ARE LOW-PERFORMING SCHOOLS ADOPTING PRACTICES PROMOTED BY SCHOOL IMPROVEMENT GRANTS?

The federal School Improvement Grants (SIG) program aims to improve student achievement by promoting the implementation of four school intervention models: transformation, turnaround, restart, and closure.[1] *Previous research provides evidence that low-performing schools adopt some practices promoted by the four models, but little is known about how schools combine these practices.*[2]

This brief describes both the individual SIG-promoted improvement practices and the combinations of these practices that low-performing schools reported adopting. Key findings, based on spring 2013 survey responses from 480 school administrators in low-performing schools that were and were not implementing a SIG intervention model, include the following:

(1) Schools on average reported adopting 20 of 32 improvement practices promoted by the SIG transformation or turnaround models.

(2) No school reported adopting all practices required under the transformation or turnaround models.

(3) More than 96 percent of schools reported adopting each of the 3 most commonly adopted individual practices: using data to inform and differentiate instruction, increasing technology access for teachers or using computer-assisted instruction, and providing ongoing professional development that involves teachers working collaboratively or is facilitated by school leaders.

(4) For 16 of the 32 practices examined, schools implementing a SIG model were statistically significantly more likely than schools not implementing one to report adopting that practice.

(5) Almost every school reported adopting a unique combination of practices, but certain practices (for example, the 3 most commonly adopted practices listed above) were much more likely than others (for example, using financial incentives to recruit and retain effective teachers and principals) to be included in these combinations.

In recent years, there has been an increased focus on turning around our nation's low-performing schools. For example, the American Recovery and Reinvestment Act of 2009 (ARRA) allocated $3 billion to the U.S. Department of Education's (ED) School Improvement Grants (SIG) program. These funds were in addition to the $546 million already appropriated for SIG that year. SIG, which was authorized in 2001 under Title I Section 1003(g) of the Elementary and Secondary Education Act, aims to substantially improve student achievement in low-performing schools by promoting the implementation of four school intervention models, each of which prescribes specific improvement practices (see Appendix A for a complete description of these four models):[3]

1. **Transformation.** This model requires that districts replace the principal of the school, develop an evaluation system for teachers and principals that incorporates student progress, institute comprehensive instructional reforms, increase learning

time, create community-oriented schools, and provide operational flexibility and sustained support (for example, allow the school to make decisions typically made at the district level in areas such as hiring and firing, length of school day, and budgets).

2. **Turnaround.** This model requires that districts replace the principal of the school, rehire no more than 50 percent of the staff, institute comprehensive instructional reforms, increase learning time, create community-oriented schools, and provide operational flexibility and sustained support.[4]
3. **Restart.** This model requires that districts convert the school into a charter school or close and reopen it under a charter school operator, charter management organization, or education management organization selected through a rigorous review process.
4. **Closure.** This model requires that districts close the school and enroll its students in higher-achieving schools in the district.

Given the size of this federal investment, the Institute of Education Sciences (IES) at ED is conducting a large-scale evaluation of SIG to better understand the program's implementation and impact. This brief, which was developed as part of that effort, examines the improvement practices adopted by low-performing schools, which are formally referred to as "persistently lowest-achieving schools" in SIG guidance. This brief does not examine the impact of the SIG models and associated practices on outcomes for low-performing schools. A future report for this evaluation will do so. That report will also examine whether the type of model, and the practices associated with those models, are related to improvement in outcomes for low-performing schools.

ED required states participating in the SIG program to categorize "persistently lowest-achieving schools" into three tiers based on each school's level (elementary or secondary), eligibility for and receipt of Title I program funds, and achievement or graduation rate. Schools that fell in one of these three tiers were eligible for SIG but could receive grants only if their districts competitively applied on their behalf to the state education agency. Schools in the first two tiers (Tier I and Tier II) were prioritized for award, and as a condition of award, these schools were required to implement one of the four SIG models. Schools in Tier III were permitted but not required to implement one of the four SIG models. ED defined the tiers as follows:[5]

- Tier I generally includes Title I-receiving elementary or secondary schools identified for improvement that are among the lowest-achieving 5 percent of such schools in the state (or, for high schools, have had a graduation rate less than 60 percent for a number of years).[6,7]
- Tier II generally includes secondary schools that are eligible for, but do not receive, Title I funds that are among the lowest-achieving 5 percent of such schools in the state (or, for high schools, have had a graduation rate less than 60 percent for a number of years).[8,9]
- Tier III generally includes Title I-receiving elementary or secondary schools identified for improvement that are not in Tier I.[10]

This brief examines the improvement practices adopted by three groups of schools, all but 10 of which were eligible for SIG (meaning they fell in one of the three tiers defined above): (1) low-performing schools as a group (including schools that did and did not implement one of the four SIG models), (2) schools implementing one of the four SIG models, and (3) schools not implementing one of those models.[11]

Examining the first group will help us better understand how low-performing schools more broadly are trying to improve. Although ED has recently made substantial investments in the SIG program, the fraction of low-performing schools in the U.S. that receive SIG and that are formally implementing a SIG model is small (a recent analysis from fiscal years 2009 and 2010 suggests that in each year, less than 10 percent of eligible schools received SIG).[12] Examining the second and third groups allows us to compare the improvement practices adopted by schools that did and did not implement one of the SIG models. Although one might expect to observe differences between these two groups, we might not observe them if: (1) schools not formally implementing one of the SIG models adopted many of the practices promoted by SIG, for example, due to awareness raised by SIG and funding from other sources, or (2) schools formally implementing a SIG model adopted few of the practices promoted by SIG, for example, because they encountered challenges during implementation.[13,14]

For each of these three groups, we examined individual school improvement practices and combinations of these practices that low-performing schools reported adopting in spring 2013. Examining how low-performing schools combine practices is an important first step to better understanding why some schools ultimately successfully turn around while others do not, and it may be relevant to educators thinking about how to package improvement practices in their own schools.[15,16] Each low-performing school presumably adopts the practices it believes will most directly address its students' unique needs, and which it is able to adopt, given various financial, political, and other constraints. If these needs and constraints, along with schools' interpretations of the SIG model requirements, are diverse, then we might also expect to see substantial variation in how the models and associated practices are adopted.

Data

The data in this brief came from surveys of school administrators conducted in spring 2013 (see Appendix Table B.2 for a list of the survey questions used in the analysis for this brief).[17] The response rate for the survey was 93 percent. The study team developed the survey instrument, conducted pilot tests of the survey with seven school administrators,[18] and then revised the survey questions as needed to ensure uniformity and consistency of the data collected. The survey consisted of mostly closed-ended questions—that is, questions with yes or no responses or with a set of specific response categories from which to choose. The study team carefully reviewed all responses for completeness and consistency, and followed up with respondents about missing and inconsistent responses to ensure their accuracy. The survey did not collect information about the details of and quality with which schools implemented practices. Therefore, this brief helps us better understand broad patterns of adoption reported by study schools, but it does not provide information on the quantity, quality, or details of adoption. *Throughout this brief, we refer to* ***schools reported*** *as a concise method of conveying what* ***school administrators reported****.*

The sample included 480 low-performing schools and the 60 districts and 22 states in which the schools are located (hereafter referred to as the *SIG sample*).[19,20,21] Each state and district

included both low-performing schools implementing a SIG model and ones not implementing a SIG model. The SIG sample was not randomly selected from the full set of SIG-eligible schools.[22] The sample was purposively selected to support the estimation of impacts of SIG-funded models on student outcomes using a regression discontinuity design that a future report will present.[23] More specifically, schools from the first two SIG eligibility tiers (Tiers I and II) comprise the treatment group, and schools in the third SIG eligibility tier (Tier III) or that are SIG-ineligible comprise the comparison group. Broadly speaking, the states and districts selected for the study sample were those that had the largest number of treatment and comparison group schools and that had a high proportion of schools in the treatment group that actually received SIG in 2010. Therefore, findings cannot be generalized to low-performing schools nationwide. Given the limited information currently available on improvement practices adopted by low-performing schools, these findings are nevertheless relevant.

This brief examines the practices adopted by two types of low-performing schools: (1) schools implementing one of the four SIG models in the 2012–2013 school year and (2) schools not implementing one of those models in 2012–2013.[24] We examined these types of schools separately because SIG promoted specific practices, so the practices adopted by these two groups of schools may differ. However, differences between the practices adopted by these groups of schools could have occurred even in the absence of SIG, so any observed differences should not necessarily be attributed to SIG.

To put the findings in context, it is important to understand how our study schools compare with low-performing schools nationwide. Table 1 shows the baseline characteristics from the 2009–2010 school year of all study schools and all SIG-eligible schools in the U.S. Table 1 also shows analogous baseline characteristics for study schools implementing one of the four SIG models in the 2012–2013 school year and study schools not implementing one of those models in 2012–2013.[25]

A comparison of school characteristics from the Common Core of Data in the first two columns of Table 1 suggests many statistically significant differences between study schools and all SIG-eligible schools in the U.S. For example, study schools had higher average percentages of students who are non-Hispanic black and eligible for free or reduced-price lunch. Study schools were more likely to be in urban areas and to be high schools. Study schools were also more likely to be in the first two tiers (Tiers I and II) that were eligible for funds to implement a SIG model. Since these two tiers were prioritized for SIG awards, it was necessary to select a disproportionate share of schools from these tiers to ensure that our study sample contained a sufficient number of SIG-funded schools to support the estimation of impacts. Thus, findings for study schools do not generalize to all low-performing schools in the U.S.

A comparison of school characteristics from the Common Core of Data in the last two columns of the first panel in Table 1 suggests that our two groups of study schools were mostly similar at baseline. There were three statistically significant differences between them: schools implementing SIG models had higher average percentages of students who are non-Hispanic black and who are eligible for free or reduced-price lunch and lower average percentages of Hispanic students than schools not implementing such models. Readers should keep this context in mind when interpreting the comparisons in this brief because implementation of a SIG model was not the only difference between the groups of schools. Study schools implementing SIG models were statistically significantly more likely to be in the first two tiers that are eligible for funds to implement a SIG model than the study schools not implementing such models, which is

to be expected because schools in the first two tiers were prioritized over Tier III schools for SIG awards. The two groups also differed in their implementation of SIG models, which is by construction (see the second panel of Table 1).

