



Which Way Up?

What research says about school turnaround strategies

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Which Way Up? What the Research Shows

For decades--- and particularly since passage of No Child Left Behind--- policymakers have sought the latest innovations to turn around low-performing schools. With the advent of NCLB, schools with low performance and sizable achievement gaps were identified for improvement or restructuring, depending on the extent of their challenges.

This reform effort took on added dimensions in 2009 with passage of the American Recovery and Reinvestment Act (ARRA), commonly known as the stimulus bill. As one of its education centerpieces, ARRA included a one-time infusion of \$3 billion to transform the NCLB-era School Improvement Grant (SIG) program into an aggressive reform strategy that targeted public schools in the bottom five percent nationwide.

Awarded and managed by state education agencies, the strengthened SIG program requires low-achieving schools--- as determined by standardized test scores, achievement gaps, and high school graduation rates--- to select one of four models for reform, including school closure, restarting as a charter, transformation and turnaround strategies. The different approaches take their cues from NCLB and experiments undertaken in some cities, and inform the criteria of another key program from the U.S. Department of Education, the Race to the Top initiative.

Further confounding the field of policies and programs being launched to address chronically underperforming schools are a wave of so-called parent trigger laws. First appearing in California in 2010, seven states have since enacted legislation that give parents more power to demand changes in neighborhood schools--- and these parent-trigger laws often take school boards out of the reform and improvement equation. If parents are successful in rallying support for change, the trigger laws also can authorize school reforms similar to those options available under NCLB and the SIG program.

In this paper, the Center for Public Education, an initiative of the National School Boards Association, examines the research base behind these various strategies, as well as data on early implementation of these options by SIG-funded schools.

Although the data on these different methods is limited, there are some conclusions and important considerations that can be drawn from what is available.

For instance, staffing overhauls are a feature of many of the models, yet replacing most of the faculty and the principal can prove to be overly burdensome for rural schools. And this says nothing of the years-long process that research has shown it takes for a new teacher or principal to become highly effective.

Needless to say, it is critical that school board members understand the context behind these strategies which continue to dominate the education environment and show no signs of going away.

Main findings of the report:

The US Department of Education has invested billions in the School Improvement Grant program. Yet research on the efficacy of turnaround strategies, intervention models intended to reverse chronically low performance at schools across the nation, is limited. A department study showed that two-thirds of grant recipients posted gains. However, the report is based on only one year's data so it is too early to draw conclusions.

Previous research has examined, to different degrees, each of the four individual models that SIG award recipients must select and implement.

School Closure: Studies on school closure indicate student performance is dependent on the school the student transfers to; better performing schools produce gains, lower-performing schools don't.

Restart: Research on charters has shown charter schools on average perform no better or worse than peer traditional schools.

Transformation: By far, the most popular model among SIG award recipients, transformation is difficult to assess because of the flexibility schools have in interpreting and adopting the model. Similar "restructuring" efforts in Philadelphia schools showed some improvement in math and reading.

Turnaround: Scant data exists on the effectiveness of the turnaround model, although research is clear about one of its strategies: replacing half the staff. Most studies conclude that principals and teachers have the most impact on student achievement, although less is known about the effect of large scale staff changes on a school.

How We Got Here

School districts and state education agencies have tried numerous school reform and improvement models in recent decades, including several of the ideas touted in the ARRA SIG program, to provide students an opportunity to attend a higher performing school. Perhaps most notable among these efforts are those undertaken by Chicago Public Schools, where current U.S. Education Secretary Arne Duncan was superintendent from 2001 to 2009.

Nonetheless, whether the four ARRA SIG reform strategies have a solid basis in prior research is a much-discussed topic among researchers, and a debate that still rages today. Given the significant challenges facing many schools, some experts have called for urgent action, arguing that waiting for the research may deny opportunities for thousands of students.

The federal government also had embraced some of these concepts, in general if not forcefully, under the No Child Left Behind Act (NCLB) of 2001. Under NCLB, schools that failed to make Adequate Yearly Progress for five consecutive years had to undertake one of five options:

- Re-open as a charter
- Replace all or most existing staff
- Contract with an external entity to operate the school
- Turn the school over to the state
- Engage in any other form of major restructuring

Perhaps not surprisingly, a majority of struggling schools selected the last and least invasive option. In its in-depth study of restructuring efforts in five states (California, Georgia, Maryland, Michigan, and Ohio), the Center on Education Policy found between 86 percent and 96 percent of restructuring schools chose the “any other” option (Scott, 2008).

A Brief Snapshot of Three Core Drivers of School Improvement

No Child Left Behind: Schools failing to meet Adequate Yearly Progress for five consecutive years had to undertake one of five options: 1) Re-open as a charter; 2) Replace all or most existing staff; 3) Contract with an external entity to operate the school; 4) Turn the school over to the state; or 5) Engage in any other form of major restructuring.

State Improvement Grant (as funded by ARRA): Districts and schools had four options: 1) closure; 2) restart as a charter or under the direction of an education management organization; 3) transformation, including replacement of the principal; and 4) turnaround, including replacement of principal and at least 50 percent of staff.

Parent Trigger Laws: Now present in seven states, parents in most cases must sign petitions and demonstrate strong support to demand change. While state laws allow several reform options, several mimic those in the revised SIG program (such as converting to a charter; closing a school; or replacing a majority of staff).

As a result of this approach, NCLB “endorsed and supported risk-averse turnaround strategies through its open-ended fifth option” for restructuring (Calkins, Guenther, Belfiore & Lash, 2007; Mass Insight, 2012). The Obama administration seemed to echo this view in defending its choice of SIG options made available under ARRA.

At a December 2009 forum sponsored by the Center on Education Policy, Judy Wurtzel, then deputy assistant secretary for planning, evaluation and policy development at the Education Department, emphasized that the four models under the revised stimulus SIG program would allow districts to “intervene intensively” in low-performing schools (Center on Education Policy, 2010).

