Mapping the Terrain:

Year 1 of the Evaluation of the Bill & Melinda Gates Foundation's National School District and Network Grants Program

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Over the past decade, a number of reform efforts have aimed at reducing the size of the learning communities in the nation's schools. Although these efforts take multiple forms (e.g., breaking up existing large schools, creating new schools, reducing class size), their common purpose is to provide students with a more personalized environment that addresses their individual needs and learning styles. In a number of jurisdictions across the country, learning communities are being downsized with support from such philanthropic organizations and governmental agencies as the Annenberg Foundation, the Carnegie Foundation, the U.S. Department of Education, and the California State Legislature. The Annenberg Foundation, for example, committed $500 million to reform urban high schools, emphasizing the importance of reducing school size. One of the Carnegie Foundation's major goals for middle schools was "to create small communities for learning" (Carnegie Council on Adolescent Developments, 1989, p. 9). In 2000, the U.S. Department of Education awarded nearly $45 million to Local Education Agencies to support its Smaller Learning Communities Program, with substantial increases in funding over the past two years. Further, California has spent roughly $1.5 billion per year for class size reduction in grades K–3 over the past six years, and at least 24 other states also have taken steps to reduce class size (Bohrnstedt and Stecher, 2002).

Although support is mounting for small, effective learning environments, small schools are far from commonly available as educational alternatives for all students. Such schools are currently in short supply, as is knowledge of what it takes to achieve systemic success. In recent years, the Bill & Melinda Gates Foundation has developed a reform initiative designed to address both of these needs through its National School District and Network Grants Program, a $350 million initiative to improve America's high schools. The foundation's grantees are taking a two-pronged approach to reform: grantee organizations are supporting the design of new, small high schools and/or the conversion of large high schools into smaller learning communities. Additionally, the foundation funds a number of K–12 district initiatives and organizations that provide technical assistance to school reformers, as well as organizations that advocate for policy environments supportive of school reform. Through this program the foundation hopes to increase the supply of successful small school alternatives, particularly for students who are currently most underserved. In addition, by studying the varied approaches and contexts in which the program operates, the foundation hopes to offer insights into what works in practice as reformers seek to enact fundamental improvements in the system of American high school education.

This paper is the first in a series of reports that document the process and outcomes of educational change promoted by the foundation's National School District and Network Grants Program. This paper is based on data from the first of a 5-year evaluation. In this early stage of the program, this report is intended to provide an introduction to the initiative; later years' reports will investigate outcomes and lessons learned as the initiative unfolds. Specifically, this paper

- provides background information on the types of reform strategies used by the foundation and presents the foundation's vision for high school reform and its operating assumptions about school change;

- describes the goals and strategies of the foundation's district, school network, and technical assistance grantees; and
- describes the challenges grantees have faced in the initiative's first year.

The findings in this paper are supported by two data-gathering activities. The first is an exploration and analysis of the foundation's goals, operating assumptions, and decision-making needs for the initiative. The second is a set of initial site visits with 19 foundation grantees conducted primarily during the late spring and summer of 2001.

THE FOUNDATION'S THEORY OF CHANGE

In the spring of 2001, we sought to understand and document the Bill & Melinda Gates Foundation's strategies and the implicit and explicit assumptions embedded in its approaches to school reform as it pertained to its national grants program. We needed to understand the foundation's *theory of change* (Connell and Kubish, 1995; Shadish, 1987; Weiss, 1995) both to develop the key research questions for the study and to craft a research design tailored to the vision and goals of the foundation's program.

We began our work by examining foundation documents and facilitating meetings with foundation staff members (the executive director and two program officers who oversee the work of the grantees and the evaluators) to develop a preliminary model of the foundation's theory of educational change. To this end, we posed a series of questions to foundation officials about their vision for the grant program, planned strategies for achieving those goals, and assumptions about the mechanisms by which these activities would produce school improvement. We also asked about possible environmental constraints and about the resource, procedural, and policy challenges that would have to be overcome for the foundation initiative to meet its objectives.
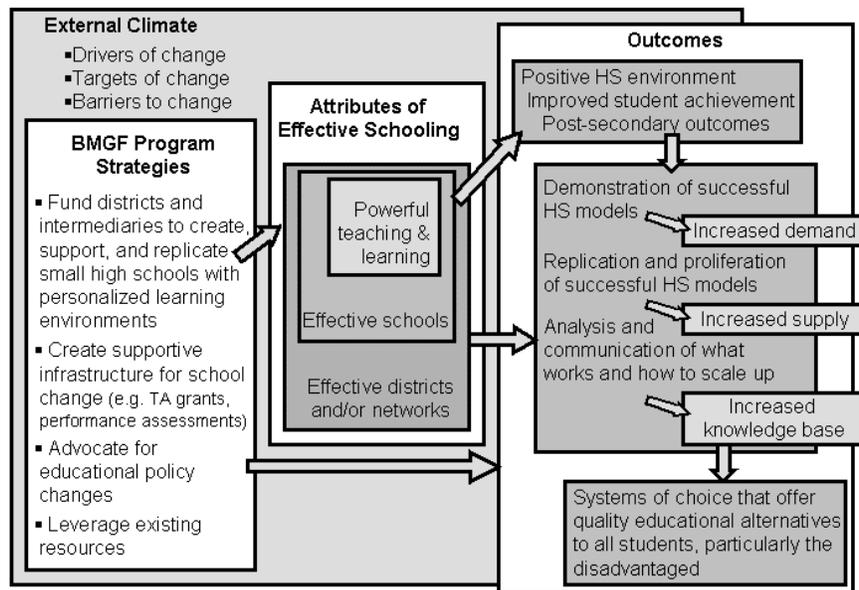
Sessions were structured to accomplish three goals. We sought to (1) help foundation officials refine and document their vision of the grant program, (2) allow the logic of the program components and their hypothesized relationships to be examined and tested, and (3) obtain guidance for decisions concerning the design of the initiative's evaluation. On the basis of these sessions, the foundation's theory of change was developed and refined. We are planning yearly updates to the theory of change to keep pace with the dynamic plans of the foundation and to capture important lessons learned over the course of the initiative.

Description of the Foundation's Theory of Change
The theory of change for the foundation's National School District and Network Grants Program presented here illustrates our understanding of how foundation officials expect the grant program to work. The theory of change depicts the goals of the program; strategies for grantee selection, funding, and support; and assumptions suggesting why particular approaches to school change will be successful as described by foundation staff.[1] In the complete theory we have sought to go beyond a simple depiction of program activities and desired outcomes, instead unpacking dependencies and assumptions about drivers, enablers, and other factors that the foundation staff hypothesizes will shape the path of the educational change that the initiative is able to accomplish. The theory is summarized briefly in this section.

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[1] The theory of change described here reflects the foundation's views as of July 31, 2001.

External Climate
- Drivers of change
- Targets of change
- Barriers to change

BMGF Program Strategies
- Fund districts and intermediaries to create, support, and replicate small high schools with personalized learning environments
- Create supportive infrastructure for school change (e.g. TA grants, performance assessments)
- Advocate for educational policy changes
- Leverage existing resources

Attributes of Effective Schooling

Powerful teaching & learning

Effective schools

Effective districts and/or networks

Outcomes

Positive HS environment
Improved student achievement
Post-secondary outcomes

Demonstration of successful HS models

Increased demand

Replication and proliferation of successful HS models

Increased supply

Analysis and communication of what works and how to scale up

Increased knowledge base

Systems of choice that offer quality educational alternatives to all students, particularly the disadvantaged

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The overall motives, goals, and strategies for the National School District and Network Grants Program, as depicted in the above picture, are as follows:

- *Drivers of, targets of, and barriers to change.* The foundation described its efforts as driven by concerns over the current ineffectiveness of large, comprehensive high schools, particularly in urban areas. It described these schools as lacking personalization and high expectations for students. According to the foundation, large, comprehensive high schools fail to serve many of their students, leaving many students without access to effective educational opportunities.

- *Foundation program strategies.* In this grant program, the foundation is funding initiatives that share the goal of creating small and/or restructured schools and creating a more supportive infrastructure and policy climate in which those schools will operate.

- *Attributes of effective schooling.* Foundation officials asserted that schools that serve students well, and the networks or districts within which these schools operate, are characterized by a set of attributes (described below) that promote effective schooling environments and successful learning. Although specific designs vary, foundation officials contended that schools that serve students well tend to be small—typically 400 students or fewer—and to be designed according to a coherent vision, shared among all stakeholders, that guides the focus of schooling.

- *Outcomes.* Target outcomes discussed by the foundation officials include both intermediate and long-term outcomes (e.g., supportive high school environments and improved achievement for students, both in high school and beyond). Officials discussed systemic outcomes as their ultimate goal, seeing the initiative as a path to more widely available systems of choice for all students, particularly the most disadvantaged. Officials described their goal as increasing the demand for, and supply of, high-quality high schools through the demonstration of successful alternatives and

attention to issues of scale and, at the same time, increasing the knowledge base that can support successful long-term, effective, and systemic changes to education.

