

# Evaluation of the State Program Improvement Grant (SIG) Program

## Final Report

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# EVALUATION OF THE STATE PROGRAM IMPROVEMENT GRANT PROGRAM FINAL REPORT

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# Chapter 1. INTRODUCTION

This report is the final in a series of five documents that enumerate the results of Westat's formative evaluation of the U.S. Department of Education's State Improvement Grant Program (SIG Program). Rather than providing a summary of the overall evaluation, this report details the final phase of the SIG Program Evaluation. The two primary activities during this phase were creating a catalogue of SIG project<sup>1</sup> outcomes and describing dimensions of effective SIG project leadership.

This first chapter provides background information regarding the SIG Program. A description of the findings from the evaluation's cataloguing and rating of SIG project outcomes follows in Chapter 2. Chapter 3 is an account of the evaluation's effort to document leadership activities that effectively promoted systemic change in funded states. Chapter 4 presents a theory of systemic change derived from the evaluation team's learning over the course of the evaluation.

## The Genesis and Nature of the SIG Program

The federal role in the education of individuals with disabilities dates to 1958.<sup>2</sup> Since this time, a cornerstone of federal disability legislation and policy has been an effort to build and maintain the work force that is needed to achieve positive results for students with disabilities. The primary responsibility for ensuring that the persons responsible for educating these students possess the requisite skills and knowledge has always rested with schools and local education agencies (LEAs). Over the years, however, and particularly since the enactment of the Education for All Handicapped Children Act of 1975,<sup>3</sup> LEAs have come to rely on a complex system of personnel preparation and professional development to ensure an adequate supply of qualified personnel. Institutions of higher education (IHEs) have historically been at the center of this system, receiving direct support from federal grant programs designed to increase both the supply and quality of personnel. State education agencies (SEAs) have had an important coordination role, mandated initially by P.L. 94-142, which they have carried out through activities described as their comprehensive system of personnel development (CSPD).

With the 1997 Amendments to the Individuals with Disabilities Education Act (IDEA), Congress authorized *State Program Improvement Grants for Children with Disabilities*, which signaled a major new chapter in the longstanding federal support for personnel development. Through these grants, targeted federal financial resources became available "to assist State educational agencies, and their partners...in reforming and improving their systems for providing educational, early intervention, and transitional services [for children with disabilities], including

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<sup>1</sup> In this report, the term *SIG Program* refers to the overall program established by IDEA'97, and the term *SIG project* refers to the state projects funded through SIG Program grants.

<sup>2</sup> With P.L. 85-926, the Education of Mentally Retarded Children Act, Congress authorized the use of discretionary funds for personnel preparation in the area of mental retardation.

<sup>3</sup> P.L. 94-142

their systems for professional development, technical assistance, and dissemination of knowledge about best practices.”<sup>4</sup> To administer grants under this legislation, the U.S. Department of Education’s Office of Special Education Programs (OSEP) established the SIG Program. The SIG Program enhanced the long-standing role the federal government has played in assisting states in their efforts to educate children and youth with disabilities and represents a logical evolution of that role in a number of respects. It also deviates from tradition in significant ways.

The SIG Program’s focus on professional development, technical assistance, and dissemination of best practices is consistent with CSPD requirements and with prior personnel preparation grant programs under IDEA ‘97. As with the CSPD, each state was required to use its SIG funds in accord with its State Improvement Plan, thus addressing areas of personnel shortages. As noted in the report from the Senate Committee on Labor and Human Resources that accompanied the IDEA bill, the SIG Program was “an attempt to improve results for children with disabilities through addressing personnel needs of States as identified and defined by States, not the Federal Government” (p. 37).<sup>5</sup> Under the SIG Program, states could focus on recruitment and retention initiatives as well as personnel development. Thus, the states’ SIG projects complemented CSPD.

The SIG Program, however, enhanced or went beyond CSPD functions in four important ways. First, the program provided additional funds to states to plan and implement initiatives. Second, the program emphasized the use of an existing foundation of research-based knowledge. Third, the program emphasized systems change, as noted in the Senate committee report: “[the SIG Program] establishes a new system of grants to improve results for children with disabilities *through systemic reform* [italics added] with an emphasis on personnel training” (p. 37).<sup>6</sup> Fourth, the SIG Program required state applicants to conduct a comprehensive needs assessment, the results of which were to be used to justify the project activities proposed in the grant application.

The SIG Program was clearly an attempt by Congress to strengthen the states’ role in professional development relative to IHE teacher preparation programs. With the SIG Program, a shift occurred from the practice of directing federal professional development dollars almost exclusively to IHEs, through OSEP’s Personnel Preparation Program, to the allotment of funds to SEAs as well. The Senate committee report makes the intention clear:

“Under the current program, universities receive grants based on applications...[that] generally focus on pre-service training for special education teachers. In many States, the greatest need for training is for in-service training for general and special education teachers, and for pre-service training in addressing the special instructional needs of children with disabilities...for future general education personnel. The committee believes that, by targeting State Program Improvement Grant funds as it has, appropriate training for teachers addressing the learning needs of children with disabilities...will help reduce

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<sup>4</sup> IDEA, 1997, Part D, Subpart 1, Sec. 651(b)

<sup>5</sup> Senate Report No. 105-17 (1997)

<sup>6</sup> Senate Report No. 105-17 (1997)

inappropriate referrals to special education of learning disabled children and improve results for children with disabilities served by both general and special educational personnel” (p. 37).<sup>7</sup>

The premises on which the SIG Program was based can be inferred from Congress’s assertions about the program in IDEA ‘97:

- States are in the best position to identify the improvements required to obtain better results for children with disabilities;
- Systems change is necessary to effect those improvements;
- Improving systems requires comprehensive planning that involves multiple individuals, agencies, and institutions;
- To affect a large proportion of students, states must engage multiple partners and use systems change strategies
- SEAs need to play a leadership role in engaging partners and bringing about the systems changes;
- A body of research-based knowledge and best practice exists in special education and related disciplines around which systemic change efforts can be developed and implemented;
- Improved student outcomes will occur when efforts at systems change target (1) personnel recruitment, retention, and pre-service enrollment, which will ensure an adequate supply of qualified personnel; and (2) personnel development (pre-service and in-service), which will promote the use of research-based practice; and
- The national interest will be served by the federal government having a role in assisting states with these improvement efforts.

Importantly, the law’s focus on systemic change was further emphasized by OSEP staff in the guidance provided to states both in completing SIG applications and implementing the grants once funded. For example, an OSEP request for grant applications stated, “In determining the significance of the proposed project, the Secretary considers the likelihood that the proposed project will result in *system change* [italics added] or improvement.”<sup>8</sup> OSEP also made clear the systemic change purpose in developing the competition for the SIG Program Evaluation contract, which funded Westat’s evaluation. The evaluation was expected to provide information and recommendations regarding the extent to which the SIG Program is meeting three fundamental goals, including the goal “to improve results for infants, toddlers, and children with disabilities as an outcome of *systemic change* [italics added].”<sup>9</sup>

IDEA ‘97 identified three specific systems that should be a target for change within the SIG projects: professional development, technical assistance, and dissemination of information. Guidance from OSEP to SIG project staff specifically encouraged emphasis on the first of these systems, professional development. In fact, Congress required SIG grantees to use not less than 75 percent of their funding “to ensure that there are sufficient regular education, special education, and related services personnel who have the skills and knowledge necessary to meet

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<sup>7</sup> Senate Report No. 105-17 (1997)

<sup>8</sup> Federal Register. (October 18, 2000), p. 62539.

<sup>9</sup> Federal Register. (April 25, 2000), p. 25168.

the needs of children with disabilities and developmental goals of young children.”<sup>10</sup> This requirement led most states to emphasize strategies that were designed to increase the quality and quantity of adequately trained special and general education personnel through the most direct means, which consisted of professional development activities. As a consequence, states focused their SIG project activities primarily on improving their systems of professional development. Accordingly, the SIG Program Evaluation also focused its inquiry primarily on systemic change efforts in the area of professional development.

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<sup>10</sup> States could spend 50 percent of their funding on personnel needs if the state’s needs in this area had been met—no state made this claim.

## Chapter 2. SIG PROJECT OUTCOMES

In previous years, the SIG Program Evaluation focused on documenting SIG project activities, determining the quality of SIG projects' evaluations, and investigating states' efforts to implement systemic change. As the evaluation approached its end, the focus shifted to assessing outcomes, as reported by SIG projects. Specifically, the number, type, and quality of SIG project outcomes were analyzed. The purpose of this analysis was twofold. First, the results of this analysis provide descriptive information about SIG projects as a whole. And second, the catalogue of outcomes can serve as the basis for judgments about the overall success of the SIG Program.

In 2005, the evaluation team began conducting a thorough investigation of SIG project outcomes. Included in this evaluation were SIG project outcomes generated and reported by all five of the cohorts of SIG projects, that is, those projects funded with 5-year grants that started in years 1999 through 2003. Forty-eight states received grants during that period. Generally, outcomes associated with the second round of SIG funding—3-year grants that began in 2004 and that are referred to as SIG II—are not included in this analysis, with the exception of outcomes that are clearly a result of activities that states continued from their first SIG.