Strengthening the SIG Program

With a goal to promote intensive intervention, Congress and President Obama enacted a major scale-up of School Improvement Grant efforts in 2009. As shown in Table 1, the SIG program received a dramatic increase through the stimulus bill.

Table 1: Federal Funding for School Improvement Grants

Fiscal Year	Total Awarded
FY07	\$125 million
FY08	\$491 million
FY09	\$3.546 billion
FY10	\$546 million
FY11	\$535 million
FY 12	\$535 million

Source: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education (2011)

To access the increased funding, states had to identify their “persistently lowest-achieving schools,” which the law defines generally as any Title I or Title I-eligible school in need of improvement, corrective action or restructuring and ranks among the lowest five percent in performance based on state or alternate assessments. Title I-eligible high schools with graduation rates below 60 percent could also apply. Under the SIG funding formula, dollars are distributed to states based on Title I funding. In fiscal year 2010, when the bulk of stimulus funds were distributed, state-by-state grants ranged from \$1.26 million for Vermont to \$69 million for California. Schools that applied and met the criteria could receive up to \$2 million over three years to undertake a variety of reform and improvement strategies.

Table 2: Round 1 Distribution of SIG Awards by State and Tier

States	Total	Tier I		Tier II		Tier III	
		N	%	N	%	N	%
Total	1,228	514	41.9%	312	25.4%	402	32.7%
Alabama	11	9	81.8%	2	18.2%	0	0.0%
Alaska	7	7	100.0%	0	0.0%	0	0.0%
Arizona	19	14	73.7%	5	26.3%	0	0.0%
Arkansas	7	5	71.4%	2	28.6%	0	0.0%
California	92	67	72.8%	25	27.2%	0	0.0%
Colorado	19	10	52.6%	9	47.4%	0	0.0%
Connecticut	14	10	71.4%	4	28.6%	0	0.0%
D.C.	10	10	100.0%	0	0.0%	0	0.0%
Delaware	2	0	0.0%	2	100.0%	0	0.0%
Florida	77	52	67.5%	19	24.7%	6	7.8%
Georgia	26	21	80.8%	5	19.2%	0	0.0%
Idaho	6	3	50.0%	3	50.0%	0	0.0%
Illinois	10	4	40.0%	6	60.0%	0	0.0%
Indiana	7	4	57.1%	3	42.9%	0	0.0%
Iowa	6	6	100.0%	0	0.0%	0	0.0%
Kansas	6	4	66.7%	2	33.3%	0	0.0%
Kentucky	105	5	4.8%	5	4.8%	95	90.5%
Louisiana	32	1	3.1%	1	3.1%	30	93.8%
Maine	6	3	50.0%	3	50.0%	0	0.0%
Maryland	11	5	45.5%	6	54.5%	0	0.0%
Massachusetts	12	12	100.0%	0	0.0%	0	0.0%
Michigan	28	3	10.7%	25	89.3%	0	0.0%
Minnesota	19	11	57.9%	8	42.1%	0	0.0%
Mississippi	8	2	25.0%	6	75.0%	0	0.0%
Missouri	32	14	43.8%	18	56.3%	0	0.0%
Montana	6	6	100.0%	0	0.0%	0	0.0%
Nebraska	7	7	100.0%	0	0.0%	0	0.0%
Nevada	10	6	60.0%	4	40.0%	0	0.0%
New Hampshire	7	5	71.4%	2	28.6%	0	0.0%
New Jersey	12	4	33.3%	8	66.7%	0	0.0%
New Mexico	9	9	100.0%	0	0.0%	0	0.0%
New York	25	22	88.0%	3	12.0%	0	0.0%
North Carolina	24	6	25.0%	18	75.0%	0	0.0%
North Dakota	38	1	2.6%	0	0.0%	37	97.4%
Ohio	41	25	61.0%	10	24.4%	6	14.6%
Oklahoma	10	10	100.0%	0	0.0%	0	0.0%
Oregon	12	5	41.7%	7	58.3%	0	0.0%
Pennsylvania	58	32	55.2%	26	44.8%	0	0.0%
Rhode Island	6	6	100.0%	0	0.0%	0	0.0%
South Carolina	19	9	47.4%	10	52.6%	0	0.0%
South Dakota	18	1	5.6%	1	5.6%	16	88.9%
Tennessee	72	10	13.9%	2	2.8%	60	83.3%
Texas	66	30	45.5%	18	27.3%	18	27.3%
Utah	7	5	71.4%	2	28.6%	0	0.0%
Vermont	66	5	7.6%	5	7.6%	56	84.8%
Virginia	58	11	19.0%	7	12.1%	40	69.0%
Washington	18	8	44.4%	10	55.6%	0	0.0%
West Virginia	15	4	26.7%	11	73.3%	0	0.0%
Wisconsin	46	5	10.9%	6	13.0%	35	76.1%
Wyoming	6	0	0.0%	3	50.0%	3	50.0%

Note: A total of 1,228 schools from 49 states and DC are included in this table; data from HI was not available at the time.

Tier I includes any Title I school in improvement, corrective action, or restructuring that (1) is among the lowest-achieving five percent of those schools in the state; or (2) is a high school that has had a graduation rate below 60 percent for several years.

Tier II includes any secondary school that is eligible for, but does not receive Title I funds and (1) is among the lowest-achieving five percent of such secondary schools in the state or (2) had a graduation rate below 60 percent for several years.

Tier III includes the remaining Title I schools in improvement, corrective action, or restructuring that are not Tier I schools.

Source: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education (2011)

Once funded with SIG dollars, underperforming schools and their districts must choose one of four options for reform:

- The school closure model, in which the low-performing school is closed and students move to a higher achieving school.
- The restart model, in which the school becomes a charter or is taken over by an education management organization.
- The transformation model, in which the school replaces the principal, provides enhanced professional development to staff, launches a teacher evaluation system, increases learning time and creates new support services for students.
- The turnaround model, which includes many of the same elements as the transformation model with the additional requirement that teachers must reapply for their jobs. A turnaround school must replace at least 50 percent of the staff and grant the new principal greater autonomy to pursue reforms.