Each program element is elaborated further in the sections that follow.

Drivers of, targets of, and barriers to change. Why this program, and why now? Foundation officials indicated that they have initiated this grant program because schools are commonly seen as failing to serve the majority of America's students. They argued that these failures are reflected in large and anonymous high school environments, crumbling infrastructures, and low expectations for students—problems that increase in magnitude in underprivileged communities and that are exacerbated by the challenges of an increasingly diverse student population. Finally, a majority of education reform initiatives supported by the government or other foundations have been aimed at the primary school level. High schools, they contended, have been largely ignored.

Foundation officials asserted that although successful schooling models do exist, they are typically isolated examples rather than broadly available alternatives. They concluded that the policy context for education currently does little to support more systemic approaches to change; that is, although public concern for education is high, national discourse tends toward short-term action rather than long-term solutions and is frequently uninformed by research.

For these reasons, the foundation officials described their goals of both demonstrating success in improving the nation's high schools and developing a knowledge base about success at scale. Officials also described a long-term desire to influence the policy climate to be more supportive of promising systemic solutions to the challenge of providing a high-quality high school education to all students.

Grant program strategies. Foundation officials indicated that the grant-making portion of their strategy is designed to demonstrate and replicate successful high school models and will support the organizations that are enacting change, either by direct technical assistance or by the development of a more supportive infrastructure. Officials described their national education grants as falling into four primary types:
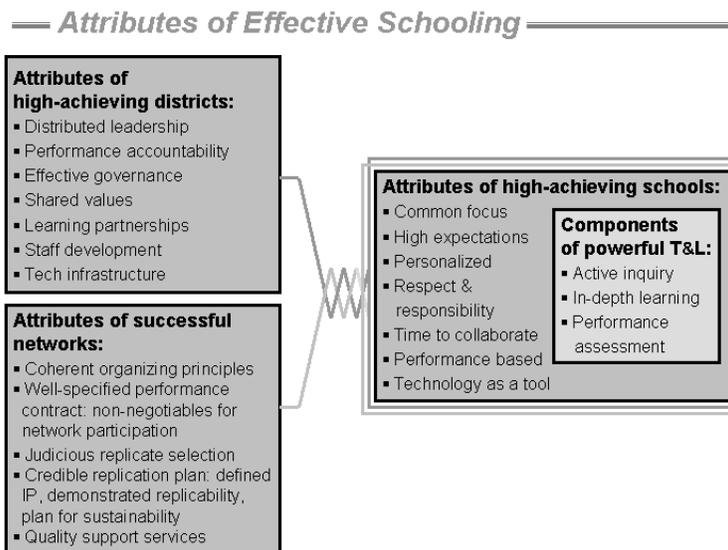
- *Urban high school grants:* grants to organizations working specifically with urban school districts to support small high school reform (n=5)

- *District grants:* grants to districts, in support of districtwide education reform activities (n=3)

- *Network grants:* grants to organizations that are not public education agencies with the goal of demonstrating one or more successful models of schooling or approaches to school change, focusing on small high schools, and replicating the model or process in additional schools with the ultimate goal of increasing the supply of effective educational alternatives (n=7)

- *Technical assistance and advocacy grants:* grants to organizations that provide support for change, either to other grantees or to a wider group of schools, districts, and other change agents, or grants intended to support improvements in educational infrastructure or the policy climate (for example, grants to support the development of new performance assessment models) (n=4)

Currently, the primary focus of the foundation's work is on urban and network grants. The foundation discussed the intention of shifting more emphasis to advocacy-related activities once successful models are established.

Foundation officials indicated that an important factor in the program's initial success will be the selection of promising grantees whose work is likely to instantiate the foundation's visions of schooling in a variety of student and community contexts. Officials discussed how they have strived to create a diverse grantee portfolio with respect to educational settings (but with an emphasis on urban schools and students of poverty) and with respect to strategies for pedagogy, organization, and implementation approach. Other important selection criteria are consistency with the foundation's vision, effective leadership, and grantee capacity sufficient to accomplish stated goals. An important factor is that the foundation never advertised the availability of funds for this program. Instead, grantees were sought out and chosen on the basis of first-hand knowledge of their organizations, often developed through one or more visits to the organizations.

To support the planning, design, and implementation of these programs, the foundation officials described three critical factors: (1) sufficient time and resources, (2) an accountability system, and (3) outside assistance. To address the needs for time and resources, the foundation grants offer direct funding for grantees' activities; additional resources are expected to come from industry partnerships and other resource-leveraging strategies. The foundation provides additional assistance to schools and grantees through technical assistance (TA) grants and other efforts, including regular communication to and among grantees and ongoing feedback from a programwide evaluation project that was started in March 2001.

<u>Attributes of effective schooling</u>. Officials defined the foundation's vision of effective schooling through sets of attributes for effective classrooms, schools, and districts or networks. These are depicted below:

=== *Attributes of Effective Schooling* ===

Attributes of high-achieving districts:
- Distributed leadership
- Performance accountability
- Effective governance
- Shared values
- Learning partnerships
- Staff development
- Tech infrastructure

Attributes of successful networks:
- Coherent organizing principles
- Well-specified performance contract: non-negotiables for network participation
- Judicious replicate selection
- Credible replication plan: defined IP, demonstrated replicability, plan for sustainability
- Quality support services

Attributes of high-achieving schools:
- Common focus
- High expectations
- Personalized
- Respect & responsibility
- Time to collaborate
- Performance based
- Technology as a tool

Components of powerful T&L:
- Active inquiry
- In-depth learning
- Performance assessment

The foundation's description of powerful teaching and learning is based on the National Academy of Sciences study called *How People Learn* (Bransford, Brown, and Cocking, 1999), which evaluated and synthesized developments in the science of learning. The contributors to *How People Learn* posited that effective instruction begins with what learners bring to the setting

(e.g., academic content and cultural practices and beliefs). That is, the creation of new knowledge begins with learners' current knowledge. Environments that foster *active learning or inquiry* attempt to help students make connections between their previous knowledge and academic tasks. They encourage students to take control of their own learning and to extract underlying themes and principles from their learning exercises. Environments that foster active learning focus on sense making, self-assessment, and reflection on what worked and what needs to be improved. They encourage students to transfer their learning to new settings and events. Students develop a flexible understanding of when, where, why, and how to use their knowledge to solve new problems.

Deep understanding requires well-organized knowledge of concepts, principles, and procedures of inquiry. *In-depth learning* promotes a knowledge base that includes both a set of facts and some clearly defined principles. Again, learning begins with students' current knowledge. Learning happens when students expand their understanding of a given topic and extend it to new situations. Deep learning happens when students use their understanding of a topic to access the principles governing the topic. Students become independent and thoughtful problem solvers.

Assessment and feedback are crucial for helping people learn. To be most helpful, assessment should mirror good instruction, take place regularly as part of instruction, and provide information about the levels of understanding that students reach. Assessment should reflect the quality of students' thinking, as well as the specific content they have learned. If students are learning for deep understanding, assessments should make their thinking visible and measure students' reasoning, understanding, and complex problem solving. They should mirror the process demands and performance required by students' learning tasks. The content and process demands of performance assessments should align with teachers' and students' performance objectives. The use of performance-based assessments has led to success in other reform programs (Hill, Foster, and Gendler, 1990), particularly for disadvantaged students (Howley, 1994; Klonsky, 1995). Feedback opportunities allow students to revise and improve the quality of their thinking and understanding (Bransford et al., 1999).
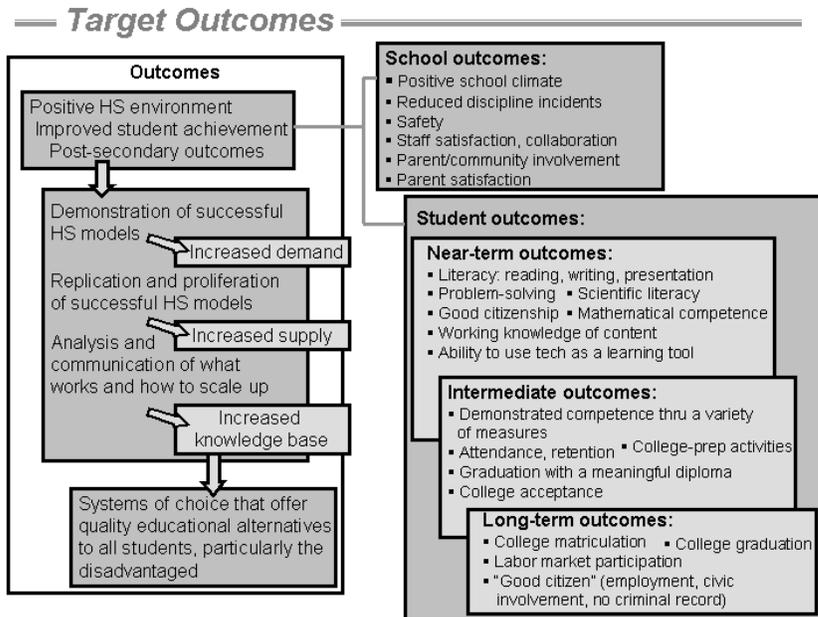
Drawing on an extensive body of research, officials have also identified attributes of effective schools. For example, *common focus* and *collaboration* are important elements of the professional community of teachers (Marks, Secada, and Doane, 1996). The presence of these attributes in a school means that teachers, as a group, have a shared understanding of what students should be learning and how to facilitate learning, and teachers work with one another toward this end.