Table 1. Baseline Characteristics of Study Schools and All U.S. Schools Eligible for SIG

	All Study Schools in 2012–2013	U.S. Schools Eligible for SIG in 2012–2013	Study Schools Implementing a SIG Intervention Model in 2012–2013	Study Schools Not Implementing a SIG Intervention Model in 2012–2013
Characteristics from the 2009–2010 Common Core of Data				
Average Percentage of Students by Racial/Ethnic Category				
White, non-Hispanic	8.8*	31.3	8.5	9.3
Black, non-Hispanic	53.0*	28.7	56.2†	46.9
Hispanic	32.8	31.1	30.4†	37.4
Asian	2.0*	3.2	1.8	2.4
Other	3.4*	5.7	3.1	3.9
Average Percentage of Students Eligible for Free or Reduced-Price Lunch	82.0*	70.9	83.2†	79.6
Percentage of Schools That Are Title I Eligible	94.4	95.2	94.3	94.5
Percentage of Schools by Location				
Urban	87.6*	43.2	86.5	89.6
Suburban	6.2*	22.4	6.6	5.5
Town or rural	6.2*	34.4	6.9	4.9
Percentage of Schools by Level				
Elementary	30.5*	54.6	32.4	26.8
Middle	18.9	19.4	19.8	17.1
High school	47.7*	19.8	45.9	51.2
Other	2.9*	6.2	1.9	4.9
Eligibility Tier and Planned Intervention Model at Time of SIG Application				
Percentage of Schools by Eligibility Tier				
Tier I	45.8*	6.9	58.5†	19.5
Tier II	19.1*	8.1	23.3†	10.4
Tier III	35.2*	85.0	18.2†	70.1
Percentage of Schools by Intervention Model				
Transformation	37.3*	38.1	56.4†	0.0
Turnaround	22.6*	23.1	34.2†	0.0
Restart or closure	6.2	6.1	9.4†	0.0
None of the above	33.9*	32.7	0.0†	100.0
Number of Schools	**460–480**	**17,360–18,100**	**280–320**	**160**

Sources: Common Core of Data, 2009–2010; Institute of Education Sciences database of SIG-eligible schools.

Note: See endnote 25 for detailed information about the calculations in this table.

* Significantly different from schools in the U.S. eligible for SIG in 2012–2013 at the 0.05 level, two-tailed test.

† Significantly different from study schools not implementing a SIG intervention model in 2012–2013 at the 0.05 level, two-tailed test.

In Appendix B, we compare the characteristics of states in which our SIG sample schools are located and all states in which SIG schools are located (Table B.1). We also compare the characteristics of districts in which our SIG sample schools are located and all districts in which SIG schools are located (Table B.1). The characteristics of states in our SIG sample did not significantly differ from states nationwide. The SIG sample districts differed from U.S. districts with SIG-funded schools on students' race and school location. Our study districts had a higher percentage of students who are non-Hispanic black and were more likely to be in an urban area.

Methods

To determine the extent to which schools adopted practices promoted by SIG, we reviewed the spring 2013 school administrator survey and selected all questions that asked schools about their adoption of improvement practices aligned with the SIG application criteria.[26] The SIG application criteria described practices in the following topic areas: (1) adopting comprehensive instructional reform strategies, (2) developing and increasing teacher and principal effectiveness, (3) increasing learning time and creating community-oriented schools, and (4) having operational flexibility and receiving support. For the purposes of this brief, we consider developing and increasing teacher effectiveness and developing and increasing principal effectiveness as two separate topic areas.

SIG sought to promote practices within each area by explicitly permitting them, or in some cases requiring them, for specific models. According to the SIG application criteria, required practices are those that schools implementing a particular SIG model *must* adopt, and permissible practices are those that schools implementing a particular SIG model *may* adopt. Table 2 lists the required or permissible practices under the transformation or turnaround models for which we had associated questions from the school administrator survey.[27] We focused on required or permissible practices under the transformation or turnaround models because, as seen in Appendix A and Table 2, both models prescribed a large set of overlapping practices (all practices that were required or permissible under the transformation model were also permissible under the turnaround model), and the majority of our study schools (60 percent) were implementing one of these two models. In contrast, the restart and closure models required a limited set of changes (converting a school into a charter or closing the school) that schools implementing other models would not have adopted, and only a small fraction of our study schools (6 percent) were implementing one of these two models.

Even though we focused on practices for the transformation or turnaround models only, the analysis included schools that adopted the restart model, since these schools could also have chosen to adopt practices under the transformation or turnaround models. Schools that were planning to implement the closure model but had not yet closed as of spring 2013 were surveyed and are also included in the analysis. However, we did not analyze the restart or closure model schools separately because there were fewer than 30 of these schools. Schools that had already implemented the closure model as of spring 2013 were not surveyed.

Table 2. Required or Permissible Practices Under the Transformation or Turnaround Models

	Model That Required the Practice	
Required or Permissible Practices	SIG Transformation Model	SIG Turnaround Model
Adopting Comprehensive Instructional Reform Strategies[a]		
Use data to evaluate instructional programs	X	X
Use data to inform and differentiate instruction	X	X
Use benchmark or interim assessments at least annually	X	X
Implement strategies to ensure that English language learners master academic content		
Increase technology access for teachers or use computer-assisted instruction		
Developing and Increasing Teacher Effectiveness		
Require student achievement growth as a component of teacher evaluations	X	
Use multiple performance measures for teacher evaluations	X	
Use teacher evaluation results to inform compensation	X	
Review competencies of staff or replace instructional staff		X
Provide multiple-session professional development events	X	X
Provide professional development on Common Core State Standards, state standards, or turnaround	X	X
Provide ongoing professional development that involves working collaboratively or is facilitated by school leaders	X	X
Provide professional development on student learning needs	X	X
Design professional development with school staff	X	X
Use data to evaluate the success of professional development		
Use financial incentives and other strategies to recruit and retain effective teachers	X	X
Use evaluation results to inform reductions in force or have policies that allow principal authority to hire staff		
Developing and Increasing Principal Effectiveness		
Use student achievement growth as a component of principal evaluations	X	
Use multiple performance measures for principal evaluations	X	
Use principal evaluation results to inform compensation	X	
Replace the principal	X	X
State or district provides professional development on budgets or turnaround strategies	X	X
State or district provides professional development on identifying staff for leadership positions	X	X
State or district provides professional development on aligning professional development with evaluation results	X	X
Use financial incentives to recruit and retain effective principals	X	X
Increasing Learning Time and Creating Community-Oriented Schools[a]		
Establish schedules and implement strategies to increase learning time	X	X
Change parent or community engagement strategies	X	X
State or district provides professional development on working with parents or creating a safe school environment		
Change discipline policies		
Use data to guide nonacademic supports		X
Having Operational Flexibility and Receiving Support[a]		
Have autonomy on budgeting, hiring, discipline, or school year length	X	X
State or district provides training or technical assistance to support school improvement or the use of data to improve instruction	X	

Sources: SIG application; surveys of school administrators in spring 2013.

Note: This table only lists the practices for which we had associated questions from the school administrator survey. See Appendix B, Table B.2 for a list of the specific survey questions aligned with the SIG practices in this table. An X in the SIG Transformation Model column means the practice in that row was required under the transformation model. When there is no X in that column, it means the practice in that row was permissible (but not required) under the transformation model. Similarly, an X in the SIG Turnaround Model column means the practice in that row was required under the turnaround model, and no X means that practice was permissible (but not required) under the turnaround model.

[a] These topic areas contained practices for which we did not have associated questions in the school administrator survey. In the adopting comprehensive instructional reform strategies area, we did not have survey questions for two practices permissible under both the transformation and turnaround models: (1) conduct periodic reviews of the curriculum, (2) implement a schoolwide response-to-intervention model; and we did not have survey questions for one practice permissible under the turnaround model only: implement a new school model (for example, a themed or dual language academy). In the increasing learning time and creating community-oriented schools area, we did not have survey questions for two practices permissible under both the transformation and turnaround models: (1) extend or restructure the school day, (2) expand the school program to offer full-day kindergarten or pre-kindergarten. In the having operational flexibility and receiving support area, we did not have survey questions for one practice that was permissible under the transformation model and required under the turnaround model: adopt a new governance structure, such as a turnaround division within the local education agency or state education agency; and one practice permissible under both the transformation and turnaround models: implement a per-pupil school-based budget formula that is weighted based on student needs.

Because it was necessary to limit the length of the survey, not all practices for the transformation or turnaround models had associated questions from the school administrator survey (see Table 2 notes for a list of excluded practices). Some additional caveats apply to how we measured adoption: (1) we based adoption of practices on self-reports from schools, (2) the SIG application wording left it up to the schools to decide many of the details about how to implement particular practices, and (3) we did not collect information about the details of and quality with which schools implemented practices. This brief thus helps us better understand broad patterns of adoption reported by the study schools, but it does not provide an independent assessment of the quantity, quality, or details of adoption. Appendix B, Table B.2 describes how we measured the adoption of each practice listed in Table 2 and lists the specific survey questions that addressed each practice.

Of the 32 practices we identified, 9 were addressed by a single question in the survey, so schools were considered to have adopted the practice if they responded yes to that question. The other 23 practices were addressed by multiple questions, so schools were considered to have adopted the practice if they responded yes to at least half of the questions that addressed the practice.[28] For example, the survey asked 11 questions about using each of 11 recruitment and retention strategies, such as recruitment bonuses, retention bonuses, or performance bonuses. Schools were considered to have adopted the practice of "using financial incentives and other strategies to recruit and retain effective teachers" if they responded yes to 6 or more of the questions. This approach prevented double-counting practices addressed by more than one survey question, and also provided a simple and consistent way to measure adoption. Alternate methods of measuring adoption include: (1) using a different cutoff for the fraction of questions to which schools must have a yes response (such as one-third or two-thirds instead of one-half), or (2) selecting different cutoffs for the fractions of questions for each practice, instead of requiring the same cutoff for all practices. We felt that requiring one-half of the questions (that is, a simple majority) for all practices was an objective and reasonable approach, but we also conducted sensitivity analyses that used different cutoffs for our adoption measure.[29]

Overall, Schools Reported Adopting More than Half of the Improvement Practices Promoted By SIG

The study schools reported adopting an average of 20 of the 32 practices for which we could measure adoption (Table 3). Most schools (68 percent) reported adopting at least 19 of the 32 practices (Figure 1). Schools implementing a SIG model in the 2012–2013 school year reported adopting statistically significantly more of the 32 SIG-promoted practices than schools not implementing a SIG model (Table 3). However, this difference was relatively small (an average of 21 versus 19 practices). There were no statistically significant differences in the average number of practices adopted by schools implementing the transformation model in 2012–2013 and those implementing the turnaround model in 2012–2013 (Table 3).