What the Research Shows: Aggregate Data

Among schools that received SIG grants following passage of the stimulus, early information is emerging about aggregate trends – much of it positive. The U.S. Department of Education provided preliminary information in late 2012 with first-year data covering 90 percent of the 831 SIG-funded schools, and it showed a generally upward trend.

Based on this data, nearly two-thirds of SIG-funded schools achieved progress in reading and two-thirds-- not necessarily the same schools--- made progress in math (U.S. Department of Education, 2012). The department also reported that elementary schools were more likely than secondary schools to show gains. Overall, 70 percent of elementary schools reported increases in reading from 2009-10 to 2010-11, compared with 62 percent of high schools. In math, progress rates were 70 percent for elementary schools and 65 percent for high schools. Citing this data, the department said it may demonstrate the rationale to start as early as possible on reform strategies.

Nonetheless, there are limitations to this data. First, the research did not break out achievement by the type of reform chosen – specifically, whether the school selected the turnaround, transformation, closure or restart model. Second, with just one year of data and recognizing that many factors can affect student proficiency, the department itself acknowledged it is too early to draw a causal link between SIG funding and school performance. In addition, a closer look at the data shows that rural schools may lag others in key categories.

For example, 58 percent of rural SIG schools showed one-year gains in math and reading compared with 70 percent of suburban schools and 65 percent of urban schools. Also, 14 percent of rural schools experienced a double-digit decline in reading for the first year of SIG funding, which was twice the rate of urban schools and more than three times the rate for suburban schools.

A survey of state SIG directors by the U.S. Government Accountability Office also provided some cautionary information. For example, directors in 23 of 44 states said that “most” or “all” their SIG-funded schools did not meet their annual goals. Nonetheless, these schools had their grants renewed anyway (GAO, 2012). When GAO conducted site visits with states, several state officials said they also questioned the goals data since districts were free to set their own performance targets. “For example, California officials said they did not find annual goals data useful because districts often included generic annual goals in their applications for SIG funding instead of proposing goals based on schools’ unique circumstances.” In interviews with GAO, at least half of the states also reported they lacked annual student achievement data at the time they had to make renewal decisions.

Elsewhere, aggregate data on early SIG implementation is available in California, which awarded 92 SIG grants in the first round of this new program, the largest number for any state. In comparing student performance of SIG-funded schools to schools that were eligible but did not receive funding, Dee (2012) found positive benefits resulted from the SIG-funded improvements. Chiefly, SIG-funded schools experienced larger gains in student performance and growth than those that would be expected if they had not received funding. According to this study involving 82 schools, campuses opting for the ambitious “turnaround” model--- with extensive staff turnover--- made greater gains compared to those that chose the less extensive “transformation” model. The study did not include any schools that were closed under the SIG program.

Additionally, it may be useful to examine Chicago Public Schools’ reform data, since its school turnaround efforts predated yet influenced the federal ARRA SIG effort. Looking across schools that had to select one of five models – including closure, restart and reconstitution – summary data from Chicago showed some gains. For example, elementary and middle schools undertaking reform strategies made improvements within four years. Within that time frame, the gap in test scores evident between the schools’ prior scores and the system average dropped by nearly half in reading and by nearly two-thirds in math. High schools showed little success, however, as they saw no difference, in terms of attendance or on-time graduation rate, compared to other similarly situated schools (de la Torre, Allensworth, Jagesic, Sebastian, Salmonowicz, Meyers & Gerdeman, 2012).

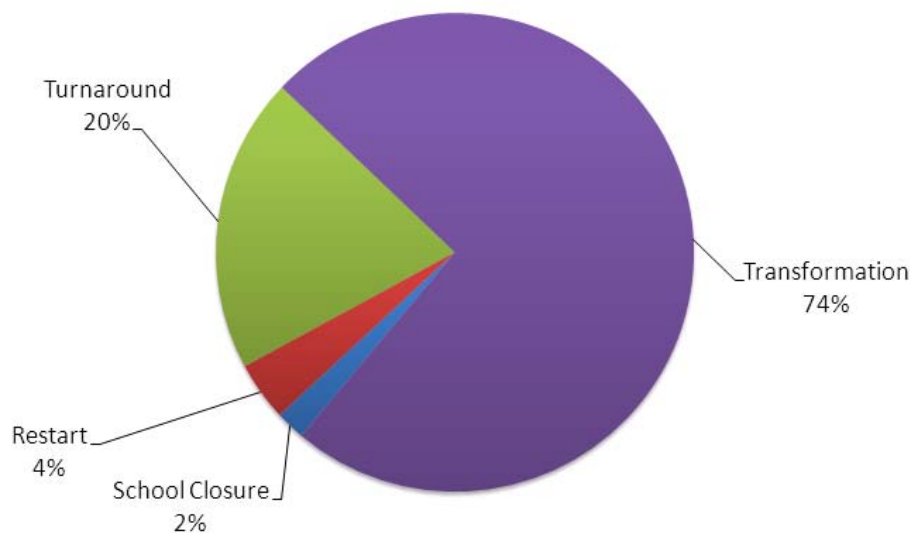
States and Schools: Who’s Choosing What Model

A detailed examination of research on SIG schools must include a look at each of the options available to districts with the lowest-achieving schools. In this section, we attempt to summarize data on usage of the four different models and what the research shows about each model.

While data from SIG-funded schools are just beginning to be released for public consumption, it is possible to look at what options schools and districts are choosing for their reform efforts.

Significantly, early research shows that the less-invasive “transformation” model is by far the most popular choice of local educators. Overall, 74 percent of identified schools were selecting the less dramatic “transformation” option (Hurlburt, LeFloch, Therriault & Cole, 2011). By comparison, few were choosing the more drastic closure or re-start model, and only one in five were seeking the turnaround strategy that requires replacing many teachers as well as the principal.