According to the work that Theodore Sizer has done with the Coalition of Essential Schools, *personalization* means that students are known by adult professionals. *Respect* and *responsibility* are characteristic of positive relationships among members of the school; school members respect one another and share responsibility for one another's well-being and development. *High expectations*, according to the foundation, refers to the academic expectations that school personnel have for all students (e.g., are all students held to high academic standards?).

Emphasis on performance describes the extent to which the school's curricula and pedagogy stress the exhibition of problem-solving skills and deep mastery of content as evidence of learning. *Technology tools* refer to the skills and resources available to provide opportunities for students to use technology to gain access to information and learn important technical skills for the future.

In each case, foundation officials asserted, success is not predicated on being able to check off the individual attributes; rather, success is a function of the coherence and comprehensiveness of the overall vision that includes each attribute and embeds it into the fabric of the school.

Target outcomes. As shown in the schematic diagram below, the grant program targets outcomes at several levels: school outcomes, including such factors as positive school climate, and school safety and student outcomes, including near-term (student learning, especially the ability to read, write, and speak well), intermediate (including overall high school success and college readiness), and long-term success (in college and in later participation in the community).

Target Outcomes

Outcomes

Positive HS environment
Improved student achievement
Post-secondary outcomes

Demonstration of successful HS models
Increased demand

Replication and proliferation of successful HS models
Increased supply

Analysis and communication of what works and how to scale up

Increased knowledge base

Systems of choice that offer quality educational alternatives to all students, particularly the disadvantaged

School outcomes:
- Positive school climate
- Reduced discipline incidents
- Safety
- Staff satisfaction, collaboration
- Parent/community involvement
- Parent satisfaction

Student outcomes:

Near-term outcomes:
- Literacy: reading, writing, presentation
- Problem-solving • Scientific literacy
- Good citizenship • Mathematical competence
- Working knowledge of content
- Ability to use tech as a learning tool

Intermediate outcomes:
- Demonstrated competence thru a variety of measures
- Attendance, retention • College-prep activities
- Graduation with a meaningful diploma
- College acceptance

Long-term outcomes:
- College matriculation • College graduation
- Labor market participation
- "Good citizen" (employment, civic involvement, no criminal record)

Summary
The foundation officials discussed their hope that the grantee portfolio, taken as a whole, will both improve student learning and opportunities within grantee-affiliated schools and promote more systemic changes. Desired systemic changes include increased demand for better high schools (based on widespread demonstration of successful models), increased supply of better high schools (from the replication and scale-up of those models), and increased knowledge of what works, both in the educational approaches that are effective in particular community contexts and in those that support systems of scale.

GRANTEES' VISIONS

Also in early 2001, we conducted a series of site visits with the foundation's grantees. The purpose of these visits was to gain a better understanding of the grantees' own visions, strategies, progress, and challenges to assist us in designing an evaluation of the program. Guided by the foundation's theory of change and our own review of the literature, we identified a number of key concepts that we wanted to explore. In addition to understanding grantees' goals and activities, for example, we also wanted to better understand the organizational capacity of the grantees and of the schools with which they work. We were particularly interested in the social capital that

they had accumulated and were in the process of developing. (These concepts are defined in later sections of this paper.)

At the time of these site visits, the foundation had funded 19 organizations, including urban school districts; network organizations working directly with schools to create small, effective learning environments; organizations providing technical assistance to other grantees on issues central to school reform (e.g., on school leadership); and organizations advocating for more positive policy environments for school change (e.g., for performance-based assessment).

Over the course of several months, we visited and interviewed grantees to gather descriptive information about their goals, activities, and plans. We gathered and reviewed program documents, including grant proposals, press releases, white papers, program descriptions, videos, and instructional materials. A team of researchers then visited grantees and interviewed key players in the grantee organizations. Where possible, we also visited schools and interviewed school staff. Semi-structured interview protocols were used in conversations with grantees, district personnel, and school staff. Protocols were designed to collect information on each grantee's program goals, history and activities, progress to date, goals for learning environment design and/or replication, strategic partnerships, expected outcomes, and future data collection opportunities. Site visits took from 1 to 3 days per grantee.

Following the site visits, we developed summary reports that provide the basis for many of the findings in this document. The summary reports were structured to

- provide general descriptions of the grantee programs;
- describe the context in which the grantees work and the grantees' working relationships;
- depict grantee visions, strategies, and plans;
- document their expected outcomes;
- report their progress to date; and
- enumerate areas going well and areas where the grantee is encountering difficulties.

The reports were drafted by the site visit teams and then provided to principals in the grantee organizations for their review and response. Grantees were invited to comment on the accuracy of the reports, to discuss any disagreements they had with evaluative statements, and to update site visitors on progress and plans. Site visitors scheduled phone interviews with grantee staff to discuss and review the reports. The summary reports were subsequently revised to correct inaccuracies and to reflect grantees' more recent activities. In some cases, the summary reports were revised to document the grantees' differing views of the evaluative information, but the final decision regarding report content was made by the research team.

Overview of Grantees
As described earlier, the foundation's 19 grantees fall into four general categories: (1) district, (2) network, (3) urban, and (4) technical assistance/advocacy. Grantees were funded for 5 years with funding levels between $750,000 and $13,000,000. Foundation grantees, located across the country from Rhode Island to Alaska, are very diverse organizations that share the common goal of creating effective, small learning communities for students.[2]

The majority of the foundation's grantees are working directly with schools, supporting the startup of new small schools and/or facilitating the conversion or restructure of existing

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[2] For some of the grantees, the Bill & Melinda Gates Foundation supports only a portion of their operations; these grantees are also receiving funding from other sources.

traditional schools to adopt more personalized and effective schooling models. Ultimately, these grantees intend to offer a widespread and viable alternative to traditional schools that will promote student achievement and well-being, both within and beyond school, as well as increase school choice within the communities they serve. Other grantees are working more broadly to provide assistance to school reform teams or to other grantees or to advocate for educational policies that are more supportive of small-school reform.

The grantees vary significantly on a number of important dimensions. For example, some grantees have targeted high schools; others are focusing on K–12 systems. Specifically, five grantees are focusing exclusively on high schools, although many of them have goals for future expansion into middle and elementary grades. Ten grantees are pursuing broader approaches to regional education reform; some are working with schools at all levels in their partner districts, and some are deliberately building a suite of schools that offers students consistency across their K–12 experience.

Grantees also vary by the populations they target and the jurisdictions they plan to serve. Consonant with the foundation's priorities, for example, at least 13 of the grantees articulated the goals of improving educational opportunities and outcomes for low-income communities and students of color in particular and/or closing equity-related achievement gaps. Many of these grantees are selecting the schools and districts with which they work on this basis. For some, goals are targeted to a specific population: for example, one grantee has a specific mission to improve educational opportunities for Latino youth. Moreover, five of the grantees, at least at the beginning, have selected a particular local area or region in which to focus their efforts. Five are pursuing a statewide strategy, and the remaining nine are reaching more broadly to influence schools across the country.

Another important example of the variation among grantees is the specificity and prescriptiveness of their reform approaches. Specificity refers to the detail with which the reform model is offered to schools; prescriptiveness refers to the degree to which the grantee requires that its model be followed explicitly. For example, some grantees have developed detailed curriculum and instructional materials to be used in the schools they support (high specificity), whereas others have developed broader guiding principles to shape the creation of effective schools and expect staff at each school to design its own curriculum and processes (low specificity). When grantees do provide detailed instructional materials, they may expect schools to follow them without modification (high prescriptiveness) or simply offer them as helpful templates for customization (low prescriptiveness). In the national program, four grantees plan to replicate a specific model school that is already in operation, whereas six grantees are supporting teams that will design schools on the basis of a set of principles for effective educational environments. Often, these latter grantees are supporting a portfolio of strategies that include school startup, conversion, and redesign according to the needs of the particular district.

Goals for Improving Education

All grantees described the goal of improving student learning opportunities and achievement outcomes. Grantees also discussed a number of additional goals for improvements within schools, districts, communities, and the broader education system. For the most part, these goals are consistent with the program goals articulated by the foundation in its theory of change. These goals are described below.

