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Executive Summary

This is the final report from the Evaluation Research Program at WestEd on findings from the evaluation of the Michigan 1003(g) School Improvement Grants (SIGs) that were awarded in fall 2010. The evaluation used both quantitative and qualitative approaches to evaluate the SIGs that were awarded to schools in Michigan in fall 2010 (i.e., SIG-I). This report focuses on the differences in student academic achievement outcomes after three years between SIG-I schools and schools that were eligible for a SIG but not awarded one. Student academic achievement was assessed using scale scores from the Michigan Educational Assessment Program (MEAP) and the Michigan Merit Examination (MME). WestEd conducted the analyses with student-level outcome data using hierarchical linear modeling (HLM), which accounted for school-level baseline scores on these same assessments as well as student demographic characteristics. In addition, survey data were collected from teachers at SIG-I schools during the third year of SIG to assess perceived implementation of SIG over the three years. Finally, the research team conducted case studies during at six schools during the third year of SIG and at five schools during the first year after SIG. The case studies focused on specific elements of SIG that were perceived by school staff to have lead to improvements as well as on schools' efforts to sustain improvements once the SIGs ended.

STUDENT ACADEMIC ACHIEVEMENT AFTER THREE YEARS OF SIG

There were large differences SIG schools and comparison schools before the roll out of SIG. These included differences in average MEAP and MME scale scores from the year before SIG as well on student background characteristics. Therefore, the results of the findings from the differences found in student scale scores on the MEAP and MME after three years of SIG should be viewed with caution.

Students at schools in Michigan that received a SIG from 2010/11 to 2012/13 had similar scale scores on MEAP mathematics, reading, and science after three years compared to students at schools in Michigan during the same period that were eligible for a SIG but did not receive one. None of the differences on MEAP scale scores for any grade were statistically significant (Exhibit ES1).
Exhibit ES1. Average MEAP Scale Scores After Three Years of SIG

<table>
<thead>
<tr>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
<th>Grade 6</th>
<th>Grade 7</th>
<th>Grade 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313</td>
<td>401</td>
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<td>708</td>
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</tr>
<tr>
<td>Reading</td>
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<td></td>
</tr>
<tr>
<td>315</td>
<td>405</td>
<td>521</td>
<td>616</td>
<td>711</td>
<td>818</td>
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<tr>
<td>Science</td>
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</tr>
<tr>
<td>497</td>
<td>501</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Means are based on MEAP scale scores from the fall 2013 administration adjusted to account for school-level baseline scores, student-level covariates, and the multi-level structure of the data.
In addition, students at schools in Michigan that received a SIG from 2010/11 to 2012/13 had similar scale scores on MME mathematics, reading, and science in grade 11 after three years compared to students at schools in Michigan during the same period that were eligible for a SIG but did not receive one. None of the differences on MME scale scores were statistically significant (Exhibit ES2).

**Exhibit ES2. Average MME Scale Scores After Three Years of SIG**

![Bar chart showing average MME scale scores after three years of SIG](chart.png)

*Note: Means are based on MME scale scores from the spring 2013 administration adjusted to account for school-level baseline scores, student-level covariates, and the multi-level structure of the data.*

**CASE STUDY FINDINGS FROM YEAR 3 OF SIG**

According to staff the six case study schools during year 3 of SIG, principal leadership played an important role in the successful administration of SIG across all schools. Principals at all case study schools in year 3 exercised some form of distributed leadership and delegated SIG-related responsibilities, though to varying degrees. In addition, at all case study schools in year 3, principals had full autonomy over SIG implementation though few principals had full autonomy over selecting and removing staff. One area where principals had full autonomy over staff selection had to do with the selection of their leadership teams. Staff reported that capable leadership teams were important to successful SIG implementation. In addition, although school leaders at these schools indicated they had not developed a set of formalized skills and competencies for selecting staff, leaders from every case study school reported having a set of informal skills, competencies, experiences, and expectations that informed staff selection when they had the autonomy to do so.

Staff at the case study schools in year 3 reported mixed results with regards to performance evaluation systems and their contribution to school improvement. Some case study schools were able to implement new staff performance evaluation systems while others were not. In some cases where evaluation systems had been implemented, these systems reportedly helped improve...
accountability among teachers, facilitated the exit of ineffective teachers, and improved the feedback provided to teachers. However, across all year-3 case study schools, teachers indicated that incentives tied to evaluation systems, particularly financial incentives, did not play a role in motivating teachers or contributing to SIG success. In addition, teachers identified several concerns related to performance evaluation systems, including the use of student achievement data, inconsistent implementation, and unrealistic rating systems.

An area where professional development and coaching played a key role was with respect to data use and instruction. Staff at all case study schools reported an increase in their use of data to monitor student progress. Similarly, staff at all these schools reported that, along with increased data use, there was improved consistency and uniformity in the data available to teachers and school leaders. However, not all staff felt that increased use of data contributed to academic improvements. Schools’ use of data was facilitated by the implementation of instructional paradigms and practices. Two of the six case study schools adopted discrete instructional paradigms, while the remaining schools adopted common and consistent instructional strategies and practices that did not necessarily subscribe to discrete paradigms. Nonetheless, across all case study schools staff indicated that the focus on instruction contributed to consistency in instruction, more student-centered instruction, higher expectations of students, and an improved focus on learning.

The role of SIG with respect to improved school climate and teacher morale was mixed. Most schools reported improvements in climate over the three years of SIG, while teacher morale trended lower toward the final years, primarily because of anxiety over how SIG and SIG-related efforts would be sustained and teacher burnout related to the high demands of SIG. Staff indicated that increasing family and community involvement at schools during SIG was not a high priority for schools. Staff at all case study schools in year 3 acknowledged the important role family and community have in school improvement, but staff at only one case study school indicated their efforts in this area had been successful.

**CASE STUDY FINDINGS FROM THE FIRST YEAR AFTER SIG**

According to staff at the five SIG-I schools visited the year after SIG ended, these schools were able to continue several practices that reportedly had been instrumental in improving student academic achievement. Of the five schools, four continued to implement instructional approaches including Direct Interactive Instruction, tiered interventions, integration of technology into teaching, alignment of curriculum to power standards tied to the state assessments, and provision of individualized support to students. Consistency within schools with regards to implementation of instructional strategies was made possible by providing time for Professional Learning Communities (either between grade-levels or content-area teachers) and with support from coaches and professional development activities. Several schools also continued to focus their efforts on improving school culture. Three schools implemented programs and activities to help students connect with other students and with teachers. Two schools brought in outside vendors or national
organizations to help students address bullying and create a sense of belonging. Another school developed a student incentive system that rewarded positive behavior, both academic and social.

Sustainability of SIG-initiated reform efforts occurred across all five post-SIG case study schools. Activities introduced during SIG that became the new way of “doing business” (i.e., teaching and learning) were sustained. At these schools, the new way of doing business was integrated into school and teacher practices such that they did not require funding to be sustained after SIG ended. In these cases, school leaders had been intentional and strategic in spending portions of SIG funds on professional development and coaching that built staff capacities, and related to instructional practices that would be sustained once SIG funding ended. Included in these activities and practices were models and strategies that, once adopted, became engrained in the curriculum, such as tiered intervention, universal lesson design, monitoring progress, and recognizing achievement. In some schools, feedback from students substantiated that there were common practices and strategies that multiple teachers retained a year after SIG funding ended.

For three of the five post-SIG case study schools, the district continued funding key staff positions that had been funded by SIG, such as coaches, technology staff, data analysts, and math and ELA interventionists. Districts continued to fund these positions even in the absence of SIG funding because of their perceived importance of these positions in supporting and sustaining improvements at schools. For example, according to staff at one of the case study schools, the district funded a data analyst position because the role was instrumental in changing the school culture so that it focused more on using data to inform decisions. At some post-SIG case study schools, activities intended to support and improve student morale, such as a fostering a college-going culture and anti-bullying programs, were reported to have been integrated into the school culture so they also would be sustained.
**Introduction and Background**

This is the final report from the Evaluation Research Program at WestEd on findings from the evaluation of Michigan’s first cohort of 1003(g) School Improvement Grants (SIGs).\(^1\)\(^2\) Specifically, this report presents student academic achievement outcomes from schools that implemented their SIGs over three consecutive years. In addition, this report uses data from teacher surveys administered in year three as a metric for SIG implementation. Finally, the report includes findings from case studies of SIG-I schools that focus on aspects of SIG implementation that were perceived by school staff to have contributed to student academic gains at the schools as well as strategies for sustaining the progress made with regards to student achievement.

The first chapter provides a brief overview of SIGs, background information on the recipients of Michigan’s SIGs, and the evaluation’s research questions. The second chapter provides information on the methods used for collecting and analyzing data. The third chapter discusses findings on student achievement and their correlation with SIG implementation constructs. The final chapter presents findings from case studies of six SIG-I schools conducted during the third year of SIG, and of five SIG-I schools conducting during the first year after their SIGs ended. The case study findings from year 3 discuss implementation domains that, according to school staff, were particularly successful at helping these schools improve and increase student performance through SIG. The case study findings from the year after the SIG ended reports school staff members’ perceptions about which elements of SIG contributed to change, as well as the perceived roles and contributions of MDE, districts, and external providers. The case study findings conclude with a brief overview of schools’ current efforts and plans to sustain the elements of SIG that that they believe contributed to improvements.

---

**SCHOOL IMPROVEMENT GRANTS**

SIGs are authorized under Title I, Section 1003(g) of the Elementary and Secondary Education Act of 1965 with the goal of aiding struggling schools to make adequate yearly progress (AYP) and exit from improvement status. Regular appropriations for SIGs increased from $125 million in 2007 to $546 million in 2009. However, in 2009, SIG funding was greatly supplemented through the American Recovery and Reinvestment Act (ARRA), which added $3 billion for SIGs (U.S. Government Accountability Office, 2011).

SIGs were awarded by the U.S. Department of Education to state education agencies (SEAs). Local education agencies (LEAs) then applied to their SEAs and proposed which of their eligible schools would receive SIG funding. LEAs received the funds and were responsible for distributing the funds

---

1. Although the 1003(a) and 1003(g) SIGs are distinct and separate funding streams, the use of “SIG” in this report refers to the latter only.

2. The focus of the evaluation and the current report is on the original 28 schools in Michigan that received 1003(g) SIG funds beginning in fall 2010; by fall 2013, however, there were only 23 remaining SIG-I schools. Additional schools have received SIG awards since 2010; however, they are outside the scope of the current evaluation.
to the eligible schools - up to $2,000,000 per year for each qualified school in the district. In 2010, the SIG regulations defined three tiers of school eligibility for purposes of obtaining SIG funds, with each tier representing a different level of priority for the SIG funds. Eligible schools in 2010 were required to meet the criteria for one of three tiers (Appendix A). In 2010, 1,228 schools in the 49 states and Washington, D.C. were awarded SIGs. Each school that received a SIG adopted one of four models: transformation, turnaround, restart, or closure. The majority of schools selected the transformation model, with the turnaround model being the second most selected. Relatively few schools chose either the restart or closure models (four and two percent, respectively) (Hurlburt, Le Floch, Therriault, & Cole, 2011). Given all SIG-I schools from 2010 in Michigan adopted either the transformation or turnaround model, Exhibit 1 displays the requirements of these two models only.

**Exhibit 1: SIG Model Requirements**

<table>
<thead>
<tr>
<th>Model</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Transformation| • Replace the school principal  
• Use a rigorous, transparent, and equitable evaluation system that takes into account student growth and is designed with teacher and principal input  
• Reward staff who positively affect student outcomes and remove those who do not  
• Provide ongoing professional development aligned with the instructional program so staff can successfully implement reform strategies  
• Implement a system of rewards and incentives to recruit and retain effective staff  
• Use data to identify and implement a research-based instructional program aligned vertically and with state academic standards  
• Promote the continuous use of student data to inform and differentiate instruction  
• Provide increased learning time  
• Provide mechanisms for family and community engagement  
• Provide operational flexibility to fully implement change  
• Receive ongoing, intensive technical assistance and support from the LEA, SEA or an external partner |

Exhibit 1 (cont.): SIG Model Requirements

<table>
<thead>
<tr>
<th>Model</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Turnaround | - Replace the school principal and provide the principal with the operational flexibility to implement change  
           | - Use locally adopted competencies to measure staff effectiveness  
           | - Screen and re-hire no more than 50% of the current staff  
           | - Implement a system of rewards and incentives to recruit and retain effective staff  
           | - Provide professional development aligned with the instructional program so staff can successfully implement reform strategies  
           | - Adopt a new governance structure for added flexibility and greater accountability  
           | - Use data to identify and implement a research-based instructional program aligned vertically and with state academic standards  
           | - Promote the continuous use of student data to inform and differentiate instruction  
           | - Provide increased learning time  
           | - Provide social-emotional and community-oriented services and supports |

SCHOOL IMPROVEMENT GRANTS IN MICHIGAN

In 2010, Michigan received the seventh-largest ARRA-supplemented SIG grant in the nation, $115 million. A portion of these funds, $86.25 million, were available for immediate grant awards (Scott, 2011). There were 228 Tier I, II, and III schools in Michigan eligible to apply for the SIG grants in Michigan in 2010, 108 of which were Tier I and II schools. These schools were deemed eligible based on their state testing data from the 2007/08 and 2008/09 school years (Hurlburt, Le Floch, Therriault, & Cole, 2011).

LEAs for 84 of the eligible schools applied for SIG funds. MDE reviewed a variety of factors in scoring applications. First, MDE reviewed student academic performance on the Michigan Educational Assessment Program (MEAP) and Michigan Merit Examination (MME) in the three preceding academic years. MDE also reviewed each school’s results from the Comprehensive Needs Assessment tool, or similar instruments or analysis of school and student needs. Michigan required that applicants submit evidence of engagement on the part of community stakeholders, including parents, teachers’ unions, and the local school board. The selected schools were expected to set rigorous, achievable goals to increase academic performance each year, and use interim assessments to provide regular achievement progress reports. For high schools, ACT’s PLAN and EXPLORE were required for assessment of college readiness.

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3 The remainder of the $115 million was rolled into a subsequent round of SIGs that were awarded to additional schools in 2011. These schools are not included in this evaluation.
DESCRIPTION OF MICHIGAN’S 2010 SIG-I GRANTEES AND DEVELOPMENTS IN SIG-I SCHOOLS FROM 2010/11 THROUGH 2012/13

Of the 84 applicants in 2010, MDE awarded funds to 28 schools, the characteristics of which appear in Exhibit 2. Individual grants ranged in size from approximately $605,000 to $4.9 million to be expended over three years, with an average grant per school of $2,955,678 over the three years. Nineteen SIG-I schools selected the transformation model, while nine opted for the turnaround model. During the first year of the grant, 27 of the schools were traditional public schools (in 17 districts) and one was a charter school under a charter management company. Each district was home to a single SIG-I school except for three urban districts with multiple SIG-I schools: Detroit Public Schools, Grand Rapids Public Schools, and Saginaw City School District. All 28 schools had relatively high percentages of students who were eligible for free- and reduced-price lunches. The range was from 38 to 99 percent of the student population, with an average of 75 percent. The racial composition of the student bodies varied, with the proportion of non-white students ranging from 3 percent to nearly 100 percent, with an average of 70 percent. Rural SIG schools tended to have the lowest percentages of non-white students at their schools.

By the second year of the grant, all the original 28 SIG-I schools continued to receive SIG funds, although one traditional public school had been converted to a charter school. By the beginning of the third year of the grant, 24 of the 28 schools continued to receive SIG funding. All four of the schools that no longer received SIG funds were part of the Detroit Public Schools. Two of these schools had closed and SIG funding to two other schools had been suspended by MDE because the schools were placed under Education Achievement Authority (EAA) supervision.\(^4\)

At the beginning of the third year of SIG, traditional public schools comprised 22 of the schools in 17 districts, while two others were charter schools each under a different charter management company. In addition, 15 of the SIG-I schools were high schools (grades 9-12), six were middle schools (grades 6-8 or 7-8), and another three were elementary schools (grades K-8). Exhibit 3 presents the distribution of SIG model by school grade level, and shows that the largest number of SIG-I schools are high schools that adopted the transformation model.

---

\(^4\) The EAA operates the Education Achievement System (EAS), a statewide school system that was created to assume operation of schools with student performance in the lowest five percent in Michigan. Its purpose is to allow schools to implement reforms while being removed from the constraints of a central administration or district office. Schools remain in the EAS for a minimum of five years. After five years, an evaluation is made of the school’s progress. Schools remain in the EAS beyond five years until they show marked progress in student achievement.

\(^5\) During the third year of SIG, one school that was operational at the beginning of the school year was closed by spring of that year.
### Exhibit 2: Michigan SIG-I School Characteristics and Status Over the Three Years of SIG

<table>
<thead>
<tr>
<th>District or Charter Management Organization</th>
<th>School</th>
<th>SIG Model</th>
<th>SIG Allocation Over 3 Years</th>
<th>Grades Served</th>
<th>SIG Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrian City School District</td>
<td>Adrian High School</td>
<td>Transformation</td>
<td>$2,750,221.00</td>
<td>9-12</td>
<td>9-12</td>
</tr>
<tr>
<td>Buchanan Community Schools</td>
<td>Buchanan High School</td>
<td>Transformation</td>
<td>$1,947,250.00</td>
<td>9-12</td>
<td>9-12</td>
</tr>
<tr>
<td>Buena Vista School District</td>
<td>Buena Vista High School</td>
<td>Transformation</td>
<td>$2,496,572.00</td>
<td>9-12</td>
<td>9-12</td>
</tr>
<tr>
<td>Detroit Public Schools</td>
<td>Farwell Middle School</td>
<td>Turnaround</td>
<td>$1,355,741.00</td>
<td>5-8</td>
<td>K-8</td>
</tr>
<tr>
<td></td>
<td>Nolan Elementary School</td>
<td>Transformation</td>
<td>$2,734,961.00</td>
<td>K-8</td>
<td>K-8</td>
</tr>
<tr>
<td></td>
<td>Lessenger-Dixon Academy</td>
<td>Turnaround</td>
<td>$3,340,988.00</td>
<td>K-8</td>
<td>K-8</td>
</tr>
<tr>
<td></td>
<td>Phoenix Elementary</td>
<td>Turnaround</td>
<td>$1,824,980.00</td>
<td>K-8</td>
<td>K-8</td>
</tr>
<tr>
<td></td>
<td>Southwestern High School</td>
<td>Turnaround</td>
<td>$3,039,952.00</td>
<td>9-12</td>
<td>9-12</td>
</tr>
<tr>
<td>Fitzgerald Public Schools</td>
<td>Fitzgerald Senior High School</td>
<td>Transformation</td>
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<td>9-12</td>
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<tr>
<td>Godfrey-Lee Public Schools</td>
<td>Lee High School</td>
<td>Transformation</td>
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<td>9-12</td>
</tr>
<tr>
<td>Grand Rapids Public Schools</td>
<td>Ottawa Hills High School</td>
<td>Transformation</td>
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<td>9-12</td>
</tr>
<tr>
<td></td>
<td>Union High School</td>
<td>Transformation</td>
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<td>9-12</td>
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<tr>
<td></td>
<td>Alger Middle School</td>
<td>Turnaround</td>
<td>$4,918,511.00</td>
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<td></td>
<td>Gerald R. Ford Middle School</td>
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<td>Westwood Middle School</td>
<td>Turnaround</td>
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<tr>
<td>Grant Public School District</td>
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<td>Transformation</td>
<td>$1,719,779.00</td>
<td>9-12</td>
<td>9-12</td>
</tr>
</tbody>
</table>

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6 This school was in operation at the beginning of the school year. However, it closed in spring, 2013 during the third year of the SIG after the administration of the state standardized exams.
### Exhibit 2 (cont.): Michigan SIG-I School Characteristics and Status Over the Three Years of SIG

<table>
<thead>
<tr>
<th>District or Charter Management Organization</th>
<th>School</th>
<th>SIG Model</th>
<th>SIG Allocation Over 3 Years</th>
<th>Grades Served</th>
<th>SIG Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romulus Community Schools</td>
<td>Romulus Middle School</td>
<td>Transformation</td>
<td>$5,328,664.00</td>
<td>2010/11</td>
<td>2011/12</td>
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<tr>
<td></td>
<td>Thompson Middle School</td>
<td>Transformation</td>
<td>$3,382,134.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
<tr>
<td>School District of the City of Inkster</td>
<td>Inkster High School</td>
<td>Turnaround</td>
<td>$5,447,000.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
<tr>
<td>Springport Public Schools</td>
<td>Springport High School</td>
<td>Transformation</td>
<td>$1,596,160.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
<tr>
<td>Van Dyke Public Schools</td>
<td>Lincoln High School</td>
<td>Transformation</td>
<td>$1,037,843.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
<tr>
<td>Waldron Area Schools</td>
<td>Waldron Middle School</td>
<td>Transformation</td>
<td>$605,500.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
<tr>
<td>Weston Preparatory Academy</td>
<td>Weston Preparatory Academy</td>
<td>Transformation</td>
<td>$1,756,080.00</td>
<td>2010/11</td>
<td>2011/12</td>
</tr>
</tbody>
</table>

Data from MDE.
Exhibit 3: Distribution of SIG Models and Grades Served in SIG-I Schools in 2012/13

<table>
<thead>
<tr>
<th>Grades Served</th>
<th>SIG Model</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transformation</td>
<td>Turnaround</td>
</tr>
<tr>
<td>K-8</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6/7-8</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>9-12</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>6</td>
</tr>
</tbody>
</table>

OVERVIEW OF THE EVALUATION OF MICHIGAN’S SIG-I SCHOOLS

In July 2011, MDE contracted with WestEd to conduct an independent evaluation of the SIG-I grants awarded in fall 2010. The evaluation, conducted over three years, combined quantitative and qualitative approaches integrating on-site observations, interviews, surveys, and relevant student- and school-level outcomes for all districts and schools receiving SIG funding, as well as in-depth case studies of several SIG schools. In addition, the evaluation utilized a group of comparison schools that did not receive SIG funds and compared student academic achievement at these schools after three years with those of students at SIG-I schools.

