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**THE POTENTIAL CONTRIBUTION OF SCHOOL  
DESIGNS AND DESIGN-BASED ASSISTANCE TO  
EDUCATION REFORM**

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The NAS initiative is based on the premise that high-quality schools possess a design.<sup>1</sup> Such a design may be explicitly and carefully articulated, or it may exist as a set of well-developed understandings among teachers, students, and parents that have evolved through time but have never been explicitly committed to paper. A design articulates the school's vision, mission, and goals; guides the instructional program of the school; shapes the selection and socialization of staff; and establishes common expectations for performance, behavior, and accountability among students, teachers, and parents. It provides criteria for the recurring self-evaluation and adjustment that are essential to continuing improvement in any organization's performance. It makes clear the student behaviors the school expects when it accepts a student and the nature of the work environment a teacher must accept if he or she takes a job in the school.

Most schools today appear to lack a design. Rather, they are homes for a collection of activities and programs of varied origins. They typically have some guidance concerning their curriculum, either from their district or from the state. The activities of individual teachers are shaped by their training and experience but are most often carried out in isolation from most of their colleagues. Teachers may independently seek assistance from community organizations or businesses in conducting their classes. Central offices may impose programs dealing with specific subjects or require particular

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<sup>1</sup>For a complementary treatment of the functions of a school design, see Hill (1997).

organizational activities, such as creating site councils. School leaders may seek grants to pursue activities they feel will benefit their school or their careers. Federal or state funding may require (or be perceived to require) specific programs or practices. In the last several decades, schools have often been required to serve as agents addressing broader societal needs, such as combating drug use or helping young, unwed mothers to begin raising their children. As a result, many schools are essentially fragmented collections of programs driven by both internal and external imperatives.

NAS began its operations by developing an RFP for school-design efforts that would reexamine the assumptions and rules that guide conventional practice and develop designs for new, high-performance schools. At the time, it was not explicitly seeking to develop designs that would help schools possessing fragmented programs to become design based. Rather, its RFP stated it was seeking to create designs for what it termed:

a new kind of American school—public or private—in which:

- assumptions, about how students learn and what students should know and be able to do, are completely reexamined;
- visions of the nature and locations of schools are reconsidered; and
- the manner in which communities create, govern, and hold their schools accountable is redesigned. (NASDC, 1991, p. 9.)

The RFP had several other important emphases as well:

- the designs were to integrate all elements of a school's life; they were to be for whole schools, not just a single grade or program within a school
- they were to be “benchmarked” against demanding goals and achievement standards
- the designs were to be for all students, not merely for those students most likely to succeed. (NASDC, 1991, pp. 20 and 21.)

The RFP thus indicates simply that NAS was seeking distinctive designs for whole schools that would successfully enable virtually all students to meet demanding standards. While the RFP pushed for break-the-mold designs, it also required the respondents to justify their designs through reference to research or proven practice.

The proposals NAS chose for funding envisioned schools that were certainly different from the norm, but they were not radical departures from what was being proposed or practiced by mainstream reformers. For example, no designs made heavy use of distance learning, which was increasingly feasible as telecommunications and computers developed. In fact, a minority of the designs made educational technology a major component of their design. Many of the pedagogical practices proposed have a history in the progressive education movements earlier in the century. However, if the designs did not possess the totally new quality that seemed so much a part of the early rhetoric surrounding NAS, they did appear to have promise to bring greater coherence and focus to schools that conducted their operations in accordance with the design.

The NAS RFP had another feature that reflected its founders' intent that its program be an instrument for the reform of many schools. The RFP stated:

*This is not a request to establish "model" schools. NASDC does not seek to develop "cookie cutter" designs. The designs must be adaptable so that they can be used by many communities to create their own new schools. A design team must have an effective plan to generate the energy required for local communities to create their own high-performance, break-the-mold schools. The important thing is that long after NASDC has disappeared from the scene, its legacy of new designs will remain. (NASDC, 1991, p. 21, italics in original.)*

One of the criteria by which proposals were judged was their "potential for widespread application and the quality of plans for fostering such application." (NASDC, 1991, p. 35.) While it was not widely appreciated by the NAS staff in the first year of operations, this requirement, together with the organization's subsequent focus on realizing it, gave rise to the emphasis that NAS now places on design-based assistance.