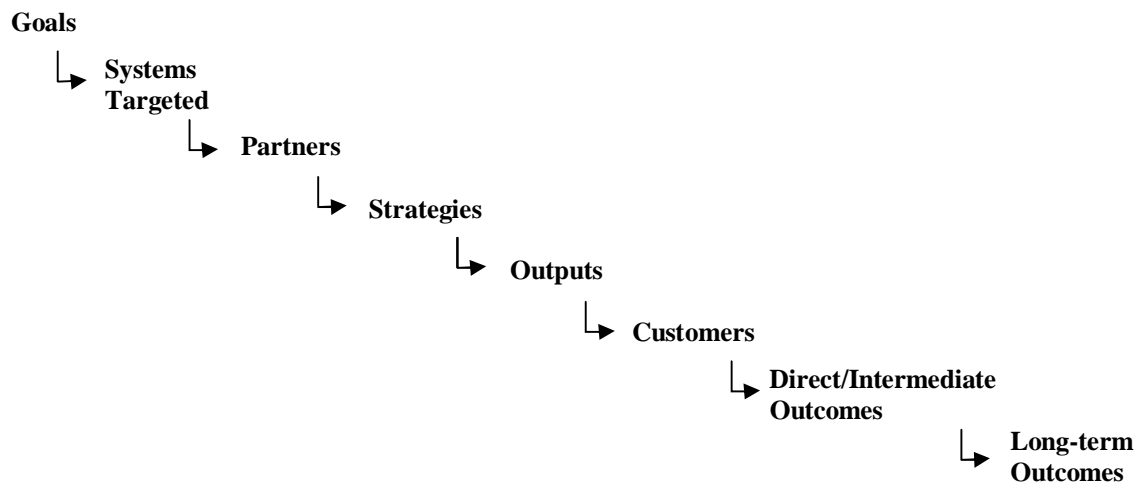
The sections that follow introduce the outcomes analysis, describe the procedures used to conduct the analysis, and present the findings of the analysis.

### Outputs and Outcomes

As an early activity of the SIG Program Evaluation, the evaluation team prepared logic models for the 48 SIG projects funded as part of the 1999 to 2003 cohorts. The models summarized each state's plan for its SIG project. The models provided comprehensive, standardized descriptions of the projects and graphic representations of their critical features, including goals, systems targeted for change, partners, strategies/activities, outputs, customers, and two levels of expected outcomes. The content of each logic model was confirmed by each state's SIG project staff. Figure 1 depicts the flow of the models. (See the *First Interim Report* for a detailed description of the logic models.) The logic models provided a structure that the evaluation team used in understanding and cataloguing SIG project outcomes.

Beginning with the preparation of the logic models, the SIG Program Evaluation team emphasized the distinction between outputs and outcomes. The evaluation defined outputs as the "direct results of the SIG project activities, including SIG project products and programs as well as the customer contacts resulting from them." Consistent with the congressional mandate, the primary outputs of SIG projects, which have been documented in previous evaluation reports, were (1) training of professional personnel, paraprofessionals, parents, and administrators; (2) technical assistance; and (3) the dissemination of materials.

**Figure 1. Logic Model Components**



The evaluation team defined intermediate outcomes as “what customers do or become as a result of outputs” and as “changes in the customers’ actions or behaviors based on knowledge or skills acquired through SIG project outputs.” Long-term outcomes are the results that follow logically from intermediate outcomes and that are expected to reflect a direct impact on children. The focus of this analysis is the outcomes generated by the outputs described above. These are the outcomes that fulfill the SIG projects’ goals.

To catalogue and rate SIG Project outcomes, the evaluation team identified four categories of intermediate and long-term outcomes:

1. Improved child performance,
2. Changes in adult behavior,
3. Improved systems functioning, and
4. Scaling up of existing successful practices.

*Improved child performance* is the ultimate desired outcome of the SIG projects and represents the primary long-term outcome of interest. Child outcomes typically result from intermediate outcomes. Most directly, these outcomes follow from *changes in adult behavior*. Less directly, improved child performance can result from the two other intermediate outcomes. Both of these two intermediate outcomes, *improved system functioning* and *scaling up of existing successful practices*, may generate effects on improved child performance through changes in adult behavior. These relationships between SIG project outcomes are represented in Figure 2 below.

**Figure 2. Relationships Between Four Types of Outcomes Found in SIG Projects**

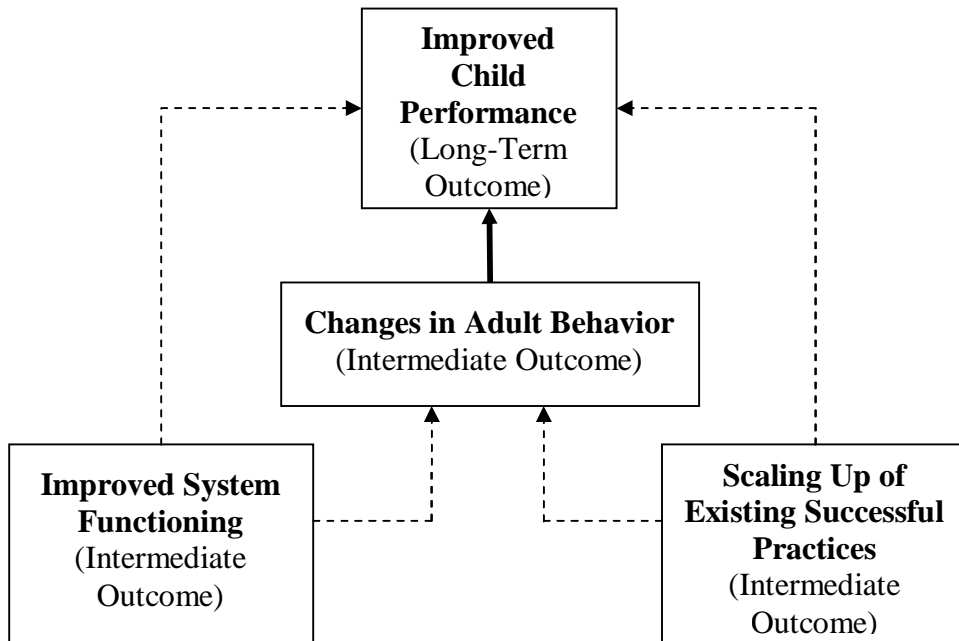
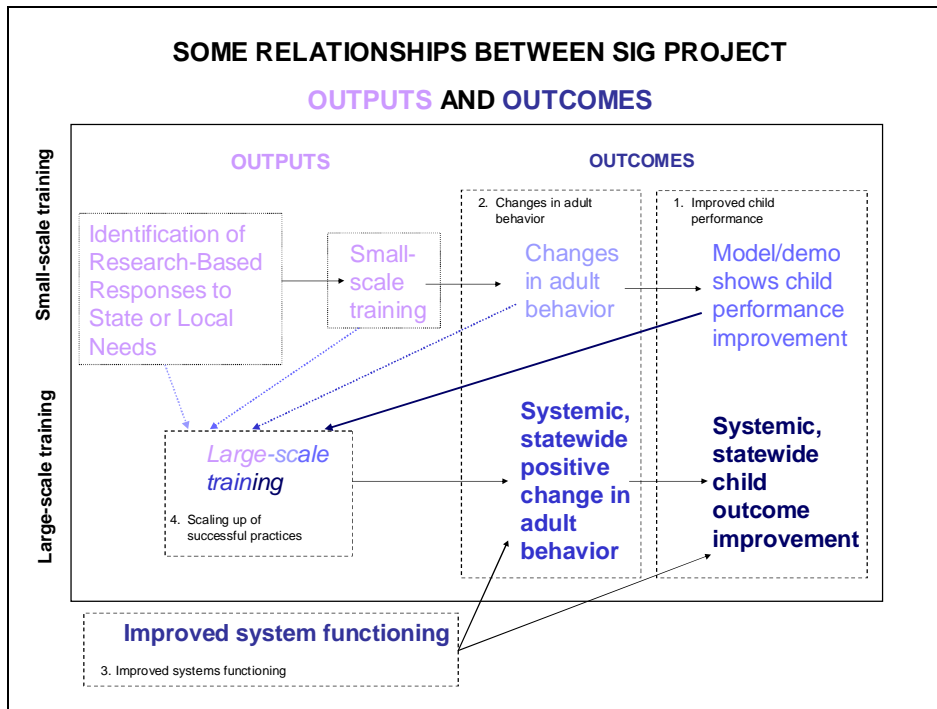


Figure 3 provides a model that shows the relationship among SIG project outputs and the four categories of outcomes. The model flows from upper left to upper right to lower left, then from lower left to lower right. This model assumes that state and local needs have been correctly identified, goals set, and appropriate strategies have been developed with suitable partners, and that planned activities (particularly, trainings) are grounded in research.

Small-scale trainings based on these identified practices are generally the first SIG-sponsored activities. If an activity results in documented positive changes in adult behavior, the activity has created an outcome in category 2: *positive change in adult behavior*. If changes in adult behavior (documented or undocumented) result in documented improvements in child outcomes, that result is considered an outcome of the training activity in category 1: *improved child performance*.

The top set of left-to-right arrows in the diagram refers to relatively small-scale training activities; the bottom set refers to large-scale efforts with potential for statewide impact. If they led to documented, systemic, statewide positive change in adult behavior, they are strong examples of outcome category 2: *positive change in adult behavior*. If they led to documented, systemic, statewide child outcome improvement, they are strong examples of outcome category 1: *improved child performance*. The provision of training can be considered an outcome without documentation of successful behavior change in adults or children if it represents a scaling-up of a practice already shown to be successful. Such outcomes are in category 4: *scaling up of existing successful practices*.

**Figure 3. Some Relationships Between SIG Project Outputs and Training Outcomes**



This framework for identifying the outcomes of training excludes many commonly used measures of success. Measures such as counts of people trained, reports of trainee satisfaction, trainee self-reports of their learning from training, and trainee self-reports of their plans to use new learning provide insufficient evidence of training success to be considered outcomes for the purposes of the SIG Program Evaluation.

Outcome category 3, *improved systems functioning*, is not necessarily associated with training. Therefore, it is diagrammed outside the training box. Some of the most common SIG project outcomes are in this category. Non-training dollars may result in new or improved organizational structures, staffing patterns, curricula, materials, data sources, laws, or accountability schemes. Increased numbers of fully certified teachers, increased test participation, improved responsiveness of existing systems, and increased inclusion can lead to direct results for students. Increased collaboration among educational providers, organizational learning, and the increased effective use of data are pure examples of improved systems functioning that have the potential for broad and long-lasting benefits for students. To highlight potential benefits from improved systems functioning, arrows connect that box to positive changes in adult behavior and child outcome improvement.