**Figure 1: Intervention Models Chosen by SIG Recipients
(Nationwide)**



Note: Analysis is based on 820 SIG-awarded Tier I and Tier II schools in 49 states and DC. Data for HI and some RI schools was not available.

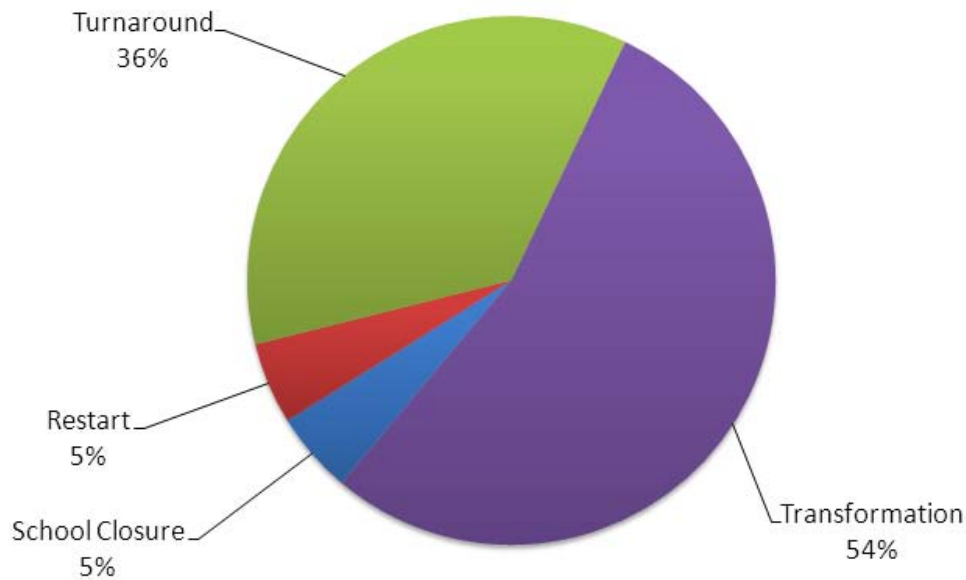
Tier I includes any Title I school in improvement, corrective action, or restructuring that (1) is among the lowest-achieving five percent of those schools in the state; or (2) is a high school that has a graduation rate below 60 percent for several years.

Tier II includes any secondary school that is eligible for, but does not receive, Title I funds and (1) is among the lowest-achieving five percent of such secondary schools in the state or (2) had a graduation rate below 60 percent for several years.

Source: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education (2011)

Urban SIG schools were more likely than SIG schools overall to select an intensive reform option. In a 2011 survey of major urban school systems that are members of the Council of Great City Schools, 54 percent of SIG recipients indicated they had chosen the transformation model while 36 percent had opted for the turnaround (Lachlan-Hache, Naik & Casserly, 2012). Usage of the remaining two models also was slightly higher among council members, with five percent choosing closure and five percent selecting re-starts.

Figure 2: Intervention Models Chosen by SIG Recipients (Urban)



The calculations are based on analyses by the Council Great City Schools, a coalition of 65 of the nation's largest urban public school system. A total of 389 Great City Schools received SIG awards in the first round. Adapted from "The School Improvement Grant Rollout in America's Great City Schools," by J. Lachlan-Haché, M. Naik & M. Casserly, 2012, Council of Great City Schools.

One reason for the discrepancy between urban schools and all schools may be the isolation of rural and small-town schools, which face particular difficulty with the closure, turnaround and restart models. Such schools are more likely to choose the transformation model rather than closure, re-start or turnaround, according to an Idaho state official (Scott, McMurrer, McIntosh & Dibner, 2012).

These more isolated schools "face problems in finding sufficient teachers to meet the replacement requirements of the turnaround model, have limited access to private management organizations that could implement the restart model, have difficulty meeting the timelines to become a charter school under the restart model, and have no other schools to which they could send students under the closure model," the report stated. Based on a 2010 CEP study, administrators in Idaho, Maryland and Michigan were among those reporting difficulties finding and retaining the teachers and principals required under these reform options.

According to Hurlburt et. al, SIG awards for school closures nationwide occurred in only nine states in the first round of stimulus grants, with restarts taking place in only 13 states (2010). Four states have specific policies that do not allow restarts as an option.

A Look at Each Model

The following section provides more detail about each model--- closure, restart, transformation, and turnaround--- and summarizes the research on these strategies. It should be noted, this research generally predates the ARRA SIG program.

School Closure

The option to close a low-performing school is considered the most drastic of the four interventions and is often employed for schools considered beyond repair or reform. Yet SIG's requirement that displaced students attend schools that are higher achieving may cause compliance problems for districts/LEAs with a number of low-performing schools. This model can be especially problematic for low-performing schools in rural districts since they may not have any alternative school for students to attend. As Figure 1 shows, only two percent of SIG awards were used for this purpose, and in these cases, the district receives funds to cover costs associated with closing the school and placing students in another school.

Most school closures occur in urban areas, where poor academic performance often coincides with declining enrollments and budget pressures as reasons for closure. A 2011 study from the Pew Charitable Trusts examined school closures in six urban districts, noting "there is limited research on the subject" of how school closures impact student academic performance, since most closures have occurred in "cash-strapped urban school districts [where] tracking the impact of large scale closings on students has not been a priority." The report aimed to help Philadelphia district officials determine which schools to close--- at the time of the report there were 70,000 empty seats in the school system--- and did not focus solely on academic concerns, although the authors did recommend academic performance be one of the decision-making factors.