Table 3. Average Number of SIG Practices Adopted by Study Schools

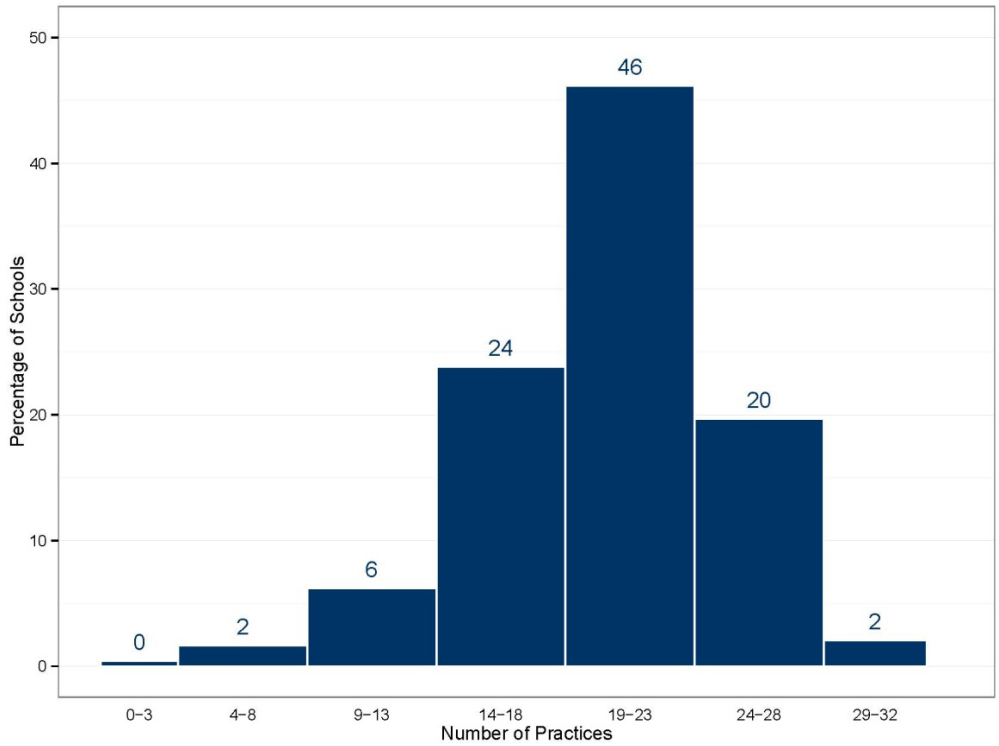
	Average Number of Practices Adopted, by Group				
	All Study Schools in 2012–2013	Schools Implementing a SIG Intervention Model in 2012–2013	Schools Not Implementing a SIG Intervention Model in 2012–2013	Schools Implementing the SIG Transformation Model in 2012–2013	Schools Implementing the SIG Turnaround Model in 2012–2013
All Practices for Which We Could Measure Adoption (32 practices)	20.0	20.8*	18.5	20.7	20.7
Practices Required Under the SIG Transformation Model for Which We Could Measure Adoption (24 practices)	14.2	14.8*	13.1	14.7	14.9
Practices Required Under the SIG Turnaround Model for Which We Could Measure Adoption (20 practices)	13.1	13.6*	12.0	13.6	13.7
Number of Schools	**480**	**320**	**160**	**180**	**110**

Source: Surveys of school administrators in spring 2013.

Note: None of the differences in the average number of practices adopted by schools implementing the SIG transformation model in 2012-2013 and schools implementing the SIG turnaround model in 2012-2013 were statistically significant at the 0.05 level using a two-tailed test.

* Significantly different from schools not implementing a SIG intervention model at the 0.05 level, two-tailed test.

Figure 1. Distribution of SIG Practices Adopted by Study Schools



Source: Surveys of school administrators in spring 2013.

No Schools Reported Adopting All Practices Required Under the SIG Transformation or Turnaround Models

Some of the 32 practices were not required under the turnaround or transformation models, but no schools reported adopting all 24 practices required under the transformation model or all 20 practices required under the turnaround model.

Schools implementing a SIG model reported adopting statistically significantly more of the required transformation practices and the required turnaround practices than schools not implementing one. However, these differences were relatively small, amounting to an average of about two additional practices for schools implementing a SIG model (Table 3).

There were no statistically significant differences between schools implementing the transformation model and schools implementing the turnaround model in the number of required practices they reported adopting. Schools implementing the transformation model did not report adopting more of the required transformation practices than schools implementing the turnaround model. Similarly, schools implementing the turnaround model did not report adopting more of the required turnaround practices than schools implementing the transformation model (Table 3). The lack of differences is not too surprising, given the substantial overlap in requirements for the two models (see Table 2). For example, both models required the use of financial incentives to recruit and retain effective teachers and principals, and for both models, these were the least commonly adopted practices among our study schools.[30]

There are a few potential explanations for why no schools reported adopting all of the practices required under the transformation or turnaround models. First, some practices might require more time to adopt or have more barriers to adoption than others. For example, using teacher and principal evaluation results to inform compensation are required practices under the transformation model, but were among the five least commonly adopted practices by transformation schools. This finding is not too surprising because to change teacher and principal evaluation systems, such as using evaluation results to inform compensation, states might have to first engage in discussions with principal and teacher unions, which can be contentious and time-consuming.[31,32] States would also need to set up their data systems in a way that facilitates the use of evaluation data for these purposes (for example, ensuring that the system can directly link individual student data to their teachers over time). Second, schools might choose to focus their efforts on a select group of practices in each area rather than adopting all of them, perhaps due to technical capacity constraints or other factors. Third, it is possible that schools purposefully adopt certain practices first and plan to adopt more eventually. While our data do not allow us to determine whether any of these possible explanations are correct, they do offer starting points for future investigations on this topic.

Finally, it is possible that we would have observed higher rates of adoption if we had required schools to respond yes to fewer questions about each practice, rather than at least half of the questions. A sensitivity analysis that used the most generous definition of adoption for each practice (requiring schools to respond yes to a minimum of one question about each practice) found that 1 percent of schools adopted all 24 required transformation practices and 4 percent adopted all 20 required turnaround practices. Thus, the adoption threshold that we used did not substantially alter our general finding about the adoption level of required practices.

Each of the Three Most Commonly Adopted Practices Was Adopted by Over 96 Percent of Schools

We looked separately at the 32 individual practices and identified those that were most and least commonly adopted by our study schools (shown in Table 4 in the "This Practice" columns). The 3 most commonly adopted practices were: (1) using data to inform and differentiate instruction (99.6 percent), (2) increasing technology access for teachers or using computer-assisted instruction (96.7 percent), and (3) providing ongoing professional development that involves working collaboratively or is facilitated by school leaders (96.1 percent). The 3 least commonly adopted practices were: (1) using principal evaluation results to inform compensation (22.6 percent), (2) using financial incentives and other strategies to recruit and retain effective teachers (14.9 percent), and (3) using financial incentives to recruit and retain effective principals (6.6 percent).

For Half of the Practices Examined, Schools Implementing a SIG Model Were Statistically Significantly More Likely Than Schools Not Implementing One to Report Adopting that Practice

We found some significant differences in adoption of individual practices between schools implementing a SIG model and schools not implementing such models. For 16 of the 32 practices, schools implementing a SIG model were statistically significantly more likely than schools not implementing a SIG model to have reported adopting that practice (Table 4). Across these 16 practices, the difference in the percentage of schools that reported adopting each practice ranged from 6 to 22 percentage points. For 10 of these 16 practices, schools implementing a SIG model were over 10 percentage points more likely to have reported adopting each practice than schools not implementing a SIG model. Of these 10 practices, 6 were related to human capital management (that is, professional development, staff replacement, and teacher evaluations), and the remaining 4 were related to the use of data, increasing learning time, and parent or community involvement strategies.

Almost Every School Reported Adopting a Unique Combination of Practices, But Certain Practices Were Much More Likely to Be Adopted

Adoption Rates Overall

Only two schools reported adopting the same combination of practices. However, although the exact combination of practices schools reported adopting varied, the findings above suggest that certain practices might be more likely than others to be included in these combinations. In Table 4, we ranked the 32 individual practices from the most to the least commonly adopted and, for each practice, calculated the percentage of schools that reported adopting that particular practice *and all of the practices that were more commonly adopted than it (shown in the "This Practice and All Practices in the Rows Above" columns).*[33] For example, the fifth most commonly adopted practice was using benchmark or interim assessments at least annually. Ninety percent of study schools reported adopting this practice *and* the 4 practices that were more commonly adopted than it: (1) using data to inform and differentiate instruction, (2) increasing technology access for teachers or using computer-assisted instruction, (3) providing ongoing professional development that involves working collaboratively or is facilitated by school leaders, and (4) providing professional development on student learning needs. Overall,

more than half of schools reported adopting a combination that included the 10 most commonly adopted individual practices.

There were statistically significant differences in adoption for some combinations of practices between schools implementing a SIG model in 2012–2013 and schools not implementing such a model. Schools implementing a SIG model were statistically significantly more likely than those not implementing one to report adopting nine combinations and statistically significantly less likely to report adopting two combinations (Table 4). Across the nine combinations that schools implementing a SIG model were more likely to report adopting, the difference in the percentage of schools that reported adopting each combination ranged from 9 to 20 percentage points. For eight of these nine combinations, schools implementing a SIG model were over 10 percentage points more likely to have reported adopting each combination than schools not implementing one. For example, schools implementing a SIG model were 13 percentage points more likely than those not implementing one to report adopting a combination that included the five most commonly adopted individual practices (95 versus 82 percent) (Table 4).