Through time, each team has developed two things: (1) a design and (2) a strategy and fledgling capability for helping schools to transform their operations in ways consistent with that design. Each team's design embodies a "theory of action" containing the implicit and explicit assumptions and explanations for how and why school operations consistent with the design will enable students to meet

high standards.<sup>2</sup> The design specifies or guides such things as curriculum, grouping of students, and the nature of the performance that is expected of students. Usually, the design also proposes the broad dimensions of the culture that the Design Team feels is important in its schools.

The Design Team's assistance strategy can be seen as embodying a second, related theory of action concerning the intervention the team uses to help schools transform their operations to be consistent with those envisioned under the design. An assistance strategy guides the sequencing of implementation tasks, the nature and content of the training that is provided, and ways in which implementation progress is assessed and adjustments in implementation are made. The strategy also describes how the Design Teams will relate to schools before, during, and after the implementation of the design.

The designs and assistance strategies have schools as their targets. Recent NAS activities have also moved further to target jurisdictions. As we described in Chapter One, NAS began its third, scale-up phase of operations with the idea that it would seek jurisdictions with existing or planned policies and practices (operating environments) that supported schools that choose distinctive designs and use design-based assistance to implement those designs. It was quickly apparent that the jurisdictions NAS chose to work with were not prepared to use designs and design-based assistance and that NAS itself did not fully appreciate the changes that jurisdictions needed to make to support such use on a sizable scale. Thus, NAS has begun to develop a third strategy and associated theory action applied primarily to a school district.<sup>3</sup>

This theory of action views transformation of schools through the use of design-based assistance as its cornerstone. It argues that the requirement to support such transformations in a significant pro-

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<sup>2</sup>A theory of action describes the chain of causality that leads the proponents of an intervention to predict it will have positive outcomes. An explicit theory of action should guide evaluators as they seek to understand the reasons for an intervention's impact. See Weiss (1995), Pressman and Wildavsky (1973), Williams (1975), Argyris and Schon (1978), or Argyris and Schon (1996).

<sup>3</sup>Several of NAS's jurisdiction partners are states, but its Phase 3 strategy has tended to be targeted to individual districts.

portion of a district's schools will guide and pressure other district reform activities, particularly those related to decentralizing authority to schools, managing the professional development of staff, and amassing and managing resources needed for school-level reform. If this theory of action proves correct, new district policies and practices, which incorporate schools with distinctive designs and uses design-based assistance, will emerge. The theory posits that such districts will significantly improve the performance of all students.

Thus, the initial vision of NAS's mission evolved to one with three components: (1) the designs themselves, (2) design-based assistance, and (3) a strategy to help districts effectively use the designs and design-based assistance by creating a supportive operating environment.<sup>4</sup> These components are schematically represented in Figure 2.1. They are discussed in more detail in the rest of this chapter.

## **THE NATURE OF NEW AMERICAN SCHOOLS DESIGNS**

In 1991, most observers, as well as NAS's founders, probably expected that a school design would consist of specifications for curriculum and instructional practice, for school organization and governance, and for the manner in which the schools would communicate with parents and others in the community. Most would probably also have said that a design would include either extensive curriculum products or detailed guidelines for the curriculum. Some thought that the designs should explicitly develop or adopt standards and assessments.

However, as noted above, NAS's RFP contained a broader view of the product. The designs were not to be cookie cutters; they would provide guidance rather than rigid prescription. This reflected decades of experience suggesting that completely and rigidly specified designs for education programs seldom were successfully replicated or even sustained in their initial settings. (Berman and McLaughlin, 1978.)<sup>5</sup>

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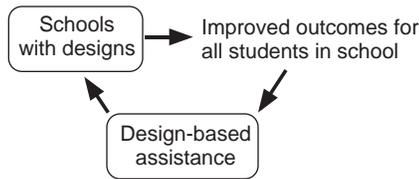
<sup>4</sup>The use of the concept of theories of action owes much to discussions with a panel that the Annenberg Foundation established to advise RAND on this evaluation. Its members include Howard Fuller, Paul Hill, Andrew Porter, Karen Sheingold, Carol Weiss, and Barbara Cervone.

<sup>5</sup>McLaughlin (1990, pp. 11–16) revisited this study a decade later.