Goals for students. Every grantee highlighted improved student academic achievement as a goal. Some emphasized improvements in the standardized test scores on which accountability systems are currently based. Most emphasized measures of achievement that capture the in-depth learning

and problem-solving skills that their school environments are intended to promote. Overall, most grantees discussed the need to measure their outcomes by using a balanced approach that includes both standardized and alternative measures. Other target outcomes for students while in school include improved attendance, retention, discipline, graduation, active participation in the school community and distributed governance, and what one grantee refers to as "enduring student characteristics" (passion for learning, engagement, independence, resourcefulness, and other positive work habits).

Goals for schools. In general, grantees discussed the goal of developing school environments that are less crowded, safer, more personal, more responsive to community needs, and positive places to learn. Other frequently cited target outcomes at the school level are equity of learning opportunities and outcomes; high parental and community involvement; improved student, parent, and teacher satisfaction; closer teacher-student relationships, facilitated by smaller class sizes and modified teacher roles; increased collaboration and common vision among staff; and widespread curriculum improvements that include project-based learning, curriculum depth, and a more thorough integration of standards.

Goals for communities. Most grantees described the goal of supporting schools that are more integral to and more positive influences on their communities than is the case in most urban environments. They discussed closer involvement of parents and, in many cases, local corporations in the educational enterprise. Several grantees also described their desire to see further-reaching community outcomes from their work, including a more skilled workforce, regional economic development, greater confidence and aspirations for young people, or more minority youth who choose education as a career.

Goals for districts. Most of the grantees are working with districts to varying degrees. Most expressed hope that their work will help educate district staff about small schools and the importance of school autonomy. In addition, most grantees expressed hope that the supportive district policies they negotiate for their own schools will eventually lead districts to offer similar supports more broadly to schools within their jurisdiction.

Goals for policy and reform climate. Several grantees said they were deliberately engaging in advocacy activities (e.g., seeking to promote discourse and legislation endorsing the use of performance-based assessment strategies and other relevant education reforms, or developing repositories of knowledge about systemic school reform to inform ongoing educational improvement). Of the grantees whose current focus is more school based, many also articulated the goals of becoming a catalyst for change within the district, state, or nation; increasing the knowledge base and experience base among the reform community; and offering significant numbers of students a choice of educational system. For most, of course, these are long-term outcomes that will be based on successful demonstration in the grantees' schools during the next five years.

Visions of Effective Classrooms and Schools
Foundation grantees were selected, in part, on the basis of compatible visions for effective small-school education. When they described their schooling environments, many cited principles similar to the foundation's stated attributes of high-achieving schools and to the components of powerful teaching and learning. Many of the grantees also share ideological backgrounds and inspiration; for example, five grantees use the tenets of the Coalition of Essential Schools as inputs to their design principles.

Nevertheless, the instantiation of these principles varies by grantee, and often across schools or districts within the same grantee network. This section offers a more specific view of grantees' visions for effective schooling by describing the range of designs they are using, or plan to use, to achieve each of the foundation's attributes within their schools. It is important to note that in this early stage of the evaluation, our description draws primarily from the philosophies and planned school designs that grantees discussed with us, as well as from very limited observations made during brief visits to a small number of schools already in operation in the spring of 2001 (primarily model schools for those grantees that plan the replication of a particular approach to small schooling). The ultimate school design is frequently the product of a locally based design team and always varies to some extent with local conditions and requirements. Therefore, the degree to which the innovative approaches in the grantees' designs are actually implemented in grantee schools can be expected to vary in practice. The extent and reasons for variations in design implementation will be an important topic of inquiry over the next 4 years of the evaluation.

Components of powerful teaching and learning. As indicated earlier, the foundation identified three key constructs describing the effective teaching and learning envisioned for classrooms in schools reached by its funding program: (1) students' *active inquiry,* (2) students' *in-depth learning* and application of their attained knowledge, and (3) students' high performance on both real-world tasks and other measures of achievement (*performance assessment*).

Active inquiry. In nearly all cases, grantees described their school visions as placing students in an active role; at least 13 of the 15 network, urban, and district grantees emphasized inquiry and problem solving in their interviews. To varying degrees, grantees' visions and strategies highlight the importance of students' having a say in the projects and directions they choose to undertake and in the ways they spend their time. For example, at four of the grantees' schools, facilities are designed to encourage active and collaborative project work, replacing traditional desks and classrooms with well-stocked labs, open spaces in which students pursue project work, and dedicated student workstations. Additionally, many of the grantee model schools have structured the school day with fewer but longer periods to allow time for extended project work and student autonomy to pursue activities important to their own learning. Two grantee models have done away with formal class schedules entirely, basing the entire school day around student project work.

As with all the elements of school design, the extent to which grantees emphasize the active inquiry component varies. At several site visits, students were observed conducting research (for example, biology students at one school spent the semester investigating why people die), engaging in debates (in an English class, for example, students conducted an evidence-based debate about character development), and presenting results to peers or community members (for example, site visitors watched as a student presented her project on communication disorders and fielded difficult questions from a panel of adults). Although many grantees' schools ground their curricula and teaching methods primarily in techniques like these, a few include both inquiry-based learning and more traditional methods in their school designs, using textbooks, didactic instruction, or both in some course offerings to ensure coverage of what they consider to be the most important basic concepts and skills in particular subject areas.

In-depth learning. A majority of grantees said that they are emphasizing a curriculum strategy of depth, not breadth. About three-quarters of grantees that work directly with schools told us that they work hard to promote authentic learning opportunities, both in and out of school. For example, students at senior levels at four grantees' schools are required to engage in outside internships to promote learning in real workplace settings. At one school, roughly a third of the

teachers were hired from local industry, with the expectation that these teachers can structure projects and use technology in ways that are likely to reflect authentic workplace demands.

Performance assessment. Nearly all the grantees told us that student assessment in their schools will ideally be based on a variety of measures that include curriculum-embedded and performance-based assessments. Favored assessment strategies among grantees include student portfolios (digital or otherwise), rubric-driven assessments of project products, student presentations and exhibitions (either verbal or electronic, to peers, teachers, and community representatives), and standards-based report cards. According to grantees' plans, alternative assessments such as these will be used exclusively in some schools; in others, they will be used in addition to more traditional forms of assessment. Standards emphasized by the various grantees' plans include district, state, or national content and performance standards; locally defined standards for student achievement and performance; and research-informed best practices.

In most cases, we were informed that school-based design teams or teachers developed specific assessments used in courses. Again, it appears that grantees vary with respect to the degree to which they dictate the use of performance-based assessment to the teachers or design teams that will be implementing them; some have allowed wide variability in the types of assessments that will actually be used in classrooms.

<u>Attributes of high-achieving schools</u>. As illustrated earlier, the foundation has identified seven attributes of effective high schools: (1) *common focus* on a few key, research-based goals; (2) *time to collaborate*; (3) *personalized* learning environments; (4) *respect and responsibility* among students and among teachers and between these groups; (5) *high expectations* for all students; (6) emphasis on *performance*, with student promotions based on demonstrated competency; and (7) *technology tools* to support innovative student learning and effective school operations.

Common focus. Many grantees informed us that they have defined a set of principles about teaching and learning that help establish a shared vision for their schools. For network grantees working to establish new schools based on their own design, these principles were often evident on the walls or published materials of the schools themselves. Another strategy for generating a common vision among school stakeholders is the planning process (sometimes a year long) that most grantees have encouraged new schools to undertake together, making collaborative decisions on school goals and designs. Consistent with its community-driven focus, one grantee has awarded planning grants to design teams made up of community members and school staff; these teams have and will be coached through the process of developing commonly owned school visions and designs.

According to grantees, most of the small schools they are developing focus on particular curriculum areas or offer defined concentrations, which students can choose in their later years. Grantees differ in the degree to which they also offer a broader range of courses and activities (e.g., humanities courses in a mathematics- and science-focused school, or extracurricular activities). Some grantees have approached curricular reform through a common focus on a particular curriculum area. For example, reform in one district has begun with a common focus on student literacy; the grantee expects to launch a focus on mathematics next, replicating some of the same approaches to instructional improvement.

Time to collaborate. Many grantee models emphasize team planning, team curriculum development, and team teaching, accomplished through the allocation of time for staff to collaborate during the school day as well as over the summer. Collaboration includes both teamwork among school staff and teamwork with parents, community members, and industry

representatives. Many grantees recommend nontraditional school schedules to allow extended time for teacher collaboration, often daily. Building this element into the school day without reducing time for teacher-student interactions can be a challenge. In some models, teacher collaboration takes place during periods of student independent work.