Table 4. Adoption Rates for SIG Practices, Overall

	All Study Schools in 2012–2013		Schools Implementing a SIG Intervention Model in 2012–2013		Schools Not Implementing a SIG Intervention Model in 2012–2013	
	Percentage of Schools That Adopted:					
Practices, Sorted by the Percentage of All Study Schools That Reported Adopting Them	This Practice	This Practice and All Practices in the Rows Above	This Practice	This Practice and All Practices in the Rows Above	This Practice	This Practice and All Practices in the Rows Above
1. Use data to inform and differentiate instruction	99.6	99.6	99.7	99.7	99.4	99.4
2. Increase technology access for teachers or use computer-assisted instruction	96.7	96.7	97.8	97.8	94.5	94.5
3. Provide ongoing professional development that involves working collaboratively or is facilitated by school leaders	96.1	94.0	98.1*	96.9*	92.1	88.4
4. Provide professional development on student learning needs	95.9	91.7	98.1*	95.6*	91.5	84.1
5. Use benchmark or interim assessments at least annually	95.9	90.3	96.9	94.7*	93.9	81.7
6. Use data to evaluate instructional programs	95.0	86.7	95.3	90.6*	94.5	79.3
7. Use data to guide nonacademic supports	90.7	80.5	92.8*	85.6*	86.6	70.7
8. Use data to evaluate the success of professional development	82.0	70.0	85.9*	76.2*	74.4	57.9
9. Provide professional development on Common Core State Standards, state standards, or turnaround	78.3	59.8	83.1*	66.5*	68.9	47.0
10. State or district provides professional development on budgets or turnaround strategies	76.4	51.3	79.6*	57.4*	70.1	39.6
11. State or district provides professional development on working with parents or creating a safe school environment	75.4	45.5	78.4*	51.4*	69.5	34.1
12. Use evaluation results to inform reductions in force or have policies that allow principal authority to hire staff	69.6	31.9	69.6	34.8	69.5	26.2
13. Implement strategies to ensure English Language Learners master academic content	68.9	23.4	66.8	24.5	73.2	21.3
14. Use multiple performance measures for principal evaluations	68.5	17.8	68.7	16.6	68.3	20.1
15. State or district provides professional development on aligning professional development with evaluation results	68.3	14.9	69.9	13.8	65.2	17.1
16. Establish schedules and implement strategies to increase learning time	66.9	11.4	70.5*	11.0	59.8	12.2
17. Replace the principal	66.7	7.7	71.5*	7.2	57.3	8.5
18. State or district provides training or technical assistance to support school improvement or the use of data to improve instruction	66.5	7.2	71.2*	6.6	57.3	8.5
19. Change parent or community involvement strategies	61.7	6.2	67.4*	5.6	50.6	7.3

Table 4 *(continued)*

Practices, Sorted by the Percentage of All Study Schools That Reported Adopting Them	All Study Schools in 2012–2013		Schools Implementing a SIG Intervention Model in 2012–2013		Schools Not Implementing a SIG Intervention Model in 2012–2013	
	Percentage of Schools That Adopted:					
	This Practice	This Practice and All Practices in the Rows Above	This Practice	This Practice and All Practices in the Rows Above	This Practice	This Practice and All Practices in the Rows Above
20. Change discipline policies	60.9	6.2	63.6	5.6	55.5	7.3
21. State or district provides professional development on identifying staff for leadership positions	59.4	6.0	60.2	5.6	57.9	6.7
22. Provide multiple-session professional development events	55.1	3.9	58.6*	3.1	48.2	5.5
23. Require student achievement growth as a component of teacher evaluations	47.8	2.3	50.2	0.9*	43.3	4.9
24. Design professional development with school staff	47.8	2.1	53.0*	0.6*	37.8	4.9
25. Use multiple performance measures for teacher evaluations	45.3	1.2	48.9*	0.6	38.4	2.4
26. Use student achievement growth as a component of principal evaluations	40.2	0.8	40.8	0.6	39.0	1.2
27. Review competencies of staff or replace instructional staff	33.5	0.4	41.1*	0.3	18.9	0.6
28. Use teacher evaluation results to inform compensation	24.6	0.2	26.3	0.0	21.3	0.6
29. Have autonomy on budgeting, hiring, discipline, or school year length	23.8	0.2	25.4	0.0	20.7	0.6
30. Use principal evaluation results to inform compensation	22.6	0.0	22.9	0.0	22.0	0.0
31. Use financial incentives and other strategies to recruit and retain effective teachers	14.9	0.0	17.2*	0.0	10.4	0.0
32. Use financial incentives to recruit and retain effective principals	6.6	0.0	7.8	0.0	4.3	0.0
Number of Schools	**480**		**320**		**160**	

Source: Surveys of school administrators in spring 2013.

* Significantly different from schools not implementing a SIG intervention model in 2012–2013 at the 0.05 level, two-tailed test.

Adoption Rates By Topic Area

It is also of interest to examine how schools combined practices for each of the topic areas. In Table 5, we ranked practices from the most to the least commonly adopted *within topic areas*, and for each practice, calculated the percentage of schools that reported adopting that particular practice *and all of the practices that were more commonly adopted than it within the same topic.*

Looking first at the adoption of individual practices within topic areas, the topic area with the highest overall adoption of individual practices was adopting comprehensive instructional reform strategies. The average adoption rate across all five practices in this area was 91 percent,[34] and at least 95 percent of schools reported adopting each of four practices in this area (Table 5). A lower percentage of schools, 69 percent, reported adopting the remaining practice in this area—implementing strategies to ensure English Language Learners (ELLs) master academic content. The lower adoption rate of this practice was partly due to the fact that 16 percent of our study schools did not have ELLs. Among study schools with ELLs, the percentage of schools that reported adopting this practice was higher, 77 percent.

The topic area with the lowest overall adoption was having operational flexibility and receiving support. The average adoption rate across the two practices in this area was 45 percent. Only 67 percent of schools reported adopting the most commonly adopted practice in this area—the state or district providing training or technical assistance to support school improvement or the use of data to improve instruction. The only other topic area in which the most commonly adopted practice was adopted by less than 80 percent of schools was developing and increasing principal effectiveness (76 percent; Table 5). In contrast, for the other three topic areas—adopting comprehensive instructional reform strategies, developing and increasing teacher effectiveness, and increasing learning time and creating community-oriented schools—at least 90 percent of schools reported adopting the most commonly adopted practice in those areas.

Some topic areas had greater variability in the adoption of individual practices than other areas. For example, the three areas with the largest differences in adoption rates between the most and least commonly adopted practices were: (1) developing and increasing teacher effectiveness, (2) developing and increasing principal effectiveness, and (3) having operational authority and receiving support. In these areas, the difference in adoption between the most and least commonly adopted practices was over 40 percentage points.[35]

Looking next at the adoption of combinations of practices within topic areas, more than three-quarters of schools reported adopting combinations that contained the three most commonly adopted practices in some topic areas. In particular, in the areas of adopting comprehensive instructional reform strategies and developing and increasing teacher effectiveness, more than 78 percent of schools reported adopting all of the three most commonly adopted practices in those areas (Table 5).

Statistically significant differences in the adoption of combinations of practices between schools implementing and not implementing a SIG model were concentrated in three topic areas (Table 5). These included: (1) developing and increasing teacher effectiveness, (2) developing and increasing principal effectiveness, and (3) increasing learning time and creating community-oriented schools. For example, in the area of developing and increasing teacher effectiveness, schools implementing a SIG model were statistically significantly more likely than schools not implementing one to report adopting the first 6 combinations (out of 12) shown in Table 5.

Table 5. Adoption Rates for SIG Practices, By Topic Area

Practices, Sorted Within Topic by the Percentage of All Study Schools That Reported Adopting Them	All Study Schools in 2012–2013		Schools Implementing a SIG Intervention Model in 2012–2013		Schools Not Implementing a SIG Intervention Model in 2012–2013	
	Percentage of Schools That Adopted:					
	This Practice	This Practice and All Practices in the Rows Above In the Same Topic	This Practice	This Practice and All Practices in the Rows Above In the Same Topic	This Practice	This Practice and All Practices in the Rows Above In the Same Topic
Adopting Comprehensive Instructional Reform Strategies						
1. Use data to inform and differentiate instruction	99.6	99.6	99.7	99.7	99.4	99.4
2. Increase technology access for teachers or use computer-assisted instruction	96.7	96.7	97.8	97.8	94.5	94.5
3. Use benchmark or interim assessments at least annually	95.9	94.8	96.9	96.6*	93.9	91.5
4. Use data to evaluate instructional programs	95.0	90.7	95.3	92.2	94.5	87.8
5. Implement strategies to ensure that English language learners master academic content	68.9	64.4	66.8	64.3	73.2	64.6
Average adoption rate across all practices in this topic area	91.2		91.3		91.1	
Developing and Increasing Teacher Effectiveness						
1. Provide ongoing professional development that involves working collaboratively or is facilitated by school leaders	96.1	96.1	98.1*	98.1*	92.1	92.1
2. Provide professional development on student learning needs	95.9	93.4	98.1*	96.6*	91.5	87.2
3. Use data to evaluate the success of professional development	82.0	78.9	85.9*	84.3*	74.4	68.3
4. Provide professional development on Common Core State Standards, state standards, or turnaround	78.3	65.6	83.1*	72.4*	68.9	52.4
5. Use evaluation results to inform reductions in force or have policies that allow principal authority to hire staff	69.6	45.8	69.6	50.2*	69.5	37.2
6. Provide multiple-session professional development events	55.1	30.4	58.6*	33.9*	48.2	23.8
7. Require student achievement growth as a component of teacher evaluations	47.8	16.1	50.2	17.2	43.3	14.0
8. Design professional development with school staff	47.8	10.8	53.0*	11.3	37.8	9.8
9. Use multiple performance measures for teacher evaluations	45.3	8.1	48.9*	8.8	38.4	6.7
10. Review competencies of staff or replace instructional staff	33.5	4.3	41.1*	5.6	18.9	1.8
11. Use teacher evaluation results to inform compensation	24.6	2.1	26.3	2.8	21.3	0.6
12. Use financial incentives and other strategies to recruit and retain effective teachers	14.9	0.8	17.2*	1.3	10.4	0.0
Average adoption rate across all practices in this topic area	57.6		60.8		51.2	

Table 5 *(continued)*

Practices, Sorted Within Topic by the Percentage of All Study Schools That Reported Adopting Them	All Study Schools in 2012–2013		Schools Implementing a SIG Intervention Model in 2012–2013		Schools Not Implementing a SIG Intervention Model in 2012–2013	
	Percentage of Schools That Adopted:					
	This Practice	This Practice and All Practices in the Rows Above In the Same Topic	This Practice	This Practice and All Practices in the Rows Above In the Same Topic	This Practice	This Practice and All Practices in the Rows Above In the Same Topic
Developing and Increasing Principal Effectiveness						
1. State or district provides professional development on budgets or turnaround strategies	76.4	76.4	79.6*	79.6*	70.1	70.1
2. Use multiple performance measures for principal evaluations	68.5	54.0	68.7	56.4	68.3	49.4
3. State or district provides professional development on aligning professional development with evaluation results	68.3	42.2	69.9	44.5	65.2	37.8
4. Replace the principal	66.7	28.4	71.5*	31.7*	57.3	22.0
5. State or district provides professional development on identifying staff for leadership positions	59.4	24.8	60.2	27.9*	57.9	18.9
6. Use student achievement growth as a component of principal evaluations	40.2	12.6	40.8	15.0*	39.0	7.9
7. Use principal evaluation results to inform compensation	22.6	5.0	22.9	6.9*	22.0	1.2
8. Use financial incentives to recruit and retain effective principals	6.6	1.7	7.8	2.2	4.3	0.6
Average adoption rate across all practices in this topic area	51.1		52.7		48.0	
Increasing Learning Time and Creating Community-Oriented Schools						
1. Use data to guide nonacademic supports	90.7	90.7	92.8*	92.8*	86.6	86.6
2. State or district provides professional development on working with parents or creating a safe school environment	75.4	71.0	78.4*	75.5*	69.5	62.2
3. Establish schedules and implement strategies to increase learning time	66.9	48.9	70.5*	53.3*	59.8	40.2
4. Change parent or community engagement strategies	61.7	36.9	67.4*	41.1*	50.6	28.7
5. Change discipline policies	60.9	31.1	63.6	34.5*	55.5	24.4
Average adoption rate across all practices in this topic area	71.1		74.5		64.4	
Having Operational Flexibility and Receiving Support						
1. State or district provides training or technical assistance to support school improvement or the use of data to improve instruction	66.5	66.5	71.2*	71.2*	57.3	57.3
2. Have autonomy on budgeting, hiring, discipline, or school year length	23.8	15.5	25.4	16.6	20.7	13.4
Average adoption rate across all practices in this topic area	45.2		48.3		39.0	
Number of Schools	**480**		**320**		**160**	

Source: Surveys of school administrators in spring 2013.
* Significantly different from schools not implementing a SIG intervention model in 2012–2013 at the 0.05 level, two-tailed test.

