This product is part of the RAND Corporation monograph series. RAND monographs present major research findings that address the challenges facing the public and private sectors. All RAND monographs undergo rigorous peer review to ensure high standards for research quality and objectivity.
Evaluating Comprehensive School Reform Models at Scale

Focus on Implementation

Georges Vernez, Rita Karam, Louis T. Mariano, Christine DeMartini

Prepared for the U.S. Department of Education
The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND® is a registered trademark.

© Copyright 2006 RAND Corporation

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from RAND.

Published 2006 by the RAND Corporation

1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
4570 Fifth Avenue, Suite 600, Pittsburgh, PA 15213-2665

RAND URL: http://www.rand.org/

To order RAND documents or to obtain additional information, contact
Distribution Services: Telephone: (310) 451-7002;
Fax: (310) 451-6915; Email: order@rand.org
Under pressure to improve student achievement, schools throughout the nation are increasingly turning to whole-school models of reform. Whole-school reform, often referred to as comprehensive school reform (CSR) is based on the idea that a school ought to have a coherent vision of its mission and educational strategy that addresses every aspect of its operations. Hundreds of CSR models have been developed. All CSR models share the common focus of changing the “whole school.” But they differ in their educational philosophies and prescribed practices in key areas such as curriculum, methods of teaching, forms of governance, and parental involvement. CSR is one of a limited set of interventions that the No Child Left Behind Act explicitly allows for schools that need to improve their performance.

To date, the nation has more than 20 years of experience with CSR. More than 8,000 elementary and secondary schools (mostly low-performing) have adopted a CSR model, and more than $2 billion of federal funds have been used to implement CSR strategies. Nonetheless, the potential of this school reform to improve student achievement and meet the No Child Left Behind goal of 100 percent proficiency in reading and mathematics by the year 2014 is unknown.

CSR’s effectiveness continues to be hotly debated. Research results have been mixed. Some studies have measured a modest improvement in student achievement; others have found no effect. A major shortcoming of nearly all of these studies is that they fail to account for the extent to which schools have actually implemented their chosen model. Most prior studies have simply assumed that schools have implemented
their chosen CSR model in its entirety. However, what if most schools have implemented CSR models only partially or not at all? In such cases, the desired outcome cannot be expected to occur, or if it does, cannot necessarily be attributed to the intervention. The level of implementation must be known before one can decide whether a model is effective.

This study was designed to fill the “implementation measurement” gap. We developed a methodology to quantitatively measure the level of CSR implementation that can be used across a variety of CSR models, and we then applied this methodology to measure actual implementation of four different CSR models in a large number of schools. The study also compared the extent to which actual practices in curriculum, instruction, governance, grouping of students, assessment of students, and parent involvement differed between schools using these four models and a sample of matched comparison schools that did not use the models.

Previous research on CSR implementation has relied mainly on in-depth case studies. Although this approach can provide good data, it is expensive, resulting in studies that focus on only a small number of schools. The methodology we developed has two advantages. First, it relies primarily on surveys of principals and teachers supplemented by a small number of case studies, and therefore can be used for a large number of schools at a time (see Chapter Two). Second, it is applicable to all types of CSR models and can also be used to study practices in nonmodel schools. Our approach involves, first, the acquisition of an in-depth knowledge and understanding of the model’s philosophy and core components (for most models, core components include curriculum, methods of instruction, governance, student groupings, assessment, and parent involvement). Second, we translated our detailed understanding of each model into a set of practices or activities that the school should have or do in order to implement the core components. These “should have or do” practices, taken together, indicate full implementation of the model design. Next, survey questions were developed to measure whether the practices were in use, and, if used, the extent of use. To enable comparisons of school practices across schools that use different models or no models, care was taken to
ensure that the wording of the survey questions was applicable to different models and schools. We kept in mind that many CSR models draw on widely acknowledged “best practices” that may be used by schools implementing another model or by schools that do not use CSR at all. Many CSR models have been developed by educational consultants; to ensure that we captured each model’s key components, the “should have or do” practices and survey questions were reviewed by the applicable model developers. Finally, survey responses were translated into a standardized implementation score for each model practice that was then aggregated across model core components and across all components for a whole-school implementation score.

Four CSR models designed for grades K–8 are included in this study: Accelerated Schools (AS), Core Knowledge (CK), Direct Instruction (DI), and Success for All (SFA). They were selected because they have been widely implemented in schools throughout the nation, and because they differ from each other significantly (see Table 2.1, Chapter Two). Surveys were sent to principals and teachers in a cross-sectional sample of 250 model schools: 36 AS schools, 42 CK schools, 93 DI schools, and 79 SFA schools in Florida and Texas.1 We also sent surveys to a set of comparison schools that had not implemented a CSR model. These comparison schools were matched one-on-one with each model school (similar socioeconomic characteristics, similar size, and, when possible, in the same district). Finally, we complemented this study with a set of case studies in 12 schools to obtain more qualitative information and insights into the implementation process.

We recognize that our methodology cannot measure all dimensions of the four CSR models, although we did measure those deemed most important by the model developers. In addition, we recognize that our sample of CSR models is not representative of all types of CSR models; our data is cross-sectional; and our sample of schools, although large compared to most other studies, is not fully representa-

1 We originally intended to measure changes in implementation over time and sent surveys over three years: 2002 to 2004. Because too many schools abandoned the models or refused participation in one or more years, the longitudinal sample became too small for reliable analysis.
tive of schools using these models in Florida and Texas. Nevertheless, the analyses presented in this report provide new insights and advance our understanding of how fully CSR models get implemented, the implementation challenges encountered by schools, the type of interventions that might address those challenges, and how practices of model schools differ from those of nonmodel schools.