For purposes of examining SIG implementation, WestEd developed an evaluation framework based on the research of Fixsen, Naoom, Blase, and Wallace (2007) and inclusive of Michigan’s School Improvement Framework and the best practices of school turnaround as identified by WestEd’s School Turnaround Center (WestEd, 2010). The framework comprised 27 indicators that were collapsed into nine domains. These indicators represent critical components for the implementation of educational interventions broadly, and school improvement grants in particular. The domains, which represent groups of indicators around areas key to school operations, reform, and support, are described in the following exhibit.

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7 One transformation high school was in operation at the beginning of the school year. However, it closed in spring, 2013 during the third year of the SIG.
Exhibit 4: Description of SIG Implementation Domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Leadership</td>
<td>• Principal has been replaced.</td>
</tr>
<tr>
<td></td>
<td>• School and district leaders create an environment of distributed leadership where all staff and key stakeholders contribute to a cumulative, purposeful, and positive effect on student learning (i.e., student learning is put first, collective responsibility for student learning, school organization and management supports teachers’ efforts).</td>
</tr>
<tr>
<td></td>
<td>• School and district have an active and engaged SIG team.</td>
</tr>
<tr>
<td></td>
<td>• Principal uses multiple methods and data sources to support teachers and help improve their skills to successfully implement SIG interventions.</td>
</tr>
<tr>
<td>Teacher Practices &amp; Instruction; Curricula</td>
<td>• Teachers use intentional processes and practices to facilitate high levels of student learning.</td>
</tr>
<tr>
<td></td>
<td>• Teachers are committed to a common vision for the school that guides instruction.</td>
</tr>
<tr>
<td></td>
<td>• Principal and teachers have multiple data gathering systems to support and inform decision making on differentiated instruction to meet the academic needs of individual students.</td>
</tr>
<tr>
<td></td>
<td>• Principal and teachers systematically gather and uses multiple sources of evidence to monitor student learning and achievement.</td>
</tr>
<tr>
<td></td>
<td>• Assessments are aligned to state standards and curricular content, and are used to guide instructional decisions and monitor student learning.</td>
</tr>
<tr>
<td></td>
<td>• School has a cohesive plan for instruction and learning that is research-based, aligned to state standards, vertically aligned, and serves as a basis for teachers’ and students’ active involvement in the construction and application of knowledge.</td>
</tr>
<tr>
<td>Professional Development &amp; Coaching</td>
<td>• School and district leaders provide in-service training and on-the-job coaching.</td>
</tr>
<tr>
<td></td>
<td>• School and district leaders use needs assessment and pre/post data from training to: (a) identify collective and individual professional development needs, (b) examine trainer and staff performance, and (c) improve training.</td>
</tr>
<tr>
<td></td>
<td>• School and district leaders analyze data on the frequency, quality, and duration of coaching to (a) assess coach performance and (b) improve coaching.</td>
</tr>
<tr>
<td></td>
<td>• Professional development and coaching are aligned with critical skills and competencies.</td>
</tr>
<tr>
<td>Staff Selection</td>
<td>• Critical skills/locally adopted competencies were used in the staff selection process.</td>
</tr>
</tbody>
</table>

---

8 Locally adopted competencies are required specifically for turnaround schools. Critical skills are broader and refer to the knowledge base, competencies, and general abilities relevant to school restructuring and implementation of the SIG plan, and are relevant to all schools. Critical skills encompass locally adopted competencies.
### Exhibit 4 (cont): Description of SIG Implementation Domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Staff Performance Evaluation** | • School and district have a system in place to assess skills on which staff were selected, trained, and coached; data are used to inform staff feedback.  
• School and district monitor teacher and principal implementation of SIG-related responsibilities.  
• School and district adopt and implement a new rigorous, transparent, and equitable staff evaluation system (transformation schools only).  
• There is a system in place for financial incentives, growth opportunities, and removal based on performance. |
| **Climate & Morale**         | • School leaders and teachers develop structures, programs, and practices to (a) strengthen the learning environment and the quality of the relationships between students and teachers and among school staff, and (b) create a safe, caring, and engaging school environment for students and staff. |
| **Socioemotional Supports**   | • School and district provide social-emotional services and supports to students and their families.                                                                                                         |
| **Family/Community Engagement** | • School and district leaders maintain purposeful, active, positive relationships with families of its students and with the community in which it operates to support student learning.  
• Principals and teachers engage families and community to identify priorities and concerns, and provide them with the ability to contribute to the improvement process. |
| **District Support**          | • District adopts a new governance structure for schools that provides principals with sufficient operational flexibility.  
• District ensures ongoing, intensive technical assistance and related support to schools from LEA, SEA, or designated external provider. |

### THE CURRENT REPORT

The current report focuses on the following research questions: *Do schools that receive SIG funding demonstrate improvements in student academic achievement to a greater degree than similar schools that did not receive SIG funding during the same period?* and *“How is implementation of SIG related to improvements in student academic achievement outcomes at schools that receive SIG funding?”* The findings for this report are derived from the analysis of student achievement data from both SIG-I and comparisons schools after three years. In addition, this report uses data from teacher surveys administered in year three as a metric for SIG implementation. Finally, the report includes findings from case studies of SIG-I schools that focus on aspects of SIG implementation that were perceived by school staff to have contributed to student academic gains at the schools, as well as strategies for sustaining students’ academic progress.
Method

OVERVIEW

In the first year of the evaluation WestEd identified indicators to measure SIG implementation in SIG-I schools and their districts and continued to use these indicators during year 3. The indicators were These indicators were grouped into domains that represent important structural and systemic areas of school reform, as well as key areas of school operations. Implementation data collected during year 3 focused on the following indicators only: (1) school leadership; (2) teacher practice and instruction, and curricula; (3) professional development and coaching; (4) teacher performance evaluation; (5) family and community engagement; (6) student socioemotional supports; (7) school climate and culture, and (8) district support. In addition, the evaluation team collected information about district facilitators and impediments to SIG implementation as well as plans and efforts to sustain SIG initiatives once funding ended.

DATA COLLECTION

SIG IMPLEMENTATION CONSTRUCTS

During year 3 of SIG, WestEd developed a survey that asked teachers about implementation with regards to several domains of SIG. The domains in the survey were based on core components critical for program implementation as identified by Fixsen, Naoom, Blase, and Wallace (2007). Additional resources used in informing the domains included MDE’s Office of School Improvement’s School Improvement Framework and the best practices of school turnaround as identified by WestEd’s School Turnaround Center (WestEd, 2010). The domains included: (1) school leadership; (2) teacher practice and instruction, and curricula; (3) professional development and coaching; (4) teacher performance evaluation; (5) family and community engagement; (6) student socioemotional supports; and (7) school climate and culture. The survey also asked teachers about an additional domain related to their use of student performance data in monitoring progress and informing practice. The items for each of the eight domains were rated on a 1 (strongly disagree) to 5 (strongly agree) scale. For example, with regards to professional development and coaching, teachers were asked the extent to which they agreed or disagreed that professional development and coaching had been used to inform instruction, differentiate instruction, and had been coordinated and aligned with each other. In addition, the survey asked about their perception of the impact of each of these domains. For example, teachers were asked the extent to which they agreed or disagreed that professional development and coaching had contributed to gains in student achievement. In spring 2013, principals at the 23 SIG-I schools were emailed a list of the teacher contact information used for the teacher survey administration from the previous year. Principals were asked to remove from

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9Results from descriptive analyses of each if the survey question can be found in Bojorquez, Rice, Diaz, Rodriguez, Wendt, & Washington (2013).
the list any teachers who no longer taught at the school and to add contact information for any
teachers currently at the school who were not on the previous list. WestEd received updated teacher
contact information from 22 of the 23 schools. WestEd used the teacher contact information from
the previous year for the one school that did not provide revised information. Because the survey
was intended for teachers only, WestEd removed any individuals from the contact list who did not
appear to be teaching staff, such as administrative personnel, outside consultants, intervention
specialists, or guidance counselors.

The survey invitation was sent to teachers in May, 2013 and the survey remained open until mid-
June, 2013. During this interval, several email reminders were sent to teachers to complete the
survey including one from the Assistant Director of the Office of Education Improvement and
Innovation (OEII) at MDE. In addition, teachers were informed that their names would be entered
in a raffle to win one of four iPad minis if they completed the survey. The email inviting teachers to
complete the survey contained a custom URL link, which allowed each respondent to complete the
survey anonymously and in more than one session if desired. After a teacher completed the survey,
it was submitted electronically.

WestEd sent out email invitations to 778 individuals presumed to be teachers (based on contact
information) at 23 SIG-I schools and 461 participated in the survey for an initial response rate of
59.3 percent with individual school’s response rates ranging from 24.4 to 100 percent. In order to
remove respondents who likely were not teachers, WestEd examined the survey responses when
describing subjects taught. Eight respondents stated that they did not teach or worked in a non-
teaching role (e.g., librarian, technical support, reading coach). These respondents were removed
from the analysis, yielding valid responses from 453 presumed teachers and a final response rate of
58.2 percent.

To examine the association between SIG implementation and student achievement, WestEd needed
to create single measures for each of the eight domains that could be included as predictors in
statistical models with students’ MEAP and MME score scores after year 3 of SIG as the outcome
variable. WestEd first conducted an exploratory factor analysis on the teacher survey with each set
of items that comprised the eight respective domains to determine if the items were measuring a
single construct. The factor analyses indicated that the items within each domain measured one
construct (i.e., the factor analyses produced single factor solutions). However, one item in the school
climate and culture domain (i.e., “I feel ‘burned out’ because of my job.”) did not correlate highly
with the other items in the domain and was excluded from further analysis. Next, WestEd calculated
the internal reliability of the items comprising the eight domains using Cronbach’s alpha. The
internal reliability of the eight domains ranged from $\alpha = .73$ to $\alpha = .96$ and are considered
“acceptable” to “high” reliability (John & Benet-Martinez, 2000). The results from the factor
analyses and the internal reliability analyses indicated that the items within each of the domains
could be combined to create composite measures (Appendix B).

In addition, WestEd conducted a number of exploratory factor analyses with the items comprising
two to three domains to determine if the items within each domain were measuring constructs that
could be differentiated from the other domains. The factor analyses revealed that the items within each domain were distinct from the items in the other domains and were therefore measuring separate aspects of SIG implementation. For example, the exploratory factor analysis with the professional development/coaching items and the school climate/culture items produced a two-factor solution, with each set of items loading (i.e., clustered together) on the domain they were designed to assess. These additional factor analyses provided further support for creating the composite measures.

WestEd created composite scores for each teacher by averaging the items in each domain. Composite scores were not created for teachers who completed less than 50 percent of the items in an individual domain. After creating composite scores for the individual teachers, aggregate scores for each of the 23 SIG schools were created by averaging the scores for teachers in each school. The aggregate school-level scores were the measures used in the implementation analyses to predict changes in students’ academic achievement.

**STUDENT ACHIEVEMENT OUTCOMES**

WestEd used a quasi-experimental design to examine the impact of SIG after three years on students’ mathematics, reading, and science achievement as assessed by the MEAP and MME. We identified a comparison group of non-SIG-I schools and compared the achievement of the students in these schools with the achievement of students in the SIG-I schools. WestEd conducted the analyses using hierarchical linear modeling (HLM) and accounted for measures of prior school-level achievement and student demographic characteristics. MDE provided WestEd with student-level MEAP, MME, and demographic data from the 2010/11 and 2011/12 school years. Additionally, WestEd downloaded school-level MME results for the 2009/10 school year that were publicly available on the MDE website (www.michigan.gov/mde) and the MI School Data website (www.mischooldata.org).

**STUDENT DEMOGRAPHIC DATA**

MDE provided data on the students’ economic status, special education status, English proficiency status, gender, and race/ethnicity. In order to include these variables in the analyses, dummy codes were created for economic status (economically disadvantaged = 1; not economically disadvantaged = 0), special education status (special education = 1; not special education = 0), English proficiency status (limited English proficient = 1; not limited English proficient = 0), and gender (male = 1; female = 0). The race/ethnicity variable had codes for Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Black/African American, Hispanic/Latino, White, Two or More Races, and Asian. Because Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Two or More Races, and Asian constituted less than eight percent of the SIG-I and comparison schools, an “Other” category was created by merging these racial/ethnic groups. A set of dummy codes was created that contrasted Black/African American (i.e., the largest racial/ethnic group) with: (1) Whites; (2) Hispanics/Latinos; and (3) Other.
MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM (MEAP)

The MEAP assessments were administered to students in grades 3-9 in the fall of each school year. There were five MEAP assessments: (1) mathematics, (2) reading, (3) science, (4) writing, and (5) social studies. For the current evaluation, WestEd utilized the mathematics and reading assessments completed by students in grades 3-8 and the science assessments completed by students in grades 5 and 8. The mathematics and reading assessments were based on the content covered in the previous school year. In contrast, the science assessments covered content from the prior two to three school years (Michigan Department of Education, n.d.).

All students received a scale score and a performance level for each MEAP assessment. The scale scores were conversions of the assessments’ raw scores that allowed the results of the different test administrations (e.g., 2010/11 and 2012/13) to be compared even though new test items are used in the different administrations. The scale scores are divided into ranges that correspond to four performance levels: (1) Advanced, (2) Proficient, (3) Partially Proficient, and (4) Not Proficient. Students who score in the Proficient or Advanced levels are identified as “proficient” on each assessment (Michigan Department of Education, n.d.).

The reliability of the MEAP mathematics, reading, and science assessments was satisfactory. The Cronbach’s alphas, which measured the assessments’ internal consistency, ranged from 0.87 to 0.91 for mathematics, 0.83 to 0.87 for reading, and 0.85 to 0.89 for science. The content validity of the assessments (i.e., whether the assessments cover the standards they are intended to measure) has also been investigated. Panels of experts that reviewed the mathematics and reading assessments determined that the correspondence between the content of the assessments and the grade-level standards was acceptable. However, the panel of experts determined that the science assessment did not sufficiently address one of the five standards it was designed to assess (Michigan Department of Education, n.d.).

MICHIGAN MERIT EXAM (MME)

The MME was administered in the spring of each school year to students in grade 11 and students in grade 12 who did not take the MME in grade 11 or previously received an invalid score on the MME. The MME assessed students’ college- and career-readiness in the following five subjects: (1) mathematics, (2) reading, (3) science, (4) writing, and (5) social studies. WestEd used the mathematics, reading, and science scores of the students in grade 11 in the analyses for the current evaluation.

Consistent with the MEAP assessments, each student received a scale score and one of the four performance levels for the MME mathematics, reading, and science. In 2010 and 2011, the MME mathematics, reading, and science showed good internal consistency reliability. The Cronbach’s alphas ranged from 0.91 to 0.92 for mathematics, 0.88 to 0.89 for reading, and 0.87 to 0.88 for science. The MME showed high levels of convergent validity. In 2010 and 2011, the correlations between the MME mathematics and ACT mathematics were $r = .75$, respectively; the correlations between the MME reading and the ACT reading were $r = .86$ and $r = .87$, respectively; and the
correlations between the MME science and the ACT science were $r = .77$ and $r = .78$, respectively (Michigan Department of Education, 2011a; Michigan Department of Education, 2011b).

**SCHOOLS INCLUDED IN THE ANALYSIS**

All Tier 1 and 2 schools in Michigan in 2010 schools were eligible for the SIG grant because they had been identified as the persistently lowest-achieving schools in the state. The comparison schools were selected from the pool of 80 remaining Tier I and Tier II schools that did not have their SIG application accepted that year or did not submit a SIG application. In year 1, Tier 1 and 2 schools were excluded from the potential pool of comparisons schools if they had closed before the beginning of or during the 2010/11 school year ($n = 14$), were special education schools ($n = 5$), or were K-12 schools/other grade configuration schools ($n = 3$), which provided the evaluation with 58 non-SIG comparison schools (Exhibit 9). One SIG school that had served students in 5-8 during the first year began serving students in K-8 in year 2 of the SIG. However, because this school was closed before the MEAP was administered, no achievement data were available for this school for year 2. In addition, another school that had served students in K-6 in year 1 began serving students in K-8 during year 2. Finally, three of the evaluation’s comparison schools closed after year 1. This provided 27 SIG-I schools and 55 non-SIG comparison schools for the analysis in year 2.

By year 3 of the SIG, two SIG-I schools had closed and two others no longer received SIG funds because they had been taken over by the EAA. In addition, another seven comparison schools from the evaluation had closed by the third year. Thus, in year 3, three SIG-I elementary schools (i.e., grades K-6 or K-8), six SIG-I middle schools (i.e., grades 6-8 or 7-8), and 15 SIG-I high schools (grades 9-12) were included in the outcome analyses, while 11 comparison elementary schools (i.e., grades K-8); seven comparison middle schools (i.e., grades 6-8 or 7-8); and 30 comparison high schools (i.e., grades 9-12) were included (Exhibit 10).
Exhibit 9. Flow Diagram of the SIG-I and Comparison Schools Used for Outcome Analyses in Each Year of the Evaluation

108 Tier 1 and 2 Schools in 2010

24 SIG I schools

3 schools with grades K-6 or K-8

6 schools with grades 6-8 or 7-8

15 schools with grades 9-12

48 comparison schools

11 schools with grades K-8

7 schools with grades 6-8 or 7-8

30 schools with grades 9-12

80 Non-SIG I Schools

22 schools removed from pool of comparison schools:

• 14 schools that closed before or during 2010-11 school year
• 5 special education schools
• 3 schools with K-12 grade configuration
Exhibit 10. Flow Diagram of SIG-I and Comparison Schools for Outcome Analyses in Year 3

108 Tier 1 and 2 Schools in 2010

80 Non-SIG I Schools

Year 1: 28 SIG-I schools

1 SIG school closed before year 2 MEAP exam

Year 2; 27 SIG-I schools

1 SIG school closed; 2 SIG schools moved into EAA

Year 1: 58 comparison schools

Year 2: 55 comparison schools

1 SIG comparison school closed

1 comparison schools closed

Year 3: 48 comparison schools

22 schools removed from pool of comparison schools:

• 14 schools that closed before or during 2010-11 school year
• 5 special education schools
• 3 schools with K-12 grade configuration

Year 3: 24 SIG-I schools

Year 1: 28 SIG-I schools

Year 2; 27 SIG-I schools

Year 1: 58 comparison schools

Year 2; 55 comparison schools

1 SIG comparison school closed

1 comparison schools closed

Year 3: 48 comparison schools

22 schools removed from pool of comparison schools:

• 14 schools that closed before or during 2010-11 school year
• 5 special education schools
• 3 schools with K-12 grade configuration

Year 3: 24 SIG-I schools
Instead of matching schools one-to-one, each year WestEd used all of the remaining Tier 1 and 2 non-SIG-I schools as comparison schools. Although it would have been optimal to select the most comparable group of schools from the pool of 80 non-SIG-I schools (Shadish, Cook, & Campbell, 2002), this was not possible for two reasons. First, even though all of the Tier 1 and 2 schools had low achievement, there were more SIG-I high schools with relatively higher achievement than non-SIG-I high schools. As a consequence, there were not enough non-SIG-I high schools with prior achievement similar to the SIG-I high schools to use one-to-one matching. Second, biased results are likely to occur when the number of schools (i.e., level-2 units) included in HLM models is small (Maas & Hox, 2005). This would have been a particular problem with the small number of SIG-I schools that were elementary and middle schools. Including all of the non-SIG-I schools in the comparison group allowed the analyses to include the greatest number of schools.