One of the few studies to look at the impact of school closure on student achievement examined 18 Chicago elementary schools shuttered between 2001 and 2006 (de la Torre & Gwynne, 2009). The report found that among displaced students, 82 percent enrolled either at schools on probation or at schools scoring in the lowest quartile of CPS schools based on the Iowa Test of Basic Skills (ITBS). "Only 6 percent of displaced students attended schools with ITBS scores in the top quartile," the authors noted (de la Torre & Gwynne, 2009).

It was hardly surprising then that the study found student achievement to be highly dependent upon the new school that child attends. Based on testing one year after closure, displaced students at weaker schools (those in the bottom quartile of all system schools) had lost more than a month in reading and 1.5 months in math. By comparison, the smaller number of displaced students who ended up in stronger schools (those in the top quartile) had gained a month in reading and two months in math.

Another study, focused on an anonymous, mid-sized urban district in the Northeast, found similar results, with displaced students performing better in their new higher-achieving schools and also found

“no evidence” of a negative impact on the receiving schools due to the influx of new/displaced students (Engberg, Epple, Gill & Sieg, 2011).

An examination of school closures in Denver, Chicago, Hartford, and Pittsburgh noted that district officials considered school closings as a part of the district’s overall improvement plan and “did not expect that closing schools would lead directly to improved student learning” (Steiner, 2009). All four districts struggled with finding higher performing schools for the displaced students to attend, even though district officials felt they could not continue letting students attend “chronically low-performing schools.” District officials offered these four pieces of advice to those considering school closure (Steiner, 2009):

- Base decisions on data analysis of school performance,
- Inform the public about clear benefits to students,
- Offer support to students and families during transition, and
- Ensure affected teachers and staff have a clear understanding of the next steps

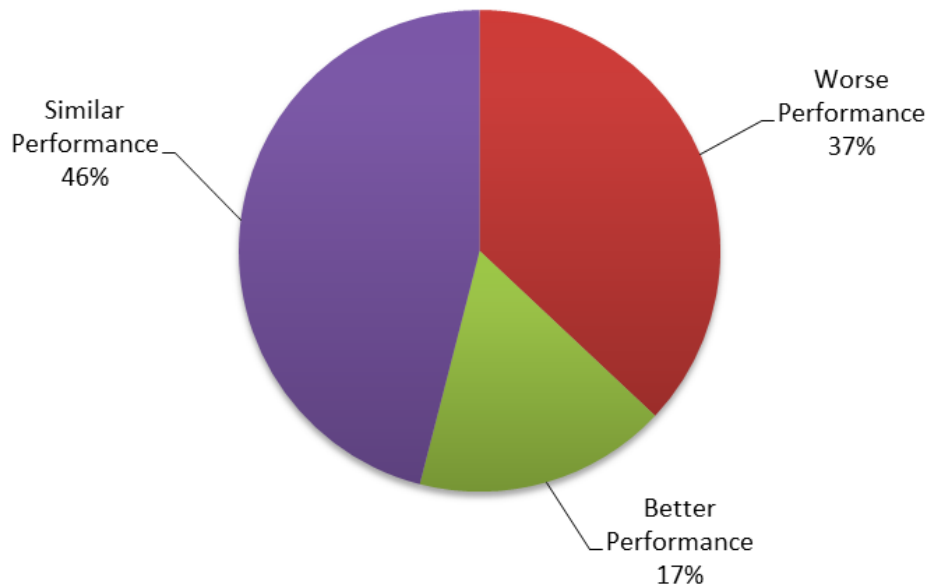
Restart Model

In this model, the U.S. Department of Education requires that LEAs close and reopen the school under a charter management organization (CMO) or an education management organization (EMO) “selected through a rigorous review process.” As shown in Figure 1, few schools/LEAs have selected this model.

As with traditional public schools, there is wide variance in charter schools and research on their effectiveness has shown mixed results. The Center for Public Education’s 2010 report, *Charter Schools: Finding Out the Facts*, is a good primer on the subject.

A large database from Stanford University’s Center for Research on Education Outcomes (CREDO) has provided more recent insight into charter schools. The latest report from CREDO, *Charter School Growth and Replication*, examines student performance at charter schools--- independently-operated and run by charter management organizations--- and again finds mixed results (Peltason & Reynolds, 2013). CREDO’s work is based on data from charter schools across 23 states, New York City, and Washington D.C., and compares student performance in the charter and traditional public school sectors through the use of “virtual twins” (matched according to student demographics, English language proficiency, and participation in special education or subsidized lunch programs).

Figure 3: Charter School Performance Compared to Traditional Public Schools



Source: Center for Research on Education Outcomes (CREDO), Stanford University, 2009.

The 2013 report noted that CMO performance records, similar to individual charter schools, are mixed. According to CREDO, “CMOs taken as a whole have about the same performance as the [traditional public schools] with whom they co-exist. In math, learning gains in CMOs lag [traditional public schools] by a small degree ... and post better gains than independent charter schools” (Peltason & Reynolds, 2013).

Other findings included:

- School performance in the new school’s first year is “predictive of later performance.” Most (80 percent) of the schools in the bottom (4th and 5th) quintiles of performance remained in those quintiles through their fifth year of operation. Conversely, almost all (94 percent) of the schools that began in the top quintile remained there over time.
- Reading and math scores show that students who attended CMO charter schools for four years have stronger growth than traditional public school students and non-CMO charter students.
- These scores also show that students eligible for free or reduced lunches, ELL students, and special education students fared better when attending a CMO school than similar students attending non-CMO charters or traditional public schools.

In addition to the general research on charter schools, some recent studies have examined school “restarts.” RAND Corporation examined the Philadelphia experience with takeover and restructuring in a 2007 study. Looking at student data from 45 of the city’s lowest performing schools that were turned over to a group of seven private “managers”--- three for-profit EMOs, two non-profit EMOs and two universities--- Gill, Zimmer, Christman & Blanc (2007) found that the privately managed schools in Philadelphia showed no positive or negative effects in reading or math in the four years following takeover.