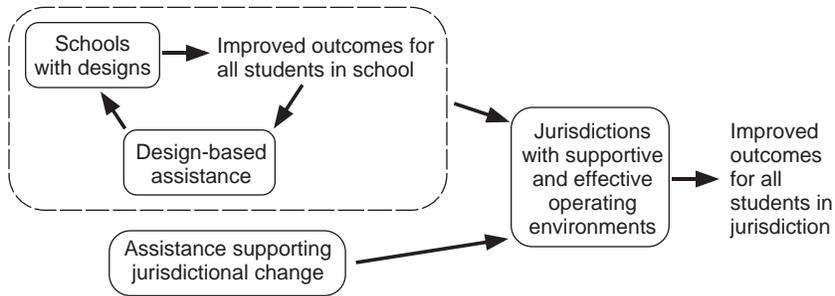
**Theory 1—Design**



**Theory 2—Design-based assistance**



**Theory 3—Jurisdictional change led by design-based assistance**



**Figure 2.1—Schematic Description of New American Schools Initiative**

The designs chosen differ in their conceptions. They range from relatively specific descriptions of how schools should be organized and what materials should be used, to broader, less fully specified visions of what the school should look like, coupled with organizational processes to enable a school to achieve that vision. The descriptions of three of the designs contained in the following brief paragraphs provide some sense of this variation.<sup>6</sup>

<sup>6</sup>These descriptions are based on materials from the Design Teams’ or NAS’s Web sites. As a part of its 1998 activities, RAND will trace the evolution of the designs from

*Roots and Wings* is a design for elementary schools, particularly those serving at-risk youth. It builds on a reading and writing program, *Success for All*, whose development extends back over a decade. The guiding vision of the design is to work continuously to prevent any student from falling behind desired standards of performance.

The Design Team provides both curriculum materials and assessments. Students are tested at 8-week intervals to assess their progress. On the basis of the assessments, students may be assigned to tutors; alternative teaching strategies may be used; students may be regrouped; or other interventions with the student and his or her family may be tried. Class periods for reading are extended to 90 minutes, and cooperative learning is emphasized. A full-time facilitator works with teachers in each school to help implement the design. The facilitator coordinates the assessments, helps with staff development, and generally tries to help ensure that every student is making adequate progress.

*Roots and Wings* added several components to *Success for All*. It has a math program that also includes curriculum materials and teaching and assessment strategies. An integrated social studies and science component, called *World Lab*, has also been developed. Within it, students carry out a variety of projects, often cooperatively. The Design Team has developed extensive materials and guidance for instruction for the *World Lab* units.

The *Roots and Wings* Design Team developed its design around the Maryland state education standards that had been set just before the design effort began. The design has little difficulty adapting to other state and district standards for reading and math, since such standards are similar across the country. There have been larger problems with *World Lab*, because states and districts differ significantly in their requirements for social studies.

The design says little directly about the organization and governance of the school. It does require a family support team to promote family involvement and develop plans to meet the needs of individual students who are having difficulty.

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what was initially proposed to what is currently being implemented. Our goal will be to derive lessons from this evolution for future reform activities.

*Modern Red Schoolhouse* is a K–12 design. Emphasizing demanding standards, it uses a fairly traditional curriculum taught using modern pedagogical techniques and substantial amounts of technology. It specifies the character of school governance and seeks to be a school of choice.

Modern Red Schoolhouse began its design work by creating its own standards, which it aligns with local standards, if necessary. It has also developed a set of assessments that reflect these standards. At the elementary school level, approximately half the design's curriculum is based on E. D. Hirsch's *Core Knowledge*, while the remainder involves interdisciplinary units to meet standards related to higher-level skills.<sup>7</sup> The James Madison series developed by the U.S. Department of Education guides its upper-level curriculum. The design requires school faculties to develop pedagogical skills that emphasize helping all students to reach its standards. In contrast with *Roots and Wings*, however, it does not specify these skills in detail.

The design has devoted considerable attention to management and governance. Modern Red Schoolhouse schools are intended to be quite autonomous, although few, if any, have been granted the autonomy sought by the designers. Training is provided in managerial functions. The design specifies a governing structure for the school that is centered on its design components. The governing structure is intended to engage all teachers in implementing the design.

