NAS’s mission is to help schools and districts significantly raise the achievement of large numbers of students with design-based assistance. While each design is unique, each aims to restructure the entire school emphasizing changes in organization and governance, the professional lives of teachers, content and performance expectations, curriculum and instructional strategies, and parent and community involvement.

This chapter provides an overview of the conclusions of our study and some policy implications. Although we largely focus on findings from the current study, where appropriate, we refer to findings from the larger set of RAND work on NAS schools.

IMPLEMENTATION IN NAS SCHOOLS

- Implementation increased modestly from 1997 to 1999. The between-school variance decreased somewhat over time, while the within-school variance increased.

- There were large differences in implementation by jurisdiction in 1999. Similar to what we found in our earlier study (Berends, Kirby, et al., 2001), Kentucky and Memphis ranked relatively high on this index, while Washington and San Antonio ranked the lowest.

- There were differences in implementation by design team in 1999. Comparisons among design teams reveal that CON, RW, and NARE ranked comparatively high on the core implementa-
• Implementation appears to increase and deepen over the first four years after schools adopt designs, although at a decreasing rate. Between the fourth and fifth years, however, we see a significant downturn in implementation, although a few schools with more years of implementation continued to show progress.

FACTORS AFFECTING IMPLEMENTATION IN NAS SCHOOLS

The process of changing entire schools to improve student learning opportunities is complex and difficult, because so many actors are involved and so many factors have to be aligned to support change. Several factors emerge from our research as fostering high-quality and coherent implementation in the types of schools in the sample, perhaps the most important of which is principal leadership.

Schools

Strong Principal Leadership. Schools that reported having strong principal leaders had implementation levels over half a standard deviation above schools at the sample average. In addition, individual teachers’ beliefs about principal leadership were important in explaining within-school variance in implementation. Our findings suggest that effective and supportive principal leaders are likely to both increase and deepen implementation in a school. For example, if most or all the teachers in a school view the principal as a strong leader, this will likely lead to reduced variance within a school and help the design become more schoolwide. The importance of principal leadership for establishing effective schools has been emphasized by researchers for decades (Edmonds, 1979; Purkey and Smith, 1983; Rosenholtz, 1985), so it is not surprising that such leadership is critical for the implementation of NAS designs. While not surprising, the crucial role that principal leadership plays with respect to implementation should not be overlooked when adopting and implementing whole-school reforms.

School Composition. Taking into account other factors related to teachers, design teams, and districts, we found that poverty and mi-
nority composition of students were related to implementation, both in a positive direction. Teacher-reported implementation levels were higher in higher poverty schools and among schools with high percentages of minority students. However, the interaction of high poverty and high minority composition appeared to have a negative effect on implementation.

Our discussion has focused thus far on the net influence of each factor. However, it is important to emphasize that schools often face a multiplicity of challenges, and the interaction among these factors can set these schools back considerably in their attempts to implement school designs. Bodilly (1998) found, for example, that schools that were beset with a combination of two or more negative factors such as internal tensions, leadership turnover, forced adoptions of designs, or poor understanding of designs, ranked very low on implementation. Thus, schools need stable leadership and capacity and commitment on the part of the teachers to make the designs work.

Prior Level of Implementation. We find that schools with higher levels of prior implementation tended to make steady progress over time. Thus, it becomes important to make sure that schools have the resources, willingness, and the capacity to implement designs right from the beginning. A strong initial effort is likely to pay off in the long run in terms of higher implementation; otherwise, schools are likely to fall further behind.

Teachers

Sense of Teacher Efficacy. In our analyses, we found that teacher perceptions of students and their readiness to learn were all significantly related to teacher-reported levels of implementation. Teachers with a greater sense of efficacy (i.e., those who believed strongly that lack of basic skills was not a hindrance to their students’ academic success, or that students can learn with the resources available) also reported higher implementation than those who felt otherwise.

These are conditions commonly reported by urban schools, highlighting the importance of getting teachers behind the adopted
model, and providing them with supports and resources to allow them to teach to high standards.

**Teacher Support for the Model.** This variable was important in explaining both within-school and between-school variance in implementation. Supportive teachers implemented at a higher level within a school; the greater the degree of overall school-level support, the higher the implementation. This highlights the importance of getting teachers behind the adopted model; supportive teachers tend to reinforce and enhance implementation, not merely at the individual teacher level but at the school level as well.

**Design Teams**

**Importance of Clear Communication.** At the teacher level, not surprisingly, we find that clear communication on the part of the design aids implementation. In her case study work, Bodilly (1998) identified five elements related to design teams that were important contributors to design implementation:

- A stable team with the capacity to serve a growing number of schools;
- Ability to communicate the design well to schools;
- Effective marketing to the district and ability to gain needed resources to implementation;
- Greater relative emphasis on core elements of schooling (curriculum, instruction, student assignment, student assessment, and professional development) rather than a more systemic approach; and
- Stronger implementation support to schools with whole-school training, facilitators, extensive training days, quality checks, and materials.

Our findings and those of the earlier study (Berends, Kirby, et al., 2001) highlight the importance of clear communication to teachers and design team support in the form of resources in encouraging high levels of implementation.
Conclusions and Policy Implications

**Type of Design.** Our study found that overall certain designs had markedly higher levels of implementation: CON, NARE, and RW, while others such as MRSH had markedly lower levels of implementation. In the multivariate model, controlling for other factors such as prior implementation and school characteristics, we do not find many differences among designs, with two exceptions: CON schools and AC schools made steady progress over this time period. AC schools, which in 1997 were at the low-end of the implementation index, have made marked progress in implementation over the two years. This may be due to unobserved characteristics of the designs themselves that make them easier or harder to implement in schools already facing several challenges in terms of poverty, lack of resources, and the capacity to implement designs—a critical issue for future research to address.

**Districts**

**Importance of Stable Leadership, Resources, and Support.** Districts play several important roles in fostering/hindering implementation, including:

- Initial matching and selection;
- Encouraging support by the design team;
- Creating a supportive environment with supportive
  - Political leadership;
  - Regulatory policies; and
  - Consistent coherent funding stream.

Bodilly (1998) identified several district and institutional factors that contributed to implementation. These were leadership backing and stability at the district level; centrality of the NAS initiative to the district’s agenda; lack of crisis situations; history of trust and cooperation; availability of resources for transformation; school-level authority and/or autonomy; union support; district accountability; and assessment systems that were compatible with those of the designs.

The analyses reported here as well as in our earlier work (Berends, Kirby, et al., 2001) showed that the level of implementation varied
significantly across districts. In our analysis, we found that Memphis and Kentucky ranked high on these indicators of support and ranked high in implementation; others, such as San Antonio and Washington lagged far behind on both support indicators and implementation.

Thus, it is clear that several factors need to be aligned for designs to be well-implemented in schools. Without strong principal leadership, without teachers who support the designs and have a strong sense of teacher efficacy, without district leadership and support, without clear communication and provision of materials and staff support on the part of design teams, implementation is likely to lag far behind. These are sobering and important lessons for federal, state, and local efforts aimed at comprehensive school reform.