**STUDENTS INCLUDED IN THE ANALYSIS FOR YEAR 3**

The analyses with the MEAP assessment data included students in grades 3-8 that attended elementary SIG-I schools or comparison schools during the 2012/13 school year. It was possible for students to not have outcomes scores in every subject area being examined. A total of 6,662 students were included in the MEAP math analyses after 1,412 students were removed because they did not attend the same school for the full academic year. A total of 6,695 students were included in the MEAP reading analyses after 1,396 students were removed because they did not attend the same school for the full academic. A total of 3,139 students were included in the MEAP science analyses after 563 students were removed because they did not attend the same school for the full academic year.

Even though the students were tested on the MEAP in the fall of 2013 for the posttest, the student-level database included a variable indicating which schools they attended during 2012/13. This variable allowed attribution of each student's achievement to the school where he or she received instruction during the prior year, and is consistent with how Michigan performs the calculations for adequate yearly progress (AYP).

The analyses with the MME assessment data included students in grade 11 who attended a SIG-I or comparison school during the 2012/13 school year. A total of 4,012 students were included in the MME math analyses after 1,043 students were removed because they did not attend the same school for the full academic year and another 389 were removed because of missing demographic data. A total of 4,088 students were included in the MME reading analyses after 1,070 students were removed because they did not attend the same school for the full academic year and another 234 were removed because of missing demographic data. A total of 4,081 students were included in the MME science analyses after 1,060 students were removed because they did not attend the same school for the full academic year and another 339 were removed because of missing demographic data.
CASE STUDIES

WestEd, in consultation with OEII, selected SIG-I schools for case studies during both year 3 of the SIG as well as during the first post-SIG year. Schools in year 3 and the first post-SIG year were selected to represent a range in terms of improvement of student academic achievement since the inception of the SIG. A range in terms of the degree of implementation during year 2 was also used a selection criteria for year-3 case study schools. In both years, two member teams visited each school. Year 3 visits were two-day visits; post-SIG visits were one-day visits.

The six SIG schools selected for the year 3 case studies included rural, town, city, and suburban locations (Exhibit 11). At the time these schools were selected, achievement data for high schools were available for the first two years of SIG, while achievement data for the elementary and middle schools were available for only one year of SIG. The implementation data that were considered were from the year 2 spring site visits during which time implementation data were collected that aligned with the implementation domains articulated in the evaluation framework. Each school received a score for each implementation domain on a four-point rubric. All schools received Title I funds and had free- or reduced-priced lunch eligibility percentages between 47 and 93 percent. Three schools served students in grades 9-12; two schools served students in grades 6-8; and one school served students in pre-kindergarten through grade 8. Two schools served a majority White students while the remaining four schools served a majority African American students.

Of the five SIG schools selected for the post-SIG year visits, two were in a city: one in a midsize city and the other in a small city (Exhibit 11). One school was in a large suburb and another school was in a town. The fifth school was considered rural. Student performance was the only factor examined in selection of these schools. Achievement data for high schools were available for the full three years of SIG, while achievement data for the elementary and middle schools were available for the first two years of SIG. All schools received Title I school funds and had free- or reduced-price lunch eligibility percentages between 41 and 81 percent. All schools served grades 9-12 with one school also serving grade 8. The race/ethnicity of the largest two subgroups included White at each school, with the second subgroup being Latino at three of the five schools.
### Exhibit 11. Case Study School Characteristics

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Follow-up year</th>
<th>SIG model</th>
<th>Grades served</th>
<th>Received Title-I schoolwide program funds</th>
<th>Student enrollment</th>
<th>Location</th>
<th>Race/ethnicity of largest two subgroups</th>
<th>FRPL eligibility</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>Transformation</td>
<td>9-12</td>
<td>Yes</td>
<td>874</td>
<td>Town: Distant</td>
<td>64% White; 26% Latino</td>
<td>48%</td>
<td>26</td>
<td>69</td>
<td>91</td>
<td>83</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td>Transformation</td>
<td>9–12</td>
<td>Yes</td>
<td>584</td>
<td>Rural: Distant</td>
<td>82% White; 15% Latino</td>
<td>47%</td>
<td>59</td>
<td>90</td>
<td>92</td>
<td>85</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Turnaround</td>
<td>PK- 8</td>
<td>Yes</td>
<td>739</td>
<td>City: Large</td>
<td>97% African American</td>
<td>88%</td>
<td>5</td>
<td>2</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>6-8</td>
<td>Yes</td>
<td>714</td>
<td>Suburb: Large</td>
<td>68% African American; 27% White</td>
<td>77%</td>
<td>21</td>
<td>9</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>9–12</td>
<td>Yes</td>
<td>1077</td>
<td>City: Small</td>
<td>68% African American; 17% Hispanic; 14% White</td>
<td>81%</td>
<td>37</td>
<td>29</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>6-8</td>
<td>Yes</td>
<td>621</td>
<td>City: Small</td>
<td>60% African American; 21% Hispanic; 18% White</td>
<td>93%</td>
<td>12</td>
<td>11</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>8-12</td>
<td>Yes</td>
<td>601</td>
<td>Suburb: Large</td>
<td>86% White; 5% two or more races</td>
<td>41%</td>
<td>93</td>
<td>92</td>
<td>64</td>
<td>45</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>9–12</td>
<td>Yes</td>
<td>943</td>
<td>City: Midsize</td>
<td>42% African American; 41% White</td>
<td>74%</td>
<td>18</td>
<td>37</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>Transformation</td>
<td>9–12</td>
<td>Yes</td>
<td>405</td>
<td>City: Small</td>
<td>67% Latino; 16% White</td>
<td>81%</td>
<td>33</td>
<td>63</td>
<td>56</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: All information from the 2012/13 Common Core of Data except top-to-bottom rankings, which were retrieved from the MDE website.
During the site visits to these schools, the WestEd team interviewed principals and conducted focus groups with school improvement teams and teachers. The year 3 visits included additional interviews with parents and external providers. All interviews were semi-structured and broadly focused on changes schools implemented that staff believed impacted student achievement and sustainability. The interview and focus group protocols for the site visits appear in Appendix C.

ANALYSES

ANALYSES OF STUDENT ACHIEVEMENT DATA

WestEd used *-tests to compare the achievement of the SIG-I and non-SIG high schools at baseline. In addition, multi-level logistic regression models were used to determine whether the percentages of students in each demographic category differed significantly across the SIG-I and comparison groups at baseline.

HLM (Raudenbush & Bryk, 2002) was used to compare MEAP and MME assessment data after three years between SIG-I and non-SIG schools. The use of HLM is an improvement over other methods, such as multiple regression, because HLM appropriately accounts for the clustering of students within schools. The use of regression analysis with clustered data can produce inflated Type I error rates (i.e., identifying a statistically significant difference when one does not actually exist). In addition, HLM allows control variables at multiple levels (e.g., student demographic characteristics and prior school-level achievement) to be included properly. HLM is also needed because the results based on regression analyses are not likely to be accurate (Singer, 1998), further because of the nesting of grades within schools, it is important to account for the non-independence of grades. In this case, the intraclass correlation coefficients (ICCs) based on the MEAP and MME assessments varied across the different subjects and grade levels. The ICCs ranged from 0.00 to 0.20 for the mathematics assessments, 0.00 to 0.14 for the reading assessments, and 0.00 to 0.17 for the science assessments.

The HLM analyses were conducted using Stata’s xtmixed command. Due to the small number of schools included in each analysis, restricted maximum likelihood estimation was used. With the exception of the intervention status variable, all of the predictor variables in the analyses were centered on the grand mean, which allowed the calculation of the adjusted means for the SIG-I and comparison groups (Raudenbush & Bryk, 2002). Two-level HLM models (i.e., level-1 = students; level-2 = schools) were where only the intercepts were specified as random effects. In order to reduce bias, pretests (e.g., school-level average mean scale scores) and demographic characteristics were included as covariates in the models (Shadish, Cook, & Campbell, 2002).

One set of analyses was performed using the MME data and separately conducted analyses for each of the grade levels 3-8 and for each subject area. Two sets of analyses were performed using the MEAP assessment data. The first set of MEAP analyses was conducted separately for each of the three subject areas and separately at each of the grade levels 3-8. The second set of MEAP analyses
combined all of the grade levels into a single analysis separately for each of the three subject areas. In order to include the data from grades 3-8 in one analysis, the pretest and posttest MEAP scale scores within each grade were normalized by subtracting the state mean from each student's score and dividing by the state standard deviation. This method of standardization is equivalent to creating z-scores. After normalizing the scores, a score of -1.00 at each grade level was equivalent to a scale score that was one standard deviation below the state mean. The normalized test scores represent the relative performance rankings of students in the sample, rather than their absolute level of performance.

The two-level models employed for the MEAP and MME analyses are outlined by the equations below using Raudenbush and Bryk’s (2002) terminology and notations. The additional covariates used in the analyses that included multiple grade levels are noted below.

Level-1 model:

$$Y_{ij} = \beta_{0j} + \beta_{1j}(\text{Demographic Covariate 1})_{ij} + \ldots + \beta_{Qj}(\text{Demographic Covariate Q})_{ij} + r_{ij}$$

Where

$$Y_{ij}$$ was the average posttest mathematics, reading, or science score for student $$i$$ in school $$j$$;

$$\beta_{1j}$$ to $$\beta_{Qj}$$ were level-1 coefficients that described the strength and direction of the associations between student demographic characteristics and the posttest scores. The student-level control variables included students’ economic status, special education status, English proficiency status, gender, and race/ethnicity. The student demographic characteristics were dummy-coded. The analyses that included multiple grade levels also included dummy codes for the students’ grade levels. $$r_{ij}$$ was the residual (i.e., a level-1 random effect) associated with student $$i$$’s posttest score in school $$j$$ using the level-1 model.

Level-2 model:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Intervention Status})_{j} + \gamma_{02}(\text{school-level baseline achievement score})_{j} + u_{0j}$$

Where

$$\gamma_{00}$$ was the average posttest score for the comparison group after accounting for the covariates.

$$\gamma_{01}$$ was the level-2 coefficient that described the strength and direction of the association between the intervention status and the posttest scores.

$$\gamma_{02}$$ was the level-2 coefficient that described the strength and direction of the association between the school-level baseline achievement score corresponding with the outcome (e.g., for the mathematics outcome, the school-level grade average mathematics score from 2010 was used) and the posttest scores.
Intervention status (SIG-I = 1; Comparison = 0) was a dummy coded variable that contrasted the schools that participated in the SIG-I with the non-SIG schools. The analyses with the multiple grade levels also included a dummy coded variable contrasting elementary and middle schools. \( \eta_0 \) was the school random effect that corresponded to the deviation of school \( j \)'s level-1 intercept, \( \beta_0j \), from its predicted value using the school-level model.

WestEd examined multiple outcomes in each baseline and outcome analysis. As the number of outcome comparisons increases, the likelihood of committing a Type I error (i.e., identifying a statistically significant difference when one does not actually exist) increases as well. To address this issue, WestEd used the Benjamini-Hochberg (B-H) correction for each group of baseline and outcome comparisons (Benjamini & Hochberg, 1995; Schochet, 2008; Thissen, Steinberg, & Kuang, 2002).

**ANALYSIS OF SIG IMPLEMENTATION AND STUDENT ACHIEVEMENT**

WestEd used HLM to conduct the analyses that assessed the association between teacher reported SIG implementation and student achievement on the MEAP in the fall of 2013 and the MME in the spring of 2013 (i.e., after year 3 of SIG). In contrast to the analyses for the quasi-experimental design, which included the SIG and comparison schools, the implementation analyses included only the 23 SIG schools. Given the limited number of schools that could be included in the implementation analyses, the students in grades 3-8 with MEAP scores were combined with the students in grade 11 with MME scores to conduct one analysis with the students’ math achievement scale scores, one analysis with the students’ reading achievement scale scores, and a final analysis with the students’ science achievement scale scores. Consistent with the analyses for the quasi-experimental design, the achievement measures included in the analyses were normalized using the state mean and standard deviation for each test, which allowed us to included different grades and tests into a single analysis.

The implementation analyses utilized school-level composite scores based on the teacher survey for the following eight domains: (1) school staff engagement and contributions to learning; (2) teacher evaluation system; (3) curricula; (4) professional development and coaching; (5) use of student performance data; (6) family and community engagement; (7) socioemotional supports for students; and (8) school climate and culture. These composite variables were used as simultaneous predictors of the students’ mathematics, reading, and science achievement. Statistically significant associations between the composite measures and the students’ achievement on the state tests would suggest a link between aspects of SIG implementation and improved student outcomes.

The implementation analyses included control variables for the students’ grade level, economic status, special education status, English proficiency status, gender, and race/ethnicity. In addition,

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10 The Benjamini-Hochberg correction was chosen because the power losses are smaller compared to other multiple comparison correction procedures (Schochet, 2008).
the models included school-level measures of mathematics, reading, and science achievement on the MEAP and MME from 2010 prior to the start of SIG as control variables. The three analyses included only the pre-test measure of the same subject as a statistical control (i.e., the reading analysis included only the pre-test reading as a control variable).

**ANALYSIS OF CASE STUDY DATA**

The WestEd research team used a deductive content analysis approach for identifying themes from the case study interviews. A member of the research team reviewed all of the notes from the interviews. The research team member identified themes throughout the interviews. Following the identification of these, the researcher again reviewed all notes and coded notes for themes. The research team then created a spreadsheet of themes and the presence or absence of each theme for each school. Themes were selected for discussion in this report when there was strong convergence on the identified themes from multiple sources in multiple SIG-I schools. For example, this report discusses a theme within a school when stakeholders at that school consistently described the programs and activities at their school.
Student Achievement at SIG Schools After Three Years

SIG-I AND NON-SIG SCHOOLS PRIOR TO SIG

There were large differences between SIG-I schools and non-SIG schools on several characteristics before the year before the roll out of SIG. Therefore, caution should be used when interpreting differences between student scale scores on the MEAP and MME between the two types of schools after three years.

According to Ho, Imai, King, and Stuart (2007), an acceptable level for minimizing bias between matched groups is a difference between treatment and comparison groups on measured characteristics prior the intervention that is less than a quarter of a standard deviation (i.e., an effect size of 0.25). In order to assess how comparable the SIG-I and non-SIG schools were on observable characteristics, the two groups of schools were compared with regards to student demographic characteristics and average baseline MEAP and MME scale scores in the year prior implementing SIG.

Several differences between treatment and comparison groups in this evaluation were beyond the acceptable cut off of an effect size of 0.25. For example, SIG-I schools included in the analysis of MEAP scores had a larger percentage of students with limited English proficiency compared to non-SIG schools included in the MEAP analysis (Exhibit 12). In addition, SIG-I schools included in the analysis of MME scores a larger percentage of students who were White and a smaller percentage who were African American (Exhibit 13) compared to non-SIG schools used in the analysis of MME scores. The size of each of these differences was larger than 0.25.
### Exhibit 12. Baseline Demographic Characteristics of Students in SIG-I and Non-SIG Schools Included in the MEAP Analyses

<table>
<thead>
<tr>
<th></th>
<th>Percent of students in SIG-I schools</th>
<th>Percent of students in comparison schools</th>
<th>Difference</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Disadvantaged</td>
<td>88.37</td>
<td>82.90</td>
<td>5.47</td>
<td>0.15</td>
</tr>
<tr>
<td>Special Education</td>
<td>11.93</td>
<td>10.72</td>
<td>1.21</td>
<td>0.04</td>
</tr>
<tr>
<td>Limited English Proficiency</td>
<td>8.60</td>
<td>3.29</td>
<td>5.31</td>
<td>0.25</td>
</tr>
<tr>
<td>Female</td>
<td>48.71</td>
<td>49.05</td>
<td>-0.34</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

**Race/Ethnicity**

<table>
<thead>
<tr>
<th></th>
<th>Percent of students in SIG-I schools</th>
<th>Percent of students in comparison schools</th>
<th>Difference</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>68.69</td>
<td>76.58</td>
<td>-7.89</td>
<td>-0.18</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>11.33</td>
<td>5.55</td>
<td>5.78</td>
<td>0.22</td>
</tr>
<tr>
<td>White</td>
<td>13.62</td>
<td>15.13</td>
<td>-1.51</td>
<td>-0.04</td>
</tr>
<tr>
<td>Other</td>
<td>6.36</td>
<td>2.73</td>
<td>3.63</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Note: The Other category for Race/Ethnicity includes Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Two or More Races, and Asian. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. SIG-I n = 2,012 students in 9 schools; non-SIG-I n = 4,830 students in 18 schools.
### Exhibit 13. Baseline Demographic Characteristics of Students in SIG-I and Non-SIG Schools Included in the MME Analyses

<table>
<thead>
<tr>
<th></th>
<th>Percent SIG-I students</th>
<th>Percent comparison students</th>
<th>Difference</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically disadvantaged</td>
<td>69.49</td>
<td>78.86</td>
<td>-9.37</td>
<td>0.22</td>
</tr>
<tr>
<td>Special education</td>
<td>8.90</td>
<td>12.10</td>
<td>-3.20</td>
<td>0.10</td>
</tr>
<tr>
<td>Limited English proficiency</td>
<td>5.54</td>
<td>7.47</td>
<td>-1.93</td>
<td>0.08</td>
</tr>
<tr>
<td>Female</td>
<td>52.95</td>
<td>50.22</td>
<td>2.73</td>
<td>0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent SIG-I students</th>
<th>Percent comparison students</th>
<th>Difference</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>43.14</td>
<td>79.72</td>
<td>-36.58</td>
<td>0.76</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>14.44</td>
<td>9.39</td>
<td>5.05</td>
<td>0.16</td>
</tr>
<tr>
<td>White</td>
<td>36.40</td>
<td>8.72</td>
<td>27.68</td>
<td>0.69</td>
</tr>
<tr>
<td>Other</td>
<td>2.16</td>
<td>6.02</td>
<td>-3.86</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Note: The Other category for Race/Ethnicity includes Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Two or More Races, and Asian. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. SIG-I n = 1,662 students in 15 schools; non-SIG-I n = 1,545 students in 30 schools.

There were also differences on MEAP and MME scale scores at SIG-I and non-SIG schools the year prior to SIG implementation that were larger than an effect size of 0.25 (Exhibit 14). The year before the SIG, students in the third grade in SIG-I schools had higher MEAP scale scores in reading and mathematics compared to students in third grade at non-SIG schools. In addition, the year before the SIG, students in the fourth grade in SIG-I schools had higher MEAP scale scores in mathematics compared to students in fourth grade at non-SIG schools. Finally, students in the eleventh grade in SIG-I schools had higher MME scale scores in mathematics, reading, and science the year before the SIG compared to students in eleventh grade in non-SIG schools. All MEAP and MME scales scores from 2010, as well as demographics characteristics (regardless of the magnitude of the difference between groups on these factors) were used in the outcome analyses as covariates.
Exhibit 14. Baseline Average MEAP and MME Scale Scores at SIG-I and Non-SIG Schools

<table>
<thead>
<tr>
<th></th>
<th>SIG-I schools</th>
<th>Non-SIG schools</th>
<th>Difference</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Average</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3</td>
<td>3</td>
<td>319.19</td>
<td>10.32</td>
<td>10</td>
</tr>
<tr>
<td>Grade 4</td>
<td>3</td>
<td>417.89</td>
<td>4.91</td>
<td>10</td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>498.23</td>
<td>1.54</td>
<td>11</td>
</tr>
<tr>
<td>Grade 6</td>
<td>4</td>
<td>607.31</td>
<td>8.76</td>
<td>12</td>
</tr>
<tr>
<td>Grade 7</td>
<td>9</td>
<td>704.17</td>
<td>5.83</td>
<td>17</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>800.25</td>
<td>5.84</td>
<td>18</td>
</tr>
<tr>
<td>Grade 11</td>
<td>15</td>
<td>1075.37</td>
<td>14.71</td>
<td>30</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3</td>
<td>3</td>
<td>319.00</td>
<td>9.92</td>
<td>10</td>
</tr>
<tr>
<td>Grade 4</td>
<td>3</td>
<td>417.64</td>
<td>6.38</td>
<td>10</td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>508.64</td>
<td>10.30</td>
<td>11</td>
</tr>
<tr>
<td>Grade 6</td>
<td>4</td>
<td>607.04</td>
<td>4.15</td>
<td>12</td>
</tr>
<tr>
<td>Grade 7</td>
<td>9</td>
<td>703.96</td>
<td>7.25</td>
<td>17</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>806.29</td>
<td>7.05</td>
<td>18</td>
</tr>
<tr>
<td>Grade 11</td>
<td>15</td>
<td>1094.63</td>
<td>9.44</td>
<td>30</td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>498.18</td>
<td>3.72</td>
<td>11</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>801.59</td>
<td>8.36</td>
<td>18</td>
</tr>
<tr>
<td>Grade 11</td>
<td>15</td>
<td>1080.06</td>
<td>17.26</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: The averages are based on aggregated school-level MEAP scale scores (for each grade) from the fall 2010 administration and aggregated school-level MME scale scores from the spring 2010 administration. Positive differences indicate higher scores for SIG-I schools. Effect sizes were calculated by dividing the difference by the state-level standard deviation. SD = standard deviation.
Students at schools that received a SIG for three years had similar scale scores on MEAP mathematics, reading, and science compared to students at schools that did not receive a SIG. The small differences in these scale scores were not statistically significant after adjusting for differences in student characteristics and the schools’ average MEAP scale scores from before the SIG.