The unique methodology we developed was sensitive enough to capture meaningful variations in implementation levels across model types and across schools, and to describe variations in school and teacher practices between model schools and nonmodel schools. This methodology can be replicated at reasonable cost and could be used in future studies to determine how the level of CSR implementation affects student achievement.

We found that none of the schools in our study had fully implemented all core components of the model they had adopted. We also found broad variations in the level of implementation across schools using the same model. Some core components were implemented more widely than others. For example, schools were generally able to implement the prescribed curriculum of their adopted model, with occasional minor departures to compensate for perceived gaps, such as placing more emphasis on reading comprehension or altering the sequence of topics to meet state or district standards. But schools had more difficulty in following the instructional practices prescribed by their model and in grouping students by level of performance; these two components were generally implemented at a lower level. Finally, in comparison to other core components, practices to increase parental involvement in school affairs were consistently implemented at the lowest level. Overall, the level of implementation did not change with the length of time that a school had been using a model.

Teachers’ reported commitment to using their schools’ adopted model was typically only lukewarm, notwithstanding the importance model developers place on teacher “buy-in.” The level of teachers’ commitment did not change with years of experience using the model. By contrast, principals consistently overrated their teachers’ commitment to the model. In our case studies, we found that most principals had
selected the model themselves, without teacher input. The disparity between principal and teacher perceptions may be the result of teachers having been excluded from the model selection process.

Model developers typically prescribe a high level of support to ensure that the model is implemented successfully. Such support includes external support (principal and teacher consultation with the model developers/consultants, teacher training, and ongoing professional development) and internal support (the appointment of a school staff member to facilitate and coordinate the implementation). However, most schools did not have the level of implementation support that model developers deemed necessary. On average, teachers received about half of the recommended initial training and about one-quarter of the recommended ongoing professional development. Similarly, both the prescribed levels of external assistance from model developers/consultants and the time allocated to an internal school staff member to facilitate and coordinate model implementation fell short. It may be that schools do not have sufficient time or staff to devote to model implementation, or that they lack the flexibility to reallocate their resources, or that they are not motivated to do so.

A higher level of support was associated with a higher level of implementation. However, different forms of support were associated with the implementation of different core components. Consistent with previous research, our study shows that the level of teachers’ commitment was associated with implementation of the model’s curriculum, methods of instruction, and grouping of students (all practices that are implemented mostly at the classroom level). The level of teachers’ professional development related to the model was also associated with implementation of curriculum and methods of instruction. Implementation of methods of instruction was also associated with the frequency of meetings between teachers and an external consultant; implementation was greater if such meetings occurred more frequently. External assistance from the model developer and internal assistance from the internal facilitator were also associated with schoolwide activities, including grouping of students in classrooms by performance and governance.
Finally, we found that schools tended to engage in the same types of activities regarding curriculum, methods of instruction, student groupings, governance, assessment of students, and parent involvement regardless of whether the school used one of the four models or not. And, on average, all schools engaged in these activities at the same frequency or level of intensity. However, a number of model-prescribed practices differed between types of model schools and between model schools and their matched nonmodel schools. The practices that were implemented at a higher level of intensity or frequency when prescribed by a model included teacher participation in the development of the yearlong plan and its use to minimize overlaps across grades; students working collaboratively in groups or pairs; teachers’ adherence to lessons’ word-for-word-scripts; assignment of daily homework and parent signoff on that homework; and placement of students into classrooms or groups by reading performance. Also, parent involvement was higher in most model schools than in nonmodel schools. For individual tutoring, the reverse was true: in schools using a prescriptive model (CK, DI, and SFA), fewer students received supplemental tutoring, suggesting that such models may decrease the need for it.

Our findings, if replicated in future studies, have several broad implications. The most important is that given the limited differences in actual practices between schools that implement different models and between model and nonmodel schools, it is not surprising that research to date has found only modest effects of CSR models on student achievement. Although, we found some practices prescribed by the models that were practiced at a higher level of intensity or frequency by model schools than by nonmodel schools, it remains unknown whether it is these practices that affect student achievement and at what level must be implemented to have the desired impact. Future research should focus on identifying the practices, the levels of implementation, and the levels of support required to ensure desired implementation levels that contribute most to student achievement.

There is also significant room to increase the level of implementation of CSR models. We found that the level of support fell short of the level recommended by model developers, and that a higher level of specific types of support was associated with higher implementation
of specific model components. Schools should ensure that teachers are committed to implementing the adopted model and that they receive the necessary initial training. Teachers should be more actively involved in choosing the model and in practicing the prescribed changes before they are asked to implement them in the classroom. A higher level of initial and ongoing professional development related to the model may also be needed. Schools that continued use of a model beyond the first few years provided some form of continuing professional development related to the model. To improve implementation of schoolwide changes, the availability of and interactions with an external consultant and an internal consultant may need to be increased as well.

Beyond that, it remains to be seen how much more additional support, of what kind, and for what model core component or individual practices may be needed to increase the level of implementation of CSR models. This also is an area where future investigations have the potential to be most fruitful.

Finally, our findings underline the importance of accounting for the level of implementation when seeking to measure CSR effects on student achievement. We hope that the measurement methodology developed for this study will also be used in future studies, in order to measure a broader sample of schools. Researchers cannot determine whether a CSR model affects student achievement until they first know whether and how completely the model has been implemented.