## Procedures for Assessing Outcomes

The evaluation team conducted an exhaustive document review to identify and catalogue outcomes reported by SIG projects. Beginning in 2005 and continuing to fall 2006, the evaluation team reviewed all available annual performance reports (APRs) (161 documents) from the 48 states with SIG projects, all available final reports (15 documents), applications for funding under the SIG II Program (24 documents), and other supporting SIG project documents from 27 states (105 documents).<sup>11</sup> Members of the evaluation team read each report and recorded outcome statements in a summary table for each state. Table 1 summarizes the sources of data used in the SIG project outcome analysis. As noted previously, outcomes associated with SIG II projects are not included in this analysis, except for outcomes that are clearly a result of continuing activities from the first SIG.<sup>12</sup>

**Table 1. Summary of Data Sources**

Document Name	Number of States	Number of Documents
SIG project annual performance report (APR)	48	161
SIG project final report	15	15
SIG II applications	24	24
Other SIG project documents	27	105

As described above, and consistent with the procedures for creating SIG project logic models, the evaluation team recorded long-term and intermediate outcomes in the summary tables. Also consistent with the logic model development, a distinction was made between project outputs and outcomes. This sometimes subtle distinction separates statements about the direct results of product activities (e.g., “683 teachers attended the training, giving it an average rating of 4.8 on a 5-point scale”) from statements that provide quantitative or qualitative evidence of changes in child performance, adult behavior, or systems functioning (e.g., “87% of students whose teachers were trained demonstrated better academic growth than a control group”). The first example describes an output that would not be included in a summary table, while the second example is a long-term outcome that would be included.

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<sup>11</sup> Other SIG project documents reviewed in this analysis included websites, test score results, presentations, reports, CD Roms, written responses to Westat questions, SIG project evaluation reports, survey results, project status charts, Enhancement Grant applications, workshop materials, newspaper articles, data from statewide progress monitoring, brochures created with SIG funding for the public, conference results, project summaries, OSEP Part B Annual Progress Reports, collaboration memos, GSEG applications, handbooks developed for educators with SIG funding, interviews with SIG project clients, transition process flow charts, and steering committee minutes.

<sup>12</sup> Also not included in this analysis are outcomes achieved under the successor to the SIG Program, the State Personnel Development Grants Program (SPDG Program) authorized by the 2004 Amendments to IDEA.

Each outcome statement in every state summary table was categorized, scored, and analyzed. The four categories of intermediate and long-term outcomes described previously were employed. Exhibit 1 shows these outcome categories and the subcategories that emerged during the analysis. The exhibit also provides examples of the types of results reported by SIG projects that the evaluation team did not consider sufficient to be identified as outcomes.

**Exhibit 1. Outcome Categories and Subcategories, with Examples of Non-Outcomes**

<b>Outcome Category</b>	<b>Outcome Subcategories</b>	<b>Examples of Non-Outcomes</b>
1. Improved child performance	a. Improved test scores b. Reduced suspension or referral rates c. Increased post-secondary job or education placement rates d. Educator or parent reports or observations of specific improvements in child learning or behavior e. Improved graduation or dropout rates f. Decreased referrals to special ed or increased return to general ed	<ul style="list-style-type: none"> <li>• Test scores not linked to a specific initiative</li> <li>• General statements of improved learning or behavior</li> </ul>
2. Improved adult behavior	a. Increased teacher retention rate b. Direct observations or self-reports of use of new skills	<ul style="list-style-type: none"> <li>• Number of adults trained</li> <li>• Adult satisfaction with training</li> <li>• Adult self-reports that they plan to use what they learned in training</li> </ul>
3. Improved systems functioning	a. Self-reports of increased collaboration b. Improved organizational structures c. Improved staffing patterns d. New and potentially effective curriculum, materials, data sources, laws, or accountability schemes e. Increased test participation f. A greater number or percentage of fully certified teachers or administrators g. Evidence of organizational learning from previous efforts h. Improved responsiveness of existing systems i. Increased inclusion j. Increased effective use of data	<ul style="list-style-type: none"> <li>• Organizational agreements signed or commitments made</li> <li>• Number of trainings that occurred or number of participants in training</li> <li>• Meetings attended</li> <li>• Subgrants awarded</li> <li>• Stipends awarded</li> </ul>
4. Scaling up existing successful practice	a. Evidence of broad implementation of new practices b. Outcomes from a broad range of sites c. Evidence of sustainability of an initiative once propagated	<ul style="list-style-type: none"> <li>• Plans or commitments to expand an initiative</li> <li>• Number or locations of trainings</li> <li>• Subgrants awarded</li> </ul>

The evaluation team developed standards in four areas against which to judge all outcomes found in SIG project documents. To qualify as a SIG project outcome for the purposes of this evaluation, the reported outcome had to (1) be supported by some qualitative or quantitative data (Evidence standard), (2) be at least partially related to the SIG project (SIG Link standard), (3) have a beneficial effect on students with disabilities (Quality standard), and (4) be either in effect statewide or have potential to be scaled up to a statewide effort (Impact standard). A set of evaluation criteria were employed to determine the overall value of each reported outcome—that is, to rate each outcome statement that qualified as an outcome for the purposes of the SIG Program evaluation. More detail is provided in the next section.

To enhance the validity and reliability of the general rating process, after extracting outcome statements from SIG project documents, the evaluation team conducted a series of telephone conversations with SIG project directors and staff. The calls were designed to confirm that (1) all SIG project outcomes had been reported in SIG project documents and accurately extracted, and (2) all of the outcome statements in SIG documents were, in fact, SIG project outcomes.

The telephone conversations occurred with a convenience sample of 22 of the 36 states initially funded in 1999, 2000, or 2001. In every case, SIG project staff approved the list of outcomes identified by members of the evaluation team. In a few states, SIG project staff provided additional details or background about an outcome. Members of the evaluation team incorporated the additional details in the state summary tables. For each state involved in a conference call, the SIG Program Evaluation team updated the outcome data. Thus the conference calls served as a “member check,” providing assurances that the evaluation team had captured the SIG projects’ outcomes and had correctly filtered out outcome statements that did not meet the standards.

The result of this initial step in the process of analyzing SIG project outcomes was the identification of 456 individual outcomes from the 48 SIG projects. Tabulating the number of outcomes by SIG project funding-year cohort indicated that the absolute highest number of outcomes was found for the 1999 cohort (198 total outcomes). This finding is not surprising given that the 1999 funding cohort had the largest number of states (18). When the average number of outcomes was calculated for each cohort, again, the 1999 funding cohort had the highest average number of outcomes (11). Again, this finding is not surprising given that the SIG projects funded in 1999 were the most chronologically mature. The absolute number of SIG project outcomes and the average number of outcomes per funding cohort are displayed in Table 2 below.

**Table 2. Absolute Number and Average Number of SIG Project Outcomes Identified, by Funding Cohort**

<b>SIG Project Funding Cohort</b>	<b>Absolute Number Outcomes per Cohort</b>	<b>Average Number of Outcomes per Cohort</b>
1999 (N=18 states)	198	11
2000 (N=9 states)	77	8.6
2001 (N=9 states)	89	9.8
2002 (N=6 states)	52	8.7
2003 (N=6 states)	40	6.7
Totals	456	9.5

### **Outcome Coding and Scoring**

Two members of the evaluation team independently assigned a set of numeric scores to each identified SIG project outcome. Overall outcome scores are the product of 0 to 3 scores on each of the four standards: evidence, SIG link, quality, and impact. These are the same four dimensions that the evaluation team used to initially screen outcome statements. The evaluation team developed scoring levels for each of the four standards, assigning a value of 0, 1, 2, or 3 to each SIG project outcome on each standard. The scoring scheme thereby captured the strength of each outcome. Exhibit 2 provides a description of and the scoring levels for each standard.

Overall outcome scores for each state were derived as products of scores on the four separate standards. The product was used instead of the sum because each standard is presumed to be essential. Strength on one standard does not fully counterbalance weakness on another. Thus, in an additive system, four 2s would be the equivalent of two 3s and two 1s; each would sum to 8. But in this multiplicative system, the weakness of the 1s overbalances the strength of the 3s. Thus, the more balanced outcome (four 2s) scores 16, while the less balanced outcome (two 3s and two 1s) scores 9. This is appropriate because the two 1s indicate a lack of confidence in key outcome components. Also, multiplication means that, in the extreme case, a zero in any standards nullifies the entire score. Again, this is appropriate because each of the four components is essential to making an outcome consequential and therefore noteworthy for the purposes of the SIG Program Evaluation.

The first step in the scoring process was outcome categorization. Most commonly, the outcomes had been described in a SIG annual performance report. Each outcome was placed in a single outcome category and subcategory and given a descriptive label.

**Exhibit 2. Outcome Standards and Levels**

Scoring Standard	Scoring Standard Description	Scoring Standard Levels
Evidence	Does qualitative or quantitative data show that the described outcomes really happened?	4: Gold-standard level evidence; experimental design or equivalent <sup>13</sup> 3: Fairly strong evidence 2: Marginally sound evidence 1: Evidence not verifiably sound 0: No evidence
SIG Link	Did the SIG cause the outcome?	3: Definitely a result of the SIG 2: Definitely SIG-influenced or plausibly a result of the SIG 1: Plausibly SIG-influenced 0: No evidence of SIG influence
Quality	Will the described outcome help children with disabilities?	3: Clearly a positive change in outcomes for children with disabilities 2: Likely to represent or lead to a positive change in outcomes for children with disabilities 1: Might represent or lead to a positive change in outcomes for children with disabilities 0: No evidence change will improve outcomes for children with disabilities
Impact	Will the described outcome have a sustainable statewide impact?	3: Sustainable statewide impact already achieved 2: Evidence for substantial statewide impact now or eventual sustainable statewide impact 1: Demonstration only or limited scale-up 0: No evidence of impact

The following outcome, from a SIG project’s Year 3 Annual Performance Report (APR) will serve to demonstrate how the evaluation team applied the outcome standards: *Literacy test results for students with disabilities improved*. The objective the outcome addressed was described in the APR as follows: “Reading skills of 80% of the children with disabilities in grades K-3 will improve through intensive and comprehensive professional development, follow-up, and on-site assistance for general and special education teachers within the 12 lowest performing schools selected annually throughout the state. This is an expansion on the Reading First Grant.” And the resulting outcome was described as follows: “DIBELS results showed a substantial percent of kindergarten students in the participating schools that moved into benchmark status, compared to students in non-participating schools.”