Personalization. Without exception, the grantees told us that a more personal schooling environment is one of their primary goals. Many used the term "familylike" to describe student-staff relationships and relationships between the school and students' families. In many grantee model schools and school designs, students have an advisor or an advisory group that provides consistent mentorship across years and one-on-one interactions with staff. In at least seven of the grantees' schools, students are expected to stay with the same teachers, advisors, or both for multiple years. Students may also have mentor relationships with industry representatives or other outside adults; at one grantee's school, for example, mentors have included a translator at a local hospital, a cancer researcher, and a marketing executive. Moreover, at least five grantees have based their schooling models on an individualized learning plan for each student. This plan is, or is expected to be, developed collaboratively by varying combinations of student, teacher, advisor, and parents and informs course selection, evaluation of developmental needs, and (in some models) graduation decisions.

Although most grantees are promoting a small-school approach, several are also working with large high schools that will remain large, either by the grantee's own choice or because of differences in preferred strategy between the grantee and the district. In these large schools, the grantees indicated that personalization is still a goal, using approaches such as advisories, individual learning plans, or the option for students to self-select into a focused academic program within the larger school. One grantee will be using a "looping" design in some schools, subdividing the student body into smaller teams that will stay with a particular set of teachers for several years.

Respect and responsibility. Again, this is a goal commonly cited by grantees. School designs seek to promote respect and responsibility through internship models, in which students take on increasing responsibility for independent work, and through teamwork models, in which students are responsible to their teammates. Some grantees have provided or plan to provide training and coaching for students and staff on this topic. Students in one grantee's school were observed performing skits about stereotypes, with a focus on issues of respect; another grantee held a summer workshop for school staff on the topic of respect and responsibility.

High expectations. The grantees all articulated the goal of a school environment with consistently high expectations for all students, to prepare each of them for success in college and in the workplace. Some strategies cited for implementing this tenet include basing education more firmly on standards or on the challenging demands of the workplace; offering teachers professional development on the subject of high expectations, sometimes including visits to model schools to see the goal in action; and ensuring personalized guidance, often in the form of an advisory structure, for each student. Many grantees have eliminated tracking in their schools, claiming that separate Advanced Placement (AP) courses and honors offerings establish higher expectations for some students than for others because not all students have access to them; grantees are still working through the implications of mixed-ability groupings for curriculum development and for college admissions.

Performance based. According to many grantees, the expectation is that promotion and graduation decisions will be based on student performances and other evidence of mastery rather

than (or in addition to) seat time. This sometimes requires grantees to seek waivers of standard requirements from the district or state. Student performances may be judged by teachers, peers, parents or community members, industry representatives, and input from the students themselves.

Grantees vary in the emphasis they place on student standardized test scores. Some described those tests as necessary for their students to take but have focused primarily or exclusively on more performance-based assessments as indicators of student progress. Others described mandated tests as critical metrics of success for their students and leave decisions about assessment strategies to the individual school design teams and the communities they serve. A primary mission of one grantee is to advocate against high-stakes tests, with strategies ranging from promoting public discourse to applying for waivers from testing requirements for member schools.

Technology as a tool. Grantees vary in the degree to which they recommend or require the use of technology to support student learning in their schools. Some have embedded technology throughout the school model and are committed to keeping it up-to-date. For example, students at three grantees' schools are assigned workstations for daily use, and another grantee has a goal of wireless laptops and networking in all of its schools. Other grantees use technology for particular functions. In a few cases, the grantee or schools did not exhibit a focus on technology.

Common uses of technology for students include digital portfolios, technology-embedded learning processes such as research and presentation, and modern scientific and business equipment in labs to simulate actual work environments. Technology has also been used as a tool by some grantees and districts for disseminating best practices by teachers for curriculum development and by students and school staff for communicating with parents. One grantee is creating a small virtual high school in a Midwest school, using technology as the primary vehicle for delivering instruction.

Summary

Overall, the vision of education that the grantees described appears to reflect the foundation's visions—a proliferation of effective models for small high schools that offer high-quality, personalized, and inspiring educational alternatives for all of the nation's students. The selected grantees represent different aspects of the implementation of this vision, including the direct management of schools, sponsorship of locally based reforms, broader technical assistance, and advocacy for policy changes. We now turn to a discussion of the activities and strategies the various grantees are using to implement their visions.

Implementation Strategies

The preceding sections summarized grantees' goals and their visions for what effective schooling might look like. Here, we discuss the range of strategies the grantees are using, or plan to use, to accomplish those goals. These strategies include organizational capacity building at the grantee and school levels, site selection and management, teacher and student recruitment, and replication and rollout strategies. Each is described below.

Developing Grantee Capacity

A consistent finding in the literature on implementation is that the successful and faithful implementation of a given intervention depends on the capacity of the interveners as well as the capacity of the organizations they choose to change. We define grantee capacity in terms of the human, material, and social resources the grantees bring to their work with individual schools and

networks. At the most basic and immediate level, these resources include the *quality and stability of the leadership and staff* of the grantee organization (i.e., human capital) and the *financial resources* the grantee brings to bear on the intervention process (i.e., financial capital). Grantee capacity also involves the organization's *social capital*—that is, the relationships the organization has developed internally and externally that enhance the resources available for its work. Additionally, over the long run, grantees' control over their own *intellectual property* is predicted to have important implications for successful growth and development over time.

Human capital. The sociology literature defines human capital as the knowledge and skills developed and maintained by individuals that can be applied to the goals of the organization. According to grantees, they are taking a variety of approaches to developing human capital through the staffing of their own organizations, often with limited funds or with the intention of supporting numerous schools while remaining a small organization. Beyond key staff, some grantees were in the process of hiring the additional staff resources needed by their programs when we spoke with them; others were engaging consultants or outsourcing some of their services. Most grantees have been working to build strategic partnerships, often with local universities that can offer teacher professional development or with other grantees for collective advocacy strength. Grantee boards of directors are often composed of leaders in small-school reform and other related fields, acting as additional sources of expertise to grantee organizations.

Financial capital. Reform is costly, potentially involving professional development, technical assistance, on-site coaching, changes in the physical plant, curriculum materials, and technology equipment, among many other components (Jordan, McPartland, Legters, and Balfanz, 2001; CES, 2000). Financial stability and breadth facilitate the ongoing assistance that grantees are able to provide to schools. Financial resources may come from private sources, such as foundations; public sources, such as school districts or federal grants; or the community, such as support from partnering businesses, parents' fundraising, or other local agencies.

Grantees informed us that they have developed a number of strategies for augmenting and sustaining their financial resources beyond the money they receive from the Bill & Melinda Gates Foundation (and co-funders where they exist). Many have either solicited or plan to solicit grants from other local or national agencies or are generating funds from business partnerships. Some have sought local bond issues to support their work within a district. Others plan to offer for-fee services and resources to replicates, including teaching materials, school design templates, consulting services, and so forth.

Social capital. Social capital refers to the connections that exist among individuals—the social networks and the norms of reciprocity and trustworthiness that arise from them (Putnam, 2000; Cohen and Prusak, 2001). Applied at the grantee level, social capital consists of the stock of active connections among grantee leaders and education thinkers and leaders that can be drawn upon, for example, and the trust, mutual understanding, and values that they share to make cooperative action possible in the schools they are supporting.

According to most grantees, establishing strategic partnerships has been an important focus in their first year. Partners include local businesses, community organizations, like-minded reform and advocacy organizations, community colleges to supplement high school course offerings, and universities for teacher professional development. Grantees also indicated that they have begun networking with one another to leverage their efforts and explore potential partnerships between organizations. For example, grantees are considering ways to collaborate on performance-based assessment and accountability efforts as they move forward. Additionally, one grantee is exploring a partnership with another grantee for designing several schools. One district grantee is

a member of another grantee's network. Two additional grantees are proposing a joint teacher preparation program.

Intellectual property. Intellectual property refers to the original work that the grantees are developing and distributing that can be leveraged for business advantage. Although the number of ideas and materials that can fall under the label of intellectual property are vast, some examples include curricular materials, Request for Proposals used to select school sites, contractual relationships with staff or partner organizations, and training materials for teachers and principals. Developing and establishing control over their intellectual property is important for the long-term sustainability and marketability of the grantees' work.

Intellectual property is often an output of the work that grantees perform as they design their programs, school supports, and business plans in this first year. For example, many described a process of formalizing their principles, practices, and plans, capturing and refining their initial ideas in the form of documented design principles, RFPs, selection criteria for districts and schools, descriptions of services, and partnering agreements that spell out non-negotiable requirements for school design, school governance and autonomy, professional development days, and so on. A key development to investigate over time is the extent to which grantees establish legal ownership and control over their intellectual property and how they choose to leverage this category of resources.

Supports Offered to Schools
In most cases, grantees in the National School District and Network Grants Program are intermediary organizations that work with schools or districts to implement their desired visions of schooling. The grantees' lever to the change they seek, therefore, is primarily through the support they offer to the schools, districts, and communities with which they partner.