Transformation Model

As noted in Figure 1, the transformation model is by far the most popular among SIG grantees, as it provides more flexibility than the other three options. Under transformation, schools are required to:

1. Replace the principal (unless he or she has been in place less than two years)
2. Institute evaluations that reward staff who increase student achievement and remove those who do not
3. Implement comprehensive instructional reform
4. Increase learning time
5. Provide ongoing high quality job-embedded professional development.

In addition, the model allows a number of permissible activities such as, providing additional compensation to attract and retain staff or increasing rigor by offering students opportunities for more advanced coursework.

Clearly the transformation model requires or allows many strategies, and this fact adds to the complexity of its study and evaluation. As Dee (2012) noted, “Evidence on how underperforming schools can dramatically and quickly improve student outcomes is largely anecdotal” and based largely on case studies. While a research base exists on several of the individual strategies (see past CPE research on [restructuring instructional time](#) and [increasing high school rigor](#)), Dee added, “there is no prior evaluation evidence on the effectiveness of initiatives with these particular design features.”

In Philadelphia, the efforts of the city’s School Reform Commission from 2002 to 2005 may shed some light on elements of school transformation. During this period, the reform commission provided additional funding and/or new management to 86 low-performing schools. According to a RAND Corporation study, 45 of these schools were placed under private management while 21 “restructured” schools received intensive professional development and close oversight from district management, and another 16 schools had no management intervention but additional resources (Gill et. al, 2007).

The city’s restructured model resembled the SIG transformation model and RAND found these were the only schools among the three options to show any effect, positive or negative. Students in restructured schools performed better in math for three years and in reading for the first year, while the other models had no impact. It is noteworthy that additional resources to support all three reform models

ceased after three years. However, in the fourth year, students at the restructured schools continued to perform better than others in math.

Regarding more recent SIG-funded activities, some districts have supported their own research effort. In Virginia, for example, the second-year evaluation of transformation efforts at T.C. Williams High School in Alexandria City Public Schools, illuminated gains. A summary report noted that the school in 2011-12 met federal benchmarks for all students in mathematics, after meeting only eight of 14 benchmarks two years previously (Hanover Research, 2012). Other boons included hitting federal benchmarks in English proficiency for two consecutive years and seeing marked increases in the school's graduation rate and percentage of students taking Advanced Placement tests. T.C. Williams' transformation approach has five key pillars: Individual Achievement Plans for each student in math and English; Professional Learning Plans for all teachers; increased data collection and tracking on student achievement; enhanced use of external partners and additional supports such as writing and math centers, advisory time, and extended school learning options.

Turnaround Model

About one in five SIG grants support this model. While less drastic than closure or conversion to a charter, the turnaround model is still prescriptive, with the following requirements:

1. Replace the principal and screen all existing staff and rehire no more than 50 percent
2. Adopt a new governance structure, i.e., principal reports to a new LEA "turnaround office"
3. Grant the principal flexibility to implement comprehensive reforms
4. Increase learning time
5. Provide ongoing high quality job embedded professional development

Similar to the transformation model, there is little research that can assess the turnaround model in its specific SIG incarnation. However, the 2012 survey by the Council of Great City Schools gives some insight on the use and evaluation of particular strategies prior to ARRA passage (Lachlan-Haché et al., 2012). For example, the requirement that the LEA replace the principal and at least 50 percent of staff was used by 19 urban districts over the past five years in a total of 106 schools. Most (14 of 19) districts reported that this strategy was effective or very effective; three indicated they saw no change in student achievement; and two of the respondents reported the strategy was ineffective or very ineffective.

Some insight may also be gained by examining the research on reconstitution – the strategy of replacing a school's entire staff – as summarized by Calkins et. al (2007). Overall, these findings are not positive:

- In the eight schools reconstituted after 1994 in San Francisco, there was little, if any, improvement in standardized test scores 10 years later.
- Three years after several Chicago schools were reconstituted, researchers found lower-than-average gains in reading achievement compared with the rest of Chicago schools.

Partial replacement of staff also raises concerns about the loss of experienced teachers. For instance, in Louisville, Ky., more than 40 percent of new hires at seven SIG schools were new teachers (Klein, 2012). This is especially troublesome given that brand new teachers are less effective than their peers with three or more years of teaching (Gordon, Kane & Staiger, 2006; Rice, 2010). Rice (2010) found that the biggest gain in students' math achievement attributable to teacher experience occurred in the second year of teaching.

Dee (2012) found that the average years of experience among teachers dropped by more than two years for California schools undergoing SIG reforms. The author noted that this finding "is consistent with the hypothesis that SIG-funded school reforms led to an influx of less experienced teachers who were new to the school." At the same time, however, he noted that SIG changes did not substantially alter the share of teachers with a graduate degree.

The CGCS survey (Lachlan-Haché et. al, 2012) also asked specifically about implementing SIG funds and found that 39 percent of those districts that received SIG funds "did not have enough time to recruit and hire qualified principals and school leaders," and more than half "did not have enough time to recruit and hire qualified staff" (not including principals).

The Common Thread

While each model available to SIG grantees has its own requirements, there is one common requirement across the four models – replacing the principal. While there is a research base showing that among school factors, principals have a big impact on student achievement--- second only to teachers--- the strategy of replacing the principal to improve low-performing schools is largely new (Seashore-Louis, Wahlstrom, Leithwood & Anderson, 2010).

A brief analyzing the research basis for the four models noted that the principal replacement strategy borrows heavily from the corporate world, where replacing top managers is seen as key to successful turnarounds (Brownstein, 2012). This strategy also builds on the insight that "new principals were seen as catalysts for change," drawn from two studies on school turnarounds in which one examined 15 elementary schools and the other analyzed seven middle schools (Duke, 2006; Picucci, Brownson, Kahlert & Sobel, 2002).

Additionally, a long-term analysis of New York City public school principals found that the impact of effective principals, as measured by the value-added scores on student assessments, was nearly twice as large in high-poverty schools as in low-poverty schools (Branch, Hanushek & Rivkin, 2012).

