools. The clusters will all include several feeder patterns of elementary (K-5) and secondary (6-12) schools. Aspire's existing clusters have already benefited from strong community support. Word-of-mouth among satisfied parents and fulfilled teachers has made enrollment and recruiting more effective and driven demand for additional schools. Aspire has also found that starting new schools in a given area is easier after a first school has proven itself to be successful. Indeed, within two years of opening Monarch Academy (K-5) in East Oakland in 2000, Aspire was able to open Lionel Wilson College Preparatory Academy (6-12)—the first new high school building in Oakland in 40 years. Both schools are now fully enrolled with waitlists.

In line with its tight management model and tight school design, Aspire uses the clusters to oversee its schools' day-to-day operations. Aspire maintains a home office in Oakland and is in the process of opening several regional offices to support its geographic clusters. This tight management control enables Aspire to ensure the fidelity of the educational model: highly personalized, high-quality, small schools that emphasize high standards and clear learning goals for every student. Aspire has achieved notable success: all 10 Aspire schools in operation in the 2004-2005 school year far exceeded their state-mandated API goals; and Aspire's

first class of graduating seniors achieved a 100 percent graduation and four-year college acceptance rates.²

Strategy and circumstances will determine whether clustering makes sense for each individual school developer. However, the variety of these benefits explains why a number of developers are now looking to clustering to help them scale the number of high-performing schools.

Sharing knowledge and insights from our work is a cornerstone of the Bridgespan Group's mission. This document, along with our full collection of case studies, articles, and newsletters, is available free of charge at www.bridgespan.org. We also invite your feedback at feedback@bridgespan.org.

² The graduating class was a small group of seniors from Lionel Wilson College Preparatory Academy in June 2005. Source: Aspire December 2005 newsletter.