After adjusting for school-level prior achievement and student-level demographic characteristics, none of the differences in MEAP scale scores between SIG-I and non-SIG schools reached statistical significance. This was the case when analyzing MEAP scale scores at any grade level or across grade levels, and was true for mathematics, reading, and science. The largest differences between SIG-I and comparison schools, after adjusting for school-level prior achievement and student-level demographic characteristics, were for students in grade 5. Students in grade 5 in SIG schools had average MEAP scores in mathematics that were 8.84 scale score points higher (effect size = 0.34), MEAP scores in reading that were 8.29 scale score points higher (effect size = 0.35), compared to grade 5 students in non-SIG schools. In addition, students in grade 4 in SIG schools had average MEAP scores in mathematics that were 8.10 scale score points lower (effect size = -0.40) compared to grade 4 students in non-SIG schools. However, even in the above three instances, the differences between MEAP scale scores SIG and non-SIG schools were not statistically significant.

The findings after three years of SIG on the MEAP are consistent with those found after one year of SIG, that is, there were no statistically significant differences between students in SIG schools and non-SIG schools in MEAP mathematics, reading, or science scale scores after adjusting for baseline MEAP mathematics scale scores and student-level demographics (Nakamoto, Rice, & Bojorquez, 2012; Appendix D). However, after two years of SIG, students in grade 6 in SIG-I schools scored significantly higher on the MEAP mathematics assessment than students in grade 6 in non-SIG schools after the scale scores were adjusted for baseline MEAP mathematics scale scores and student-level demographic characteristics. The adjusted difference was 8.48 scale score points (effect size = 0.44). In addition, after two years of SIG, students in grades 6 and 8 in SIG-I schools scored significantly higher on the MEAP reading assessment than their grade-level counterparts in non-SIG schools, after adjusting for baseline MEAP reading scale scores and student-level demographics. For grade 6, the adjusted difference was 6.72 scale score points (effect size = 0.26). For grade 8, the adjusted difference was 3.13 scale score (effect size = 0.13). However, none of these differences remained statistically significant after adjusting for multiple comparisons (Bojorquez, et al., 2013; Appendix D).

On average, students at neither SIG-I nor non-SIG schools reached levels of proficiency in the three subject areas by the third year of SIG. After the third year of SIG, the average MEAP scale scores in
mathematics and science in every grade at both SIG and non-SIG schools were in the “not proficient” range. In addition, after the third year of SIG, the average MEAP scale scores in reading in every grade at both SIG and non-SIG schools were in the “partially proficient” range.
### Exhibit 15. Average MEAP Scores After Three Years at SIG-I and Non-SIG Schools

<table>
<thead>
<tr>
<th></th>
<th>Students at SIG-I schools</th>
<th>Students at comparison schools</th>
<th>Adjusted average difference</th>
<th>95% CI for the adjusted average difference</th>
<th>p value</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School n</td>
<td>Student n</td>
<td>Unadjusted average</td>
<td>Adjusted average</td>
<td>SD</td>
<td>School n</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All grades</td>
<td>9</td>
<td>1,965</td>
<td>-0.68</td>
<td>-0.75</td>
<td>0.78</td>
<td>18</td>
</tr>
<tr>
<td>Grade 3</td>
<td>3</td>
<td>111</td>
<td>319.61</td>
<td>313.37</td>
<td>26.04</td>
<td>10</td>
</tr>
<tr>
<td>Grade 4</td>
<td>3</td>
<td>123</td>
<td>410.82</td>
<td>400.87</td>
<td>20.61</td>
<td>10</td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>109</td>
<td>512.67</td>
<td>510.27</td>
<td>25.68</td>
<td>11</td>
</tr>
<tr>
<td>Grade 6</td>
<td>4</td>
<td>136</td>
<td>611.26</td>
<td>604.99</td>
<td>23.53</td>
<td>12</td>
</tr>
<tr>
<td>Grade 7</td>
<td>9</td>
<td>739</td>
<td>706.65</td>
<td>707.91</td>
<td>22.15</td>
<td>17</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>746</td>
<td>799.25</td>
<td>803.57</td>
<td>21.28</td>
<td>18</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All grades</td>
<td>9</td>
<td>1,977</td>
<td>-0.70</td>
<td>-0.72</td>
<td>0.88</td>
<td>18</td>
</tr>
<tr>
<td>Grade 3</td>
<td>3</td>
<td>111</td>
<td>319.65</td>
<td>314.82</td>
<td>22.94</td>
<td>10</td>
</tr>
<tr>
<td>Grade 4</td>
<td>3</td>
<td>125</td>
<td>412.26</td>
<td>404.86</td>
<td>26.54</td>
<td>10</td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>108</td>
<td>521.23</td>
<td>520.58</td>
<td>25.58</td>
<td>11</td>
</tr>
<tr>
<td>Grade 6</td>
<td>4</td>
<td>134</td>
<td>617.96</td>
<td>615.92</td>
<td>28.26</td>
<td>12</td>
</tr>
<tr>
<td>Grade 7</td>
<td>9</td>
<td>745</td>
<td>710.27</td>
<td>711.14</td>
<td>28.88</td>
<td>17</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>753</td>
<td>812.75</td>
<td>817.50</td>
<td>28.13</td>
<td>18</td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All grades</td>
<td>9</td>
<td>888</td>
<td>-0.84</td>
<td>-0.82</td>
<td>0.86</td>
<td>18</td>
</tr>
<tr>
<td>Grade 5</td>
<td>3</td>
<td>115</td>
<td>498.89</td>
<td>497.49</td>
<td>19.25</td>
<td>11</td>
</tr>
<tr>
<td>Grade 8</td>
<td>9</td>
<td>773</td>
<td>803.41</td>
<td>804.93</td>
<td>19.05</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Positive adjusted average differences indicate higher scores for students at SIG-I schools. Adjusted averages are based on MEAP scale scores from the fall 2013 administration. The “all grades” MEAP scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. For example, a score of -0.75 is equivalent to a scale score that is three-fourths of a standard deviation below the state mean. The averages have been adjusted to account for the multi-level structure of the data and the student- and school-level covariates. Each effect size was calculated by dividing the adjusted average difference by the pooled standard deviation. SD = standard deviation.
Exhibit 16 displays the variation in changes in MEAP scale scores from the year before SIG implementation (i.e., the 2009/10 school year) to the end of SIG (i.e., the 2012/13 school year) in each SIG and non-SIG school. For each subject area, the change in MEAP scores were calculated by standardizing scores from MEAP 2010 and MEAP 2013, and calculating the difference between the MEAP 2010 school-level average and MEAP 2013 student-level average for each grade. Then, the differences in all grades in a school were averaged. Changes in standardized MEAP scores in SIG schools from the year before SIG implementation to the third year of SIG ranged from -0.30 to 0.33 in mathematics, from -0.26 to 0.26 in reading, and from -0.08 to 0.51 in science. In non-SIG schools, changes in standardized MEAP scores in the same years ranged from -0.50 to 0.45 in mathematics, in -0.24 to 0.33 reading and -0.75 to 0.62 in science. This indicates that average MEAP scale score increased in some SIG schools and decreased in other SIG schools; the same was true for non-SIG schools.
Exhibit 16. Changes in Standardized MEAP Scale Scores from 2010 to 2013, by School

Mathematics

Reading

Science

Note: In each graph, the change in MEAP scores was calculated by standardizing scores from MEAP 2010 and MEAP 2013, and calculating the difference between the MEAP 2010 school-level average and MEAP 2013 student-level average for each grade. Then, the differences in all grades in a school were averaged.
STUDENT ACADEMIC ACHIEVEMENT ON THE MME AT SIG-I AND NON-SIG SCHOOLS AFTER THREE YEARS

Students at schools that received a SIG for three years had similar scale scores on MME mathematics, reading, and science compared to students at schools that did not receive a SIG. The small differences in these scale scores were not statistically significant after adjusting for differences in student characteristics and the schools’ average MME scale score form before the SIG.

The unadjusted MME scale score means were higher for students at SIG-I schools compared to students at non-SIG schools. However, each of the mean differences between the two groups was less than one scale score point after adjusting for school-level prior achievement and student-level demographic characteristics. None of the adjusted differences were statistically significant. The effect sizes for all three outcomes were near zero.
### Exhibit 17. Average MME Scores After Three Years at SIG-I and Non-SIG Schools

<table>
<thead>
<tr>
<th>Subject</th>
<th>Students at SIG schools</th>
<th>Students at non-SIG schools</th>
<th>95% CI for the adjusted average difference</th>
<th>p value</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Unadjusted average</td>
<td>Adjusted average</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1,635</td>
<td>1,079.38</td>
<td>1,064.70</td>
<td>45.26</td>
<td>2,411</td>
</tr>
<tr>
<td>Reading</td>
<td>1,642</td>
<td>1,097.02</td>
<td>1,088.98</td>
<td>30.23</td>
<td>2,446</td>
</tr>
<tr>
<td>Science</td>
<td>1,641</td>
<td>1,088.62</td>
<td>1,078.33</td>
<td>35.78</td>
<td>2,440</td>
</tr>
</tbody>
</table>

Note: Positive adjusted average differences indicate higher scores for students at SIG-I schools. Adjusted averages are based on MME scale scores from the spring 2013 administration. The adjusted averages have been adjusted to account for the multi-level structure of the data and the student- and school-level covariates. Each effect size was calculated by dividing the adjusted average difference by the pooled standard deviation. SD = standard deviation. SIG-I school n = 15; non-SIG schools n = 30.
Exhibit 18 displays the variation in changes in MME scale scores from the year before SIG implementation (i.e., the 2009/10 school year) to the end of SIG (i.e., the 2012/13 school year) in each SIG and non-SIG school. For each subject area, the change in MME scores was calculated by standardizing scores from MME 2010 and MME 2013, and calculating the difference between the MME 2010 school-level average and MME 2013 student-level average for each grade. Then, the differences in all grades in a school were averaged. Changes in standardized MME scores in SIG schools from the year before SIG implementation to the third year of SIG ranged from -22.96 to 11.81 in mathematics, from -16.91 to 7.47 in reading, and from -27.60 to 7.69 in science. In non-SIG schools, changes in standardized MME scores in the same years ranged from -19.76 to 37.08 in mathematics, from -0.24 to 0.33 in reading, and from -16.19 to 15.33 in science. This indicates that average MME scale score increased in some SIG schools and decreased in others; the same was true for non-SIG schools.
Exhibit 18. Changes in Standardized MME Mathematics Scale Scores from 2010 to 2013, by School

Mathematics

Note: In each graph, the change in MME scores was calculated by standardizing scores from MME 2010 and MME 2013, and calculating the difference between the MME 2010 school-level average and MME 2013 student-level average for each grade. Then, the differences in all grades in a school were averaged.
Exhibit 19 shows the average teacher ratings of the implementation of each SIG construct across the 23 SIG-I schools. Use of student performance data was rated as the most highly implemented of the constructs with the teacher evaluation system as the least implemented.

**Exhibit 19. Average SIG Construct Implementation Ratings by Teachers at SIG-I Schools**

<table>
<thead>
<tr>
<th>School Staff Engagement and Contributions to Learning</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Evaluation System</td>
<td>2.90</td>
<td>0.34</td>
<td>1.95</td>
<td>3.43</td>
</tr>
<tr>
<td>Curricula</td>
<td>3.62</td>
<td>0.31</td>
<td>2.80</td>
<td>4.27</td>
</tr>
<tr>
<td>Professional Development and Coaching</td>
<td>3.60</td>
<td>0.31</td>
<td>2.81</td>
<td>4.00</td>
</tr>
<tr>
<td>Use of Student Performance Data</td>
<td>4.04</td>
<td>0.27</td>
<td>3.45</td>
<td>4.69</td>
</tr>
<tr>
<td>Family and Community Engagement</td>
<td>3.08</td>
<td>0.57</td>
<td>1.60</td>
<td>4.13</td>
</tr>
<tr>
<td>Socioemotional Supports for Students</td>
<td>3.28</td>
<td>0.44</td>
<td>2.49</td>
<td>4.08</td>
</tr>
<tr>
<td>School Climate and Culture</td>
<td>3.39</td>
<td>0.60</td>
<td>2.35</td>
<td>4.62</td>
</tr>
</tbody>
</table>

n = 23 SIG-I schools.
Note: The rating scales ranged from 1 to 5, with 5 indicating the highest degree of implementation.

The associations between MEAP/MME scale scores and teachers’ ratings of implementation constructs were examined after controlling for student-level covariates including: grade level, economic status, special education status, limited English proficiency status, gender, and race/ethnicity, and school-level baseline achievement score. No statistically significant associations were found between implementation constructs and MEAP/MME scale scores in reading or mathematics (Exhibits 20 and 21). Higher MEAP/MME scale scores in science after three years of SIG were significantly associated with teacher reports of greater implementation of effective curricula. In addition, when teachers reported less positive school climate it was significantly associated with higher MEAP/MME scale scores in science after three years of SIG (Exhibit 22). However, only the association between curricula and MEAP/MME scale scores remained statistically significant after controlling for multiple comparisons. No other implementation constructs had statistically significant associations with science outcomes.
Exhibit 20. Association Between SIG Construct Implementation Ratings by Teachers at SIG Schools and Mathematics Achievement Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Beta</th>
<th>Standard Error</th>
<th>Z-score</th>
<th>Confidence Interval</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>School staff engagement and contributions to learning</td>
<td>0.04</td>
<td>0.32</td>
<td>0.14</td>
<td>-0.58, 0.67</td>
<td>-0.58</td>
</tr>
<tr>
<td>Teacher evaluation system</td>
<td>0.07</td>
<td>0.28</td>
<td>0.25</td>
<td>-0.48, 0.61</td>
<td>-0.48</td>
</tr>
<tr>
<td>Curricula</td>
<td>0.07</td>
<td>0.30</td>
<td>0.22</td>
<td>-0.52, 0.65</td>
<td>-0.52</td>
</tr>
<tr>
<td>Professional development and coaching</td>
<td>0.17</td>
<td>0.30</td>
<td>0.57</td>
<td>-0.42, 0.77</td>
<td>-0.42</td>
</tr>
<tr>
<td>Use of student performance data</td>
<td>-0.05</td>
<td>0.42</td>
<td>-0.11</td>
<td>-0.87, 0.78</td>
<td>-0.87</td>
</tr>
<tr>
<td>Family and community engagement</td>
<td>0.11</td>
<td>0.20</td>
<td>0.52</td>
<td>-0.29, 0.51</td>
<td>-0.29</td>
</tr>
<tr>
<td>Socioemotional supports for students</td>
<td>-0.17</td>
<td>0.28</td>
<td>-0.60</td>
<td>-0.72, 0.38</td>
<td>-0.72</td>
</tr>
<tr>
<td>School climate and culture</td>
<td>0.13</td>
<td>0.29</td>
<td>0.44</td>
<td>-0.43, 0.69</td>
<td>-0.43</td>
</tr>
</tbody>
</table>

Student n = 3,585; School N = 23.
Note: Achievement scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. Coefficients were adjusted for student-level covariates including: grade, economic status, special education status, limited English proficiency status, gender, and race/ethnicity, and baseline achievement score.

Exhibit 21. Association Between SIG Construct Implementation Ratings by Teachers at SIG Schools and Reading Achievement Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Beta</th>
<th>Standard Error</th>
<th>Z-score</th>
<th>Confidence Interval</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>School staff engagement and contributions to learning</td>
<td>0.24</td>
<td>0.21</td>
<td>1.18</td>
<td>-0.16, 0.65</td>
<td>0.24</td>
</tr>
<tr>
<td>Teacher evaluation system</td>
<td>0.18</td>
<td>0.18</td>
<td>0.96</td>
<td>-0.18, 0.54</td>
<td>0.34</td>
</tr>
<tr>
<td>Curricula</td>
<td>0.19</td>
<td>0.20</td>
<td>0.94</td>
<td>-0.20, 0.58</td>
<td>0.35</td>
</tr>
<tr>
<td>Professional development and coaching</td>
<td>-0.11</td>
<td>0.20</td>
<td>-0.52</td>
<td>-0.50, 0.29</td>
<td>0.60</td>
</tr>
<tr>
<td>Use of student performance data</td>
<td>-0.21</td>
<td>0.28</td>
<td>-0.76</td>
<td>-0.77, 0.34</td>
<td>0.45</td>
</tr>
<tr>
<td>Family and community engagement</td>
<td>0.03</td>
<td>0.14</td>
<td>0.23</td>
<td>-0.23, 0.30</td>
<td>0.82</td>
</tr>
<tr>
<td>Socioemotional supports for students</td>
<td>0.04</td>
<td>0.19</td>
<td>0.23</td>
<td>-0.33, 0.42</td>
<td>0.82</td>
</tr>
<tr>
<td>School climate and culture</td>
<td>-0.14</td>
<td>0.19</td>
<td>-0.73</td>
<td>-0.51, 0.24</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Student n = 3,603; School N = 23.
Note: Achievement scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. Coefficients were adjusted for student-level covariates including: grade, economic status, special education status, limited English proficiency status, gender, and race/ethnicity, and baseline achievement score.
### Exhibit 22. Association Between SIG Construct Implementation Ratings by Teachers at SIG Schools and Science Achievement Outcomes

<table>
<thead>
<tr>
<th>Construct</th>
<th>Beta</th>
<th>Standard Error</th>
<th>Z-score</th>
<th>Confidence Interval</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>School staff engagement and contribution to learning</td>
<td>0.21</td>
<td>0.15</td>
<td>1.44</td>
<td>-0.08, 0.50</td>
<td>0.15</td>
</tr>
<tr>
<td>Teacher evaluation system</td>
<td>0.19</td>
<td>0.13</td>
<td>1.46</td>
<td>-0.07, 0.45</td>
<td>0.14</td>
</tr>
<tr>
<td>Curricula</td>
<td>0.38</td>
<td>0.15</td>
<td>2.49*†</td>
<td>0.08, 0.68</td>
<td>0.01</td>
</tr>
<tr>
<td>Professional development and coaching</td>
<td>0.08</td>
<td>0.15</td>
<td>0.54</td>
<td>-0.22, 0.38</td>
<td>0.59</td>
</tr>
<tr>
<td>Use of student performance data</td>
<td>-0.42</td>
<td>0.22</td>
<td>-1.86</td>
<td>-0.86, 0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Family and community engagement</td>
<td>0.15</td>
<td>0.10</td>
<td>1.48</td>
<td>-0.05, 0.34</td>
<td>0.14</td>
</tr>
<tr>
<td>Socioemotional supports for students</td>
<td>0.10</td>
<td>0.14</td>
<td>0.70</td>
<td>-0.17, 0.37</td>
<td>0.49</td>
</tr>
<tr>
<td>School climate</td>
<td>-0.38</td>
<td>0.14</td>
<td>-2.77*</td>
<td>-0.65, -0.11</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Student n = 2,515; School N = 23.

*Statistically significant at p < .05
†Statistically significant after using the Benjamini-Hochberg correction for multiple comparisons.

Note: Achievement scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. Coefficients were adjusted for student-level covariates including: grade, economic status, special education status, limited English proficiency status, gender, and race/ethnicity, and baseline achievement score.
Case Study Summary: Year Three Visits

In this section we summarize the case studies conducted during the fall 2012 school year, which was the beginning of the final year of the grant for SIG-I schools. The visits focused on identifying implementation domains that, according to school staff, were particularly successful at helping these schools improve and increase student performance through SIG. A second purpose of these visits was to understand how, according to school staff, specific domains of implementation contributed to success. Findings are presented by specific implementation domains, as articulated by the evaluation design. Because only one case study school used in the year-3 visits had adopted the turnaround model, we do not make comparisons between transformation and turnaround schools.

SUMMARY OF FINDINGS ACROSS CASE STUDIES

Overall, most implementation domains related to SIG reportedly contributed to improvements at the case study schools. According to respondents, principal leadership played an important role in the successful administration of SIG across all schools. All principals exercised some form of distributed leadership and delegated SIG-related responsibilities, though to varying degrees and of varying scope. Principals had full autonomy over SIG implementation, which was critical, though few principals had full autonomy over selecting and removing staff. One area where principals had full autonomy over staff selection had to do with the selection of their leadership teams. Capable leadership teams were important to successful SIG implementation. School leaders indicated they did not develop a set of formalized skills and competencies when selecting staff for the school at large, perhaps due to their limits in selecting staff. However, principals from every case study school reported having a set of informal skills, competencies, experiences, and expectations that informed staff selection when they had the autonomy to do so.