Replacing a principal was an option prior to the stimulus-funded changes to SIG, and a survey of the Council of Great City Schools found that 17 districts reported using this strategy over the past five years in a total of 81 schools (Lachlan-Haché et. al, 2012). Eleven of the district respondents reported the strategy was effective, five said they witnessed no change in student achievement, and one deemed the strategy ineffective.

The new requirements of SIG provide some flexibility for the turnaround and transformation models, saying that replacing the principal is not needed if that leader started within two years of the reform effort. The survey by Council of Great City Schools found members appreciated this flexibility – as almost half (49 percent) of member districts who were SIG grantees retained their current principal as a result (Lachlan-Haché et al., 2012).

Based on an analysis of principals in the New York City public schools, students at schools with first year principals have lower math scores and a higher number of absences than their peers at schools led by principals with three years' experience (Clark, Martorell & Rockoff, 2009). This positive relationship is even stronger for principals with five or more years' experience. Another study that demonstrates this is the 2010 evaluation of the New Leaders for New Schools program, which found "a positive association between academic achievement and having a New Leader in his or her second (or higher) year of tenure" (Martorell et. al, 2010). Still, it may take time as "there is a small negative relationship between achievement and attending a school led by a first-year New Leader."

The Question of Money

If the SIG reforms are showing small gains – as reflected by some of the available, limited data – what role does money play in this trend? Hurlburt et. al (2012) estimated that the size of the annual per-pupil SIG award was equal, on average, to 20 percent of each state's overall spending in 2009-10 (based on the District of Columbia and 31 states with available data). For example, SIG schools in Oklahoma received awards representing an additional \$4,600 per pupil annually. In 2009-10, prior to the large increase in SIG funding, per pupil spending was only \$7,200.

Prior to the enhanced ARRA-related funding levels, SIG awards in Maryland were only about \$20,000 per school and they did not provide "enough money to truly turn around the school that has been low-performing for many years," according to a Maryland state official (Scott et. al, 2012). Yet as a result of the new infusion of stimulus money, Maryland SIG schools received an average grant of \$2.7 million over three years under the revised program – a whopping 45-fold increase.

When interviewed by the Center on Education Policy, officials in Maryland and Michigan were "optimistic about the potential for these grants to improve student achievement" at SIG schools. Similarly, district officials surveyed through the Council of Great City Schools agreed that the SIG program has a "strong chance of significantly improving our district's persistently lowest-achieving schools" (Lachlan-Haché, et. al, 2012).

**Table 3: Average Total SIG Award and Annual Per-Pupil Award
by Tier, SIG Model, School Size and School Level**

	Total Award Per School (in millions of dollars)			Annual Per-Pupil Award	
	<i>N</i>	Mean	S.D.	Mean	S.D.
Tier					
Tier I	397	\$2.60	1.49	\$1,490	1,210
Tier II	260	\$2.47	1.53	\$1,130	1,450
Tier III	354	\$0.52	0.84	\$330	410
Intervention Model					
Turnaround	131	\$2.96	1.53	\$1,630	1,590
Restart	31	\$2.71	1.59	\$1,210	910
Closure	11	\$0.10	0.10	\$380	360
Transformation	484	\$2.48	1.45	\$1,270	1,280
Tier III SI Strategies	354	\$0.52	0.84	\$330	410
School Size					
200 or fewer students	142	\$1.42	1.18	\$3,860	4,300
201-400 students	250	\$1.37	1.28	\$1,540	1,400
401-600 students	238	\$1.57	1.47	\$1,070	990
601 or more students	377	\$2.48	1.87	\$760	570
School Level					
Elementary	334	\$1.37	1.42	\$1,100	1,100
Middle	236	\$1.61	1.66	\$1,020	1,090
High	383	\$2.37	1.67	\$910	1,140
Non-standard	54	\$1.99	1.33	\$1,880	2,780

Note: Analysis is based on 1,011 SIG-awarded schools in 43 states and DC. Data from AR, FL, MO, NY, RI, WI and HI was not available. School-level data from two schools in CA, 7 schools in GA and 15 schools in TX was unavailable. In addition, four Tier III schools in Los Angeles did not have 2008-2009 Common Core of Data records.

Tier III SI strategies refer to all school improvement strategies adopted for SIG awarded Tier III schools. Non-standard means any school whose grade configuration does not fall within the elementary, middle or high school categories.

Per-pupil awards calculated by dividing the total SIG award by the number of years in the grant and then by the school's student enrollment. These amounts were then averaged and weighted in proportion to the number of students enrolled.

Source: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education (2011)

Sustainability, however, is an issue of importance to state leaders. For example, state education officials in Maryland, Michigan and Idaho raised concerns about sustaining their reform efforts beyond the three-year ARRA SIG grants, in light of overall decreases in state education funding (Scott et al, 2012). This is an issue that clearly requires additional research.

What Does it all Mean?

In an atmosphere where school reform and improvement is a high priority, the federal government's efforts under the 2009 stimulus bill have led to extensive change at low-achieving schools. By directing schools and districts to undertake one of four options, the U.S. Department of Education has ushered in a new era in school reform through programs and grant initiatives like the Race to the Top competition and the revised School Improvement Grant program. Additional interest in these reform models could come from the afore-mentioned parent trigger laws in seven states. Nonetheless, comprehensive data from this experiment is still years away and data on past use of these four models has produced a mix of results, with some positive and others less so.