This support can take a number of forms. Grantees may provide direct support to schools in the work of designing programs, recruiting students, and opening the doors. But most grantees see themselves in more of an enabler role, working through programs that offer financial grants, consulting services, curriculum materials, and other avenues for strengthening the school's own capacity to implement innovative educational environments.

At least three types of capital contribute to organizational capacity at the school level: human, material, and social. In the area of school reform, a few of the most important types of *human capital* are teacher content knowledge and pedagogical skills, quality and stability of school leadership, and degree of parental involvement that can be developed at the site. *Material capital* consists of the resources that organizations can acquire to initiate and sustain their activities, including such important resources as instructional materials and adequate physical facilities. Material capital can also be defined to include financial resources. *Social capital,* as described in the previous section, consists of the network of relations that organizations have that encourage trust and information sharing and, ultimately, cooperative action. Together, these resources contribute to the capacity of schools to enact educational reform.

The sections below describe grantee strategies that support both school capacity development and school design and implementation activities, grouped by the level (school, classroom, district, community, network) within which the supports are targeted.

School level. The most tangible support that some grantees reported providing to schools is financial, supplying funding for school planning and implementation. Other key school-level supports include human capital development in the form of recruitment assistance and

professional development for teachers and school leaders; templates and other resources for school design; and material capital assistance in the processes of physical space procurement, vendor relations, and technology setup.

Professional development may be face-to-face or online and often includes summer institutes, model school visits, and on-site mentorship or coaching programs. Other interesting professional development strategies used by different grantees include a yearlong principal apprenticeship program, a rubric that defines requisite skills to support professional development for teaching staff, and a program of classroom visits intended to promote ongoing practice-based discourse among teachers and administrative staff within the district.

Grantees vary widely in terms of the degree to which they offer or prescribe specific practices to their schools. Some grantees provide materials or hands-on support to help implement specific practices in the schools they support, offering templates for student handbooks, policies (e.g., student behavior management), and other school-level guidelines that can prove difficult to develop (e.g., requirements and procedures for student independent work proposals). This approach is most often taken by grantees with model schools, who develop materials to support new replicate sites based on the operations of the model school. In these cases, the materials are often supplemented with visits to the model and opportunities for coaching and mentoring from model school staff. Other grantees have left the task of designing the specifics of school practices entirely up to school-based design teams, focusing instead on leadership coaching, training, and other activities that promote school capacity to enact distributed leadership models and other important aspects of new school designs.

Classroom level. Direct grantee supports to help shape instruction within their schools may include grantee-supplied curriculum materials and other instructional resources; support for curriculum development, assessment development, or standards interpretation and implementation; and ongoing mentoring for teachers in the instructional and student-related issues that may arise as both teachers and students transition to new, more autonomous learning environments. Again, the degree to which grantees offer direct guidance for curriculum, pedagogy, and other elements of classroom enactment varies widely.

District level. Grantee supports at the district level range from coaching on district practices supporting school-level autonomies to strategic support for physical space allocation within the district. Some grantees informed us that they have found it necessary to hire local staff to improve the availability and proximity of the support they offer to their partner districts. For example, one technical assistance grantee has established a training program for district representatives, using both in-house training and on-site consulting to support capacity building for effective systemic change within districts. Because grantee staff expressed belief in the importance of change agents at senior levels, the grantee has targeted its recruiting efforts to assistant superintendents and other senior district staff.

Community level. Grantees have used a variety of approaches to working with their communities to generate social capital through shared interest, involvement, and demand. At least one grantee's reform initiative emerged from local community demand, and a close partnership with a strong local community organization facilitates the ongoing community ownership of the grantee's work. Some other grantees told us that they seek out communities in which to establish replicate schools and then conduct a range of community education programs and meetings to generate awareness and promote demand. The challenges that grantees face with regard to community-level support vary significantly in different communities, as do grantee strategies for reaching out to the community.

<u>Network level.</u>   Grantees vary in the degree to which they support member schools with information and communication programs to establish a true "network" of schools and other partners, an important source of social capital to schools. To support network development, some grantees informed us that they are hosting meetings of leaders and staff for their schools or providing online mechanisms for communicating about best practices and sharing ideas. One grantee reported that its network participants not only share ideas but also challenge each other to set high standards in their schooling approaches. Other grantees indicated that they deliberately partner new and experienced schools within the network, with the intent of enhancing mentor support as well as fostering community among network members. Another grantee discussed establishing a teacher's collaborative to offer professional support and community to the teachers within the network as it provides trained teachers to its schools.

Other grantees described offering network support by providing information: for example, one grantee is developing a clearinghouse of small school research, resources, and results to support both the reform efforts of its network members and the advocacy activities of policymakers. One grantee's technical assistance programs are aimed at building a "network of networks" to support information sharing across reformers, including a series of topical discussions that the grantee plans to videotape and disseminate throughout the network as well as the facilitation of site visits or internships with other network members, including other foundation grantees.

<u>Site Selection and Management</u>
For grantees that work directly with schools, important areas of focus in this first grant year have been developing processes to solicit and select schools with which to partner and managing the ongoing relationship with each site. At least 8 of the 12 network and urban grantees described a process to solicit applications from schools or design teams that seek to receive support, usually in the form of an RFP. Several grantees indicated that this process is accompanied by community outreach programs to solicit interest, although some grantees reported that their growing national visibility means that interested parties come to them, which reduces their need for actively soliciting applications.

Most network and urban grantees report that they have formalized selection criteria for the districts and schools with which they will work. These criteria may include requirements for educational philosophies and designs that are consistent with grantee principles; supportive district personnel and policies; proposed design process and partners; and issues of capacity (e.g., experienced staff, financial support, or possession of an appropriate physical site).

Another initial step that many grantees described is to formalize a partnership or membership agreement, to be endorsed by school design teams or, in some cases, school districts. A common first-year activity has been to define a set of "nonnegotiables" for member schools or districts, ranging from elements of school design to autonomies granted by the district.

<u>Strategies for Teacher and Student Recruitment and Selection</u>
Grantees are involved to different degrees in recruiting teachers and students for their schools. Teacher and student recruitment and selection are core to the success of grantees' initiatives. Teachers are the primary source of schools' instructional capacity as they seek to transform education; in many new schooling models, teachers are also responsible for distributed school leadership and for curriculum development. Many grantees have service goals for particular populations of students, making the recruitment of those populations essential; in addition, most school financial models require that minimum numbers of students be attracted to provide sufficient per-pupil funding to keep the school viable.

<u>Teacher recruitment and selection.</u> Grantees may recruit teachers from the pool of experienced teachers within or outside the district, newly certified teachers, and teachers from other domains, such as industry. Many grantees cited as a challenge the limited talent pool of teachers with the requisite experience to act as teachers and mentors in the types of educational environments envisioned by the grantees. Four grantees indicated that they are working to establish a common pool of teachers (e.g., a co-op arrangement) or alternative teacher credentialing programs to produce teachers with the required skills; several others are planning to operate their own professional development institutes.

<u>Student recruitment and selection</u>. Depending on the school authority (district or charter, neighborhood or choice), students in grantees' schools may be assigned to a particular school or they may participate in an application-based lottery. With some states' charter school laws, several grantees are finding it difficult to recruit an appropriately diverse student body, an issue discussed in greater depth in the **Common Challenges** section of this paper.

<u>Replication and Rollout Strategies</u>
The sections above discussed the ways in which grantees work with the particular schools they choose to fund. For the most part, grantee goals are more far-reaching than helping individual schools: they generally seek to promote some degree of systemic educational change nationally or within a region or state. This section discusses related strategies, including scope and rollout approach. In this first year of the program, most grantees are developing plans for work with an initial set of testbed schools; we expect further-reaching plans for systemic change based on initial successes and learning opportunities to emerge over the next several years.

<u>Replication scope</u>. Some grantees indicated that they focus their work within a particular community; others seek to broaden their reach by distributing replicates nationally or even internationally. Some grantees have chosen to select replicates at least initially within a region or a state, with the intention of concentrating resources and narrowing the range of political issues, higher education requirements, and other challenges to be navigated during the demonstration phase. One grantee combines these strategies by distributing partner schools nationally but establishing regional "clusters" to concentrate support resources and promote local networking across schools. Grantees also vary by the number of schools they choose to work with in the first five years; some have selected a discrete number of replicates (i.e., from 4 to 15) to serve as demonstrations and testbeds for their model, whereas others are working with a larger number of schools.

<u>Rollout approach</u>. Most grantees indicated that they are looking ultimately for systemic change, but at this early phase, important questions include where to start and how quickly to proceed. For those grantees opening new schools, a common strategy has been to begin with one grade (e.g., open a high school with 9th grade only) and add one grade each year until the school has reached its full target grade range. Some grantees who are reforming existing schools have chosen comprehensive whole-school reform; others have selected a subset of the school with which to begin (e.g., a single grade, a single subject-area concentration, or a school-within-a-school). Several grantees are seeking reform across a particular district, either pursuing districtwide programs for certain targeted reforms or selecting an initial subset of schools for immediate design or redesign.