The Design Team has created a guide to help a school develop a technology plan; technology for both instruction and management is integral to the design. A comprehensive, networked instructional management system is recommended.<sup>8</sup> This system contains information on standards, curriculum units, and student performance. It is intended to support teachers, students, parents, and

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<sup>7</sup>E. D. Hirsch and colleagues developed the Core Knowledge curriculum based on ideas first put forth in Hirsch's book *Cultural Literacy: What Every American Needs to Know* (1988). The curriculum itself is set out in a set of guides with the title (e.g.) *What Your First Grader Needs to Know: Fundamentals of a Good First-Grade Education* (1997).

<sup>8</sup>The Design Team has not developed this itself. It encourages its schools to choose among several commercially available systems.

administrators in developing Individual Education Compacts (IECs) representing agreements between teachers, students, and parents about student work needed to ensure that she or he meets the school's standards.

Professional development services are provided for the key elements of the design. An important component of professional development is each teacher's experience in writing curriculum units that are based on the standards and focused on developing the skills required to perform well on the assessments.

*Expeditionary Learning Outward Bound (ELOB)* is less structured than either the Roots and Wings or Modern Red Schoolhouse designs. It is based on a set of 10 design principles that reflect its heritage in the Outward Bound program and govern the operations of an ELOB school. The Design Team describes its general approach as follows:<sup>9</sup>

Expeditionary Learning is a comprehensive school design that transforms every aspect of a school. Teachers, students, administrators, parents, and community members create a school culture that embodies all of the ten design principles as well as key program components. Students' primary daily experiences are as crew members embarked on rigorous, purposeful, multi-disciplinary and project-based learning expeditions which include strong intellectual, service and physical dimensions.

Expeditionary Learning schools have significant school-based decision-making and operate within districts where the leadership actively supports implementation of this design. Over time, this design builds community understanding, interest and commitment to public education by offering parents and community members meaningful and rewarding involvement in supporting students' intellectual and character development.

To implement this vision and its ten Design Principles, ELOB describes five "Core Practices."<sup>10</sup>

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<sup>9</sup>The description of the general approach is from the ELOB Web page in January 1998. The ELOB Web page can be found at:

<http://hugsel.harvard.edu/~elob/design.htm>

<sup>10</sup>All the quotes are from Expeditionary Learning Outward Bound (1998), pp. 3-7.

1. Learning Expeditions—“[L]ong-term, in-depth investigations of a single theme or topic that engage students in the world through authentic projects, fieldwork, and service.”
2. Reflection and Critique—“The faculty is a collaborative of learners who regularly reflect on curriculum, instruction, and the work students produce in order to do their individual and collective work better.”
3. School Culture—“Teachers take collective responsibility for the learning of every student and have time to reflect on their practice, and to ask ‘Does our school culture make all students feel safe, challenged, and respected?’”
4. School Structures—E.g., the use of block scheduling, heterogeneous student grouping, multiyear teaching, site-based management and decentralized budgeting, shared decisionmaking, and schoolwide reporting and assessment.
5. School Review—“School improvement planning incorporates Expeditionary Learning design principles and core practices and the school’s plan for strengthening implementation of them. All school constituencies review the plan annually to assess the school’s progress in attaining the Expeditionary Learning Benchmarks, to set priorities and goals for the future, and to approve drafts of the plan.”

The design explicitly uses the content standards that are used by the jurisdiction with which it is working. For each of the Core Practices, it provides implementation benchmarks by which schools and others can judge the level of implementation of the practice and, therefore, of the design.

As these three examples suggest, the NAS Design Teams have embraced a spectrum of design conceptions. These vary in scope and grade-level emphasis. The designs range from those that provide clear guidance for classroom organization and instructional materials to those that specify broad principles and key curricular and pedagogical practices but leave the specifics to the school. They vary in the amount and character of specific products they provide—curriculum, training materials, software tools, and materials for engaging the community. Each design provides schools with a vision, but the character of the vision varies widely.

### **THE CHARACTER OF THE DESIGN-BASED ASSISTANCE NEW AMERICAN SCHOOLS DESIGN TEAMS PROVIDE**

Each team also has a distinct strategy for implementing its design. None believe that they can simply hand materials to a school and expect the school to implement the design on its own. Each has distinctive ways to engage a school community initially and different starting points for implementation. They have different ways in which they attempt to introduce quality control.