<sup>13</sup> The *Evidence* standard has a theoretical range of 0–4, but the top level, “gold-standard level evidence” is extremely rare in implementation evaluations. Nothing approaching that level was expected or seen in the practical realm of State Improvement Grants. Thus, in effect, the range of the category is the same as the other three: 0–3.

The evaluation team labeled this outcome *1a* because it represents *improved child performance* (category *1*) and was documented by *improved test scores* (subcategory *a*). The first of four standards, *evidence*, rated the strength of evidence supporting the existence of the claimed outcome. Fairly strong evidence earned a score of 3. Marginally sound evidence was a 2; any evidence, even if it is not verifiably sound, still earned a 1. If there was no evidence provided, the score was 0, and thus there was no outcome. In the case of this example, a score of 2 was given because the evidence supporting the claim that “literacy test results for students with disabilities improved” was “marginally sound.” The claim is clear in the APR, but the evidence is marginal because no data were presented and because it was not clear how the authors of the report define “improved.”

Once the level of *evidence* is scored, scoring on the other three standards proceeded with only marginal consideration of the strength of evidence per se. In other words, in review the *SIG link*, *quality*, or *impact* of an outcome, the presumption was that that outcome occurred as stated. By proceeding in this manner, the evaluators were able to avoid penalizing an outcome multiple times because the evidence of its existence was limited. The penalty for limited evidence would come mathematically when the scores on the four standards were multiplied.

The second standard, *SIG link*, measures the evidence that the identified outcome was a result of SIG project activities. Some outcomes are at least partially attributable to other funding sources, the actions of other agencies, or required activities unrelated to the SIG project. Building on existing opportunities or concurrent initiatives can increase the quality and quantity of outcomes achieved by a SIG project, but it is nonetheless important to distinguish between SIG-caused and SIG-influenced outcomes. Outcomes earned a 3 if they were definitely a result of the SIG. Those that were definitely SIG-influenced or plausibly a result of the SIG earned a 2. Those that are only plausibly SIG-influenced earned a 1. If there was no evidence presented that suggested any effect of the SIG on the outcome, the score was 0 and there was no score for the outcome.

Returning to the prior example, the program described was “an expansion on the Reading First grant.” The evaluation team scored this outcome a 2 in the *SIG link* category; the program was seen to be “definitely SIG-influenced.” The *SIG link* category was often the most challenging to score because the degree of SIG project involvement in activities and thus the assignment of credit for outcomes was often hard to ascertain from the available evidence.

The third standard, *quality of change*, reflects the judgment of the evaluators regarding the degree to which the described outcome would lead to improved outcomes for children with disabilities. If, in the judgment of the reviewers, the outcome represented a clear positive change for children with disabilities, the score was a 3. If it was likely to represent or lead to a positive change in outcomes for children with disabilities, the score was a 2. If it might represent or lead to a positive change in outcomes for children with disabilities, the score was a 1. If the outcome did not appear relevant to improving outcomes for children with disabilities, then the score was 0 and the claimed outcome was not considered an outcome for this evaluation. For the example, the *quality* score for the outcome was 3 because it is unequivocally positive for students with disabilities to improve their literacy test scores.

The fourth standard, statewide *impact*, rates the degree to which the outcome appears likely to have a sustainable statewide impact. If sustainable statewide impact has already been achieved, the score was a 3. If there was evidence for current or eventual substantial statewide impact, the score was a 2. If the outcome was a demonstration or limited scale-up only, the score was a 1. If there was no evidence of impact at all, the score was 0 and there was no outcome. In the example above, the outcome was rated a 1 because only 12 schools per year were involved in the program. If there had been more evidence provided that showed an impact of the program on a significant portion of the state’s most at-risk students, this outcome might have been considered “substantial statewide impact” and earned a score of 2, but such evidence was not provided.

The final outcome score is the product of the four categories of scores. The overall strength of each outcome was classified as *robust*, *solid*, *probable*, and *possible*, according to the numeric definitions in Exhibit 3. Outcomes with a zero in any category have a score of zero and are not recorded. In the example provided above, the score was  $2 \times 2 \times 3 \times 1 = 12$ , which is considered only a *possible* outcome for the SIG Program Evaluation.

**Exhibit 3. Numerical Definitions of Overall Outcome Strength Based on Score**

Overall Outcome Strength	Numerical Definition
Robust	81: $3^4$
Solid	54: $3^3 \times 2$
Probable	From 36 to 16: $3^2 \times 2^2$ , $3^3 \times 1$ , $3 \times 2^3$ , $3^2 \times 2 \times 1$ , or $2^4$
Possible	From 12 to 1: $3 \times 2^2 \times 1$ , $3^2 \times 1^2$ , $2^3 \times 1$ , $3 \times 2 \times 1^2$ , $2^2 \times 1^2$ , $3 \times 1^3$ , $2 \times 1^3$ , or $1^4$

**Findings: Categorization of Outcomes**

The evaluation team analyzed the frequency with which outcomes occurred in each outcome category and subcategory, as well as the frequency with which outcomes achieved the highest, lowest, and middle scores on each of the four scoring standards. In addition, some of the strongest specific outcomes were investigated further and are described in greater detail later in this report. Table 3 summarizes the number of outcomes by category, subcategory, and outcome strength.

The evaluation team documented 81 outcomes in category 1, *improved child performance*. The majority (42 of 82) were *improved test scores (1a)*. Of the 81 outcomes, 34 had final outcome scores of *probable* or higher, with five of these *solid*, and one *robust*.

**Table 3. Summary of Outcome Strength Counts by Outcome Category And Subcategory**

Outcome Category	Strength of Outcome Score				
	Robust	Solid	Probable	Possible	TOTAL
<b>1. Improved child performance</b>	1	5	28	47	81
a. Improved test scores	1	2	16	23	42
b. Reduced suspension or referral rates	0	1	3	7	11
c. Increased post-secondary job or education placement rates	0	0	0	1	1
d. Educator or parent reports of specific improvements in child behavior	0	1	2	11	14
e. Improved graduation or dropout rates	0	1	3	1	5
f. Decreased referrals to special ed or increased return to general ed	0	0	4	4	8
<b>2. Improved adult behavior</b>	0	4	27	35	66
a. Increased teacher retention rate	0	1	2	3	6
b. Direct observations or self-reports of use of new skills	0	3	25	32	60
<b>3. Improved systems functioning</b>	3	18	150	122	293
a. Self-reports of increased collaboration	0	1	24	21	46
b. Improved organizational structures	0	3	25	16	44
c. Improved staffing patterns	0	0	3	0	3
d. New curriculum, materials, data sources, laws, or accountability schemes	2	2	50	44	98
e. Increased test participation	1	2	7	3	13
f. A greater number or percentage of fully certified teachers or administrators	0	6	23	26	55
g. Evidence of organizational learning from previous efforts	0	2	8	4	14
h. Improved responsiveness of existing systems	0	1	0	0	1
i. Increased inclusion	0	1	4	1	6
j. Increased effective use of data	0	0	6	7	13
<b>4. Scaling up of successful practice</b>	0	1	10	5	16
a. Evidence of broad implementation of new practices	0	0	9	4	0
b. Outcomes from a broad range of sites	0	0	0	0	3
c. Evidence of sustainability of an initiative once propagated	0	1	1	1	3
<b>OVERALL TOTALS</b>	4	28	215	209	456

Sixty-six non-zero outcomes were documented in category 2, *improved adult behavior*. Thirty-one outcomes in this category were rated as *probable* or higher; there are four *solid* and no *robust* outcomes in this category. The majority of outcomes are in subcategory b, *direct observations or self-reports of use of new skills*.

In category 3, *improved systems functioning*, 393 non-zero outcomes were documented. Of those, 171 are at least *probable* outcomes. Eighteen of these are *solid* and three are *robust*. The large majority are in subcategories 3a (*self-reports of increased collaboration*), 3b (*improved organizational structures*), 3d (*new and potentially effective curriculum, materials, data sources, laws, or accountability schemes*), or 3f (*greater number or percentage of fully certified teachers or administrators*).

The evaluation team only placed outcomes in category 4, *scaling up of existing successful practices*, when existing initiatives were scaled up. That is, this category was reserved only for those initiatives that were expanded, but not created, with SIG funds. Therefore, this category does not include initiatives that were developed by the SIG project and were ultimately taken to scale. Those initiatives were captured under one of the other relevant outcome categories. Only 16 such outcomes were documented. Eleven of these were considered at least *probable* outcomes; one was *solid*, none was *robust*. Most of these outcomes were in category 4a (*evidence of broad implementation of new practices*). It is important to note, however, that, because *statewide impact* is a standard used for scoring across all outcome categories, the large majority of the outcomes documented in all categories represent some degree of *scaling up of existing successful practices*.

## **Findings: Strengths and Weaknesses of Outcomes**

A look at the 456 outcomes through the lenses of each of the scoring standards provides insight into the strengths of the SIG Program and some areas in which it might have performed better. A comprehensive list of the outcomes and their scores appears as an appendix.

The ratings for the first standard, *evidence*, averaged 2.1. No SIG project provided “gold-level standard evidence” for any outcome. This is not surprising, because the SIG projects are not academic initiatives designed to increase our understanding of what works. They are projects designed to implement, rather than investigate, strategies to improve state education systems. Nevertheless, it is noteworthy that the evaluation team’s exhaustive review of 48 SIG projects and 326 documents uncovered only 146 outcomes that were presented with “fairly strong” quantitative or qualitative data. Another 201 outcomes were supported by only “marginally sound” data, and 109 were supported by data meeting the lowest standard, “not verifiably sound.” Outcome claims made with no evidence whatsoever were excluded from the study. Of course, lack of documentation of evidence does not necessarily imply a lack of results. Few training initiatives in education generate solid evidence that their efforts produce change in teachers or students.