Schools’ performance evaluation systems appear to have had mixed results in terms of contributing to SIG’s success. Some case study schools were able to implement new performance evaluation systems while others were not. In some cases where evaluation systems were implemented (either new or existing), these systems reportedly helped improve accountability among teachers, facilitated the exit of ineffective teachers, and improved the feedback provided to teachers. Across all schools, feedback from teachers indicated that incentives tied to evaluation systems, particularly financial incentives, did not play a role in motivating teachers and contributing to SIG success. In addition, teachers identified several concerns related to performance evaluation systems, including: the use of student achievement data, inconsistent implementation, and unrealistic rating systems.

Professional development and coaching were identified as very important contributors to SIG success. In four of the six case study schools, these were identified as the strongest contributor and facilitator to improvements at the school. One area where professional development and coaching played a key role was with respect to data use and instruction. All schools reported an increase in their use of data to monitor student progress. Similarly, all schools reported that along with increased data use, there was improved consistency and uniformity in the data available to teachers.
and school leaders. However, not all schools indicated that increased use of data contributed to improvements at the school.

Schools’ use of data and the reported subsequent added value of its use was facilitated by schools’ adoption and implementation of instructional paradigms and practices. Two schools adopted discrete instructional paradigms, while the remaining schools adopted common and consistent instructional strategies and practices that did not necessarily subscribe to discrete paradigms. Nonetheless, across all schools feedback indicated that SIG’s focus on instruction contributed to consistency in instruction, more student-centered instruction, higher expectations of students, and an improved school focus on learning.

The role of SIG with respect to school climate and teacher morale was mixed, though generally positive. Most schools reported improvements in climate over the three years of SIG, while teacher morale trended lower toward the final years, primarily because of anxiety over how SIG and SIG-related efforts would be sustained or teacher burnout related to the high demands associated with SIG. Feedback indicated that increasing family and community involvement at schools during SIG was not a high priority for schools. All schools acknowledged the important role family and community have in school improvement, but only one school indicated their efforts in this area had been successful.

Finally, with respect to the role of transparency of resource allocations under SIG, feedback from school staff indicated that over the course of SIG, transparency did not have a meaningful impact on the implementation or success of SIG. While in the early years of SIG school staff appeared to want increased transparency of resource allocation (Bojorquez, et. Al., 2013), it appears that, based on feedback from a small number of teachers, over time staff grew to trust school leadership and their decisions related to resource allocation.

**LEADERSHIP**

The examination of the leadership domain focused on principals’ level of autonomy in administering SIG, and the leadership style with which principals ran their schools. Across all schools, principals’ leadership reportedly played an important role in the successful administration of SIG. Feedback from staff at only one school implied a mixed role of the principal’s leadership in successfully administering SIG. At this school the principals’ leadership style was a drastic departure from the previous principals’ styles (i.e., previous principals had not exercised shared and distributed leadership). It was so drastic that teachers at this school indicated they did not think the principal’s leadership was an integral part of the successful administration of SIG because they struggled with this transition in leadership at their school.

All school principals exercised distributed leadership. All principals relied on their school’s SIG leadership teams. Across all schools, these teams included assistant principals, department heads, and/or SIG coordinators. In a few schools, leadership teams included SIG coaches or other teacher leaders. Not all leadership teams included teacher representation, and in those cases where teachers
were not a part of the leadership team, feedback indicated there was a “disconnect” between the principal and what occurred in classrooms.

The nature of the responsibilities delegated to members of the leadership team varied. For example, in one school where the leadership team included assistant principals, the team’s primary responsibilities included curriculum alignment and pacing, professional development and teacher support, and curricular and instructional leadership. In another school, the leadership team included coaches and their primary responsibilities included teacher support and coaching. In these two schools, decisions related to the administration of SIG resided primarily with the principal. By contrast, leadership teams in three other schools were fairly involved in decisions related to the administration of SIG, in addition to having a role in implementing SIG (e.g., teacher support, coaching).

All principals indicated they had full autonomy over implementing SIG. Further, all principals reported having full autonomy over selecting their leadership teams. Only two principals, however, indicated they had full autonomy over selecting and removing staff. In some cases, principals indicated the performance evaluation system allowed them to remove staff who were not performing to expectations.

The leadership style of three principals appeared to incorporate an element of empowering teachers and administrators, and fostering the development of teacher capacity and teacher leadership. This, in turn, nurtured a strong sense of loyalty to the principal. Feedback from school staff clarified that the principal’s leadership and management style made teachers and staff feel respected, created a sentiment (among staff and students) of not wanting to “let down” the principal, and encouraged innovative ideas from teachers.

**RECRUITMENT AND STAFFING**

In examining the recruitment and staffing domain, the evaluation focused on the role and use of formal sets of staff skills and competencies identified by each SIG school, which was a requirement of transformation schools and a recommendation for turnaround schools. However, none of the six case study schools had developed a formal set of staff skills and competencies for identifying and selecting staff. All school leaders nonetheless explained they had informal sets of skills, competencies, experiences, and expectations, which played a critical role in identifying school staff and, more importantly, members of their school leadership teams.

Several school leaders indicated they used traditional screening criteria when screening staff, for example, educational background, academic knowledge, training, experience at the school, and experience with similar student populations. Included in the informal sets of skills, competencies, experiences, and expectations were:

- ability to relate to students
- ability to develop and nurture relationships
• willingness to become involved in extracurricular activities
• willingness to contribute to school improvement
• willingness to embrace change in educational practices to engage students
• demonstrating leadership among peers
• maintaining positive attitudes with students
• being vocal
• being problem solvers

Many of the characteristics school leaders identified had a similar underlying tone and quality as those identified in previous years of the evaluation (Borjorquez, Rice, Hipps, & Li, 2012; Bojorquez, et al., 2013) with a notable difference being that during case study visits principals seemed to accept that the criteria would remain informal and not become a formal element of staff selection. This was perhaps due, at least in part, to principals acknowledging the limits of their autonomy in removing and replacing staff. Two school leaders were explicit in acknowledging that limits to their authority to remove staff, and a limited pool of teacher applicants were factors in their working with and developing existing school staff. These principals indicated that developing strong and positive relationships with existing staff and supporting staff in their development, rather than replacing staff, was more critical to turning their school around.

One area of staff selection in which all school leaders indicated they had autonomy was in selecting members for their leadership teams. Principals were keen on identifying strong teachers with demonstrated leadership skills for these roles. In some cases it proved challenging, however, to select teacher leaders for these new roles and responsibilities because it meant taking the strongest teachers out of the classroom. Most schools were able to negotiate the transition of strong teachers out of the classroom and into leadership roles, However, in one school, this was an enduring challenge in part because the school principal did not sufficiently clarify and communicate to all school staff the changing roles of the individuals in new leadership roles. This lead to misunderstanding among staff as to the role of these “promoted” teachers, poorly managed expectations, and (over time) a lack of respect for the new positions held by these teachers. This dynamic was further complicated by the fact that by the third year of SIG, these teacher leaders had taken on quasi-administrative roles. This further diminished these individuals’ effectiveness as coaches because some teachers began to view the teacher leaders as administrators.

In cases where a principal did not have the autonomy to remove staff, principals were able to move forward with improvements even though they believed that existing staff did not possess the skills and competencies necessary for school turnaround. Two principals handled this situation by recommitting to their current staff, developing strong and positive relationships with current staff (in order to foster loyalty and a common vision for the school), and using SIG to provide support for teachers, including training that furthered these teachers’ development as professionals. Other principals indicated their approach involved a high degree of listening to teachers and being
responsive to their needs. Another principal reported they created incentives for teacher to retire in cases where a teacher did not want to fully support SIG efforts. Finally, a small number of principals used their evaluation system to, over time, remove teachers who were not implementing elements of the SIG reform model necessary to improve student achievement.

**PERFORMANCE EVALUATION**

The examination of the performance evaluation domain focused on the extent to which schools were able to implement new performance evaluation systems and whether these systems contributed to improvements at the school. Feedback collected through site visits was mixed in terms of whether schools were able to implement new evaluation systems. Three schools reported implementing new evaluation systems and three reported implementing the evaluation systems used by their districts. However, feedback from five of the six schools indicated that implementation was inconsistent and staff expressed concerns or even mistrust over how the systems’ findings would be used or the value of the feedback received through the performance evaluation system.

Feedback was mixed as well with respect to whether each school’s performance evaluation system contributed to improvements. Two schools, one that implemented a new system and one that implemented the district’s system, clearly indicated the evaluation system improved the culture at the schools. This was because the new systems allowed the principals to transition out staff who were resistant to implementing the new SIG strategies, or because existing teachers were onboard with the new evaluation system and the accountability that accompanied the system. Two other schools indicated their evaluation systems had improved accountability among teachers. Although, in both of these cases, principals and staff acknowledged that the summative components of the system had not been fully implemented. In one other school, the evaluation system was being implemented and it provided some helpful feedback to teachers through the classroom observation portion of the evaluation system, but staff and school leaders acknowledged that neither the evaluation system nor incentives had contributed to improvements. In the last school, the evaluation system had not yet been fully implemented.

According to almost all teachers, incentives tied to performance evaluation, particularly financial incentives, did not play a role in motivating teachers or contributing to improvements. Aspects of evaluation systems that were mentioned more than once as having a positive contribution included:

- immediate feedback from walkthroughs or other observations
- real time suggestions tied to specific classroom practices
- access to additional data (student or observation data) that teachers could use to self-monitor
- increased accountability among teachers

Several teachers identified specific concerns associated with their school’s evaluation systems, including: a lack of clarity about how student achievement data would be included in ratings;
inconsistent implementation of the evaluation system by different administrators within a school; and scoring or rating protocols that were either on a bell curve or included category descriptions they felt were very difficult or impossible. In addition, inconsistent implementation in particular was identified as a concern by teachers at four of the schools.

**PROFESSIONAL DEVELOPMENT AND COACHING**

In examining the role of professional development and coaching in SIGs, the evaluation focused on whether, and the extent to which, professional development and coaching contributed to improvements SIG implementation or student academic performance. Across all schools, school leaders and staff indicated professional development and coaching were significant factors and key contributors to improvements and successes at schools. At four schools, professional development and coaching were identified as the strongest contributor and facilitator of improvements at their school. That said, feedback from teachers and school leaders indicated that the areas and manner in which professional development and coaching had an impact varied across schools. At four schools, teachers indicated that through professional development and coaching accountability improved among teachers and that this furthered school improvements, particularly with regards to school culture. In some cases professional development and coaching exacted its influence in that teachers became more engaged and involved in their own professional development, while in most cases professional development and coaching lead to a greater degree of teacher follow-through in their classroom practices.

Across most schools, feedback indicated professional development and coaching were effective by creating and fostering the use of common practices, language, strategies, and expectations. Teachers indicated this level of uniformity and consistency reinforced key themes and priorities (e.g., literacy), demonstrated the school’s commitment (both to an intervention and to students), increased student accountability (because students were seeing and hearing similar strategies and language, and being held to similar expectations), and increased collaboration and planning among teachers. Teachers at some schools also indicated that professional development and coaching were effective because administrators and external providers intentionally created continuity and relevance of content across opportunities. This level and form of continuity contributed to teacher buy-in and fostered teacher adoption of practices and strategies because it demonstrated the school’s commitment to the reform efforts.

Another key manner in which professional development and coaching contributed to improvements was by facilitating a shift in school culture from one that was teacher-centered to student-centered. This shift was accompanied by teachers learning to transition their attention from what they were doing to what students were learning. This helped shift conversations among teachers from blaming students for not learning to examining what teachers could do to help students better understand and master content.

Across several schools, feedback from teachers indicated that professional development and coaching were effective because they were responsive and adaptive to teachers’ needs. This
responsiveness occurred often within an adopted paradigm or framework where providers listened to teachers’ challenges and needs, and provided support to meet those needs. It also occurred when school leaders realizing the existing professional development framework or provider was not meeting teachers’ or students’ needs and subsequently changed the framework or provider.

**MONITORING**

The examination of the role the monitoring focused on schools’ use of data to monitor progress and inform practice, and how these practices contributed to improvements in SIG implementation or student performance. While all schools reported increased use of data in their monitoring of student progress, feedback was mixed in terms of the relative contribution to improvements at the school. Feedback from staff at three schools indicated their increased use of data had been a key driver and fostering improvements. Feedback at two schools indicated monitoring systems, including increased use of data, had not been instrumental in improvements. Instead, according to staff at these schools, data use was part of larger work in progress at the school. At the sixth school, feedback indicted monitoring and data systems had informed key practices, but that the school had collected so much data that it contributed to teacher burnout.

All schools indicated that increasing the consistency and uniformity of available data had a positive impact on the schools. All schools incorporated some form of interim or benchmark assessments that allowed teachers and school administrators to monitor progress and continually adjust practices. Staff acknowledged that for this type of feedback loop to provide valuable insight, consistency and continuity of data was key. Most schools used Professional Learning Communities (PLCs) in order to leverage these conversations; one school created a data room where all student- and grade-level benchmark data were posted that also included various resources and supports for teachers. While some staff acknowledged the room could have been utilized more, teachers indicated the room allowed them to “see” student need in a manner that made it undeniable that change and improvements were needed, and where they were needed.

Several key factors contributed to ensuring schools were not only data, but also information rich. These factors allowed teachers to maximize their use of available data in a meaningful manner. The sentiment was conveyed most clearly by teachers at one school when they knew how to access and disaggregate their data independently, but that they did not have time to do so. To address this need, five of the six schools indicated they either engaged an external provider, hired a data specialist, or had a data coach who took primary responsibility for assisting teachers with data analyses. In some cases, this individual also assisted teachers with data collection. Both teachers and administrators indicated that the support and expertise of data coaches and specialists was particularly valuable in helping drive change at their school. With SIG nearing its end, they were concerned about how the school would continue providing a comparable level of support to teachers.
INSTRUCTION

The examination of the instruction domain focused on whether specific instructional paradigms adopted and implemented by SIG schools were reportedly successful at improving teacher practice and student achievement. Feedback from two of the six case study schools in year 3 indicated the two schools had adopted distinct instructional paradigms supported by external providers: Direct Interactive Instruction (DII) and Rigor/Relevance Framework. The remaining four schools described common and consistent instructional strategies and practices adopted school wide that did not correspond to a distinct instructional paradigm, per se. In these cases, the common thread was student-centered instruction, raised and common student expectations, and an overall school-level focus on student learning.

Three schools made concerted efforts to include non-core subject teachers in professional development and coaching that impacted instruction. This contributed to continuity and consistency of instructional strategies and supports for students across curricular areas. For example, in one school, all teachers were trained on a common set of eight literacy strategies that were addressed at the beginning of all classes. In the other schools, non-core subject teachers’ familiarity and training with instructional strategies allowed them to reinforce these strategies in different contexts (e.g., an art teacher using and reinforcing writing strategies in the writing component of an art assignment).

Feedback from all schools indicated the most significant contribution of their schools’ focus on instruction was creating consistent, common, and continuous threads and themes. This extended across curriculum, planning, pacing, expectations (of students and staff), and support strategies. These efforts occurred school wide and contributed to a sense of accountability and investment in SIG reform efforts. For both teachers and students, these efforts reinforced the school’s commitment to the interventions adopted through SIG. Further, feedback from a small subset of schools indicated the school’s focus on instruction had begun to change the nature of conversations among teachers whereby conversations were focused on improving teacher practices and no longer on “blaming” students.

SCHOOL CLIMATE AND TEACHER MORALE

In examining the role of the school climate domain the evaluation focused on determining whether and how school climate and teacher morale had changed under SIG. Overall, feedback was mixed on the impact of SIG on school climate and teacher morale. With respect to school climate, four schools indicated school climate had improved under SIG, and one school indicated it was not very positive due to the stress and anxiety of SIG ending. At another school, it was reported that climate had not been drastically impacted by SIG.

Feedback from two schools indicated teacher morale had improved under SIG with a third school noting slight improvements in teacher morale. At another school, staff indicated a mixed impact of SIG on morale with teachers seeing the value of all the additional demands and responsibilities.
associated with SIG but also expressing concern and anxiety over how SIG-related efforts and support would be sustained after SIG. Feedback from the remaining two schools indicated that during the final year of SIG teacher morale had suffered. At these two schools, school leaders and staff noted that there had been improvements in teacher morale during the first two years of SIG but that factors arising during the final year had presented challenges that had not been overcome. These challenges were related to key SIG staff leaving the school and the realities of addressing sustainability of SIG supports. In addition, inclusion of non-core teachers in professional development and coaching reportedly improved teacher morale and camaraderie because non-core teachers felt as if they were all in this (i.e., SIG) together. The inclusion of non-core teachers also contributed to a shared sense of accountability among teachers that was also modeled to students.

Overall, impacting school climate, particularly teacher morale, was challenging for schools because SIG was associated with a high level of additional responsibility and pressure. While many teachers came to acknowledge the value and see the benefits of these additional efforts, they were also associated with a high degree of pressure and stress. Additionally, leading into the final year of SIG, teachers and school staff were faced with the question of how to sustain practices without the additional support, either fiscal or human, associated with SIG.

**FAMILY AND COMMUNITY ENGAGEMENT**

The examination of the family and community engagement domain focused on whether schools had been able to improve their engagement efforts under SIG and, if so, whether they contributed to improvements in student academic performance. While all schools acknowledged the importance of family and community engagement and involvement, staff at only one school reported that their efforts at improving engagement had been successful. Three other schools indicated they had increased engagement efforts under SIG, but they had not been very successful. The final school acknowledged that family and community engagement efforts had not been a priority and they were unable to identify any specific engagement efforts or activities supported by SIG. Nonetheless, teachers and school leaders discussed the ways in which engagement efforts under SIG had changed. Four of the six schools indicated they had staff, either existing or newly hired, dedicated to improving engagement. In all of these cases, one or two individuals were active in engagement efforts and, to varying degrees, helped unload such responsibilities from teachers so that these teachers could direct greater time and attention to instruction.

In two schools, school leaders, teachers, and parents indicated that upon learning that their school was identified as a failing school, families and the community experienced some degree of embarrassment, and contributed to the overall increase in accountability at the school. These families and community could now identify with the school while holding administrators responsible for improvements.
Allocating Fiscal and Human Resources

The examination of the fiscal and human resource allocation domain focused on transparency with respect to how SIG funds were allocated and whether school leaders leveraged and integrated SIG resources to advance school priorities. Of the five schools that discussed SIG fiscal and human resources, all indicated there was some degree of transparency around the allocation of SIG resources. However, in all these cases, staff indicated that transparency, be it at high or limited levels, did not have a meaningful impact on the implementation or success of SIG. There was only one instance where teachers indicated limited transparency negatively impacted morale, and this was because teachers or teacher representatives did not have a voice or input into resources purchased with SIG funds. Additionally, all five school leaders indicated they integrated and leveraged SIG resources with other sources of school funds to advance school priorities and maximize the support they provided students.
Case Study Summary: Post-SIG Visits

In this section we summarize the case studies conducted during the spring of the 2014 school year, which was the initial year after SIG-I schools completed their grants. The visits to five SIG-I schools focused on examining elements of SIG that made a difference at the school over the three years of SIG and the sustainability of these elements. Specific areas of focus included examining which implementation domains were effective at bringing about change, respondents’ perceptions of how these domains affected change, contributions of key partners in affecting change, and how schools approached sustainability after SIG ended. Of specific interest was the impact of SIG on student behavior and attitudes, and on school climate, culture, and morale.

The following is a summary of the impact of SIG over the three years of the grant and respondents’ perceptions about which elements of SIG contributed to change. The section also includes a summary of the role and contributions of MDE, external providers, and districts with a specific focus on how these entities facilitated or hindered change. This section concludes with a brief overview of SIG-I schools’ efforts and plans to sustain the elements of SIG that staff felt had contributed to improvements.

HOW SIG CONTRIBUTED TO SCHOOL IMPROVEMENT

Overall, SIG was perceived to have contributed to improvements at each of the five case study schools. According to school staff and students, over the three years of SIG there were notable changes in areas related to teacher support, practice, and behavior. Among these changes were:

- provision of professional development and coaching for teachers,
- allocated time for teacher collaboration,
- use of new instructional paradigms,
- use of common tools and intervention strategies,
- use of data to monitor student progress,
- focus on improving school culture and student sense of connectedness, and
- greater sense of accountability for improvement among teachers.