RAND's fieldwork in Phase 2 convinced us that these implementation strategies shared importance with the designs in determining the outcomes a school achieved. During these visits, the RAND staff assessed implementation progress for each school and probed for the underlying reasons for the progress. Interviews with teachers and principals suggested several important characteristics of the intervention that they thought helped make it more effective than previous reforms with which they had been associated:

1. The design provided a vision for the school that organized and gave purpose to the entire reform effort.
2. The restructuring effort dealt with the whole school, which resulted in less of the divisiveness or fragmentation often associated with reforms that deal with only a few classrooms or a single subject area.
3. The assistance the Design Team provided or that the schools sought from other sources was shaped by the vision inherent in the design.
4. The intervention involved significant amounts of resources, both in terms of the assistance and materials provided by the team and the time devoted by school personnel.
5. Demanding time lines imposed by NAS drove the restructuring effort.

These observations led RAND to place increased emphasis on identifying the *strategies* that the Design Teams were developing to provide assistance to the schools implementing a design, as well as on the designs themselves. Reflecting this perspective, Bodilly, in the final chapter of her report on lessons learned in Phase 2, coined the term *design-based assistance* to describe the emerging results of the

investments that NAS had made. (Bodilly, 1996, Ch. 7.) This emphasis is reflected in Theory 2 in Figure 2.1.

While the term “design-based assistance” is new, the concept is not. Many organizations provide assistance in the context of a design. In most cases, this assistance relates to a single program, perhaps in reading, math, or science. In a few cases, the assistance is provided in the context of an entire school. For example, Accelerated Schools and the Comer School Development Program both provide assistance in the context of a design.

The distinguishing feature of the NAS initiative is that it has deliberately set out to develop a variety of design-based assistance organizations with which schools can choose to affiliate. It has invested not only in creating the designs themselves but also in developing organizations and their strategies for engaging and assisting schools to implement their designs.

Differences between school-level reform using design-based assistance and more traditional forms of assistance are portrayed in Table 2.1. The left column lists a number of the elements of school reform, such as the development of a school vision, the acquiring of technical assistance, and the means of gauging progress. The middle column suggests the manner in which design-based assistance deals with those elements, while the last column attempts to characterize the more traditional approaches to school reform.<sup>11</sup>

The entries in the table suggest that the elements of the type of design-based assistance espoused by NAS include the following:

1. A vision, inherent in the design, that guides the school’s staff during the design’s implementation.
2. An implementation strategy that guides the sequencing of tasks and provision of assistance during the implementation process.

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<sup>11</sup>Highly effective reformed schools are often the product of exceptional leaders who in fact focus a school’s reform effort in ways very much like what the Design Teams try to do. Thus, in individual cases a school may converge on a vision quickly and have a very clear strategy that engages its whole staff. A fundamental premise of NAS’s initiative, which serves as a working hypothesis for evaluation, is that Design Teams will be able to help significant proportions of the nation’s schools to do this.

**Table 2.1**  
**Comparison of Whole-School Design-Based Assistance with Traditional Means of School Reform**

Elements of Reform	School-Level Reform Using Design-Based Assistance	School-Level Reform Under More Traditional Conditions
1. Development of a school vision	Starting point is choice of design; evolves through implementation. High standards for all required.	Not required. Reforms typically center on component of school program.
2. Focus of reform effort	The entire school. Seeks to create team with shared responsibility for high outcomes.	Usually subject matter or grades—sometimes governance, e.g., site-based management.
3. Duration of reform effort	Intense initial effort lasting 2–3 years, but reform is continuing process.	No set time.
4. Sources of technical assistance	Initial assistance largely from design team. Long-term assistance from sources deemed most effective by school.	No set pattern. Frequently provided by school district or local teachers college. Training sometimes provided by program vendors.
5. Source of curricular materials	Varies. Some design teams provide detailed materials; others provide frameworks for curriculum development; others use commercially available materials.	Varies according to development of school program. Sometimes shaped by textbook adoption procedures.
6. Strategy for sequencing assistance	Strategy for sequencing actions is explicit. Design teams have different approaches.	None.

**Table 2.1 (continued)**

Elements of Reform	School-Level Reform Using Design-Based Assistance	School-Level Reform Under More Traditional Conditions
7. Conception of professional development	Professional development is integral to design. Implementation of design results in professional development. Network of like schools is key source of expertise.	Tends to be responsibility of individual staff member. Often dependent on district staff development policies.
8. Organization of staff	Integral to design. Some transitional roles defined. School revises organization and staffing structure to meet its needs.	Tends to be function of district rules. Divided along disciplinary or programmatic lines.
9. Measurement of progress of reform	Benchmarks established by Design Team or by school with Design Team guidance.	Not usually explicit.