As noted previously, while the first scoring standard focuses on the value of the *evidence* that an outcome was actually achieved—that is, that it actually occurred—the other three

standards assume that the outcome occurred, at least at some level. Those three standards focus on the extent of the connection to the SIG project (*SIG link*), the *quality* of the outcome in regard to its strength in improving child outcomes, and the degree to which the outcome has already demonstrated or has the potential to achieve a systemic, statewide *impact*.

The ratings for *SIG link* averaged 2.1 out of 3.0. The evaluation team found 137 outcomes that were “definitely a result” of SIG projects. An additional 240 were “definitely SIG-influenced or plausibly a result of the SIG,” and 79 were “plausibly SIG-influenced.” It is important to note that, for many activities, it is appropriate and even desirable for SIG projects to partner extensively to achieve their goals. In some states, such partnering is facilitated by a dovetailing of SIG goals with state general education priorities or by a legal decree that has required pooling of resources to address a problem. The *SIG link* rating is therefore limited because it does not capture or account for the reasons outcomes may not be fully attributable to SIG funding. It does, nevertheless, provide an indication of the extent to which the SIG project contributed to the outcome.

The ratings for the third standard, *quality*, averaged 2.4 out of 3.0. The evaluation team rated the value of SIG project outcomes for students with disabilities by asking, “Would this help children with disabilities?” The answer was a clear yes (“clearly a positive change”) in 203 cases, a likely yes (“likely to represent or lead to positive change”) in 212 cases, and an equivocal yes (“might represent or lead to a positive change”) in 41 cases. Evidence of the *quality* of outcomes was sparse. For example, one state used SIG funds to disseminate research-based materials to teachers. The evidence that these materials were produced and disseminated was strong, but the evaluation team questioned whether these materials would be likely to (1) be read and (2) be absorbed into practice in effective ways. The *quality* rating was 1.

The fourth and final standard, *impact*, addresses the issue of scaling-up of successful practices. The evaluation team rated 118 outcomes of SIG projects as having “sustainable statewide impact.” Another 177 showed either “substantial statewide impact or evidence for eventual sustainable statewide impact.” The remaining 161 were “demonstrations only or limited scale-up.”

## **Robust Outcomes**

The evaluation team identified four outcomes that received the highest attained score in each standard, for an overall score of 81 (3<sup>4</sup>). The SIG Program Evaluation team consider these to be *robust* outcomes because they are strong in each of the four key standards: *evidence*, *SIG link*, *quality*, and *impact*. They each provided fairly strong data that the SIG created a positive, sustainable, statewide change for students with disabilities. It is unlikely to be a coincidence that all four are congruent with No Child Left Behind imperatives. These robust outcomes are described in separate sections below. Each section includes a general description of the outcome along with particulars regarding the strength of the outcome for each of the four scoring standards.

### ***A reading initiative resulted in better test scores***

One robust outcome was attained by a literacy initiative that improved results for children and was institutionalized statewide. The SIG project funded the pilot program, which involved intensive, data-driven, ongoing training of school teams with a focus on specific instructional strategies. Positive results were clearly demonstrated. The program was expanded statewide by SIG II in combination with line-item state funds.

This outcome fits under category *1a (improved child performance—improved test scores)* and was described by the evaluation team as follows: “A reading initiative for students with disabilities in kindergarten through third grade resulted in better test scores.” Fairly strong *evidence* was provided that this statement is true. For example, according to an APR, “The department established 15 performance benchmarks for student achievement ...that were applied to 52 target schools...only 1 of the 52 schools failed to meet a majority of the performance benchmarks. 49 of the 55 buildings made statistically significant gains on 12 or more of the 15 benchmarks.”

The *SIG link* to this K-3 initiative was also well documented by APR text: “The second...literacy program, for K-3 students, was pilot tested and implemented using SIG I resources.” The outcome achieved sustainable statewide *impact*, through partnership with other funders. According to the report, “It has been scaled up to K-12 and institutionalized through the use of line item state funds.” The SIG final report mentioned “quality professional development for 111 school-based teams.” In a conference call with SIG project staff, the SIG Program Evaluation team learned that trained, school-wide literacy teams are operating in all 365 schools in the state, demonstrating state-wide impact.

Strong evidence was provided in the APRs of the *quality* of this outcome, that is, that it represented a positive change for children with disabilities. It “increased the state’s capacity to support quality PD for 111 school-based teams focused on student achievement.” It “demonstrated the effectiveness of PD that is intensive and ongoing, data driven, focuses on specific instructional strategies and models, involves school-based teams, and provides support in implementation.” Clear improvements across 15 literacy benchmarks were documented.

### ***Alternate and modified assessments were developed and piloted statewide***

Another robust outcome was obtained by a state that implemented a policy change to ensure that students with disabilities were included in state testing programs. SIG project staff worked to add accommodations for diverse learners to state assessments and extend the ways that student achievement could be measured. This alternative to traditional testing was based on existing standards and yielded full inclusion in the state’s accountability system for students with disabilities. It is an example of outcome category *3d*, representing *improved systems functioning—new and potentially effective, curriculum, materials, data sources, laws, or accountability schemes*.

The *evidence* that these materials and schemes were put in place is strong. The SIG final report stated, “As a result of intensive statewide training and information dissemination, schools routinely include students with disabilities in the state assessment and accountability system.”

Participation rates on all assessments exceeded 90 percent and reached 98 percent in grade 4 mathematics. Between 1999-2000 and 2000-2001, the percentage of students receiving accommodations increased across grade levels and subjects statewide.

The *SIG link* was well documented. The plan to change assessment regulations and the processes for implementing them was completely funded through the SIG. “SIG I was catalytic in the systemic policy change around special education students. By year 4, alternate and modified assessments for special education students, designed and piloted by SIG staff with SIG resources, were fully in place.”

The *quality* of this change is clear and positive. Students with disabilities benefit from a paradigm shift that includes them in state assessments. Student information systems, technical assistance standards, student rates of inclusion in testing, and proficiency rates for students with disabilities on those tests have all been positively affected. Changes in district, school, administration, and teacher behavior are described as components of this outcome.

In this case, statewide *impact* was achieved by developing special education standards and strategically aligning them with the state’s accountability system of standards for all students. There were discrete targets for technical assistance and field-based consultation on a “continuous improvement” continuum.

***An alternate assessment tool was developed; its users were trained statewide***

Another robust outcome in category 3d (*improved systems functioning— new and potentially effective, curriculum, materials, data sources, laws, or accountability schemes*) was the development of an alternate assessment to measure life skills for students with disabilities. The *evidence* for this outcome was strong. According to this state’s report, “the most recent...SIG supported a statewide alternate assessment component. Approximately 3000 students (2.9%) were assessed using alternative life skills assessments last year.” An interactive television training was offered to all local school districts in the state and private schools received guidance from the Deputy Commissioner for Standards and Assessment. This degree of training consistency is credited for “significant...portfolio improvements...Twenty-seven percent of the portfolios were double-scored, producing a reliability coefficient of 63%. Scorer validation of Department eligibility decisions showed 99% agreement. The number of unscorable portfolio decreased over the previous year from 17% to 6%. In general scores were much improved.” This state includes data that indicate that “ongoing training and technical assistance documents are clearly helping teams to make more appropriate alternative assessment decisions.” The final report describes “98 of 100...developed and administered correctly to students with moderate and severe disabilities.”

The *SIG link* to this outcome was clear. The report says, “This was the first product that was disseminated from the SIG I...designed from the outset to be sustained by the SEA after the initial start-up support from SIG I.”

The *quality* of this outcome is good. It reflects a positive change for students with disabilities. Developmentally appropriate portfolios capture achievements not otherwise documented for students with academic challenges. Portfolios in this model are cumulative and

conditional, so that all criteria in each benchmark have to be met before higher criteria are scored. In this state, they are also largely aligned with the general education standards framework: “Of nearly 550 portfolios reviewed...84% had at least one objective aligned with standards and 79% were completely aligned with standards.”

This assessment format has clearly had statewide, systemic *impact*. Its impact may even extend beyond state borders. It was “on the cutting edge at the time of the SIG award. Other state directors at the SIG/SPDG conferences were interested in...this assessment format.”

### ***Students with disabilities participated in annual assessments at a rate of 98.7 percent***

The outcome described immediately above helped the state achieve another robust outcome in category 3e (*improved systems functioning—increased test participation*). The alternate assessment tool, together with the extensive use of training, monitoring, and accommodations generated an improvement in the participation of students with disabilities in the statewide assessment program. As a result, “overall participation (of all students) for the state was slightly less than 97 percent and participation for students with disabilities was 98.7 percent. Both these figures exceed the 95 percent participation requirements of the No Child Left Behind Act.” The *evidence* for the claim is strong.

The *SIG link* to the outcome is well documented. The SIG project developed the alternate assessment. SIG project staff provided a variety of training opportunities, including interactive television training available to all public districts, special support for private schools, and training-grant supported ongoing technical assistance. Summer institutes and regional meetings with uniform training were conducted throughout the life of the grant. Student participation in the state’s assessment program was monitored. Permissible accommodations were also encouraged. As a result of the training, monitoring, and accommodations, students with disabilities had a participation rate of between 84 percent and 98 percent on a variety of the state’s standard assessments. The large majority of the rest of the state’s students with disabilities took the new alternate assessment. This coordinated state effort is clearly linked to the high participation rate for students with disabilities in the state.

The *quality* of this change is clearly positive. Students with disabilities are no longer excluded from statewide standards-based assessments. With state-supported accommodations, this population is expected to participate in assessments that have always been afforded typically developing children.