Among the five schools, four continued to implement new instructional approaches to improve student performance after SIG. One school adopted Direct Interactive Instruction and instituted tiered interventions to better meet student learning needs. Another school integrated technology into teaching to reach students in multiple ways by engaging them and providing hands-on learning opportunities. One school aligned its curriculum to power standards that were aligned to the State assessments and helped both teachers and students monitor the areas they had mastered and areas they still needed to master. Another school instituted intervention strategies to provide individualized support to students. Four of the schools had staff across the school implement
common instructional practices, including specific tools and strategies. Feedback from respondents indicated this approach allowed students to understand the academic expectations of them from all teachers. Such common threads in implementation of instructional strategies were made possible by carving out time for teachers to collaborate through PLCs, with other grade-level or content-area teachers, and with support from coaches and in professional development sessions.

Several schools also continued to focus their efforts on improving school culture. Three schools implemented programs and activities to help students connect with other students and with teachers. Two schools brought in outside vendors or national organizations to help students address bullying and create a sense of belonging. Another school developed a student incentive system that rewarded positive behavior, both academic and social.

With respect to changes in data use, feedback from respondents from three schools indicated an increased use of student-level data for monitoring student progress that also informed teacher instruction. At one of these schools, the district funded a data analyst position because the role was instrumental in changing the school culture in a manner that focused on using data to inform decisions. Regarding accountability, two schools had notable levels of buy-in from staff that fostered a sense of ownership over the instructional approaches the school adopted as well as a high level of accountability among staff to perform well.

**PERCEPTIONS OF SIG CONTRIBUTION TO CHANGE**

This section includes a brief summary of respondents’ perceptions on how SIG contributed to improvements in specific outcomes, namely student behavior and attitudes and school climate, culture, and morale. These specific areas were of interest because they represent key foundational elements upon which more significant changes can be built, for example changes in student learning and achievement.

**STUDENT BEHAVIOR AND ATTITUDES**

Staff at all five case study schools reported that SIG had a positive impact on student behavior and attitudes. The site visits team subsequently engaged school leaders and staff in exploring their perceptions of what elements introduced by SIG brought about this change and how they thought the elements contributed to positive student behaviors and attitudes. Staff at three of the schools indicated that higher and common teacher expectations of students impacted student behavior and attitudes. Teachers reported that because they had higher expectations of students, over time students responded and began behaving in accordance with those expectations. As it became clear to staff and students that the reforms under SIG were not simply another passing trend, all parties became more invested in, and bought into reform activities. Respondents at all schools suggested that having common expectations across teachers at the school as well as requiring students to monitor their own progress helped students change their attitudes toward school. Additionally, two
schools provided incentives for students by rewarding positive attendance, performance, and behavior.

**SCHOOL CLIMATE, CULTURE, OR MORALE**

Several school efforts supported through SIG reportedly contributed to an improved school climate. According to staff at one school, its participation in and winning a statewide school spirit competition positively impacted school culture and student camaraderie. At another school, the removal of the principal went a long way in showing teachers that meaningful changes were not only underway, but also supported and backed-up by the district. Teachers responded with a renewed spirit of collaboration and readiness for change.

Two schools leveraged Safe and Supportive Schools (S3) grant funds to provide students with tiered intervention supports instead of referrals. The S3 funds were also used to build personal relationships with students who needed extra academic help. Staff indicated that, for students, this represented a renewed commitment by staff, and motivated students accordingly. At another school, the walls were renovated and painted, and students’ college acceptance letters were posted. This reportedly changed the school culture from one previously focused on athletics to one focused on academics. This demonstrated to students that the school was prioritizing academics and placing a high value on academic success.

**ROLES AND CONTRIBUTIONS OF KEY PARTNERS**

In this section we provide a summary of the role and contributions of key partners in schools’ SIG reform efforts, namely MDE, external providers, and the district. Each of these entities had key roles to play in SIG plan implementation, particularly with regards to accountability, support, or facilitation.

**MDE**

Overall, MDE served as a catalyst for change and a resource provider for each of the five schools. Staff at several of the schools indicated that if they had not been in the bottom 5 percent of schools in the state and received SIG funding to address their deficits, they may not have been able to change the course of their schools. Funding became the primary vehicle that allowed school leaders to implement change provided the needed support to their staff. Combined, the public identification (“shaming” in the words of several respondents) as a failing school and the funding that came with SIG created a sense of accountability for the schools. Additionally, staff from one school viewed MDE’s SIG monitor as a mentor who helped guide their grant implementation; these staff were very appreciative of this support.
EXTERNAL PROVIDERS

Feedback from respondents indicated external providers had important roles in SIG’s impact and were instrumental in facilitating improvements and in allowing the change process to take hold at the schools. For example, specific supports delivered by external providers, such as one-on-one coaching, co-teaching, professional development, and facilitation of collaborative time with teachers on applying new instructional strategies were viewed as key to the successful implementation of reform across schools. Additionally, teachers across the five schools viewed external providers as responsive to their calls for assistance, experts in myriad areas and in modeling and guiding instructional changes. According to school staff, external providers added to the sense of accountability for improvements among teachers, were objective and “outside” the historical context of schools, and became a resource to teachers that their schools and districts could not have afforded without SIG funding.

DISTRICTS

Across these schools, districts supported schools’ implementation of SIG by providing principals with autonomy to carry out SIG activities. Districts also provided support by managing the SIG budget and, in some cases, supplementing funding for key SIG-related initiatives. Finally, several districts supporting principals’ decisions to remove teachers who principals felt were hindering change efforts. One district was particularly supportive of the SIG because when the school voiced that the original external provider was not meeting the school’s needs. The district supported the school leader in their effort to replace the provider and helped identify a high-quality change agent to replace the original provider. In this case, the school’s ability to tap into the district’s knowledge of support providers was especially important.

SUSTAINABILITY

Sustainability of SIG-initiated reform efforts was a significant issue across all five case study schools. At all schools, activities introduced by SIG that became the new way of doing business (i.e., teaching and learning) were sustained. At these schools, the new way of doing business was integrated into school and teacher practices such that they did not require funding to be sustained. School leaders were intentional and strategic in spending portions of SIG funds on professional development and coaching that supported teacher development and built capacity, related to instructional practices, that could be integrated and sustained once SIG funding ended. Included in these activities and practices were the instructional models and strategies that became a core part of the way teachers taught and students learned. The models and strategies represented new skills and practices teachers adopted that were also engrained in the curriculum, such as tiered intervention, universal lesson design, monitoring progress, and recognizing achievement. In some schools, feedback from students reinforced comments from teachers and staff that a new way of doing business had been adopted by the school. Feedback from students substantiated that there were common practices, strategies, and language that multiple teachers retained a year after SIG funding ended.
At three schools, the district continued key staff positions that had been funded by SIG, such as coach, technology staff, data analyst, and math and ELA interventionists because of their important role in supporting and sustaining improvements at schools. Also, at some schools activities intended to support and improve student morale, such as a fostering a college-going culture and anti-bullying programs, were reported to have been integrated into the school culture.
References


Appendix A:
Three Tiers of Eligibility for Obtaining SIG Funds in 2010
2010 Eligibility Requirements for SIGs

Based on federal criteria, schools eligible for SIG in 2010 needed to meet the requirements for one of three tiers:

**Tier I** – Title I schools in improvement, corrective action, or restructuring that were (1) the lowest-achieving five percent in the state, or (2) high schools with a graduation rate under 60 percent. Elementary schools could also be eligible if they were achieving at the same rates as the persistently lowest achieving schools and had not made AYP for two years or were in the lowest 20 percent of schools based on proficiency.

**Tier II** – Secondary schools that were eligible for but did not receive Title I funds, and (1) were among the five percent lowest-achieving secondary schools in the state, or (2) had a graduation rate under 60 percent. Secondary schools were also eligible if they were achieving no higher than the highest-achieving school identified as persistently low-achieving, or had a graduation rate under 60 percent and had not made AYP for two years or were in the lowest 20 percent of schools based on proficiency.

**Tier III** – Title I schools in improvement, corrective action, or restructuring that did not meet the criteria for Tier I. Additionally, Title I schools that did not meet the criteria for Tier I or II and had not made AYP for two years or were in the lowest 20 percent of schools based on proficiency could be classified as Tier III.

Eligible Tier I and Tier II schools that received funding were required to implement one of four SIG models: restart, school closure, transformation, or turnaround. Each model includes a specific set of required as well as permissible activities. Exhibit 1 outlines the required activities for each of the four models.

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1 Tier III sites were only eligible for SIG program funds after all Tier I and Tier II schools within the district were served.
Appendix B:
SIG School Teacher Survey Items Used for Implementation Composites in Year 3
**School staff engagement and contributions to learning** \((\alpha = .87)\)

- The teaching staff have contributed to gains in student achievement at my school.
- School leadership has contributed to gains in student achievement at my school.
- Staff (excluding the principal) have taken on increased leadership roles or responsibilities.
- Decisions at my school are made collaboratively between the administration and staff.
- My school has a SIG team that is actively engaged with SIG implementation and monitoring.
- My school's leadership takes teacher opinions into account.

**Teacher evaluation system** \((\alpha = .89)\)

- The teacher evaluation system at my school has contributed to gains in student achievement.
- The teacher evaluation system at my school is transparent and equitable.
- I use data to inform classroom instruction because of the teacher performance evaluation system.
- My classroom instruction has improved because of the teacher evaluation system.
- I differentiate my instruction because of the teacher evaluation system.

**Curricula** \((\alpha = .82)\)

- The curricula have contributed to gains in student achievement at my school.
- The curricula used across the grades at my school are aligned with one another.
- The curricula I use are aligned with my instructional strategies.
- I have received the supports I need to effectively implement curricula in my class(es).
- The curricula I use have been monitored for fidelity of implementation.

**Professional development and coaching** \((\alpha = .93)\)

- The professional development I have received has contributed to gains in student achievement.
- The coaching I have received has contributed to gains in student achievement.
- I use data to inform classroom instruction because of the professional development I have received.
- I use data to inform classroom instruction because of the coaching I have received.
- I differentiate my instruction because of the professional development I have received.
- I differentiate my instruction because of the coaching I have received.
- The professional development and coaching I have received have been coordinated and aligned with each other.

**Use of student performance data** \((\alpha = .73)\)
• Teacher monitoring of student performance has contributed to gains in student achievement at my school.
• I possess the knowledge and skills to use data to inform classroom instruction.
• I receive data on student performance in a timely manner so that I can use it to inform my classroom instruction.
• I differentiate my instruction based on student performance data.

**Family and community engagement** (α = .95)
• Family and community engagement efforts from my school have increased student achievement at my school.
• My school actively engages parents.
• My school actively engages the community (other than parents).
• Families and communities help identify priorities and concerns regarding my school and students.
• Family and community engagement efforts from my school have improved student engagement.
• Family and community engagement efforts from my school have improved staff-student relationships.
• Family and community engagement efforts from my school have improved student behavior.

**Socioemotional supports for students** (α = .96)
• Socio-emotional supports for students at my school have contributed to gains in student achievement.
• Socio-emotional supports for students at my school have been aligned and coordinated with each other.
• Socio-emotional supports for students at my school have improved student engagement.
• Socio-emotional supports for students at my school have strengthened staff-student relationships.
• Socio-emotional supports for students at my school have improved student behavior.

**School climate and culture** (α = .88)
• The climate at my school has contributed to gains in student achievement.
• My school creates a safe and caring environment for students.
• I feel valued and respected as a teacher at my school.
• I feel safe at my school.
• Teachers are on the same page with one another about how to help students improve performance.

• Teachers and administrators are on the same page about how to help students improve performance.
Appendix C: Case Study Protocols
Thank you for agreeing to meet with us today and to participate in the study. As you are aware, the Michigan Department of Education (MDE) commissioned an evaluation of Michigan’s School Improvement Grant (SIG) program. WestEd, a nonprofit education research agency, is conducting this evaluation study on behalf of MDE.

MDE selected your school to participate in a case study to investigate what SIG school staff thought worked best and what could be improved about the SIG model generally. We really want to hone in on those things that had a meaningful and significant impact.

WestEd will interview district staff, principals, school leadership teams, teachers, and students. This focus group will last approximately 90 minutes. The purpose of the focus group is to obtain information on the sustainability, impact, staff buy-in, and lessons learned with SIG implementation. We have asked for your participation in the focus groups because you were part of the school leadership team. Your participation will help provide information on the SIG process and potentially improve future implementation of similar programs as well as help priority schools in Michigan implement their reform or redesign plans. Additionally, the interview is an opportunity for you to provide feedback on your experience.

Do you have any questions before we begin?

IMPACT OF SIG

We have reviewed student achievement data, your school’s SIG implementation plan, and data collected during the past two years on SIG implementation [Provide an overview of data reviewed]. First we’d like to discuss areas where changes related to either policies, practices, and structures that occurred because of SIG successfully impacted student learning. We would like you to focus your response specifically on those changes that had a significant impact on learning.

1. Describe changes at the school that were implemented because of SIG that had a significant impact on student learning and tell me how/why you think the change had an impact.  
   a. [If they have not addressed domains of interest, prompt for changes related to school leadership; teacher practices, instruction, and curricula; professional development and coaching; staff selection; staff performance evaluation; climate
and morale; socio-emotional supports; family/community engagement; district support.]

2. How did these changes brought about by SIG impact student learning? 

3. Please briefly describe any changes brought about by SIG that you felt had a significant impact on student attitudes and behavior. 

4. Please briefly describe any changes brought about by SIG that you felt had a significant impact on school and staff climate and morale.

### DISTRICT, MDE, AND EXTERNAL PROVIDER ROLES DURING SIG THAT CONTRIBUTED TO SIGNIFICANT IMPACT

Next, we’d like to discuss the ways in which your district office, MDE, and external providers contributed to helping your school improve, specifically what role they played in the changes brought about by SIG that had a significant impact on student learning. We are not necessarily looking for a description of everything each entity did related to SIG (we have gathered that data over the past three years), instead we want to hear about what each entity did related to only those changes in policies, practices, and structures that had a significant impact on student learning.

5. You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did the district contribute to (facilitate) that change? REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT. 

   a. In what ways, if any, did the district impede SIG implementation of these key changes (in policies, practices, and structures)? 

   b. Looking back on three years of SIG implementation as a whole, what would you have liked the district to do differently if you were to start SIG again? 

6. Now for MDE. You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did MDE contribute to (facilitate) that change? REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT.

   a. In what ways, if any, did MDE impede SIG implementation of these key changes (in policies, practices, and structures)? 

   b. Looking back on three years of SIG implementation as a whole, what would you have liked the district to do differently if you were to start SIG again?
b. Looking back on three years of SIG implementation as a whole, what would you have liked MDE to do differently if you were to start SIG again? Click here to enter text.

7. Are you aware of any external providers that worked with your school on SIG-related work? Are you familiar enough with their work to speak to how they contributed to student learning? Click here to enter text.

If yes: You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did external providers contribute to (facilitate) that change? REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT. (If there were multiple external providers, ensure you track which they are referring to.) Click here to enter text.

a. In what ways, if any, did external providers impede SIG implementation of these specific changes (in policies, practices, and structures)? Click here to enter text.

b. Looking back on three years of SIG implementation as a whole, what would you have liked external providers to do differently if you were to start SIG again? Click here to enter text.

8. Is there anyone or anything else that you feel had a noteworthy contribution on significantly impacting student learning? Click here to enter text.

9. Is there anyone or anything else that you feel could have been better utilized to have a noteworthy contribution on significantly impacting student learning? Click here to enter text.

SUSTAINABILITY

Next, we want to ask about sustainability of ANY SIG-related efforts. We have read the sustainability plan your school submitted to MDE, and we’d like to discuss both your plan in general and how your plan relates to those key areas of change that brought about a change through SIG.

10. How involved was this team in creating the school’s sustainability plan? How familiar are you all with the school’s SIG sustainability plan? (If they were involved and/or are familiar with the plan, continue with following questions. If they were not involved or unfamiliar with plan, only ask question 11.) Click here to enter text.

11. Let’s begin by briefly reviewing the major components of the sustainability plan as we understand the plan. (Present your understanding of the plan and make sure you understand the
major moving parts of the plan and can make sense of the draft of the sustainability plan we have.) Note any areas where your read of the plan was revised. Click here to enter text.

12. How did you decide what went into the sustainability plan (e.g., what processes, components, strategies, etc., would be included in the plan)? Click here to enter text.

13. What (“part/s of the plan”) / (“current efforts” if unfamiliar with plan) is/are focused on sustaining (insert area of change noted in question 1) that brought about a significant impact on learning through SIG? (Make sure you ask about each change—in policy, practice, structure, or otherwise—identified in question 1.) Click here to enter text.

14. Currently, you are in the middle of your first year of your sustainability plan. Which pieces are working well? Click here to enter text.

   a. Moving into year two, what pieces of your sustainability plan will you change? Click here to enter text.

REFLECTING ON SIG

15. Looking back on your three years of SIG implementation, what would you do differently as a leadership team if you were to start again? Click here to enter text.

16. If you knew your school was going to get money to help improve the school, specifically student learning, next year, where do you think that money would be best spent to most help your school? Click here to enter text.

17. Is there anything else that you would like to add? Click here to enter text.
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**BACKGROUND QUESTIONS**

1. **To start off, can you all share how long you’ve been a teacher, how long you’ve been teaching at this school, what grades you teach and experience or training working with low-performing schools or students?**

**PROFESSIONAL DEVELOPMENT AND COACHING (MONITORING)**

*Recap what we know about the PD and coaching teachers receive.*

2. **Has/how has the PD and coaching you have received over the past three years been:**
   a. relevant to teachers’ needs, and what has been done to keep it relevant (i.e., responsive)?
   b. effective at changing teacher practices, and how has the school made sure the PD and coaching were changing practices?
   c. effective at improving student achievement, and how has the school made sure the PD and coaching were improving student achievement?
3. What other types of support, besides PD and coaching, did teachers receive to successfully implement school improvement efforts?

**INSTRUCTIONAL PRACTICES/MONITORING**

4. Does the school have instructional practices (such as common planning time, delivery of scaffolding, differentiated instruction, student grouping) it is trying to implement consistently across the entire school? If no, does it help or hurt not to have one?

   a. If yes, has/how has implementation been successful at influencing teacher practices and student learning?

   b. Does/How does school leadership monitor its implementation?

**STAFF PERFORMANCE EVALUATION**

Recap what we know about their formative and summative teacher performance evaluation systems and performance incentives.

5. To what extent have these formative AND summative evaluation processes been implemented this past year?

   a. What factors have been instrumental in facilitating or inhibiting implementation of formative and summative evaluation systems?

6. What support, if any, have teachers received as a result of formative evaluation to help them meet evaluation criteria?

**SCHOOL ENVIRONMENT/CLIMATE**

7. Regarding morale in particular, over the past 3 years has student and staff morale increased or decreased AND what has contributed to this change (e.g., heavier workload, added supports, collaboration)?

   a. (If description of staff and student morale differ, explore why)?

   b. What most motivates students?

   c. What most motivates staff?

   d. Have you found anything particularly successful at improving the quality of student-staff relationships? Of student engagement?

**MONITORING**

8. How do you use data to improve student learning? [Probe: How is learning monitored; how is corrective action taken when learning is not occurring to expectations?] What are you expected to do with these data once you get them?

   a. How do you use data to inform your practices (Probe: To differentiate instruction)?

9. How do you know you are collecting the right data (i.e., valid and reliable) and what are your processes for ensuring data are actionable and used (i.e., that they are not simply collected and then sit unused)?
Year 3 Case Study
MDE SIG External Provider Focus Group Protocol

School Name
School Principal Name
Participant Name, Org., & Role
Participant Name, Org., & Role
Participant Name, Org., & Role
Participant Name, Org., & Role
WestEd Lead Interviewer
WestEd Assistant Interviewer

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BACKGROUND QUESTIONS

1. Briefly describe your role and responsibilities with regard to SIG and how long you have worked with the school?

2. (For any new external providers who we did not interview in Year 2) Describe the process of how were you identified and selected as an external provider?

PROFESSIONAL DEVELOPMENT AND COACHING (MONITORING)

For those involved in providing PD and coaching to teachers:

3. Has/how has the PD and coaching the teachers received over the past three years been:
   a. relevant to teachers’ needs and what has been done to keep it relevant (i.e., responsive)?
   b. effective at changing teacher practices, and how has the school made sure the PD and coaching were changing practices?
   c. effective at improving student achievement, and how has the school made sure the PD and coaching were improving student achievement?
4. What other types of support, besides PD and coaching, did teachers receive to successfully implement school improvement efforts? How, if it all, did it help improve the school? Why or why not?

5. How do you know teachers’ needs, how do you know what PD/coaching to deliver, how do you know to change it if/when necessary?
   a. How do you know teachers’ needs, how do you know what PD/coaching to deliver, how do you know to change it if/when necessary?
   b. How do you know teachers’ needs, how do you know what PD/coaching to deliver, how do you know to change it if/when necessary?
   c. How do you know teachers’ needs, how do you know what PD/coaching to deliver, how do you know to change it if/when necessary?