<u>Advocacy Strategies</u>
Another approach to systemic change is advocacy activities, which many grantees engage in to support their initiatives even if they are not explicitly funded for advocacy-related work. These activities range from building knowledge and disseminating information to negotiating for

district-level supports for small-school reform. Four grantees are funded by the foundation to provide technical assistance to other reformers; each includes in its strategies the commitment to build and disseminate best practices information and research related to small school effectiveness through Web-based resources, seminars, and public symposia. One grantee is forming a panel of researchers, practitioners, and politicians to look at systemic issues related to high school transformation in the grantee's local area. Grantees with a stronger advocacy focus are also planning or conducting political activities such as meeting with legislators, filing briefs, sponsoring a march, or petitioning for waivers of standard schooling requirements such as seat-time or high-stakes testing. One grantee even asks that school board members take existing assessments before they begin work on designing new ones.

Summary
The overall portfolio of grantees represents a diverse set of strategies for enacting the desired reforms. Some are establishing new schools; others are focusing on converting or restructuring existing schools or implementing a combination of strategies. Just under half of the network and urban grantees are building a network of similarly designed schools with an approach characterized by a fair degree of specificity, whereas the others described a broader range of community-driven initiatives to promote schools designed from the ground up to meet local needs. Some are focusing the supports they offer in areas related to design and instruction; others provide coaching on leadership and facilitate networking among like-minded school leaders. Still others are providing knowledge-sharing and advocacy activities to facilitate a more supportive overall context for educational reform. It is too early in the 5-year program to comment on the relative effectiveness of these diverse strategies, but comparisons as implementation proceeds will likely result in important learning about what works under what circumstances.

COMMON CHALLENGES

For all the diversity of their strategies in support of small-school reform, the challenges cited by grantees are remarkably consistent. This section describes some of the most common challenges faced by grantees and the strategies they are using to meet them. These challenges include capacity building at both the grantee and the school levels, school-level challenges such as recruiting students and balancing curricular focus, and contextual challenges such as building community support or administrative turnover in partner districts. Each is described below.

Grantee Capacity Challenges

Staffing the grantee organization. Many of the organizations receiving grants under the National School District and Network Grants Program are quite new, and their proposals to the foundation frequently set forth a vision requiring a human infrastructure far exceeding the resources they had in place. Most of the grantees cited filling key positions in the grantee organization as one of the key activities in their first year. Locating individuals with the right combination of educational-reform zeal, experience, and managerial acumen has been time-consuming and difficult. To support work in urban districts, some grantees discussed the importance of ethnic diversity in the staff they seek. One grantee indicated that most of the local pool of experienced talent is already involved in the ongoing restructuring of a local high school, leading the grantee to recruit from out of state. One technical assistance grantee reported similar difficulties in finding experienced staff; ironically, the small size of the available talent pool has affected the initial scale of programs that are ultimately designed to augment that talent pool. Some grantees have also made initial hires that turned out not to be well matched to the position, resulting in re-opened searches

for key staff. Some grantees indicated that they have found success in recruiting from domains outside the typical channels. For example, one grantee's new Replication Director was hired from industry. Other grantees are supplementing the expertise they are able to attract to their own staff with outside advisors, often including a board of directors with national reputations in small-school reform.

Insufficient funds. Grantees consistently described their programs as underfunded, describing the need to do a great deal of work with outstanding talent on a shoestring budget. Networks seeking to replicate their models reported that the process of qualifying and supporting new replicate sites takes a great deal more resources than originally anticipated, which reduces the capacity available for other activities. Budgeting and fundraising for school operations were also described as significant challenges, particularly in districts with low per-pupil funding. Local foundations often have small budgets and many competing proposals, thereby limiting their ability to help. At both the grantee and the school levels, many planned programs have been delayed or cancelled for lack of funds or grantee staff capacity.

Corporate partnerships and relations with local business organizations have often played a significant role in grantee financial strategies, although some operate in more rural or residential areas where potential corporate partners are few. Some grantees have school models that streamline administrative expenses. One grantee, for example, reduces the need for administrative staff at its schools by giving teachers shared responsibility for duties that range from managerial to janitorial. Many grantees described supplementing their own limited capacity by partnering with other organizations or (if funds are available) by contracting out services that they had originally hoped to accomplish with their own staff.

School Capacity Challenges

Finding school sites. Described by one grantee as "the hardest nut to crack," the difficulty of finding housing for new schools was cited by at least seven of the grantees that are opening new schools as part of their strategies. Predictably, the primacy of this issue tends to rise for grantees that focus their work in urban districts, with grantee-reported school enrollments up to 206% of capacity in one large city during the 2001–02 school year. For some grantees, the scarcity of facilities has delayed school openings or delayed the issuance of an RFP for new school designs; in other cases, schools have opened in temporary facilities with plans to relocate when more suitable housing is found.

Grantees have used a number of strategies to find adequate school facilities. One grantee, for example, has established a Facilities Task Force to help find housing for the new schools it supports and to streamline the process of facilities identification in the future. This grantee has expressed hope to coordinate with the school district on its concurrent facilities strategic planning process. Another grantee told us that it requires any would-be replicate to procure a suitable school site before entering into negotiations for replicate status. Some of the community-based organizations funded by another grantee may serve as alternative spaces for schools; for example, a new school may be housed in a museum.

Recruiting qualified, experienced school staff. Grantees' plans to support small-school reform all fundamentally rely on the availability of experienced people to shape, support, and carry out their programs. The shortage of qualified candidates attests to the newness of the agenda in America for small, personalized learning environments characterized by in-depth, project-based learning. Thus far, only a limited number of people have the requisite hands-on experience. Nearly every grantee cited supply problems for teachers, school administrators, and coaches with the

appropriate instructional, strategic, or design experience to guide school teams through the process of creating new educational environments. Many grantees that work locally indicated that they have found it necessary to recruit from outside their region or state, and grantee staff often serve coaching functions in the interim—in turn reducing their capacity for other work. For the types of programs supported by the foundation, teacher recruitment is a particular challenge because candidates must be willing and able to take on nontraditional roles—not only in the classroom but also in the school at large, functioning as advisors, curriculum developers, and (in some school models) even sharing administrative and janitorial responsibility.

Many grantees indicated that they are developing their own professional development programs to increase capacity for teachers and administrators. These programs often include on-site coaching, visits to model schools, and mentoring relationships with teachers and administrators from existing small schools within the grantee network. One grantee, for example, has a yearlong principal training program that includes on-site workshops, a structured series of visits to a model school to experience important elements of the grantee's educational model (e.g., student learning plan development and student exhibitions), and opportunities for networking among principal trainees. Some grantees are designing alternative mechanisms for teacher certification and supply. For example, two grantees are jointly applying to the state of California for approval to run their own teacher-credentialing program, and another grantee is establishing a teacher's cooperative that would contract qualified teachers out to schools within its network. Technical assistance grantees have been funded with an explicit goal of helping other grantees with capacity building, offering programs to enhance the skills and experience of school reformers. For example, one technical assistance grantee is facilitating knowledge sharing, field trips, internships, and other opportunities to help school reformers learn from one another and from practical experience.

Additional School-Level Challenges

Recruiting the targeted student population. Charter school attendees are frequently chosen by lottery, a system that makes it difficult for grantees to target particular underserved student populations within the district. The same issues apply to public schools of choice. A few grantees reported that their programs—particularly those that focus on technology and science—tend to attract more affluent male applicants, which makes it difficult to balance the student population. Some grantees informed us that they deliberately seek applications from underserved students by partnering with community organizations, advertising in particular neighborhoods, and running community information programs. One grantee now has a recruitment director on staff to perform this important function. Other grantees are modifying their offerings or their advertising to balance technical focus areas with humanities, hoping to attract female students by making the schools seem less exclusively high tech.

Preparing students for new forms of schooling. Some grantees that have been operating schools are discovering that students who are accustomed to traditional learning environments need particular support to learn to be successful in schools that have less structure and more expectations of student autonomy and responsibility. In some cases, grantees indicated that they are finding that school models as originally envisioned need to be adapted to be more realistic about new students' readiness for these expectations.

One grantee discussed adopting a "cluster" strategy, beginning its new schools at the elementary level and adding middle and high school grades in the same area, with the eventual goal that students can learn the schooling model early and remain with it through grades K–12. Another grantee described including the process of student enculturation into the learning environment as

a topic of training and mentoring for teachers. In their estimation, enculturation may take from several months to a year, depending on the student. In the first year of one grantee's school, staff recognized the need to offer more structure to 9th-graders, since they were not yet ready to be successful with the degree of autonomy offered by their new school. Resulting changes included a more structured block schedule and other modifications. These issues will be discussed in the professional development the grantee provides to new replicate school staff, who will also be encouraged to remain flexible and modify the school model midstream as needed to meet unanticipated student needs.