The robust score on this outcome also reflects its systemic, statewide *impact*. The results are clearly measured at the statewide level; the process is sustained by the state’s education agency.

## **Solid Outcomes**

This section describes by category 28 of the highest-rated outcomes. Each of these outcomes missed scoring at the highest level on one standard only, thus earning three 3s and one 2 for an overall score of 54 ( $3^3 \times 2$ ). The SIG Program Evaluation team has labeled these as

*solid* outcomes. Some fall short of being labeled as a *robust* outcome because the *evidence* is only marginally sound. For others, the outcome might have been definitively SIG-influenced or plausibly a result of the SIG, but it is not definitely *linked* to SIG activity. Others are somewhat questionable in terms of the *quality* standard—they are likely, but not certain, to create positive change for students with disabilities. Others come up slightly short regarding *impact*—the outcomes are not yet scaled-up statewide in a way that is clearly sustainable—yet there is evidence for eventual sustainable statewide scale up or, at a minimum, substantial statewide impact now. These *solid* outcomes are discussed below by outcome category.

### ***Outcome Category 1. Improved Child Performance***

The SIG Program Evaluation team identified five *solid* outcomes in the category of *improved child performance*. Two were in subcategory *a*, *improved test scores*. Two states effectively documented increases in student test scores using scientifically-based reading instruction. One state created a series of reading centers using scientifically based approaches to reading instruction, and effectively documented increases in the scores of the students at those centers. In another state, approximately 100 students with disabilities worked with a Word Identification Specialist and demonstrated significant progress on tests measuring decoding skills. Neither of these activities had been scaled up statewide.

In another area, *improve graduation or dropout rates* (subcategory *e*), many SIG-funded states documented statewide progress. Few, however, provided even plausible evidence that the SIG project was responsible. Only one state provided good descriptions of large-scale SIG project activities related to dropout prevention together with improved dropout rates statewide that scored high enough to be recorded as a solid outcome. Two states documented results in the area of improved student behavior, although neither had yet gone to scale statewide. One state documented *reduced suspension and referral rates* (subcategory *b*) in sites with SIG-funded initiatives; the other found that the large majority of school teams trained through a SIG-funded initiative reported *improved child behavior* (subcategory *d*), which they also credited with leading to increased instructional time.

### ***Outcome Category 2. Improved Adult Behavior***

Only four states presented outcomes in the area of *improved adult behavior* that the SIG Program Evaluation team rated as *solid*. Of course many training activities were reported that were focused on improving the performance of adults, but few scored high because of a lack of data to support the claim that these efforts actually changed adult behavior, a lack of evidence that the training would result in benefits for students, or failures to scale up trainings statewide. In some cases, these weaknesses indicate a lack of system impact in the approaches to the trainings. Also, documenting sustainable, systemic change of the behavior of teachers may require more funding than the SIGs provided, especially for larger states.

One of the four *solid* outcomes documented an *increased teacher retention* (subcategory *a*) rate due to the development of an induction program for new special education teachers that included mentoring. During the baseline year of the intervention a 19 percent attrition rate was reported. By year two the rate had dropped to 15 percent. The state reported that “it looks like the attrition rate is improving, based on the work of the SIG II evaluator.” This

evidence is marginal, but the activity is otherwise strong. Prior to the SIG, there were no systematic induction programs in the state; now, induction has become an embedded feature of districts. Retaining new teachers through mentoring is clearly of benefit to students.

The other three *solid* examples of outcomes documenting changes in adult behavior are all *direct observations or self-reports of the use of new skills* (subcategory *b*). None of these has achieved sustainable statewide change, but all are strong in the other three standards. One SIG project provided fairly strong evidence that focus groups and school self-evaluation rubrics documented and guided school improvement. In another state, a survey of parents demonstrated that services received from a parent training institute had proved very helpful to them in the IEP process. And a final state documented the use of data to improve transition processes for students with disabilities; in an initiative that was fully SIG-funded, 22 of 23 participating LEAs showed improvements on a 20-indicator checklist measuring transition services required by IDEA. Data were collected by reviewing transition IEPs.

### ***Outcome Category 3. Improved Systems Functioning***

States documented much more success at improving systems functioning outside the realm of teacher training than within it. The evaluation team found 18 *solid* outcomes documenting systems change.

Many states maintained that their SIG efforts led to *increased collaboration* (subcategory *a*) between the various stakeholders in the special education system. Overall, 46 outcomes were identified in this subcategory. Only one state, however, was able to provide sufficient documentation of the existence, quality, and impact of this change to designate the outcome as *solid*. This state provided fairly strong data documenting increased collaboration among IHEs, LEAs, parent organizations, and the division of special education and other divisions in the SEA. This improved collaboration was expected to have a statewide *impact*, but the SIG Program Evaluation team did not often find evidence or logic that indicated that the collaborations clearly reflected a positive change for students with disabilities.

Three *solid* outcome were documented under *improved organizational structures* (subcategory *b*). One state, with the help of a lawsuit resulting in the transfer of millions of dollars to special education, was able to create a comprehensive schoolwide support system. One piece of this system ensured the hiring of student service coordinators and educational assistants for every school in the state. Another state institutionalized structures that strongly encouraged data-driven professional development statewide. The third state created a highly collaborative alternative teacher preparation model, involving LEAs, IHEs, and the SEA in a client-centered approach. For that state, a conference call verified that the approach was so successful in its pilot that every IHE in the state now has an alternative teacher preparation program.

The most outcomes overall, 98, under the category of *improved systems functioning* fell under subcategory *3d: the development of new and potentially effective curriculum, materials, data sources, laws, or accountability schemes*. Two of these, previously described, were *robust* outcomes. Two more were *solid* outcomes. One state provided marginally sound data that they had developed a set of standards for a career ladder to help paraprofessionals become

professional special educators. Another provided strong data documenting the statewide implementation of a new accountability model for students with disabilities, supported by SIG resources.

The SIG Program Evaluation team documented 13 outcomes in the area of *increased test participation* by students with disabilities (subcategory *e*). Of these, one was a *robust* outcome, two others were *solid*, and another six fell under the next two level-of-evidence standards. The states with the highest rated outcomes showed that they had instituted policies, procedures, and training to make the inclusion successful for students with disabilities.

Another common outcome subcategory was *3f*. Fifty-five outcomes led to a *greater number or percentage of fully certified teachers or administrators for students with special needs*. Twenty-nine of the 55 can be classified as at least *probable* outcomes. While none of the outcomes was *robust*, six were *solid*, more than in any other subcategory. Teacher training and recruitment were often productive realms for SIG investment. Some examples follow.

In one state, an unprecedented collaboration between three universities and the SEA led to a program that allowed fully certified/conditionally endorsed special education teachers to take courses in person or online at any of the three universities. Of 163 participants, 124 completed the program and became fully endorsed. The initiative was subsequently extended to six more colleges in the state. Only minor questions about the statewide *impact* and sustainability of this initiative kept it from a *robust* score.

Another state set up a Statewide Recruitment and Retention Committee and reported that “as a direct result of the Committee’s activities, [the state] has several new pre-service and continuing special education programs, a lower number of uncertified special education teachers, a larger quantity of certified teachers overall, fewer provisionally certified teachers, and fewer temporary certificate holders.” Vacancies in special education positions decreased from 35.43 full-time equivalents in 2000-2001 to 19.44 in 2003-2004. While SIG project activities are given credit in the report, the SIG Program Evaluation team judged the documented evidence to be only *marginally sound*, thus preventing this outcome from obtaining a *robust* score.

The development of several alternative certification programs helped a third state to “reduce the percentage of special education teachers employed under emergency certification to 2% in the fall of 2004, from a high of 10% (the national average) in 2002.” A fourth state reported that “the percentage of special education teachers teaching without an appropriate license has decreased from 19.5% in 2001-2002 to 13.5% in 2002-2003.” It was presumed that recruitment, stipends, and online coursework provided by the SIG project contributed to this improvement. A fifth state documented the use of distance learning and alternative teacher preparation programs to provide approximately 100 new teachers. These programs had promise to become systemic. In the state providing the last *solid* recruitment outcome, “new undergraduate and graduate dual certification teacher education programs for special educators were developed in at least 5 IHEs, increasing the number of special education teachers graduating in-state from 200 to 262 in 2 years.” The only unanswered question about this outcome is the degree to which the SIG funding was responsibility for it.

Fourteen states reported *organizational learning* (subcategory *g*) as a result of the SIG. Ten of the 14 were at least *probable* outcomes; two were *solid*. As a result of a successful initiative, one state reported having learned a great deal about how to successfully conduct systemic, focused, and sustained professional development. Another state clearly documented that their SIG II application was designed to bring to scale successful projects from the first SIG.

Subcategory *h* is reserved for outcomes that describe *improved responsiveness of existing systems*. Only one outcome was found in this category at any level of strength, but it was *solid*. Annual reports documented statewide “gaps (delays in mandated service delivery surpassing 30 days) down from 1.4% in 2001-2002 to 0.6% in 2004-2005.” In the same timeframe, the “percentage of evaluation/reevaluations within timeline [was] up from 78% to 91%.” The only flaw in this outcome, from a rating standpoint, was that it was not accomplished exclusively with SIG money. A massive state-level investment, forced by a lawsuit, was instrumental. For example, student service coordinators and educational assistants were hired for each school in the entire state, an action far beyond the scope of SIG funding alone.

Six states reported *increased inclusion* of students with special needs in the general education classroom (subcategory *i*). Five of these were at least *probable* outcomes. One was *solid*. Between 1999 and 2004, the state reporting the *solid* outcome increased the percentage of students with disabilities educated in the regular classroom 80 percent or more of the day from 35 percent to 51 percent. SIG initiatives that may have led to this improvement were documented.

Thirteen states claimed that the SIG project led to *increased effective use of data* by educators (subcategory *j*). This claim is hard to document; only six of the claims achieved the score needed to be included as a *possible* outcome in a summative evaluation. None was considered *robust* or *solid*.