(When applicable) For those of you involved in providing PD and coaching to principals:

6. Has/how has the PD and coaching the principal or other leadership received over the past three years been:
   a. relevant to their needs, and what has been done to keep it relevant (i.e., responsive)?
   b. effective at changing principal practices, and how has the school/district made sure your PD/coaching changed principal practices?
   c. How do you know principal’s needs, how do you know what PD/coaching?

7. What other types of support do you think teachers, principals, or other leaders at the school need to help them successfully implement school improvement efforts?

INSTRUCTIONAL PRACTICES/MONITORING

For those involved with supporting teacher instructional practices, that is, providers that work with teachers in the classroom.

8. Does the school have instructional practices (such as common planning time, delivery of scaffolding, differentiated instruction, student grouping) it is trying to implement consistently across the entire school?
   a. If no, does it help or hurt not to have one?
   b. If yes, has/how has implementation been successful? (Probe: How has it influenced teacher practices and student learning?)
   c. How do you know principal’s needs, how do you know what PD/coaching?

9. What is your sense of teacher capacity to use data to differentiate instruction?

ADDITIONAL QUESTIONS

10. What in your view have been the main drivers of improvements at this school over the past three years in terms of student performance? Implementation?

11. What in your view has been the main impediment to improvements at this school over the past three years?

12. Is there anything else you would like to share that would help me understand how your school accomplished its improvements under SIG?
Thank you for taking the time to talk with us. As you know, WestEd, is under contract with the Michigan Department of Education to study the ARRA-funded SIGs that were awarded in 2010, and a team from WestEd visited your school in spring 2012. We’re back because this school was selected as a SIG-I case study school based on its improvements on state test scores since the 2009-10 school year and substantial progress on implementation of core SIG components.

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4. Does the school have instructional practices (such as common planning time, delivery of scaffolding, differentiated instruction, student grouping) it is trying to implement consistently across the entire school? If no, does it help or hurt not to have one?
   a. If yes, has/how has implementation been successful at influencing teacher practices and student learning?
   b. Does/How does school leadership monitor its implementation?

**STAFF PERFORMANCE EVALUATION**

Recap what we know about their formative and summative teacher performance evaluation systems and performance incentives.

5. To what extent have these formative AND summative evaluation processes been implemented this past year?
   a. What factors have been instrumental in facilitating or inhibiting implementation of formative and summative evaluation systems?

6. What support, if any, have teachers received as a result of formative evaluation to help them meet evaluation criteria?

**MONITORING**

7. How do you use data to improve student learning? [Probe: How is learning monitored; how is corrective action taken when learning is not occurring to expectations?] What are you expected to do with these data once you get them?
   a. How do you use data to inform your practices (Probe: To differentiate instruction)?

8. How do you know you are collecting the right data (i.e., valid and reliable) and what are your processes for ensuring data are actionable and used (i.e., that they are not simply collected and then sit unused)?

**ADDITIONAL QUESTIONS**

9. What in your view have been the main drivers of improvements at this school over the past three years in terms of student performance? Implementation?

10. What in your view has been the main impediment to improvements at this school over the past three years?

11. Is there anything else you would like to share that would help me understand how your school accomplished its improvements under SIG?
IF TIME PERMITS: School Environment/Climate

12. Regarding morale in particular, over the past 3 years has student and staff morale increased or decreased AND what has contributed to this change (e.g., heavier workload, added supports, collaboration)?

   a. (If description of staff and student morale differ, explore why)?
   b. What most motivates students?
   c. What most motivates staff?
   d. Have you found anything particularly successful at improving the quality of student-staff relationships? Of student engagement?
MDE SIG Case Study Classroom Management and Climate Walkthrough

Date: ___________________________ School: ___________________________ Observers Initials: ___________________________

Teacher: ___________________________ Grade: ___________________________ Subject: ___________________________

Time of day: ___________________________

### INSTRUCTIONAL PRACTICES (TO PROVIDE CONTEXT)

Please check if you observed any of the following instructional practices:

- Direct Instruction (lecture)
- Guest speaker presentation/lecture
- Individual Instruction (teacher, peer, aide, volunteer)
- Cooperative/Collaborative Learning (structure lessons using small groups)
- Team Teaching (two or more teachers working cooperatively to teach a lesson)
- Technology as a tool (part of instruction)
- Integration of subject areas
- Parent/community involvement in classroom activities
- Monitors students’ progress/time on task
- Models/demonstrates
- Other (Describe in notes section)

Evidence & Notes

### STUDENT ACTIVITIES (TO PROVIDE CONTEXT)

Please check how the teacher structured student activities:

- Independent seatwork (self-paced worksheets/workbook/textbook, individual work)
- Experimental, hands-on learning
- Differentiated assignments geared to individual needs
- Student discussion
- Student presentations
- Journal/Writing Block
- Silent reading
- Research Project

Evidence & Notes

### CLASSROOM MANAGEMENT & CLIMATE

Did the classroom management strategy used by the teacher provide students with an orderly classroom that was conducive to learning? □ Yes □ No

Evidence & Notes

Please check which best describes the lesson you observed:

**Classroom Climate:** □ N/A

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The teacher consistently models fairness, caring, and respect. Teacher &amp; students use courtesies (please/thank you) with each other.</td>
<td>Most of the time the teacher models fairness, caring, and respect. Teacher &amp; students usually use courtesies (please/thank you) with each other.</td>
<td>The teacher does little modeling of fairness, caring, and respect. Teacher &amp; students hardly use courtesies (please/thank you) with each other.</td>
<td>The teacher does not model fairness, caring, and respect. Teacher &amp; students do not use courtesies (please/thank you) with each other.</td>
</tr>
</tbody>
</table>

Evidence & Notes
<table>
<thead>
<tr>
<th>CLASSROOM MANAGEMENT &amp; CLIMATE CONTINUED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please check which best describes the lesson you observed:</td>
</tr>
</tbody>
</table>

**Student Engagement:**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>N/A</td>
</tr>
<tr>
<td>3</td>
<td>There is very little “down time” in the classroom. The teacher has a variety of effective strategies to redirect the students and get them engaged in the lesson.</td>
</tr>
<tr>
<td>2</td>
<td>There is a fair amount of “down time” in the classroom. When students get off task, the teacher usually reprimands a student for not paying attention.</td>
</tr>
<tr>
<td>1</td>
<td>Students are kept on-task with superficial busy-work, and the teacher mostly manages.</td>
</tr>
</tbody>
</table>

Evidence & Notes

**Q&A:**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Teacher asks many challenging questions that encourage students to talk publicly and to share their ideas with their peers.</td>
</tr>
<tr>
<td>3</td>
<td>The teacher asks several questions, but the questions are not very challenging.</td>
</tr>
<tr>
<td>2</td>
<td>The teacher asks few questions, and they are rarely very challenging.</td>
</tr>
<tr>
<td>1</td>
<td>The teacher doesn’t ask questions.</td>
</tr>
</tbody>
</table>

Evidence & Notes

**Discussion:**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Teacher facilitates discussion, encouraging the students to talk and ask questions in a respectful manner.</td>
</tr>
<tr>
<td>3</td>
<td>The teacher allows students to talk and ask questions, but the teacher sometimes loses control when this happens.</td>
</tr>
<tr>
<td>2</td>
<td>The teacher is reluctant to let students talk to their peers.</td>
</tr>
<tr>
<td>1</td>
<td>The teacher does not let student talk to their peers.</td>
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Evidence & Notes

**ADDITIONAL OBSERVATIONS & NOTES**
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Discuss board summary with principal and note here any areas where he/she provides additional or different information.

Principal update on summary (If applicable).
**STAFF RECRUITMENT AND SELECTION**

1. Do you feel your school has the right staff to significantly improve student achievement? Explain why or why not.  

2. Discuss the strengths and weaknesses of your current staff in their entirety (we are not asking about specific individuals) and how you have worked with their strengths and weaknesses to ensure the school’s success.  

3. How did your staff get placed or hired here? [Probes: To what degree were the current staff already in place when you arrived, force-placed since you arrived, or selected by you? How have the skills, attitudes, and behaviors of the staff changed since you arrived? ]  

4. As of last year, we understand you (had/had not/were in the process of) identified/ing and used/ing a formal set of teacher skills and competencies in hiring teachers. Is this your current status?  
   a. *(If skills and competencies have been identified)* What role have these played in your school’s improvement and did they actually been helpful in getting the staff you need? Have they been institutionalized? If not, why?  
   b. *(If skills and competencies are being identified or have not been identified)* What have been the challenges to identifying and using a formal set of teacher skills and competencies?  

5. Do you have the autonomy, flexibility, and authority to recruit, select, and hire teachers and staff?  
   a. If yes, what role has this played in the school’s improvement?  
   b. If no, what have been the challenges and impediments to identifying and hiring new teachers and staff?  

6. Do you have the autonomy, flexibility, and authority to remove staff?  
   a. If yes, what role has this played in the school’s improvement?  
   b. If no, what have been the challenges and impediments to removing teachers and staff?  

7. *(If the school has made progress on SIG implementation or student achievement, but responses to previous two questions indicate significant limits to autonomy, flexibility, and authority, ask the following question.)* How have you been able to make improvements to this school given the limits you just described to your autonomy, flexibility, and authority hire or remove staff?  

**STAFF PERFORMANCE EVALUATION**

Recap what we know about their formative and summative teacher performance evaluation systems and performance incentives.

8. To what extent have the formative AND summative evaluation processes I just described been implemented this past year (Probe: What has facilitated and inhibited implementation)?  

9. Describe the process of teacher buy-in to developing or implementing these systems and the extent to which it was important; what has been the buy-in?  

10. What, if any, have been the consequences of your formative evaluation system (i.e., how have teacher practices changed or been informed; how has student achievement been impacted; what midcourse corrections have been made?)  

11. What, if any, have been the consequences of your summative evaluation system (i.e., have teachers been removed, put on probation, or rewarded based on their evaluations)?
12. To what extent have performance incentives been implemented? If yes, which ones? If not why?

13. (If incentives have been implemented) Have incentives motivated staff performance? Why or why not?
   [Probes: Have incentives been delivered? Who had input in creating the system of incentives?]
   a. Which specific incentives do you think have been the most effective and ineffective?

GOVERNANCE AND LEADERSHIP

14. A three part question: Describe the following:
   (1) your leadership style or model. Could you give me examples of how you’ve exercised your leadership style and when it has worked and not worked as intended?
   (2) whether you feel it has been effective or not in getting SIG implemented, improving the school and raising student achievement, and
   (3) why it has or has not been effective.

15. Have there been any impediments or challenges to exercising your leadership style, and if so what have they been? [Probes: Any impediments from the district, teachers, or parents, and how have you been able to overcome these?]

16. What individuals or groups at the school or district are involved in providing leadership at your school (i.e., setting vision and goals and moving staff toward goals) and how? Which people do you consult for which things?

17. Describe the autonomy you have from your district as a principal and how/whether this autonomy (or lack thereof) has been a factor in school improvement?

ALIGNMENT OF FISCAL AND HUMAN RESOURCES

Recap what we know about principal’s role in making decision about resource allocation

18. Have/how have resources from other funding sources (e.g., state, federal, philanthropies) been leveraged to supplement SIG-funded efforts to improve the school? [Probes: How specifically have the programs funded in these different ways been coordinated and integrated?]

19. How does information about the allocation of SIG resources get shared with teachers and staff?
   a. To what degree do teachers and staff want to know more about how and why SIG resources are allocated in the way they are?
   b. Do you think teachers and staff need to know about SIG resource allocation? Why or why not?

ADDITIONAL QUESTIONS

20. What in your view have been the main drivers of improvements at this school over the past three years in terms of student performance? Implementation?

21. What in your view has been the main impediment to improvements at this school over the past three years?

22. Is there anything else you would like to share that would help me understand how your school accomplished its improvements under SIG?
Thank you for agreeing to meet with us today and to participate in the study. As you are aware, the Michigan Department of Education (MDE) commissioned an evaluation of Michigan’s School Improvement Grant (SIG) program. WestEd, a nonprofit education research agency, is conducting this evaluation study on behalf of MDE.

MDE selected your school to participate in a case study to investigate what SIG school staff thought worked best and what could be improved about the SIG model generally. We really want to hone in on those things that had a meaningful and significant impact.

WestEd will interview district staff, principals, school leadership teams, teachers, and students. This interview will last approximately 60 minutes. Additionally, at the end of the day, we’d like to meet for an additional 30 minutes to clarify any additional questions that arise during the course of the day. The purpose of the interview is to obtain information on the sustainability, impact, staff buy-in, and lessons learned with SIG implementation. Your participation will help provide information on the SIG process and potentially improve future implementation of similar programs as well as help priority schools in Michigan implement their reform or redesign plans. Additionally, the interview is an opportunity for you to provide feedback on your experience.

Do you have any questions before we begin?

IMPACT OF SIG

We have reviewed student achievement data, your school’s SIG implementation plan, and data collected during the past two years on SIG implementation [Provide an overview of data reviewed]. First we’d like to discuss areas where changes related to either policies, practices, and structures that occurred because of SIG successfully impacted student learning. We would like you to focus your response specifically on those changes that had a significant impact on learning.

1. Describe changes at the school that were implemented because of SIG that had a significant impact on student learning and tell me how/why you think the change had an impact. Click here to enter text.
   a. [If they have not addressed domains of interest, prompt for changes related to school leadership; teacher practices, instruction, and curricula; professional development and coaching; staff selection; staff performance evaluation; climate]
and morale; socio-emotional supports; family/community engagement; district support.]

2. How did these changes brought about by SIG impact student learning?  Click here to enter text.

3. Please briefly describe any changes brought about by SIG that you felt had a significant impact on student attitudes and behavior.  Click here to enter text.

4. Please briefly describe any changes brought about by SIG that you felt had a significant impact on school and staff climate and morale.  Click here to enter text.

**DISTRICT, MDE, AND EXTERNAL PROVIDER ROLES DURING SIG THAT CONTRIBUTED TO SIGNIFICANT IMPACT**

Next, we’d like to discuss the ways in which your district office, MDE, and external providers contributed to helping your school improve, specifically what role they played in the changes brought about by SIG that had a significant impact on student learning. We are not necessarily looking for a description of everything each entity did related to SIG (we have gathered that data over the past three years), instead we want to hear about what each entity did related to only those changes in policies, practices, and structures that had a significant impact on student learning.

5. You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did the district contribute to (facilitate) that change?  REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT.  Click here to enter text.

   a. In what ways, if any, did the district impede SIG implementation of these key changes (in policies, practices, and structures)?  Click here to enter text.

   b. Looking back on three years of SIG implementation as a whole, what would you have liked the district to do differently if you were to start SIG again?  Click here to enter text.

6. Now for MDE. You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did MDE contribute to (facilitate) that change?  REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT.  Click here to enter text.

   a. In what ways, if any, did MDE impede SIG implementation of these key changes (in policies, practices, and structures)?  Click here to enter text.
b. Looking back on three years of SIG implementation as a whole, what would you have liked MDE to do differently if you were to start SIG again? Click here to enter text.

7. Now for external providers. You mentioned changes related to (insert area of change noted in question 1) significantly impacted student learning, how did external providers contribute to (facilitate) that change? REPEAT FOR EACH CHANGE MENTIONED IN QUESTION 1 THAT HAD A SIGNIFICANT IMPACT. Click here to enter text.

   a. In what ways, if any, did external providers impede SIG implementation of these key changes (in policies, practices, and structures)? Click here to enter text.

   b. Looking back on three years of SIG implementation as a whole, what would you have liked external providers to do differently if you were to start SIG again? Click here to enter text.

8. Is there anyone or anything else that you feel had a noteworthy contribution on significantly impacting student learning? Click here to enter text.

9. Is there anyone or anything else that you feel could have been better utilized to have a noteworthy contribution on significantly impacting student learning? Click here to enter text.

**SUSTAINABILITY**

Next, we want to ask about sustainability of ANY SIG-related efforts. We have read the sustainability plan your school submitted to MDE, and we’d like to discuss both your plan in general and how your plan relates to those key areas of change that brought about an impact through SIG.

10. Let’s begin by briefly reviewing the major components of the sustainability plan as we understand it. (Present your understanding of the plan and make sure you understand the major moving parts of the plan and can make sense of the draft of the sustainability plan we have). Note any areas where your read of the plan was revised. Click here to enter text.

11. How did you decide what went into the sustainability plan (e.g., what processes, components, strategies, etc., would be included in the plan)? Click here to enter text.

12. What part/s of the plan is/are focused on sustaining (insert area of change noted in question 1) that brought about a significant impact on learning through SIG? (Make sure you ask about each change—in policy, practice, structure, or otherwise—identified in question 1.) Click here to enter text.
13. Currently, you are in the middle of your first year of your sustainability plan. Which pieces are working well? Click here to enter text.

   a. Moving into year two, what pieces of your sustainability plan will you change? Click here to enter text.

**REFLECTING ON SIG**

14. Looking back on your three years of SIG implementation, what would you do differently as a school principal if you were to start again? Click here to enter text.

15. Is there anything else that you would like to add? Click here to enter text.
Thank you for taking the time to talk with us. As you know, WestEd, is under contract with the Michigan Department of Education to study the ARRA-funded SIGs that were awarded in 2010, and a team from WestEd visited your school in spring 2012. We’re back because this school was selected as a SIG-I case study school based on its improvements on state test scores since the 2009-10 school year and substantial progress on implementation of core SIG components.

As was the case this past spring, we’re collecting information about the decisions and strategies that schools and districts undertake, and the constraints they face as they work to implement intervention models intended to improve student outcomes. Only this time, based on what we learned from our site visits to all SIG-I schools last year, we want to go deeper into what has worked well for this school and what has not worked so well with regards to school improvement generally and SIG in particular, and equally important why and how things have worked well.

While only six schools were selected for case study and MDE was involved in school selection, in our reporting schools will not be named. We will discuss individual schools in our report but each school will be given a pseudonym. Similarly, although we will identify the role or title of the people we speak to, we will not identify any individual by name. Do you have any questions before we begin?

BACKGROUND QUESTIONS (IF COORDINATOR WAS NOT INTERVIEWED SPRING 2012)

1. When did you begin working at this school?  
2. What was your position before coming to this school? Describe the position.  
3. Tell me a little about your background. [Probes: Did you have prior experience or training working with low-performing schools or students]?  
4. How would you describe your role in SIG? [Probes: More oversight and delegation or “in the weeds”? Has your role changed over time and, if so, how has it changed]?  
5. Currently, do you have any other official roles at this school or district in addition to your role in SIG? If so, please describe.  

FAMILY AND COMMUNITY ENGAGEMENT/STAKEHOLDER INVOLVEMENT

6. What is your familiarity or involvement with the school’s family engagement efforts? Describe family engagement.  
   a. (If you are familiar or involved) What have been the most successful strategies, how successful have they been, and why do you think they were successful?  
   b. Has/How has this contributed to improving climate and/or increasing student performance?  
   c. What has been unsuccessful and why do you think it was unsuccessful?
7. **Overall, how would you describe the nature and extent of boarder community and other stakeholder engagement at your school (i.e., non-parents)?**
   a. Were/How were stakeholders (outside of the school staff and parents) identified and brought into the school’s improvement efforts?
   b. What has the school done to engage them, what was successful, what was not?
   c. What has been the role and contribution, if any, of these outside/community stakeholders in supporting the school and/or increasing student performance?

8. **How would you describe the climate at this school (i.e., school environment, atmosphere, morale)?**
   [Probes: What do you see and hear when you first walk in the school? What is the demeanor of the students and staff? How do students treat each other? Do you feel safe? Does it look clean?]

9. **What aspects of school climate in particular have improved or worsened since SIG, over the last 3 years?**
   a. Why specifically do you think it has improved or worsened and what have been the biggest factors contributing to these changes?

10. **Regarding morale in particular, over the past three years has student and staff morale increased or decreased AND what has contributed to this change (e.g., heavier workload, added supports, collaboration)?**
    a. What most motivates students?
    b. What most motivates staff?

11. **Do you feel your school has the right staff to significantly improve student achievement? Explain why or why not.**
    a. Discuss the strengths and weaknesses of your current staff in their entirety (we are not asking about specific individuals) and how these strengths and weaknesses have played a role in (1) promoting your school’s success and (2) limiting your school’s success.

12. **As of last year, we understand your school (had/had not/was in the process of) identified/ing and used/ing a formal set of teacher skills and competencies in hiring teachers. Is this the current status?**
    a. *(If skills and competencies have been identified)* What role have these played in your school’s improvement and have they actually allowed the school to hire who it needs to improve the school? Have they been institutionalized? If no, why not?
    b. *(If skills and competencies are being identified/have not been identified)* What have been the challenges to identifying and using a formal set of skills and competencies?