3. Assessments of progress coupled with a process for modifying the effort based on the progress.
4. Resources sufficient to enable an entire school to transform itself in a fairly short period of time.
5. Continued support for school staffs in the form of membership in networks of like-minded practitioners and continued association with the Design Team itself.

The teams have distinctive approaches to each of these elements.

### **Vision Inherent in Design**

Our earlier descriptions of three designs hint at the range of visions the designs possess. The vision helps school staff to understand how implementation tasks meld together to produce a transformed school. It should also help students and parents to understand the purposes for which the transformation effort is being undertaken.

In the next chapter, we discuss the difficulties NAS, the Design Teams, and the jurisdictions have had in conveying the key distinctions among the visions of the designs in the process of matching designs and schools. A significant number of the staff in schools report that they did not fully understand the design as they began implementation. This may reflect the reality that a meaningful vision governing school operations is developed<sup>6</sup> through experience. Until school staff have actually engaged in the implementation of a design, they may not understand the vision. Moreover, as the implementation proceeds, a school is likely to adopt a vision that is somewhat different from what the Design Team initially proposed. Thus, the vision associated with a design may best be seen as a starting point for a school transformation rather than a prescription for the vision at the endpoint of the transformation.

### **Strategies for Implementation**

The Design Teams vary in the way they initially engage a school's staff, in the ways they provide training, and in the implementation tasks they emphasize. These strategies have evolved and continue to

evolve as the teams gain experience during scale-up. Some examples illustrate these points.

The National Alliance, which Bodilly (1995) has characterized as a systemic design, begins by working with both the school jurisdiction and school leadership to develop their ability to analyze their performance against standards and build organizational capacity to help schools improve that performance. As the design has evolved, the Alliance has increasingly emphasized developing a district or state “field team” organized around the Alliance’s design components. The Co-NECT Design Team also begins with an activity that is aimed at assessing the school’s performance and capabilities and establishing goals or benchmarks for design implementation and school performance but does not engage the district staff.

In contrast, the Audrey Cohen College team works with the entire school faculty for a week before school opens to enable the staff to begin the school year with a distinctive curricular approach and an ability to make effective use of community resources. Roots and Wings begins with a meeting of an entire school faculty. However, this team quickly focuses on its language arts component, Success for All, both because of the centrality of reading to schooling and because it feels that it can demonstrate the results of its approach in a comparatively few weeks, thus gaining support from the teaching staff.

Some of the teams emphasize engagement of the entire school faculty at the start because they want to gain wide understanding and acceptance for the design. This is true for Roots and Wings and ELOB. In contrast, National Alliance and ATLAS have relied more heavily on dealing with leadership teams or lead teachers in a model that trains the trainers, in part because they feel it is not cost-effective to engage all teachers. Modern Red Schoolhouse engages the whole school for some activities but places a lot of emphasis on organizational teams that deal with individual components of its design.

Such teams as ATLAS and Modern Red Schoolhouse believe that school-level governance is central to the operations of their schools and make significant initial efforts to help schools develop effective forms of governance. Roots and Wings and the Audrey Cohen Col-

lege think it is more effective to focus immediately on curriculum and instruction and move quickly to change classroom practices, dealing with governance as it becomes necessary during the design implementation.

Both Modern Red Schoolhouse and ELOB believe it is important for teachers to develop important components of their curriculum. They engage teachers in intense development efforts designed to help them integrate standards, curriculum, instruction, and assessment. They view this both as an important form of professional development and as a means of developing ownership in the design.

### **Assessment of Progress and Adjustment of Implementation Activities**

Several of the teams quickly developed processes for assessing the progress of schools implementing their designs. Roots and Wings uses an implementation checklist, developed and administered by the Design Team, to provide feedback to schools on progress and suggestions for steps to improve the implementation. Co-NECT makes the development of benchmarks an important initial task and helps the school to measure its progress against them.

Most teams, however, began by providing such feedback more informally. NAS, at the urging of several of its district partners, pressured the Design Teams to develop benchmarks that would serve both to help schools understand what they were expected to accomplish and to provide a framework for adjusting the implementation effort to achieve an improved implementation. While such benchmarks have been developed, our fieldwork took place too early to provide information on their application.