#### ***Outcome Category 4. Scaling Up of Existing Successful Practices***

Sixteen outcomes were recorded in category 4 (*scaling up of existing successful practices*). Only 11 of these 16 are at least *probable* outcomes. One of these is *solid*. In this case, a well packaged program, Positive Behavioral Supports, was successfully scaled up to two-thirds of the schools in the state. This was accomplished primarily by obtaining the buy-in of the two large urban systems in a heavily rural state.

These numbers, however, dramatically understate the extent of successful scaling up that occurred in SIG projects because, as explained previously, the SIG Program Evaluation team only placed outcomes in category 4 when existing initiatives were scaled up. Therefore, this category does not include initiatives that were developed by a SIG project and were ultimately taken to scale. Those initiatives were captured under the relevant outcome category, with an indication of scale-up found in the score they received for *impact*. Thus the *impact* standard provides a clearer picture of the extent of the scaling up that was promoted by SIG projects. The remainder of this section focuses more broadly on the great variety of outcomes that were scaled up.

Across Outcome Categories 1, 2, and 3, 118 of the *robust*, *solid*, or *probable* outcomes had achieved statewide, sustainable impact by the time of this review. Another 178 had shown substantial statewide impact or evidence for eventual statewide impact. Before describing these outcomes in more detail, it is worthwhile to make a distinction between two kinds of scaling up—*structural* and *additive*. In the systems sciences, structure refers to the ordering or reordering of the components of a system. This changes the dynamics of the relationship within the targeted system. In attempting to produce structural change in a positive direction, the structuring could be done in a number of ways. One of the best ways is to reorder or restructure so that one component leverages some capability of another component. Another version of this is a co-evolutionary restructuring. Here the components can cooperatively “exploit” certain values that they each possess to multiply the strength of their relationship and their potential output.

The additive change or scaling up is a process-based approach to change. Rather than attempting to exploit or leverage certain strengths or values of the components that are currently extant, the systems actors simply use resources to add another component. The basic difference is about leveraging what you currently have or using limited resources to add an additional element.

The four *robust* outcomes described above provide good examples of the two kinds of scaling up. The three outcomes related to alternate assessment are clear examples of structural scaling up. In a co-evolutionary way, changes were fostered at multiple levels to lead to inclusion of more students in statewide testing in fairer ways. Mandates for the inclusion of students with disabilities in state testing came from the federal government; state departments created new assessment tools to better serve students with disabilities; large-scale training helped staff use the assessments effectively statewide.

The reading-related *robust* outcome involves structural change within schools because of its emphasis on new ways of planning and using data, although the statewide scale-up appears to be additive. First the SIG project trained a number of schools, then additional funds were found to train a large proportion of the rest of the state’s schools.

Among the outcomes across all the outcome categories that scored as *solid*, much of the scaling-up was additive. One SIG project sponsored a model mentoring activity that was so successful that it was emulated by the state’s LEAs using their own funds. Another scaled up a Least Restrictive Environment training program from six schools in two school districts during year 1 to 261 schools in 34 school systems during year 5. Under SIG II, it was scaled up to 400 schools due to its effectiveness.

Many states also documented *solid* outcomes that are examples of structural scaling up. One state documented increased collaboration among local educational agencies, colleges and universities, parent organizations, and divisions in the department of education. It was deemed likely that students with disabilities would benefit long-term and statewide from this collaboration, but massive resource allocation was not needed. Another state adopted and institutionalized a data-driven professional development model through new regional structures linking universities and school districts. Still another developed an alternative teacher

preparation program out of a model collaboration of the state department of education, local agencies, and universities. And another developed an effective regional recruitment, preparation, and retention model that increased the number of certified special education teachers in the state and promised to continue to do so in the foreseeable future. The last example is a state that changed professional development processes from “one-shot” training models to intensive, locally-relevant technical assistance using school infrastructure and continuous monitoring.

In another form of structural change, state or federal authority was sometimes used to gain statewide impact with minimal cost. One state developed standards and a career ladder for paraprofessionals, tying into NCLB’s “highly qualified professionals” mandates. Other states (those mentioned in the *robust* outcomes section above and more) created, piloted, and trained faculty on new assessment approaches for students with disabilities. Some documented increased participation of students with disabilities in state testing programs as a result to these efforts.

Other *solid* outcome scale-ups were both additive and structural. One state documented statewide improvement in graduation and dropout rates as well as timeliness of evaluation and service provision for special education students due to an extensive program that put comprehensive student support in every school while streamlining a continuum of care for all students with disabilities. In response to a lawsuit, and by leveraging SIG money, the state had made systemic changes in their approach to students with disabilities. But the primary reason for the statewide improvement was probably more additive in the form of a massive infusion of resources, such as teachers and aides in each school, into the system. Another state additively scaled up in their SIG II project the programs that had been most successful under the first SIG; if this “rewarding success” approach becomes systemic, then that state can claim to have structurally improved its approach to special education.

Five states documented *solid* outcomes in the area of increasing the supply of teachers. The strategies used included both additive and structural approaches. Additive strategies like recruitment campaigns and the provision of stipends are not sustainable without a continued source of funds. Mentoring programs aimed at improving the retention of teachers can be viewed as structural because they leverage expertise already existing in a school or district, but they, too, require continued infusions of funds to maintain. The development of a recruitment website requires a fairly large initial expenditure and continued funding, but as a replacement for a paper system, it represents a structural improvement. The most structurally sound approaches involved the development of new methods of teacher education such as alternative certification programs and distance learning programs. Once these programs are in place, they are potentially self-financing through tuition dollars. As these varying approaches to teacher supply suggest, scaling up structurally is more likely to be sustainable than scaling up additively.

## Summary of Outcomes

The SIG Program Evaluation team was able to document 456 outcomes reported by projects funded under the SIG Program. Each of these outcomes was supported by evidence indicating that the SIG project helped generate a result that could lead to a positive change for students with disabilities. Four of these outcomes were considered *robust*, in the sense of

providing fairly strong data that the SIG project caused a sustainable, statewide change in student, adult, or system behavior that was clearly positive for children with disabilities. Another 28 outcomes fell short of the *robust* level in only one scoring standard. Each of these had only one limitation—in five cases the *evidence* was marginally sound, for another 12 the *SIG link* was not clearly drawn, for a different set of three outcomes the *quality* of the change was uncertain, and for the other eight sustainable statewide *impact* was a possibility rather than an achievement. Nevertheless, these 28 *solid* outcomes, like the four *robust* outcomes, provide substantial evidence of the positive results of the SIG Program.

The remaining 424 outcomes represent varying degrees of success. In many cases, the true strength or significance of the outcome is unknown. Stronger quantitative or qualitative evidence would have helped clarify the effect of these SIG project efforts. In some cases, the use of experimental or quasi-experimental designs to facilitate a more careful and detailed analysis of the impact of implementation would have been possible, although no state employed such methods.

Of the total 456 outcomes, 16 were identified in the *scaling up of existing successful practices* outcome category, meaning that they were existing initiatives that were scaled up through efforts of the SIG projects. Of the remaining 440 outcomes, 118 documented sustainable statewide *impact* at the time of the data collection for this report and another 178 demonstrated either substantial statewide impact or evidence for eventual sustainable statewide impact. These 440 outcomes included 81 that documented potential achievement of the long-term goal of *improved child performance*, 66 that addressed the intermediate goal category of *improved adult behavior*, and 293 that addressed *improved systems functioning*. Better documentation of efforts at achieving sustained, statewide impact would have been useful in indicating the enduring accomplishments of the SIG projects and thus the overall SIG Program.

## Chapter 3. ADMINISTRATIVE LEADERSHIP OF SIG PROJECTS

A central purpose of the SIG Program Evaluation was to view the possibilities of systemic improvement, particularly to professional development efforts implemented by SEAs. Over time, as the SIG projects evolved, building on what was learned, the SIG Program Evaluation team had the opportunity to develop a grounded theory of the nature of effective systemic improvement through professional development. The grounded theory began to emerge through the multiple iterations of concept development, drafting, testing, and revision with input from field practitioners.

As outcomes were catalogued and rated, the SIG Program Evaluation team continued its examination of the systemic nature of SIG projects, validating previously developed ideas about how effective systemic change projects unfolded. Additionally, the team focused specifically on the role leaders play in promoting the success of projects, including identifying the types of leadership strategies that made some projects more successful.

Ideas about the structure of systemic change projects were first presented in the SIG Program Evaluation's *Third Interim Report* and are reported again here with modifications informed by additional investigation. Initially labeled as the Model for Examining the Management of Systemic Change, the model itself has evolved as the evaluation team's understanding of leadership strategies has grown. The final version of the model, now called the Systemic Evaluation Inquiry Model, is described below. It provides background for understanding the evaluation team's examination of administrative leadership. Specific leadership strategies emerged as the team viewed SIG project operations through the lens of this model. That process and those strategies are presented following the discussion of the model.

### The Systemic Evaluation Inquiry Model

Traditionally, summative evaluation approaches treat the program as a black box with inputs (e.g., staff and resources) entering at one end, and outputs (e.g., gains in test scores and increased rates of graduation) observed at the other end. If the interest is in inquiring into the workings of the program to identify the systemic nature of the actual program, a logic model has generally been the means to provide an analytical view of the various components and their subcomponents. The inquiry need in systemic educational evaluation, however, is to see the program as a system-in-focus, situated and influenced by its surrounding environment, the components interacting with each other over time.

For the purposes of systemic inquiry, the "black-box model" is replaced with a "white-box model" (a transparent process model) that identifies the constituent parts of the system-in-focus and their complex interdependencies.<sup>14</sup> A white-box process model was created by the SIG Program Evaluation team as a working representation of the implementation theory of the SIG Program as it is realized by SIG projects. It is a management-oriented model of the actions and decision-making opportunities of the SEA administrators responsible for SIG projects. This

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<sup>14</sup> Skyttner, L. (2001). *General Systems Theory: Ideas & Applications*. Singapore: World Scientific Publishing.

white-box process model developed by the SIG Program Evaluation is called the Systemic Evaluation Inquiry Model and is described in some detail below.