13. *(If the school has made improvements, but responses to previous two questions indicate significant limits to principal’s autonomy, flexibility, and authority, ask the following question.)*
    How has the school been able make improvements given the limits to your principal’s autonomy, flexibility, and authority to hire or remove staff you just described?
14. What in your view have been the main drivers of improvements at this school over the past three years in terms of student performance? Implementation?  

15. What in your view has been the main impediment to improvements at this school over the past three years?  

16. Is there anything else you would like to share that would help me understand how your school accomplished its improvements under SIG?
Year 3 Case Study
MDE SIG – SIG Leadership Team Focus Group Protocol

Thank you for taking the time to talk with us. As you know, WestEd, is under contract with the Michigan Department of Education to study the ARRA-funded SIGs that were awarded in 2010, and a team from WestEd visited your school in spring 2012. We’re back because this school was selected as a SIG-I case study school based on its improvements on state test scores since the 2009-10 school year and substantial progress on implementation of core SIG components.

As was the case this past spring, we’re collecting information about the decisions and strategies that schools and districts undertake, and the constraints they face as they work to implement intervention models intended to improve student outcomes. Only this time, based on what we learned from our site visits to all SIG-I schools last year, we want to go deeper into what has worked well for this school and what has not worked so well with regards to school improvement generally and SIG in particular, and equally important why and how things have worked well.

While only six schools were selected for case study and MDE was involved in school selection, in our reporting schools will not be named. We will discuss individual schools in our report but each school will be given a fake name. Similarly, although we will identify the role or title of the people we speak to, we will not identify any of them by name. Do you have any questions before we begin?

**BACKGROUND QUESTIONS**

1. Tell me about the role of this team and its responsibilities with regards to school improvement and SIG. In your description, please mention how the team operates and works together.
   a. How were each of you selected, was there a choice in the matter, any resistance?

**GOVERNANCE AND LEADERSHIP**

2. A three part question: Describe:
   
   (1) your principal’s leadership style or model? Could you give me examples of how the principal has exercised his (or her) leadership style and when it has worked and not worked as intended?

   (2) whether you feel it has been effective or not in getting SIG implemented, improving the school and raising student achievement, and

   (3) why you think it has or has not been effective.

3. Describe this team’s role under the principal’s model? Which of you does she/he consult for different things?
**Time allotted: 1.5 hours**

4. What, if any, do you think have been the impediments or challenges the principal has encountered with respect to providing leadership (i.e., setting vision and goals for the school and moving staff toward goals), and how has he (she) been able to overcome these? [Probes: Any impediments from the district, teachers, or parents, and how have you been able to overcome these?]

5. Describe the autonomy you think your principal has from your district and how/whether this autonomy (or lack thereof) has been a factor in school improvements?

### MONITORING

6. Tell me the details of how your staff use data to improve student learning? [Probe: How is learning monitored; how is corrective action taken when learning is not occurring to expectations?]
   a. What are teachers expected to do with the data?
   b. What is this teams’ role in this process?

7. How does the school (you) know its collecting the right data (i.e., valid and reliable) and what are the school’s processes for ensuring data are actionable and used (i.e., they are not simply collected and then sit unused)?

### PROFESSIONAL DEVELOPMENT AND COACHING (MONITORING)

*Recap what we know about the PD and coaching teachers receive.*

8. Has/how has the PD and coaching the teachers received over the past three years been:
   a. relevant to teachers’ needs and what has been done to keep it relevant (i.e., responsive)?
   b. effective at changing teacher practices, and how has the school made sure the PD and coaching were changing practices?
   c. effective at improving student achievement, and how has the school made sure the PD and coaching were improving student achievement?

9. What other types of support, besides PD and coaching, did teachers receive to successfully implement school improvement efforts?

### ALIGNMENT OF FISCAL AND HUMAN RESOURCES

10. What is this team’s role in making decisions about SIG resources and their allocation?

11. How much do staff know about the details of the SIG plan and where SIG funds go? Is it important to you to know this and why or why not? Do/how do you think it impacts staff morale?

### ADDITIONAL QUESTIONS

12. What in your view have been the main drivers of improvements at this school over the past three years in terms of student performance? Implementation?

13. What in your view has been the main impediment to improvements?

14. Is there anything else you would like to share that would help me understand how your school accomplished its improvements under SIG?
Year 3 Case Study
MDE SIG – Parent and Community Member Focus Group Protocol

School Name
Participant 1 Name and Role
Participant 2 Name and Role
Participant 3 Name and Role
Participant 4 Name and Role
Participant 5 Name and Role
Participant 6 Name and Role
Date of Interview
WestEd Lead Interviewer
WestEd Assistant Interviewer

Thank you for taking the time to talk with us. We are from WestEd, an organization that research in education. WestEd is under contract with the Michigan Department of Education to study 28 schools that were awarded School Improvement Grants in 2010.

For the past year, we have interviewed school staff, surveyed teachers, and examined test scores. We’re back at this school because it was as selected as one of six case studies based on its improvements on state test scores since 2009-10 and substantial progress on implementation of core SIG components. We have collected information from many different individuals over the past year but now we want to hear from parents and other members of the community about what they think of this school, for example: how it helps students learn, and what has worked well or not with regards to trying to improve this school.

While only six schools were selected for case study and MDE was involved in school selection, in our reporting schools will not be named. We will discuss individual schools in our report but each school will be given a pseudonym. Similarly, although we will identify the role or title of the people we speak to, we will not identify any individual by name. Do you have any questions before we begin?

BACKGROUND QUESTIONS

1. I would like to know which of you have children at this school, which grade(s) they are in, and how long they have attended.
   a. For those without children in this school, please describe your involvement with the school and how it started.

2. [For all schools except Arthur Hill HS] As I said before, we are visiting this school because it has demonstrated some gains in academic outcomes. Were you aware of these improvements? Who or what do think was responsible for the changes?

   [For Arthur Hill] What is your sense of the improvements and progress your school has made over the past 3 years? What do you think is responsible for improvements or lack of improvements?

3. Since the time when your first child attended the school, have you noticed any changes in the school? If so, please describe them. [Probe: How do teachers and principals work—or not work—with parents, student learning and behaviors, teacher quality, the nature of the instruction, aspects of the physical environment.]

4. In general, how do you feel about the school? What is the school’s reputation in the district? Has your impression of the school changed over time? If so, what caused the change?
FAMILY AND COMMUNITY ENGAGEMENT/STAKEHOLDER INVOLVEMENT

5. Are you aware of the school’s visions, plans, goals, accomplishments, challenges, or failures? What information has been presented to you and by whom? [Note if differences in responses by parents and non-parents.] 

6. Describe the extent to which you are involved in school activities in general?
   a. How about in activities that involve helping or supporting the school in implementing its improvement plan (i.e., SIG plan over the past 3 years)? 
   b. What has been parents’ general reaction over the past 3 years (i.e., to the improvement plan and its changes)? Generally supportive, resistant, indifferent? 
   c. Do you believe you are welcome in the school AND encouraged to participate? If yes, can you give some examples? 
   d. Do you think your contributions matter? In what way, how do you know? 

7. Have/How have non-parent community members been involved with planning and implementing changes at this school in the past three years (i.e., changes related to SIG)? How did the school reach out to you?
   a. Do you think your contributions matter? In what way, how do you know? 

SCHOOL ENVIRONMENT/CLIMATE

8. How would you describe the climate at this school (i.e., school environment, atmosphere, morale)? [Probes: What do you see and hear when you first walk in the school? What is the demeanor of the students and staff? How do students treat each other? How do staff and student interact? Do you feel safe? Does it look clean?] 

9. What aspects of school climate in particular have improved or worsened since SIG, over the last 3 years?
   a. Why specifically do you think it has improved or worsened and what have been the biggest factors contributing to these changes? 

10. How safe do you feel your students are at this school and how safe do your children feel? [Probes: Has safety increased or decreased in the past three years?
    a. Why specifically do you think safety has increased or decreased and what have been the biggest contributing factors? 
    b. Any specific programs or procedures the school is running in an attempt to increase safety or increase student engagement? If, yes, how did you find out about them and do you think they have made any difference? 
    c. Do parents have a role in these programs or procedures, or do just the students and school staff get involved? 

11. Do you hear from your child/children that the school is particularly focused on specific content areas? If yes, which?
    a. If yes, how do you and your child/children here feel about this focus? 

ADDITIONAL QUESTIONS

12. Is there anything else you would like to share that would help us understand your school’s improvement efforts?
INTRODUCTION

Thank you for taking the time to talk with us. We are from WestEd, a company that specializes in evaluating educational programs. WestEd was invited by the Michigan Department of Education to do a study on how well your school has used money from the government called School Improvement Grants, or SIG, to improve schools. Your school received this money for the past three years. The purpose of the study is to see how well SIG money is working and how education might be improved in the future.

We want to learn about your thoughts about how the SIG has changed teacher and student attitudes and behaviors, school culture and climate, and student achievement. We will ask about your experiences during the past three years, how things are at your school this year compared to your first year here. Please share as much as you are comfortable, and allow your peers to talk as well.

Your participation in the group is completely up to you. If you choose not to participate, there will be no penalty or loss to you. If you decide now to be in the study but change your mind later, you are also free to leave the study and focus group at any time. In addition, we will keep your answers private in that no one outside the focus group or study staff will know what answers you gave. When we report the results, we will not give out any information that could be used to identify you. Neither your teachers nor your principal will know your responses.

You will not be paid for your participation, but your participation will help contribute to improving education and the use of SIG money in the future. Additionally, the focus group is an opportunity for you to provide feedback on your experience. We do not think there are any risks or discomforts to you for participating in the focus group.

Do you have any questions before we begin?

SCHOOL CULTURE AND CLIMATE

In the first section, we will ask you about your perceptions of school culture and climate. By culture and climate what we mean is atmosphere at the school, overall feelings and attitudes between students and teachers, among students, among teachers. You can also think of this as the general feeling of the school.
1. Think about this school year, how would you describe overall school culture and climate and has it changed since you were a freshman? Click here to enter text.
   
a. How would you describe the teachers’ culture and climate and has it changed since you were a freshman? Click here to enter text.
   
b. How would you describe other students’ culture and climate and has it changed since you were a freshman? Click here to enter text.
   
c. How would you describe your school to people who don’t go to school here? Click here to enter text.
      
i. Do you think people at this school (students, teachers, principal) care about making this school a good place to go to school? Click here to enter text.
      
ii. Do you think people at this school care about how students do in school? Click here to enter text.

2. Now think back to your first year at school year (4 years ago), how would you describe school culture and climate then? Is it different from the current school culture and climate? In what ways? Click here to enter text.

3. How important, if at all, do you think school culture and climate is to helping students succeed and learn? Click here to enter text.

**COMMUNITY AND PARENT ENGAGEMENT**

*For this portion of today’s group, let’s discuss your community and how your parents, neighbors, businesses, or other schools are involved with your school.*

4. How would you describe your community’s involvement in your school—by community involvement we mean parents, businesses, or other adults who don’t have students here like alumni—and has this changed since you were freshmen? Click here to enter text.
   
a. Do you feel that people in your community, who are not students or staff at this school, care about this school? How do you know? Click here to enter text.
   
b. Do you think parents of students care about this school? How do you know? Click here to enter text.
   
c. Has this changed since your first year at this school? If yes, in what ways? Click here to enter text.
      
i. Do you know why this changed? Click here to enter text.
TEACHER AND STUDENT PERFORMANCE

This section asks about your perceptions of teachers, the way they teach, what they do in the classroom. We’ll also talk about students at this school and their attitudes toward learning.

5. Think back to your first year at this school. Have there been changes in the way teachers teach? For example, do you work together with other students more or less; do you have more or less homework; do you or your teachers use more or less technology; is there more or less accountability for your work? Describe those changes. Click here to enter text.

d. Now tell me what you think about these changes.

i. Do they help you learn? Click here to enter text.

ii. Do they get you more interested or engaged in learning? Click here to enter text.

e. What could be done to get students more interested and engaged in learning? Click here to enter text.

6. [Ask question 6 if student did not address attitudes toward learning and school in response to question 5.] Now think about students at this school during the past three to four years. How would you describe students’ attitudes toward learning or doing well in school? Click here to enter text.

f. Do you think this has changed from the first year you went to school here? If yes, in what ways? Click here to enter text.

Those are all the questions we have for you today. Is there anything else you would like to tell us about your experience going to this school and how that has/or has not changed in the past three years?

[If there is time]

1. If you think back to your first year here at this school, are there any other parts or areas of your school (teachers, teaching, materials, resources, other) that have changed in a way that made your school a better place to be or a better place to learn? If yes, please describe. Click here to enter text.

2. If you knew your school was going to get money to help improve the school, specifically student learning, next year, where do you think that money would be best spent to most help your school? Click here to enter text.
Thank you for agreeing to meet with us today and to participate in the study. As you are aware, the Michigan Department of Education (MDE) commissioned an evaluation of Michigan’s School Improvement Grant (SIG) program. WestEd, a nonprofit education research agency, is conducting this evaluation study on behalf of MDE.

MDE selected your school to participate in a case study to investigate what SIG school staff thought worked best and what could be improved about the SIG model generally. We really want to hone in on those things that had a meaningful and significant impact.

WestEd will interview district staff, principals, school leadership teams, teachers, and students. This interview will last approximately 45 minutes. The purpose of this focus group is to obtain information on the sustainability, impact, staff buy-in, and lessons learned with SIG implementation. We’ve asked for your participation in the focus group because of your role as a teacher. Your participation will help provide information on the SIG process and potentially improve future implementation of similar programs as well as help priority schools in Michigan implement their reform or redesign plans. Additionally, the focus group is an opportunity for you to provide feedback on your experience.

Do you have any questions before we begin?

**IMPACT OF SIG**

We have reviewed student achievement data, your school’s SIG implementation plan, and data collected during the past two years on SIG implementation [Provide an overview of data reviewed]. First we’d like to discuss areas where changes related to either policies, practices, and structures that occurred because of SIG successfully impacted student learning. We would like you to focus your response specifically on those changes that had a **significant impact** on learning.

1. Describe changes at the school that were implemented because of SIG that had a **significant impact** on student learning and tell me how/why you think the change had an impact. [Click here to enter text.]

   a. [If they have not addressed domains of interest, prompt for changes related to school leadership; teacher practices, instruction, and curricula; professional development and coaching; staff selection; staff performance evaluation; climate]
and morale; socio-emotional supports; family/community engagement; district support. Click here to enter text.

2. How did these changes brought about by SIG impact student learning?

3. Please briefly describe any changes brought about by SIG that you felt had a significant impact on student attitudes and behavior. Click here to enter text.

4. Please briefly describe any changes brought about by SIG that you felt had a significant impact on school and staff climate and morale. Click here to enter text.

**SUSTAINABILITY**

Next, we want to ask about sustainability of ANY SIG-related efforts. We have read the sustainability plan your school submitted to MDE, and we’d like to discuss both your plan in general and how your plan relates to the policies, practices, and structures that brought about a change through SIG.

5. How involved were teachers in creating the school’s sustainability plan? How familiar are teachers with the school’s SIG sustainability plan? Click here to enter text.

6. Were teachers a part of how the school decided what went into the sustainability plan (e.g., what processes, components, strategies, etc., would be included in the plan)?

7. What (“part/s of the plan”) / (“current efforts” if teachers are unfamiliar with plan) is/are focused on sustaining (insert area of change noted in question 1) that brought about a significant impact on learning through SIG? (Make sure you ask about each change—in policy, practice, structure, or otherwise—identified in question 1.) Click here to enter text.

8. [IF TIME PERMITS] Currently, you are in the middle of your first year of your sustainability plan. Which pieces are working well? Click here to enter text.

   a. Moving into year two, what pieces of your sustainability plan will you change? Click here to enter text.

**REFLECTING ON SIG**

9. Looking back on your three years of SIG implementation, what would you do differently if you were to start again? Click here to enter text.

10. If you knew your school was going to get money to help improve the school, specifically student learning, next year, where do you think that money would be best spent to most help your school?

11. Is there anything else that you would like to add? Click here to enter text.
Appendix D:
Student Achievement at SIG Schools After One and Two Years
The models used for the analysis of MEAP scores after two years, and MME scores after one and two years, are the same as those used to analyze MEAP and MME scores after three years. The two-level models that we employed for the MEAP analyses after one year of SIG are outlined by the equations below using Raudenbush and Bryk’s (2002) terminology and notations. The additional covariates used in the analyses that included multiple grade levels are noted below.

Level-1 model:

\[ Y_{ij} = \beta_0 + \beta_1 \text{(Prior Mathematics Score)}_{ij} + \beta_2 \text{(Prior Reading Score)}_{ij} + \beta_3 \text{(Demographic Covariate 1)}_{ij} + \ldots + \beta_Q \text{(Demographic Covariate Q)}_{ij} + r_{ij} \]

Where

- \( Y_{ij} \) was the average posttest mathematics, reading, or science score for student \( i \) in school \( j \).
- \( \beta_0 \) was the average posttest score for students within school \( j \).
- \( \beta_1 \) and \( \beta_2 \) were level-1 coefficients that described the strength and direction of the associations between the prior mathematics and reading scores and the posttest scores.
- \( \beta_3 \) to \( \beta_Q \) were additional level-1 coefficients that described the strength and direction of the associations between student demographic characteristics and the posttest scores. The student-level control variables included students’ economic status, special education status, English proficiency status, gender, and race/ethnicity. The student demographic characteristics were dummy coded. The analyses that included multiple grade levels also included dummy codes for the students’ grade levels.
- \( r_{ij} \) was the residual (i.e., a level-1 random effect) associated with student \( i \)'s posttest score in school \( j \) using the level-1 model.

Level-2 model:

\[ \beta_0 = \gamma_{00} + \gamma_{01} \text{(Intervention Status)}_j + u_0 \]

Where

- \( \gamma_{00} \) was the average posttest score for the comparison group after accounting for the covariates.
- Intervention status (SIG-I = 1; Comparison = 0) was a dummy coded variable that contrasted the schools that participated in the intervention with the comparison schools.
- \( \gamma_{01} \) was the level-2 coefficient that described the strength and direction of the association between the intervention status and the posttest scores. The analyses with the multiple grade levels also included a dummy coded variable contrasting elementary and middle schools.
- \( u_0 \) was the school random effect that corresponded to the deviation of school \( j \)'s level-1 intercept, \( \beta_0 \), from its predicted value using the school-level model.
Exhibit C1: Average MEAP Mathematics, Reading, and Science Scores after One Year of SIG

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>SIG Students</th>
<th>Comparison Students</th>
<th>Adjusted Mean Difference</th>
<th>95% CI for the Adjusted Mean Difference</th>
<th>p value</th>
<th>Effect Size</th>
</tr>
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<tr>
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<td>School n</td>
<td>Student n</td>
<td>Unadjusted Mean</td>
<td>Adjusted Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIG Students</td>
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</tr>
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Note: Adjusted means are based on MEAP scale scores from the fall 2012 administration. The “All Grades” MEAP scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. A score of -0.75 is equivalent to a scale score that is three-quarters of a standard deviation below the state mean. Positive differences indicate higher scores for SIG-I students. The adjusted means have been adjusted to account for the multi-level structure of the data and the student-level covariates. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. None of the differences were statistically significant after using the Benjamini-Hochberg correction for multiple comparisons.

* p < .05.
### Exhibit C2: Average MEAP Mathematics, Reading, and Science Scores after Two Years of SIG

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<th>95% CI for the Adjusted Mean Difference</th>
<th>p value</th>
<th>Effect Size</th>
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<td>SD</td>
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*p < .05.

Note: Adjusted means are based on MEAP scale scores from the fall 2012 administration. The “All Grades” MEAP scores were normalized within grade level by subtracting the state mean from each student’s scale score and dividing by the state standard deviation. A score of -0.75 is equivalent to a scale score that is three-fourths of a standard deviation below the state mean. Positive differences indicate higher scores for SIG-I students. The adjusted means have been adjusted to account for the multi-level structure of the data and the student-level covariates. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. None of the differences were statistically significant after using the Benjamini-Hochberg correction for multiple comparisons.
### Exhibit C3 Average MME Mathematics, Reading, and Science Scores after One Year of SIG

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<th>95% CI for the Adjusted Mean Difference</th>
<th>p value</th>
<th>Effect Size</th>
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<td>Adjusted Mean SD</td>
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Note: The means are based on MME scale scores from the spring 2011 administration. The adjusted means have been adjusted to account for the multi-level structure of the data and the student- and school-level covariates. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. SIG-I schools N = XX; Comparison schools N = XX.

### Exhibit C4: Average MME Mathematics, Reading, and Science Scores after Two Years of SIG

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Note: The means are based on MME scale scores from the spring 2012 administration. The adjusted means have been adjusted to account for the multi-level structure of the data and the student- and school-level covariates. Each effect size was calculated by dividing the adjusted mean difference by the pooled standard deviation. SIG-I schools N = 16; Comparison schools N = 35.