Why Do Adoption Rates Vary?

There are several potential explanations for the variability in the combinations of practices that schools reported adopting overall. First, variation might be expected because we analyzed 32 individual practices, which yield a large number of possible combinations. Second, as noted earlier, variation might be expected because each low-performing school presumably attempts to adopt the practices it believes will most directly address its students' unique needs. Third, even if schools' beliefs about how best to address their students' needs are similar, variation still might be expected if schools' internal capacity and external constraints to adopt certain practices differ. In spite of this variation, some practices were part of the combinations adopted by many schools, which might indicate that certain practices faced the fewest barriers to adoption, coherently fit together, or may be thought to increase one another's effectiveness when used in tandem. While our data do not allow us to determine whether any of these possible explanations are correct, they do offer starting points for future investigations on this topic. For instance, a future report will examine the relationship between adoption of SIG-promoted improvement practices and changes in outcomes for low-performing schools.

Conclusion

Low-performing schools in our study sample reported adopting an average of 20 (out of 32) improvement practices promoted by SIG for which we could measure adoption in 2012–2013, and schools implementing SIG models adopted statistically significantly more practices than schools not implementing these models. However, no schools reported adopting all of the practices required under the SIG transformation or turnaround models. This might be because some practices require more time to adopt or have more barriers to adoption than others, or because schools purposefully adopted certain practices first and plan to adopt more eventually. The study schools that received SIG were in either the second or third year of their three-year grants at the time of our spring 2013 survey.

The three most commonly adopted individual improvement practices, each adopted by over 96 percent of schools, were: (1) using data to inform and differentiate instruction, (2) increasing technology access for teachers or using computer-assisted instruction, and (3) providing ongoing professional development that involves working collaboratively or is facilitated by school leaders. The three least commonly adopted individual practices, each adopted by less than 23 percent of schools, were: (1) using principal evaluation results to inform compensation, (2) using financial incentives and other strategies to recruit and retain effective teachers, and (3) using financial incentives to recruit and retain effective principals.

Although there was substantial variation in the exact combinations of the 32 practices that schools reported adopting, some practices were much more likely than others to be included in these combinations. For example, the 5 most commonly adopted individual practices were all included in the combinations of practices reported by 90 percent of our study schools. The 5 most commonly adopted practices included the 3 most commonly adopted practices listed in the previous paragraph, as well as: (1) providing professional development on student learning needs, and (2) using benchmark or interim assessments at least annually. Schools implementing a SIG model were statistically significantly more likely to adopt combinations of practices that included these 5 most commonly adopted practices than schools not implementing a SIG model (95 versus 82 percent).

Several caveats apply to the analyses conducted in this brief. First, not all practices for the transformation or turnaround models had associated questions from the school administrator survey because it was necessary to limit the length of the survey. Second, we based the adoption of practices on self-reports from schools. Third, the SIG application wording left it up to the schools to decide many of the details about how to implement particular practices. Finally, we did not collect information about the details of and quality with which schools implemented practices. Therefore, this brief helps us better understand broad patterns of adoption reported by the study schools, but it does not provide an independent assessment of the quantity, quality, or details of their adoption.

Examining how low-performing schools combine practices is an important first step to better understanding why some schools ultimately successfully turn around while others do not. The information in this brief may also be relevant to educators and state administrators thinking about how to package improvement practices in their own schools. A future report for this evaluation will examine the impact of SIG-funded models on outcomes for low-performing schools. That report will also examine whether the type of SIG model, and the practices within those models, are related to improvement in outcomes for low-performing schools.

APPENDIX A

SCHOOL IMPROVEMENT GRANT: INTERVENTION MODELS AS DESCRIBED BY THE U.S. DEPARTMENT OF EDUCATION SIG GUIDANCE (2012)

I. Turnaround Model

A turnaround model is one in which a local education agency (LEA) must do the following:

1) Replace the principal and grant the principal sufficient operational flexibility (including in staffing, calendars/time, and budgeting) to implement fully a comprehensive approach in order to substantially improve student achievement outcomes and increase high school graduation rates
2) Use locally adopted competencies to measure the effectiveness of staff who can work within the turnaround environment to meet the needs of students:
   A. Screen all existing staff and rehire no more than 50 percent
   B. Select new staff:
      (1) Implement such strategies as financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions that are designed to recruit, place, and retain staff with the skills necessary to meet the needs of the students in the turnaround school.
      (2) Provide staff with ongoing, high-quality, job-embedded professional development that is aligned with the school's comprehensive instructional program and designed with school staff to ensure that they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies.
      (3) Adopt a new governance structure, which may include, but is not limited to, requiring the school to report to a new "turnaround office" in the LEA or state education agency (SEA), hire a "turnaround leader" who reports directly to the superintendent or chief academic officer, or enter into a multiyear contract with the LEA or SEA to obtain added flexibility in exchange for greater accountability.
      (4) Use data to identify and implement an instructional program that is research-based and vertically aligned from one grade to the next as well as aligned with state academic standards.
      (5) Promote the continuous use of student data (such as from formative, interim, and summative assessments) to inform and differentiate instruction in order to meet the academic needs of individual students.
      (6) Establish schedules and implement strategies that provide increased learning time.
      (7) Provide appropriate social-emotional and community-oriented services and supports for students.

(U.S. Department of Education, 2012, pp. 27–28)[36]

II. Restart Model

A restart model is one in which an LEA converts a school or closes and reopens a school under a charter school operator, a charter management organization (CMO), or an education management organization (EMO) that has been selected through a rigorous review process. A restart model must enroll, within the grades it serves, any former student who wishes to attend the school (see C-6) (U.S. Department of Education, 2012, p. 31).

III. Closure Model

School closure occurs when an LEA closes a school and enrolls the students who attended that school in other schools in the LEA that are higher achieving. These other schools should be within reasonable proximity to the closed school and may include, but are not limited to, charter schools or new schools for which achievement data are not yet available (U.S. Department of Education, 2012, p. 34).

IV. Transformation Model

An LEA implementing a transformation model must:

1) Replace the principal who led the school prior to commencement of the transformation model.
2) Use rigorous, transparent, and equitable evaluation systems for teachers and principals that —
   A. Take into account data on student growth as a significant factor as well as other factors, such as multiple observation-based assessments of performance and ongoing collections of professional practice reflective of student achievement and increased high school graduation rates.
   B. Are designed and developed with teacher and principal involvement.
3) Identify and reward school leaders, teachers, and other staff who, in implementing this model, have increased student achievement and high school graduation rates and identify and remove those who, after ample opportunities have been provided for them to improve their professional practice, have not done so.
4) Provide staff with ongoing, high-quality, job-embedded professional development that is aligned with the school's comprehensive instructional program and designed with school staff to ensure they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies.
5) Implement such strategies as financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions that are designed to recruit, place, and retain staff with the skills necessary to meet the needs of the students in a transformation model.

(U.S. Department of Education, 2012, pp. 27–28)[37]

APPENDIX B

Table B.1. Baseline Characteristics of the State and District Samples

	Study States	All States	Study Districts	Districts in the U.S. With at Least One School Implementing a SIG-Funded Intervention Model
Average Percentage of Students by Racial/Ethnic Category				
White, non-Hispanic	55.3	61.8	19.5*	33.4
Black, non-Hispanic	19.5	15.8	38.7*	30.3
Hispanic	18.3	13.7	32.0	25.8
Asian	3.8	4.6	3.3	2.5
Other	3.1	4.1	6.5	8.0
Average Percentage of Students Eligible for Free or Reduced-Price Lunch	48.0	45.5	72.4	68.1
Percentage of Schools That Are Title I Eligible	68.1	67.8	81.4	83.0
Percentage of Schools by Location				
Urban	30.0	23.3	68.2*	37.7
Suburban	25.7	22.5	17.3	20.0
Town or rural	44.3	54.2	14.5*	42.3
Number of States or Districts	**22**	**51**	**60**	**610**

Sources: Common Core of Data, 2009–2010; Institute of Education Sciences database of SIG-awarded schools.

Note: Data from 2008–2009 were used for states and districts with data missing in 2009–2010. Data from 2007–2008 were used for states and districts with data missing in both 2009–2010 and 2008–2009. Data from 2009–2010 were used whenever possible because that was the school year just before the first year of implementation of the ARRA-funded SIG intervention models. Percentages of students are unweighted state-level and district-level averages. The column for all states includes data for 50 states and the District of Columbia. The column for districts in the U.S. with at least one school implementing a SIG-funded intervention model include data for districts in 49 states and the District of Columbia because the database of SIG-awarded schools does not include information for Hawaii. The percentages of U.S. districts with at least one school implementing a SIG-funded intervention model are based on schools' planned implementation as of 2009–2010 for cohort 1 grantees and as of 2010–2011 for cohort 2 grantees and include only Tiers I and II schools. Two study districts were each composed of two districts located within a larger school system. For each of these districts, data for the two districts have been combined in the above analyses. We aggregated the percentages for town and rural school locations so that the categories shown in this table match those shown in Table 1.

* Significantly different from districts in the U.S. with at least one school implementing a SIG-funded intervention model at the 0.05 level, two-tailed test.