Co-NECT has made a “critical friends” visit an important component of their implementation strategy. This involves a week-long visit by practitioners from other Co-NECT schools to schools in their second year of implementation. The visiting group reviews school operations and makes recommendations of ways to improve those operations. Schools RAND has visited have viewed this as very valuable. The visitors also see it as an important form of professional development. ELOB has been experimenting with a similar program.

Scale-up implementation has only been under way for two years. It is too early to say whether habits of self-assessment, reflection, and program adjustment will actually be developed by schools using design-based assistance. We expect that such habits, if they appear, will be the result of both the design implementation and district policies.

### **Resources and Time to Enable School Transformation**

As noted above, respondents in Phase 2 cited both resources and demanding timelines as reasons for implementation progress. While many researchers and reformers believe that it takes five or more years to reform a school, the goal of most of the Design Teams is to achieve substantial implementation of its design in three years. Most teams expect that the results of such implementations will be increasingly apparent as the design is in place and school operations reflect the tenets of the design.

The sources of resources required to support rapid implementation have been one of the most contentious issues in Phase 3. As we will discuss more fully in Chapter Three, the costs of Design Team services are substantially higher than what districts normally spend for technical assistance in a single school. Some districts have asked the teams to reduce the level of services provided; in the absence of substantial experience on which to base claims of effectiveness, the teams have sometimes been forced to reduce their level of effort.

Perhaps more important than the costs of the Design Teams is the time of teachers and staff to participate in training, planning, and development efforts. In most cases, schools must reallocate their own resources to free the time for teachers and staff to participate in the implementation. They have done so, but teachers have widely complained about the amount of time and effort they must devote to design implementation above and beyond the commitments they have to their regular duties.

### **Continued Professional Support for School Staff**

Each of the teams expects to provide some form of continuing support for staff members of schools affiliated with its design. The teams emphasize continued networking among their schools because of

the contributions network members can make to each other's professional development.<sup>12</sup> In this regard, design-based assistance can be seen as one means of trying to foster the communities of professional practice whose value has been emphasized by increasing numbers of scholars and practitioners.<sup>13</sup>

Some teams have been more active than others in actually providing such support. Expeditionary Learning has regular national and regional meetings, as do Roots and Wings and Success for All. Co-NECT also has a national meeting and has begun the development of a Web-based system to provide continuing support to teachers and administrators. Its critical friends activities can also be seen as an opportunity for continued professional development. The National Alliance sponsors a range of conferences and continuing education activities targeted at both affiliated and unaffiliated districts and schools.

For several of the teams, these activities are still in formative stages. The teams have been so busy dealing with the administrative issues of getting started in a fee-for-service business that they have not been able to devote significant attention to this component.

### **DESIGN-BASED ASSISTANCE AS A FOCUS FOR JURISDICTIONAL REFORM**

The third theory of action of the NAS initiative, shown at the bottom of Figure 2.1, is both its newest element and the one least well articulated. The key hypothesis is that a district will be required to make significant changes in its policies and practices if

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<sup>12</sup>Most of the networks center on national meetings. However, the most important network activities may ultimately be established within an individual school district or in compact geographic regions. The Success for All component of Roots and Wings has been available for eight or more years. In several of the districts RAND has visited, schools have already been implementing this design component for several years, and it was clear that faculties in those schools relied upon one another for help and support. Teachers who were uncertain about how to organize a Success for All classroom would spend time in classrooms of teachers in other schools who were viewed as highly effective. Often, a district-level coordinator who specialized in the Success for All design facilitated these visits.

<sup>13</sup>For example, see Talbert and McLaughlin (1994), pp. 123–153.

1. A significant proportion of a district's schools possess distinctive and well-implemented designs
2. Schools implement the designs using design-based assistance.

Under these conditions, it can be argued that schools must have the authority needed to implement a design effectively, that resources must be marshaled to invest in that design implementation, and that the district's professional development will be forced to accommodate and support school improvement. Together, it can be hypothesized that these changes, when coupled with improved standards and assessment systems, will lead to improved student outcomes.

As we will discuss more thoroughly in Chapter Three, the start of scale-up in jurisdictions was hurried. Moreover, many of the jurisdictions lacked the skills and knowledge to embark upon the changes required. As a result, NAS engaged several consultants to help jurisdictions make needed changes. Thus, in Figure 2.1, the jurisdiction strategy involves a combination of the design and design-based assistance and these consultant services.<sup>14</sup>

It is too early to see extensive results of the NAS jurisdictional strategy. Early experience does make it clear that, in districts lacking deep, top-level leadership support for the use of design-based assistance and/or facing funding crises or difficult labor negotiations, the desired jurisdictional change is unlikely.