Balancing curricular focus with well-rounded student development. Generally, the small schools that grantees have established or will establish are targeted to a specific curriculum focus (e.g., mathematics and science or music). With limited time in the school day, some grantees stated that they have found it difficult to offer alternatives such as humanities courses or extracurricular activities without diluting the school's focus. This issue appears to be exacerbated by small school size; without the benefit of the economies of scale achieved by their larger counterparts, small schools have less flexibility to hire specialized staff in a variety of disciplines and to staff and fund a variety of after-school programs and other extracurricular offerings. As a result, grantees and small school designers are faced with difficult choices. At some new schools, the debate over "focused curriculum" versus "well-rounded student development" had not been resolved at the time of our visits; for example, several staff at one grantee school were clear about the need to choose a specific curricular focus over extracurricular offerings, while another staff member described concerns about the lack of athletic and health education programs needed to counter teenage tendencies to ignore exercise and nutrition.

One grantee requires its replicate schools to establish partnerships with local community colleges. This strategy expands curriculum offerings, particularly for college-prep courses, while reducing class sizes and facilitating students' transitions to higher education. To date, another grantee has focused primarily on converting existing large schools into multiple smaller schools of choice that share common facilities. Its school-within-a-school approach allows the separate schools to benefit from shared resources and expanded program offerings.

Contextual Challenges

Building support within the community. Some of the grantees reported that their initiatives arose out of community demand and that they have been able to maintain strong ties with community organizations. Some others, however, described a lack of community participation, particularly in low-income areas, or community complacency with regard to the need or potential for significant positive change. Grantees have adopted a number of strategies to involve community members and to avoid both the impression and the reality of "top-down reform." School design teams, for example, often include parents and other community members, thus increasing their stake in the new schools as well as ensuring that school designs meet local needs. In an effort to foster community involvement, one grantee requires that the fiscal agent on each of its funded planning teams be a community-based organization, institution of higher education, cultural institution, or business working in partnership with the school and the district. Many grantees sponsor community education programs and committees that involve parents and community members. Some grantees have found that community services offered on Saturdays have more success with low-income parents. Partnerships with local community and faith-based organizations are commonplace. Some grantees are hiring staff to work locally in each community with which they engage so that relationship building need not happen from afar.

Administrative turnover in partner districts. New-school success relies strongly on positive relations with district administration, so turnover of key district personnel can set initiatives back significantly. One grantee, for example, reported that one of its rural school districts has had three superintendents in the last year; turnover is frequently high in challenging urban districts as well. As a result, grantees must work to make their initiatives sustainable in the face of change. The most common grantee strategies to sustain progress in the face of turnover include clearly articulating standards, assessments, and other curriculum elements, as well as developing strong community ownership of change so that momentum can continue across district administrations.

Other district and state political challenges. Nearly every grantee cited challenges related to district and state policy and other political concerns, including the lack of long-term program funding strategies or strategic visions for reform; unsupportive teachers' unions; regulations such as budgetary processes, Carnegie unit requirements, and mandatory testing; low per-pupil budget allocations; district policies that do not allow schools the autonomy they need for successful operations; state college admissions requirements; and many others. Further, these issues vary in each new state and district with which the grantee chooses to work and are often difficult to identify in advance or from the outside.

At times, grantees have had to drop sites for lack of local support. Some grantees have so far been able to select supportive districts to work with but are concerned that they will be increasingly less able to be selective as they grow to scale. Some grantees have limited their scope, at least initially, to working within a single district, region, or state so that they have fewer regulations and relationships to navigate. For example, one grantee has focused on a city in California; another grantee is replicating initially within northern California; and another grantee's advocacy work is targeted at New York state. Some grantees are making explicit requirements of the districts with which they partner. For example, one grantee specifies "five autonomies" that a district must grant its schools if it wish to participate in the program.

Many grantees are working closely with district personnel, teachers' unions, and other important stakeholder groups to generate buy-in and help develop workable policies. One grantee requires each new site to identify and partner with a well-connected local "angel" to help the grantee understand and navigate the political landscape. Another has indicated that when charter applications are denied by a district, it will apply instead to the state.

Grantees are also focusing on demonstration, hoping that successful implementations within a district will promote ideological support and ultimately facilitate the adoption of more supportive district policies for other schools within the district. One grantee has devoted significant effort to win (and currently to renew) a state waiver from testing requirements for its member schools. It has enlisted pro bono support from a New York law firm to help with this fight.

CONCLUSIONS

The foundation's initiative is a multifaceted philanthropic effort to stimulate and support the transformation of one of our most intractable institutions: the American high school. The core element of the foundation's strategy is the funding it provides to districts, networks, and others to create, replicate, convert, or restructure secondary schools into small, personalized, and high-achieving learning environments.

A great deal of diversity exists among the grantees and the schools they are supporting and creating. This diversity includes wide variation in interventions, school locations, and target populations. For example, some interventions are very prescriptive in their reform strategies and plans; others are based on broad guiding principles. Some intervention strategies include creating new schools, breaking up existing schools, or restructuring existing schools. (These variations exist among grantees and also within grantees; a grantee may use different interventions in different locations.) Additionally, schools are located in diverse communities, districts, and states all over the country. The target populations for schools vary; some interventions target the most underserved students, whereas others do not.

In general, grantees' reports of their first year of foundation-funded activities suggest that *grantee organizational capacity issues* are central at this stage of the initiative. Many grantees began their grant periods without having the staff within their organizations to carry out their funded activities. Recruiting grantee staff (including school coaches) with the right expertise has proven time-consuming and difficult. Those network grants that involve model schools have faced the additional challenge of juggling replication activities and running a school. Finding ways to clarify and codify practices and materials that have worked in a small, close-knit school community in ways that can be communicated to different communities calls for new capabilities that require different kinds of, as well as more, staff. Finally, obtaining the financial resources for simultaneous support of replication and technical assistance activities, the development of facilities, and ongoing operations of the schools in their network is a central issue for the network grantees.

The second major theme emerging from the grantees' descriptions of the challenges they face is the *unsupportive aspects of the policy context* in which grantees operate. State funding cycles and formulae, seat-time requirements, accountability practices, and higher education admissions processes were seen as barriers requiring waivers or cumbersome work-arounds. Although grantees are displaying ingenuity in finding ways to survive within their political contexts, the effort is consuming time and energy that could be spent in expanding and improving their programs.

Finally, in general the grantee *school models remain works in progress*. The areas where grantees feel they need to improve their programs vary from offering authentic mathematics for high school students to using best practices for English language learners to finding a way to offer advanced coursework to integrating technology with instruction. Most grantees indicated that although they have important insights and practices to offer, they are still learning what works best for the range of students and school communities they serve.

At present, most of the grantees are in early phases of implementation, focusing on staffing their organizations, selecting initial sites for their work, and supporting initial school-planning efforts. Many of the challenges they face in this early stage are common across the various initiatives, including the search for inspired and experienced staff; the challenge of building relationships with districts and communities; and negotiations for pre-requisite conditions for success, including school autonomies and facilities. Grantee challenges also reflect the novelty of this initiative; although the idea of small effective schooling environments is not new, this approach to education is still exceptional enough that many districts and states have incompatible policy environments, and the population of teachers, administrators, and mentors with experience in these schooling models is still relatively small. Grantees are actively addressing these challenges as they seek to establish effective, personalized learning environments.

Those grantees that already have operational small schools are beginning to grapple with the difficulties of bringing their educational vision into practice. Grantees are finding tensions between elements of vision (e.g., providing a strong academic focus while supporting students' broader developmental needs) and challenges in operationalizing elements of school models (e.g., finding enough time in the day for collaborative curriculum development and ongoing teacher professional development in addition to responsibilities for working with students).

It is important to stress that the kind of radical educational change these grants are intended to bring about takes time. Creating new schools means scrambling to get hundreds of essential pieces in place; changing existing schools requires a fundamental shift in the way students, teachers, parents, and administrators think about the goals and nature of schooling. It is important for the foundation to offer a framework for judging progress that holds grantees accountable for essential elements yet provides them with flexibility and a reasonable timeframe for accomplishing their goals. These elements, in combination with opportunities for formative feedback and for networking across grantees, will provide these organizations with the time and feedback they need for long-term success. Not every effort will succeed, but the community can learn from failures as well as from successes. The larger collection of schools that open over the 5 years of this program will offer powerful opportunities to understand practical challenges, to experiment with alternative solutions, and to find workable models for local adaptation and ongoing refinement, which will ultimately result in a compelling base of experience to guide future systemic change efforts. The next 4 years of this evaluation will provide valuable learning opportunities for the research team, the foundation, the grantees, and the larger research and practice communities.

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