Table B.2. Survey Questions Addressing the SIG Practices

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
Adopting Comprehensive Instructional Reform Strategies	
1. Using data to inform and differentiate instruction	DA1. During the current school year, for which of the following purposes has your school used data? b. To guide development and implementation of academic supports or enrichment programs (for example, identify how many and which students need academic support or enrichment, assign or reassign students to classes); d. To inform teachers' instructional practices (for example, identify areas for improvement, tailor instruction to meet student needs, manage instructional pacing); g. To track individual student performance and identify areas of improvement for specific students; k. To inform resource allocation to improve instruction (for example, which students participate in which programs, which staff work with which students) DA2. During the current school year, for which of the following purposes has your school used data on English language learners? e. To inform/improve/differentiate instruction for English language learners DA3. Within the past year, did any of the following activities related to data use occur in your school? For item b below, if your school does not have English language learners, select —NA. a. District staff met with you and/or other school staff to review data on overall student performance; b. District staff met with you and/or other school staff specifically to review student performance data on English language learners; c. You or other school leaders reviewed student performance data to identify areas of improvement for the school; d. You or other school leaders met with teachers to discuss student performance data to identify areas in need of improvement for individual students or groups of students; h. After reviewing student performance data, teachers, administrators, and/or coaches formulated specific plans to update and revise instructional practice to address issues with specific students or specific classes. TA12. Since July 2010, did your school implement changes to any of the following? j. Policies around the use of data for instructional improvement.
2. Increased access to technology for teachers or that the typical English/language arts teacher used computer-assisted instruction	TA31. This school year, how often does the typical English language arts teacher in your school engage in the following activities (daily, weekly, monthly, a few times per year, once per year, or never)?[a] d. Use computer-assisted instruction. TL28. Within the past year, has your school engaged in any of the following activities? f. Increased access to technology for teachers.
3. The typical English/language arts or math teacher used benchmark or interim assessments at least once per year	TA37. How often does the typical English language arts teacher in your school use benchmark or interim assessments (zero times per year, one-two times per year, three-four times per year, five-six times per year, seven-eight times per year, or more than eight times per year)?[b] TA38. How often does the typical math teacher in your school use benchmark or interim assessments (zero times per year, one-two times per year, three-four times per year, five-six times per year, seven-eight times per year, or more than eight times per year)?[b]
4. Using data to evaluate instructional programs (for example, measuring program effectiveness)	DA1. During the current school year, for which of the following purposes has your school used data? a. To evaluate instructional programs (for example, measuring program effectiveness).

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
5. Implementing strategies (including additional supports or professional development) to ensure that limited English proficient students acquire language skills to master academic content	TL29. During the current school year, have the state and/or district provided professional development or other support to the principal and/or other leaders of this school on any of the following topics? e. Ensuring that English language learners acquire the language skills needed to master academic content. DA2. During the current school year, for which of the following purposes has your school used data on English language learners? If your school does not have English language learners, select —NA. a. To make decisions about students' entry into and/or exit from English language learner status; b. To place English language learners into specialized programs and/or classes; c. To track the progress of current English language learners; d. To track the progress of former English language learners; f. To identify professional development needs for teachers of English language learners; g. To assess teacher effectiveness with English language learners. DA3. Within the past year, did any of the following activities related to data use occur in your school? For item f below, if your school does not have English language learners, select —NA. f. School leaders coached teachers on the use of data specifically to improve instruction of English language learners. DA10.This school year, has your school received any of the following supports to help your school access and use data related to English language learners to improve and/or differentiate instruction for these students? If your school does not have English language learners, select —NA. a. Supports to help school staff use data to track the performance of English language learners; b. Supports to help school staff use data to improve or differentiate instruction for English language learners TA12. Since July 2010, did your school implement changes to any of the following? For item e below, if your school does not have English language learners, select —NA. e. Strategies to meet the needs of English language learners TA22. Which of the following topics have been a focus of the professional development provided to instructional staff this school year? For item e below, if your school does not have English language learners, select —NA. e. Meeting the needs of English language learners TA32. Is your school currently using any of the following methods to organize classes or other groups of students for instruction? For item e below, if your school does not have English language learners, select —NA. e. Specialized classes for English language learners (such as newcomer class, English as a second language, sheltered content) TA36. Which of the following strategies/approaches does your school currently use to meet the needs of your school's English language learners? a. Use a curriculum that specifically addresses English language learners' needs; b. Implement instructional strategies that specifically address English language learners' needs, such as needs-based grouping, differentiated instruction, or increased progress testing of English language learners; c. Provide instruction programs specifically designed for English language learners (such as English as a second language or bilingual programs); d. Provide specialized classes for English language learners (such as newcomer class, sheltered content class); e. Provide additional services for English language learners (such as tutors, bilingual aides, after-school program); f. Provide professional development for teachers on providing instruction to English language learners; g. Use data on English language learners in school decision making.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
Developing and Increasing Teacher Effectiveness	
1. Providing staff with ongoing professional development that involved educators working collaboratively or was facilitated by school leaders or coaches	TL27. Currently, does your school offer increased induction support (above and beyond that provided to all novice teachers in the district) for novice teachers in this school? TL28. Within the past year, has your school engaged in any of the following activities? a. Provided additional professional development, mentoring, and/or instructional coaching to teachers and/or school leaders (such as principals, assistant principals, or department heads); b. Improved opportunities for collaboration, such as common planning time. DA3. Within the past year, did any of the following activities related to data use occur in your school? If so, how often did they occur (daily, weekly, monthly, a few times per year, or once per year)?[c] e. School leaders coached teachers on the use of data to improve instruction; g. Teachers met with each other to discuss data on their students/classes. DA6. Does your school provide scheduled time for teachers to examine data, either on their own or in collaboration with other teachers or school administrators? TA33. Currently, do all, some, or no teachers in your school have common planning time to meet in teams?[d] TA23. How would you characterize the nature of the professional development activities provided to instructional staff in your school this year in terms of the following characteristics? For example, focusing on the first row below, would you say that all, most, roughly half, few, or none of the professional development provided to instructional staff this school year were single-session, one-time events?[e] c. Involved practice in the classroom.
2. Providing staff with professional development that was focused on understanding and addressing student learning needs (including reviewing student work and achievement data and collaboratively planning, testing, and adjusting instructional strategies based on data)	DA9. This school year, has your school received any professional development, training, or technical assistance to help school administrators and/or teachers access data, navigate data systems, or interpret and use data to improve and/or differentiate instruction? DA1. During the current school year, for which of the following purposes has your school used data? e. To inform professional development offerings (for example, identify specific content or skills in which teachers need assistance or support). TL10. Currently, are teacher evaluation results used to guide decisions about what professional development and support is offered, recommended, or required for individual teachers in your school? TA22. Which of the following topics have been a focus of the professional development provided to instructional staff this school year? c. Instructional strategies; d. Using data to improve and/or differentiate instruction.
3. Using data to evaluate the success of professional development offerings	DA1. During the current school year, for which of the following purposes has your school used data? f. To evaluate the success of professional development offerings.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
4. Providing instructional staff with professional development that focused on transitioning to Common Core State Standards, aligning instruction to state standards, or strategies for turning around a low-performing school	TA22. Which of the following topics have been a focus of the professional development provided to instructional staff this school year? a. Transitioning to the Common Core State Standards; b. Aligning instruction to state standards; f. Strategies for turning around a low-performing school.
5. Using teacher evaluation results as the primary consideration in reductions in force and excessing decisions or having teacher assignment policies that allow for principal discretion to decide which staff to hire for the school	TL13. Currently, are teacher evaluation results, rather than seniority, the primary consideration in reductions in force and excessing decisions for your school (if your school were to reduce the size of its faculty)? TL25. Do current teacher-assignment policies for your school allow for principal discretion or authority to decide which staff to hire for your school?
6. Providing instructional staff with professional development that consisted mostly or entirely of multiple-session events	TA23. How would you characterize the nature of the professional development activities provided to instructional staff in your school this year in terms of the following characteristics? For example, focusing on the first row below, would you say that all, most, roughly half, few, or none of the professional development provided to instructional staff this school year were single-session, one-time events?[e] b. Multiple-session events.
7. Student achievement growth was a required component of teacher evaluations and the extent to which student achievement growth must factor into teacher evaluations or that state test scores were used to assess student growth for teacher evaluations was specified	TL2. Currently, to what extent does student growth evidence factor into the overall teacher evaluation? For example, student growth may be a "significant" factor in evaluations or have a specific weight (such as 20 percent) in the overall teacher evaluation.[f] TL3. Are any of the following measures used to assess student growth for teacher evaluations? a. State test scores. [Note: TL1 (shown below) was also used to address the practice in this row. Specifically, the practice in this row was coded as zero if, among other things, the response to TL1 was “no teachers.”]
8. Providing staff with professional development designed with input from school staff	TA23. How would you characterize the nature of the professional development activities provided to instructional staff in your school this year in terms of the following characteristics? For example, focusing on the first row below, would you say that all, most, roughly half, few, or none of the professional development provided to instructional staff this school year were single-session, one-time events?[e] e. Were designed with input from school staff.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
9. Using multiple performance measures for teacher evaluations	TL1. Currently, are measures of student growth a required component of teacher evaluations? TL8. Apart from the student growth measures just addressed, which of the following other measures of teacher performance are currently used by your school for teacher evaluations? If a particular measure is used only for some teachers, please specify the types of teachers for whom the measure is used (required for all teachers, required for some teachers, and not required for any teachers).[g] a. Classroom observations conducted by the principal; b. Classroom observations conducted by someone other than the principal (such as a peer or mentor teacher); c. Self-assessment; d. Peer assessments; e. Portfolios or other artifacts of teacher practice; f. Student work samples; g. Student surveys or other feedback; h. Parent surveys or other feedback.
10. Reviewing the strengths and competencies of instructional staff for the purposes of hiring or removing staff	TA16. Since July 2010, did your school review the strengths and competencies of all existing instructional staff to assess the extent to which they were likely to be successful working in a school turnaround or improvement context? TA18. Since July 2010, did your school remove instructional staff through firing or counseling out as part of school improvement efforts? TA20. Since July 2010, did your school hire a significant number of new staff (at least 50 percent of staff or more) as part of school improvement efforts? TA21. Were these new hires assessed for whether they possessed specific strengths or competencies deemed important to be successful working in a school turnaround or improvement context?
11. Using teacher evaluation results to inform decisions about compensation	TL14. Currently, do teacher evaluation results contribute to decisions about annual salary increases for teachers in your school? TL16. Currently, do teacher evaluation results contribute to the decision to provide bonuses or other performance-based compensation (other than annual salary increases) for teachers in your school?
12. Implementing strategies, such as financial incentives or more flexible work conditions, that were designed to recruit, place, and retain staff	TL18. Currently, are teacher evaluation results used to guide decisions about career advancement for teachers in your school? TL26. Currently, do teachers and/or the principal at your school have the opportunity to receive any of the following financial incentives? a. Signing/recruitment bonuses for beginning to work in this school; b. Retention bonuses for continuing to work in the school; c. Performance bonuses; d. Increased annual compensation other than bonuses; e. Loan forgiveness; f. Tuition reimbursement; g. Housing; h. Financial incentives targeted towards increasing the number of staff with English language learner expertise in the school. TL28. Within the past year, has your school engaged in any of the following activities? g. Offered more flexible work conditions (for example, more flexible schedule); h. Increased use of aides/paraprofessionals.
Developing and Increasing Principal Effectiveness	
1. State or district provides the principal or other school leaders with professional development on analyzing and revising budgets or strategies for turning around a low-performing school	TL29. During the current school year, have the state and/or district provided professional development or other support to the principal and/or other leaders of this school on any of the following topics? f. Analyzing and revising budgets to use resources effectively; g. Strategies for turning around a low-performing school.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
2. Using multiple performance measures for principal evaluations	TL19. Currently, which of the following measures are used to evaluate the performance of your school's principal? a. Student growth measures; b. Self-assessment; c. District administrator input; d. School staff surveys or other feedback; e. Student surveys or other feedback.
3. State or district uses principal evaluation results to develop the principal's professional development or provides the principal with professional development on aligning teachers' professional development with evaluation results	TL29. During the current school year, have the state and/or district provided professional development or other support to the principal and/or other leaders of this school on any of the following topics? a. Aligning professional development with teacher evaluation results. TL21. Currently, are principal evaluation results used to develop professional development and/or support plans specifically for the principal of your school?
4. School has a new principal	TA13. Did your school get a new principal between July 2010 and June 2011? TA14. Did your school get a new principal between July 2011 and today?
5. State or district provides the principal or other school leaders with professional development on identifying effective instructional staff for leadership positions and supporting them in these positions	TL29. During the current school year, have the state and/or district provided professional development or other support to the principal and/or other leaders of this school on any of the following topics? b. Identifying effective instructional staff for leadership positions and supporting them in such positions.
6. Measures of student achievement growth were used for principal evaluations and the extent to which student achievement growth must factor into principal evaluations was specified	TL20. Currently, to what extent does student growth factor into the overall principal evaluation? For example, student growth may be a "significant" factor in evaluations or have a specific weight (such as 20 percent) in the overall principal evaluation.[f] [Note: TL19a (shown above) was also used to address the practice in this row. Specifically, the practice in this row was coded as zero if, among other things, the response to TL19a was "no."]
7. Principal evaluation results were used to inform decisions about compensation	TL22. Currently, do principal evaluation results contribute to decisions about annual salary increases for the principal of your school? TL24. Currently, do principal evaluation results contribute to the decision to provide bonuses or performance-based compensation to the principal of your school?
8. Principals have the opportunity to receive financial incentives designed to recruit, place, and retain staff	TL26. Currently, do teachers and/or the principal at your school have the opportunity to receive any of the following financial incentives? a. Signing/recruitment bonuses for beginning to work in this school; b. Retention bonuses for continuing to work in the school; c. Performance bonuses; d. Increased annual compensation other than bonuses; e. Loan forgiveness; f. Tuition reimbursement; g. Housing; h. Financial incentives targeted towards increasing the number of staff with English language learner expertise in the school.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
Increasing Learning Time and Creating Community-Oriented Schools	
1. Guiding the development and implementation of, or making changes to, nonacademic supports or enrichment programs for students	DA1. During the current school year, for which of the following purposes has your school used data? c. To guide development and implementation of nonacademic supports or enrichment programs (for example, identify how many and which students need counseling). TA12. Since July 2010, did your school implement changes to any of the following? h. Nonacademic supports (for example, mental health supports) for students.
2. State or district provided professional development on working with parents or creating a safe school environment	TL29. During the current school year, have the state and/or district provided professional development or other support to the principal and/or other leaders of this school on any of the following topics? c. Working with parents; d. Integrating cultural sensitivity into the school environment. TL28. Within the past year, has your school engaged in any of the following activities? e. Enhanced safety measures in the building; I. Increased use of volunteers (for example, parents).
3. Using schedules and strategies that provide increased learning time or increasing the number of hours per year that school was in session	TA24. Does your school schedule currently use or offer any of the following? a. Block scheduling; b. Before- and/or after-school instruction; c. Weekend instruction; d. Summer instruction. TA27. In the current school year, how many hours per day is your school in session for students?[h] If the number of hours per day that your school is in session varies by day of the week, please record the number of hours per day that your school is in session for each day of the week in the box below. TA29. In the current school year, how many days per year is your school in session for students?[h] TA28. (from the spring 2012 survey) In the 2009–2010 school year, how many hours per day was your school in session for students?[h] If the number of hours per day that your school was in session varied by day of the week, please record the number of hours per day that your school was in session for each day of the week in the box below. TA30. (from the spring 2012 survey) In the 2009–2010 school year, how many days per year was your school in session for students?[h]
4. Changing policies or strategies related to parent or community engagement	TA12. Since July 2010, did your school implement changes to any of the following? i. Policies or strategies related to parent and/or community engagement.
5. Changing discipline policies	TA12. Since July 2010, did your school implement changes to any of the following? g. Discipline policies.