### **POTENTIAL BENEFITS OF USING DESIGN-BASED ASSISTANCE AS A CORNERSTONE OF A REFORM STRATEGY**

The broad theories of action that we have sketched, if they prove correct and robust, suggest that design-based assistance would have powerful benefits as the key component of an educational reform strategy. The first-level question, whether schools possessing

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<sup>14</sup>With support from foundations, NAS is developing several aids that districts can use to plan changes in their operating environments. These include an audit of the professional development system, checklists and guides supporting resource reallocation at the school level, and guidelines for aggregating federal resources to support of whole-school reform.

designs leading to program coherence perform better than those that do not, is important, but there is substantial research that supports the idea that the answer to this is positive. (Edmonds, 1979; Newmann, 1989; Newmann, 1996; and Purkey and Smith, 1983.) The NAS initiative provides opportunities to probe this question more deeply. For example, is there reason to believe that designs that provide more traditional structure and prescribed content do better than those emphasizing multidisciplinary and “authentic” instructional tasks? While the implementation of the initiative and the nature of our evaluation design make it impossible to answer this question as well as one might like, RAND will probe for evidence that casts light on this issue.<sup>15</sup>

The principal focus of the NAS initiative and of the RAND assessment has been design-based assistance itself. In this chapter, we have laid out some of the reasons that design-based assistance of the sort offered by the NAS Design Teams might be effective in improving the performance of schools. These include the benefits associated with beginning with a clearly delineated design for the school, support from trainers experienced with the design, and access to helpful colleagues in like-minded schools.

However, there are other potential benefits when design-based assistance is looked at in the context of jurisdiction policies. These benefits, if realized, may provide additional reasons that a district might want to adopt design-based assistance as a cornerstone of a reform strategy in a school jurisdiction. It is possible that widespread use of design-based assistance could lead to

1. *Greater efficiency in the use of district resources for technical assistance.* Intense, total immersion in a guided school transformation may result in more complete and lasting changes in school design. Coupling school-level assistance with the design may thus be a more cost-effective use of jurisdiction resources for assistance

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<sup>15</sup>A very brief overview of RAND’s evaluation is contained in Appendix A. The NAS initiative focuses on design-based assistance rather than on the designs themselves. The initiative emphasizes the importance of schools choosing designs and design teams they feel serve the needs of both their students and their professional development. As a consequence, a form of “selection bias” is created that makes it difficult to disentangle the effects of the designs from the effects associated with the school itself.

designed to improve school performance than are current practices based on salary incentives to induce individual investments in training and centrally designed in-service programs.<sup>16</sup>

2. *More efficient use of instructional resources.* The clear focus provided by the design may help school faculties terminate or reject individual programs peripheral to the design (and ineffective at raising student achievement) and encourage them to devote the freed resources to a significantly more coherent core program of instruction.
3. *More permanent and enduring school improvement.* Schools with clear and widely agreed-to designs may have more ability to sustain their performance through changes in personnel and district environments that inevitably occur.
4. *More rapid improvement in school performance.* The pressure to choose among concrete, competing designs may help schools choose a vision and design more rapidly than they otherwise would.

We emphasize that these are *plausible but hypothesized benefits* of making design-based assistance a major feature of a district's reform strategy. Their realization depends in large part on complementary changes in other policies in a school district. For example, the designs will not help school faculties terminate marginal programs and activities if those activities have strong advocates in the central office who are able to mandate their continuation. The possible benefits of intense, whole-school, design-based assistance will not be realized unless the district encourages and facilitates design-based assistance involving demanding deadlines. The benefits associated with networking with like-minded colleagues in schools sharing common designs will not be fully realized if the professional development policies of the districts do not encourage visits to other sites or attendance at regional or national meetings sponsored by the Design Teams.

NAS's early experiences working with jurisdictional partners illuminated the difficulties districts face in realizing these potential bene-

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<sup>16</sup>Realizing such benefits on a wide scale requires significant changes in a district's professional development and compensation policies.

**fits.** These experiences provide some early lessons for jurisdictions considering widespread use of design-based assistance. We turn to them in the next chapter.