In examining the research base behind the use of school closure, restart, transformation and turnaround, it is possible to reach some conclusions:

- Data remains limited. There is some evidence of success, primarily for schools undertaking more dramatic turnaround reforms, but data collected over a longer period of time is needed in order to make any real inferences about SIG. There is also a glaring need for more research on the SIG transformation model, given the popularity of this option among districts.
- Comparatively few schools are choosing the SIG options of restart or school closure, and state leaders seem to have less confidence in these two strategies based on surveys. Research from other systems, particularly Chicago and Philadelphia, also indicate challenges particularly with school closures. While likely driven in part by budget issues as well as school improvement priorities, closures have not generated a significant record of success to date.
- Replacing a majority of teachers--- required in the turnaround model--- presents challenges for some schools. Rural educators in particular have expressed difficulty in using the turnaround model due to challenges in finding enough teachers to meet the replacement requirements. In addition to survey data, case studies of restructured schools in California, Georgia, Maryland, Michigan, and Ohio showed that replacing a large portion of staff is feasible only if “certain criteria are met” (Scott, 2008). According to the Center for Education Policy case study, replacing staff works best when 1) districts have the capacity to help the school fill open positions; 2) the school’s region has the supply of qualified candidates to fill open positions; and 3) the district, possibly with state assistance, can negotiate to remove potential teacher union obstacles to re-staffing.
- In addition to challenges with the turnaround model, rural schools also face difficulties with the restart model since they have limited access to private management organizations that could manage schools. The closure model also may not be feasible if they have no other schools in which to send students. Even in urban areas, a closure model seems to be promising only when students can transfer to schools with documented higher achievement rates.
- Replacing a principal--- a tenet of SIG-funded interventions--- may have a beneficial effect as part of larger reforms, some studies indicate. But as is the case for much of this research, the data is limited, largely qualitative or anecdotal.

Trigger Laws: The Next Wave of Reform?

As of June 2012, seven states – California, Connecticut, Indiana, Louisiana, Mississippi, Ohio, and Texas – had parent trigger laws in place (National Conference of State Legislatures, 2012). Launched by California in 2010, the laws can give parents unprecedented power to force changes upon low-performing schools. State definitions vary on how to define low performance, though most stipulate that schools must have fallen into a low-performing category for more than a year. For example, California defines low performance as failing to meet AYP for three consecutive years and being in corrective action status for at least one year.

In six of the states, a majority of parents must sign a petition requesting reforms at a qualifying school. The reform models may include: any option under the NCLB guidelines (California); convert to a charter school (Indiana and Mississippi); replace at least 70 percent of staff, convert to charter or “impose any other major restructuring” (Ohio); and convert to charter, replace administrators or close school (Texas). Connecticut and Mississippi require local public hearings before any action takes place. Also, local school boards retain some power to contest the parent-driven changes in California, Indiana, Ohio and Texas. In Texas, for example, the local board can recommend a different strategy to the state Education Commissioner, who then must choose between the reform model suggested by parents and the model proposed by the school board.

While NCSL includes Connecticut on this list, the local district or state actually “triggers” the change. However, parents then hold a majority of membership on a School Governance Council that oversees the reforms (National Conference of State Legislatures, 2012).

In light of this collection of growing, but still limited, research, it also may be worthwhile for policymakers to consider other advice from the field in designing effective school improvement strategies. For example, the Alliance for Excellence in Education has argued that effective reform must include a “coherent design that allows staff to effectively deliver consistent instruction and support students.” Ineffective schools, the alliance notes, can adopt such a design to better align school structures, organizations and instruction.

Given the wide variation in circumstances facing struggling schools, NSBA’s advocacy of locally developed innovations and plans is an idea worthy of study. These homegrown innovations would provide flexibility to schools and could serve as an additional ‘overlay’ to the required school improvement models. One such strategy could involve schools partnering with Educational Service Agencies (e.g. intermediate units/districts). Many states already leverage their ESA capacity and expertise in promoting school improvement.

In Michigan, the state Department of Education and its regional education service agencies implemented an action plan in 2006 in which ESAs work with high priority schools that have failed to make AYP in consecutive years. The regional ESAs are responsible for bringing in coaches, auditors, consultants, and mentors to assist identified schools and districts.

In Wisconsin, ESAs play a significant role in providing support and training to all school districts by conducting regular meetings with representatives from SEA and facilitating statewide communication. Ohio, Illinois and New York contract with their regional agencies to implement school improvement strategies.

Mass Insight's research and work with schools also has led to its belief that states and districts should implement turnaround efforts in clusters of schools or "mini-districts" that are organized around certain factors such as school type (e.g., middle schools or grade 6-12 academies), student characteristics (high percentages of English Language Learners), feeder patterns (elementary to middle to high school), or region (Calkins et al, 2007). In this framework, clusters would be small enough to operate effectively as networks but large enough to be an enterprise capable of providing valuable, efficient support from the network center (Mass Insight Education, 2012).

What school boards can do?

Overall, there is limited research on the impact of any of the four SIG models and wide variation in the circumstances facing struggling schools. But there are some specifics that school boards should keep in mind:

- Examine the district's capacity to undertake a particular reform option, including finding enough qualified candidates to fill open positions. Replacing a majority of teachers -- as required in the turnaround model -- presents significant challenges for small and rural districts. Even finding highly qualified principals--a tenet of SIG-funded interventions--can be difficult.

According to the Center for Education Policy (Scott, McMurrer, McIntosh & Dibner, 2012), replacing staff works best when:

1. Districts have the capacity to help the school fill open positions
 2. The school's region has the supply of qualified candidates to fill open positions
 3. The district, possibly with state assistance, can negotiate to remove potential teacher union obstacles to re-staffing
- Partner with local universities, non-profits and/or educational service agencies to recruit qualified candidates, increase professional capacity of current staff, and develop a leadership pipeline for principals. For example, New Leaders has experienced success attracting, preparing, and supporting leaders for urban public schools in 12 locations. The University of Virginia's Turnaround Specialist program is another model program.
 - Inform and engage the community in your design plans. Any of these models, but especially school closure, can create anxiety among teachers, parents and community members. It's important to keep communication channels open while you negotiate the change.

- Monitor progress and make adjustments as needed. None of these models comes with a guarantee. Your flexibility at the local level to gauge progress and make mid-course corrections is a vital piece of eventual success.

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