Table B.2 *(continued)*

Practice (numbered as in Table 5)	Survey Questions Addressing the SIG-Promoted Practice
Having Operational Flexibility and Receiving Support	
1. State, district, or an external support provider sponsored by the state or district provided training or technical assistance to support school improvement efforts or that the school received support to help administrators and teachers use data to improve instruction	DA8. This school year, has your school received any of the following types of support to help school administrators and/or teachers access and use data to improve and/or differentiate instruction? a. Funds to support school investments related to data use; for example, funds to buy hardware or software, to develop or improve data systems, or to provide training to teachers on the analysis and use of data; b. Hardware or software to facilitate data use; c. Materials on how to access and use data to differentiate or improve instruction. TA39. Since July 2010, have the state and/or district provided any of the following types of training or technical assistance to your school? Please include assistance provided directly by state or district staff as well as assistance funded by the state or district but provided by someone other than state or district staff, for example, external consultants or staff from a regional office. a. Training or technical assistance on developing and implementing a school improvement plan; b. Training or technical assistance on identifying curricula, instructional strategies, or school reform models that have been shown to be effective at increasing student achievement; c. Training or technical assistance on identifying curricula, instructional strategies, or school reform models that have been shown to be effective at improving college readiness; d. Training or technical assistance on developing strategies to recruit and retain more effective teachers. TA41. Does your school currently have a state- or district-sponsored external support provider(s) or consultant(s) that regularly provides technical assistance to your school administrators or instructional staff around school improvement efforts?
2. School has primary responsibility for budget, hiring, discipline, or school year length decisions	TA40. Currently, does your school, the district, or the state have primary responsibility for decisions in each of the following areas for your school? a. Setting student discipline policies; b. Developing the school budget; c. Establishing the curriculum (including core texts); d. Setting student assessment policies (on assessments other than state-mandated tests); e. Staff hiring, discipline, and dismissal; f. Determining the length of the school day; g. Determining the length of the school year; h. Setting requirements for professional development.

Sources: Surveys of school administrators in spring 2012 (http://www.mathematica-mpr.com/publications/PDFs/Spring_2012_School_Administrator_Survey.pdf) and spring 2013 (http://www.mathematica-mpr.com/~/media/publications/pdfs/education/spring_2013_school_administrator_survey.pdf).

Note: DA indicates that the question came from the data systems module of the survey. TA indicates that the question came from the school turnaround module of the survey. TL indicates that the question came from the teachers and leaders module of the survey.

[a] For item TA31, the following responses were coded as "yes": daily, weekly, monthly, a few times per year, and once per year.

[b] For items TA37 and TA38, the following responses were coded as "yes": one-two times per year, three-four times per year, five-six times per year, seven-eight times per year, and more than eight times per year.

[c] For the practice of providing staff with ongoing professional development that involved educators working collaboratively or was facilitated by school leaders or coaches, responses of either "daily" or "weekly" to item DA3 were coded as "yes," because the SIG guidance defined ongoing professional development as occurring "on a regular basis (e.g., daily or weekly)."

[d] For item TA33, the following responses were coded as "yes": all teachers, and some teachers.

[e] For item TA23, the following responses were coded as "yes": all, and most.

[f] For items TL2 and TL20, the following responses were coded as "yes": significant, substantial, primary, and a specific weight of greater than or equal to one percent.

[g] For item TL8, the following responses were coded as "yes": required for all teachers and required for some teachers.

[h] For items TA27 through TA30, schools were coded as "yes" if the total number of hours that school was in session (defined as the hours per day that school was in session multiplied by the days per year that school was in session) increased between the 2009–2010 and 2012–2013 school years.

ENDNOTES

[1] U.S. Department of Education. "Applications Now Available for $3.5 Billion in Title I School Improvement Grants to Turn Around Nation's Lowest Achieving Public Schools" (December 3, 2009). Washington, DC: U.S. Department of Education, 2010. Available at http://www2.ed.gov/news/pressreleases/2009/12/12032009a.html. Accessed February 13, 2013.

[2] Center on Education Policy. "Opportunities and Obstacles: Implementing Stimulus-Funded School Improvement Grants in Maryland, Michigan, and Idaho." Washington, DC: Center on Education Policy, 2012.

[3] See endnote 1. For more information on the Elementary and Secondary Education Act, see http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf.

[4] The key differences between the turnaround and transformation model are that the turnaround model requires schools to: (1) screen staff and rehire no more than 50 percent, (2) adopt a new governance structure (such as reporting to a new turnaround office), and (3) provide appropriate social-emotional and community-oriented services and supports for students; while the transformation model requires schools to: (1) incorporate student growth into teacher and principal evaluations as a significant factor, (2) identify and reward teachers and principals who have increased student achievement or graduation rates, (3) provide ongoing mechanisms for family and community engagement, and (4) ensure that the school receives ongoing, intensive technical assistance and supports.

[5] For more information on the tiers, see Appendix C of the SIG application: U.S. Department of Education. "School Improvement Grants Application, Section 1003(g) of the Elementary and Secondary Education Act." Washington, DC: U.S. Department of Education, 2010.

[6] The number of years over which progress was to be assessed was left to the discretion of state education agencies but had to be at least two years.

[7] States had the option of identifying as Tier I schools Title I-receiving or Title I-eligible elementary schools that: (1) were no higher achieving than the highest-achieving school that met the original Tier I definition, <u>and</u> (2) were in the state's lowest quintile based on proficiency rates or had not made adequate yearly progress (AYP) for at least two consecutive years.

[8] See endnote 6.

[9] States had the option of identifying as Tier II schools Title I-receiving or Title I-eligible secondary schools that: (1) were no higher achieving than the highest-achieving school that met the original Tier II definition (or, for high schools, had a graduation rate less than 60 percent for a number of years), and (2) were in the state's lowest quintile based on proficiency rates or had not made AYP for at least two consecutive years.

[10] States had the option of identifying as Tier III schools Title I-receiving or Title I-eligible schools that: (1) did not meet the requirements to be in Tier I or Tier II, and (2) were in the state's lowest quintile based on proficiency rates or had not made AYP for at least two consecutive years.

[11] The sample of schools used in this brief includes 10 schools that were not eligible for SIG either because: (1) they were slightly higher-achieving (or had slightly higher graduation rates) than the Tier II schools, but did not meet the criteria for Tier III; or (2) they were added to the sample as replacement schools for schools that had closed (the majority of students who had been attending the closed school moved to the replacement school).

[12] Hurlburt, S., S. B. Therriault, and K. C. Le Floch. "School Improvement Grants: Analyses of State Applications and Eligible and Awarded Schools." NCEE 2012-4060. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, 2012.

[13] See endnote 2.

[14] U.S. Government Accountability Office. "School Improvement Grants: Early Implementation Under Way, but Reforms Affected Short Time Frames." GAO-11-741. Washington, DC: U.S. Government Accountability Office, 2011. Available at http://www.gao.gov/new.items/d11741.pdf. Accessed February 13, 2013.

[15] Dolge, A. "Education Department Considers Reregulating SIG." *Education Daily,* vol. 47, no. 50, 2014.

[16] Klein, A. "SIG Program Gets Makeover in Newly Passed Budget." *Education Week*, vol. 33, no. 19, 2014. Available at http://www.edweek.org/ew/articles/2014/01/29/19budget-sig.h33.html?tkn=RNNFnF05hWdc4BSp8qDhTuv4WyG8aiQY7T4h&cmp=ENL-EU-NEWS2. Accessed April 17, 2014.

[17] The web survey was sent to school principals for 480 low-performing schools. Surveys were not sent to principals of closed schools. The survey collected information about the SIG intervention models and specific improvement practices being adopted by the schools, as well as supports received from states and districts related to these practices.

[18] In the pilot test, we interviewed school administrators to assess how long it took to complete the survey; whether the structure of the survey was clear and easy to understand; whether important categories were missing from response options listed; if there were questions that were unclear; and if particular terms used in the survey were confusing.

[19] When we refer to states, districts, and schools in this brief, we are referring to those included in the SIG sample described here. The sample size for this brief (480 schools) differs from that in Herman et al. (2014) (450 schools) because this brief used data from spring 2013, whereas the other brief used data from spring 2012.

[20] Herman, R., C. Graczewski, S. James-Burdumy, M. Murray, I. Perez-Johnson, and C. Tanenbaum. "Operational Authority, Support, and Monitoring of School Turnaround." NCEE 2014-4008. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, 2014.

[21] The National Center for Education Statistics Restricted-Use Data Procedures Manual notes that "Licensees are required to round all unweighted sample size numbers to the nearest 10 (nearest 50 for ECLS-B) in all information products…" and that "Licensees shall ensure that all printouts, tabulations, and reports are edited for any possible disclosures of subject data. In planning and producing analyses and tabulations, the general rule is not to publish a cell in which there are fewer than three respondents or where the cell information could be obtained by subtraction." In keeping with these requirements, district and school sample sizes reported in this brief are rounded to the nearest 10 to protect respondent confidentiality. Actual sample sizes are shown for state data.

[22] Because the sample was not randomly selected, sampling weights were not used in the analysis. Because the response rate was 93 percent, non-response weights were not used in the analysis.

[23] For more information on the study design, see http://ies.ed.gov/ncee/projects/evaluation/other_racetotop.asp.

[24] In our study sample, 320 schools were implementing a SIG model in 2012–2013, and 160 schools were not implementing a SIG model in 2012–2013. Some schools in the first group were implementing a SIG model without the support of SIG. We placed schools that received SIG funding but were not implementing a SIG model into the second group because they would not be expected to have adopted the practices promoted by the four SIG models.

[25] The numbers in Table 1 were calculated using the following methods. Percentages of students are unweighted school-level averages. Study schools identified as implementing or not implementing a SIG intervention model were identified using information from districts and schools, as well as the IES database of SIG-awarded schools available at http://www2.ed.gov/programs/sif/index.html. U.S. schools that were eligible for SIG (and the particular intervention model that they were planning to implement if and when they applied for SIG) were identified using the IES database of SIG-eligible schools (available at the same link as the database of SIG-awarded schools). The national percentages of schools implementing each of the four intervention models are based on schools' planned implementation as of 2009–2010 for cohort 1 grantees and as of 2010–2011 for cohort 2 grantees. Data from 2009–2010 were used whenever possible to report schools' demographic and location data because that was the school year just before the first year of implementation of the ARRA-funded SIG intervention models. Data from 2008–2009 were used for schools with data missing in 2009–2010, and data from 2007–2008 were used for schools with data missing in both 2009–2010 and 2008–2009. National comparison data are for Tier I, II, and III schools in 49 states and the District of Columbia. One state, Hawaii, was excluded from the national comparison data because the database of SIG-eligible schools does not include information for Hawaii. To comply with NCES statistical reporting requirements for small cell sizes, we aggregated the percentages for town and rural school

locations and for restart and closure intervention models. Sample sizes refer to the number of schools used in the analysis. A range is provided when the sample sizes varied across items in the table due to missing data.

[26] This brief focuses on practices promoted by SIG and aligned with the SIG application criteria. For readers interested in a discussion of practices that may be most likely to improve student outcomes, please see: Herman, R., P. Dawson, T. Dee, J. Greene, R. Maynard, S. Redding, and M. Darwin. "Turning Around Chronically Low-Performing Schools: A practice guide." NCEE 2008-4020. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, 2008. Available at http://ies.ed.gov/ncee/wwc/pdf/practice_guides/Turnaround_pg_04181.pdf. Accessed August 22, 2014.

[27] We identified three additional practices that were permissible for secondary schools only and addressed in the school administrator survey. These practices are: (1) track students' college readiness or provide support to low-achieving students; (2) create small learning communities or academies; and (3) track progress to high school graduation. These practices were excluded from Table 2 and the analyses for this brief, so that we could consistently analyze secondary and nonsecondary schools together. One other practice—improve student transition from middle school to high school—was permissible for secondary schools only but not addressed in the school administrator survey.

[28] For practices that were addressed by multiple questions and had responses to only some questions, we coded the practice as having been adopted if at least half of the *nonmissing* responses were yes responses. For example, if a school responded to 8 of 11 questions that addressed the practice and 5 of the 8 responses were yes, then that school was coded as having adopted that practice. For practices with no response to any of the associated questions, we coded the practice as having not been adopted. This approach enabled us to include all schools in the analysis, rather than restricting the analysis to only the schools that responded to all the questions needed to measure adoption of all the practices. The average number of missing practices across all study schools was one.

[29] We examined the sensitivity of the number of practices adopted by all study schools in 2012–2013 to the use of different cutoffs for our adoption measure. Using a cutoff of one-half of the questions (as reported in the brief), study schools reported adopting an average of: (1) 20 of all 32 required or permissible practices, (2) 14 of the 24 required transformation practices, and (3) 13 of the 20 required turnaround practices (see Table 3). Using the most generous measure of adoption, in which schools only had to respond affirmatively to a *minimum of one* question for each practice, the average numbers of practices adopted increased by 3 to 4 practices; the corresponding numbers were: (1) 24, (2) 18, and (3) 16. Using the least generous measure of adoption, in which schools had to respond affirmatively to *all* of the questions for each practice, the average numbers of practices adopted decreased by 5 to 8 practices; the corresponding numbers were: (1) 12, (2) 9, and (3) 8.

[30] The practice of using financial incentives and other strategies to recruit and retain effective teachers was addressed by 11 questions. Across the 11 questions, the average percentage of turnaround or transformation schools with a yes response ranged from 2 to 51. The 3 questions that received the fewest yes responses (less than 13 percent for each question) were whether there was an opportunity for teachers to receive: (1) retention bonuses for continuing to work in the school, (2) financial incentives related to housing, and (3) financial incentives targeted towards increasing the number of teachers with English Language Learner expertise in the school. The practice of using financial incentives to recruit and retain effective principals was addressed by 8 questions. Across the 8 questions, the average percentage of turnaround or transformation schools with a yes response ranged from 2 to 41. The 3 questions focused on financial incentives for principals that received the fewest yes responses (less than 7 percent for each question) were the same analogous questions as the 3 questions that received the fewest yes responses for teachers.

[31] Baker, A. "More Money at Risk on Teacher Evaluations." *The New York Times*, January 18, 2013. Available at http://www.nytimes.com/2013/01/19/nyregion/more-money-at-risk-over-teacher-evaluations.html?_r=0. Accessed May 30, 2014.

[32] McNeil, M. "Hawaii Completes Most Race to Top Work, Without Teachers' Contract." *Education Week* blog, January 15, 2013. Available at http://blogs.edweek.org/edweek/campaign-k-12/2013/01/hawaii_without_teachers_contra.html. Accessed May 30, 2014.

[33] This analysis indicates whether a school's combination of adopted practices included those particular sets of practices, but it does not describe a school's *entire* combination of adopted practices. Although our method provides succinct information on many combinations of practices, it does not enable us to analyze combinations of practices that do not follow the ranking of the individual practices. For example, we did not examine the percentage of schools that adopted the second, fourth, and tenth most commonly adopted practices. In preliminary analyses, we found evidence to support the nested structure of practices examined in this brief. Specifically, when examining the N most commonly adopted practices (where N ranged from 1 to 32) we usually found that the most frequently adopted combination of practices (among all possible combinations of sizes 1, 2, …, N) was the one that included all N practices.

[34] To calculate the average adoption rate across all practices in each area, we averaged the percentages shown in the "This Practice" column of Table 5.

[35] These three areas also had the largest standard deviations in adoption rates across all practices in the five areas. We calculated the standard deviations of the percentages shown in the "This Practice" column of Table 5 for all study schools. The standard deviations of the adoption rates for each of the areas were: (1) 13 percent for adopting comprehensive instructional reform strategies, (2) 27 percent for developing and increasing teacher effectiveness, (3) 25 percent for developing and increasing principal effectiveness, (4) 12 percent for increasing learning time and creating community-oriented schools, and (5) 30 percent for having operational flexibility and receiving support.

[36] U.S. Department of Education. "Guidance on Fiscal Year 2010 School Improvement Grants Under Section 1003(g) of the Elementary and Secondary Education Act of 1965." Washington, DC: Office of Elementary and Secondary Education, U.S. Department of Education, 2012. Available at http://www2.ed.gov/programs/sif/sigguidance05242010.pdf. Accessed May 30, 2014.

[37] See endnote 36.

For more information on the full study, please visit:

http://ies.ed.gov/ncee/projects/evaluation/other_racetotop.asp

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