Through iterative data collection and analysis processes, key features of the prototype inquiry model were identified. The result was a concise list of features of administration seen in SIG projects engaged in systemic reform. The evaluation team ultimately identified 19 key features of systemic change that most states were engaging in as they conducted their SIG projects. The key features were then refined, mainly by collapsing related features and clarifying definitions. The result was a concise list of features of systemic change management seen in SIG projects. These features were then represented as functions and actions in a draft model.

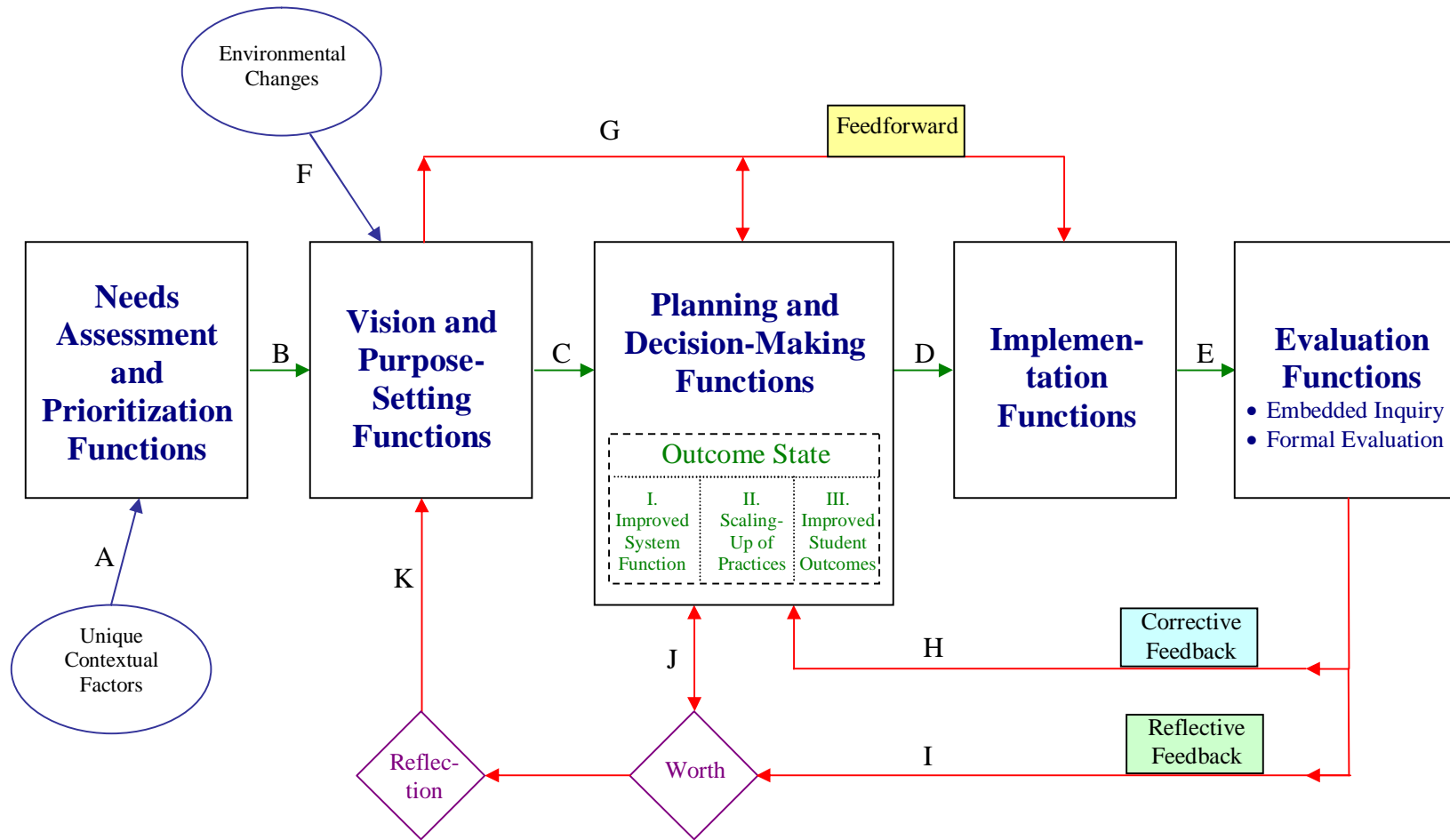
Using the draft model, the evaluation team examined well-established SIG projects. Specifically, the model elements and the relationships between elements were discussed with staff and stakeholders from SIG projects in the context of their individual projects. The model was refined based on their responses. The evaluation team then engaged staff from additional SIG projects to validate the utility of the refinements. The final product, shown in Figure 4, is a graphic representation of the SIG project administrative functions that promote systemic reform that have been observed across the many states the evaluation team studied in depth over approximately 5 years.

The Systemic Evaluation Inquiry Model captures five key functions, two important sets of influences on those functions, and the dynamic connections that make the functions systemic. That is, the boxes indicate what reformers are doing, the arrows focus on how they are doing it, and the ovals show external influences. Each arrow is defined by a broad question with sub-questions that can serve as initial evaluation questions. The model depicts key areas of focus for understanding and evaluating a particular state-level systemic reform, but is potentially applicable to other situations.

Descriptions of the various components and connections that form the Systemic Evaluation Inquiry Model are provided below. The evaluation questions corresponding to each arrow are presented later.

**Five Administrative Functions.** The SIG project administrative functions—needs assessment and prioritization, vision and purpose-setting, planning and decision-making, implementation, evaluation—constitute the core of the model and represent the most concrete aspects of systemic administration. The five function boxes represent, from the perspective of SIG project administration, what the projects do. The connections between the five functions are depicted as single arrows. Exhibit 4 further defines the five functions by showing specific actions associated with each.

**Figure 4. Systemic Evaluation Inquiry Model**



## **Exhibit 4. Explanation of the Five Administrative Functions**

### **Needs Assessment Functions**

- Collecting needs data
  - Quantitative data
  - Qualitative data
  - Opinions
- Engaging stakeholders in dialogue about needs
- Prioritizing needs (while considering context, resource, logistical, and other constraints)
- Documenting and justifying needs selection

### **Vision and Purpose-Setting Functions**

- Establishing, by consensus, a vision of a desired outcome state that defines the fundamental intention of the systemic change
- Establishing an overall direction and purpose
- Committing to shared responsibility and accountability
- Considering environmental issues and changes
- Maintaining focus

### **Planning and Decision-Making Functions**

- Allocating resources (people, money, materials)
- Creating policies, procedures, guidelines, regulations
- Ensuring policy and other alignments
- Designing implementation strategies
- Adjusting to environmental issues and changes
- Using feedback to monitor implementation
- Making course corrections

### **Implementation Functions**

- Instituting policies and regulations
- Executing strategies and activities, particularly through collaborative partnerships
- Providing and administering stipends, awards, and subgrants
- Establishing model demonstration, pilot sites
- Providing guidance, technical assistance, training, materials, and other support to customers
- Disseminating information to customers
- Collecting data

### **Evaluation Functions (Embedded and Formal)**

- Establishing metrics for outputs and outcomes
- Establishing measurable expectations for management and implementation
- Designing evaluation plan
- Collecting data
- Analyzing and interpreting data
- Disseminating findings
- Determining recommendations based on findings

**Unique Contextual Factors.** Contextual factors such as the following primarily influence the identification of SIG project needs:

- Historical events (state or local) relevant to the needs—state legislation, court rulings, prior efforts, prior reform initiatives, existing supports or support structures, etc.
- Cultural factors relevant to the needs—level of local control, advocates’ positions and strength, educators’ attitudes about special education, relationships among IHEs and LEAs, etc.
- Political factors relevant to the needs—partisan politics that affect education, organizational politics that affect education, funding climate, etc.

**Environmental Changes.** Environmental changes primarily influence the development of a SIG project’s vision and purpose-setting. Examples include the following:

- Effects of changing federal and state policies
- Effects of changes in demographics and other state or local contextual factors
- Effects of innovations
- Effects of other anticipated or unanticipated changes

**Information Loops.** Two information loops are shown in relation to the administration and leadership functions they affect most immediately. As a systemic reform develops, the information loops inform the vision and purpose-setting functions, the planning and decision-making functions, and, through the planning and decisions-making functions, the implementation functions.

Actions associated with the first feedback loop (**Feedback 1/Corrective**) include using data and other information to make corrective adjustments through planning and decision-making. This means identifying what has been successful and doing more of it; identifying what has been promising but less than fully successful and improving it; and identifying what has failed and dropping it. The second feedback loop (**Feedback 2/Reflective**) depicts the use of data and other information to determine the overall value of results and to reflect on the performance of organizations and systems in achieving the results. The multiple Feedback 2 arrows indicate its complexity as the outputs of the evaluation functions flow back to planning and decision-making and to vision and purpose-setting.

The **Worth** diamond in the Feedback 2 loop indicates that a first step in the process is using data and other feedback to make decisions regarding the value of activities and related outcomes. That is, asking whether the accomplishments are those targeted and expected, whether the accomplishments are resulting in progress toward attaining the desired outcome state, and whether the accomplishments are worth the costs. The **Reflection** diamond in the Feedback 2 loop indicates another decision-making point. Here data, other feedback, and considerations of worth are used to make decisions regarding (1) the value, purpose, or effectiveness of pertinent organizations and systems and (2) the relevance of the overall purpose, vision, or direction.

**Feedforward Loop** (Leadership/Anticipatory Planning). The feedforward loop is associated with leadership. Actions associated with feedforward include the following:

- Proclaiming and sustaining the vision of the outcome state and associated ideals
- Promoting the expectation for change
- Planning contingencies/scenarios
- Anticipating results—asking, “What would happen if we did X?”
- Thinking and planning (developing schemes) regarding sustainability

**Outcome State.** A distinctive feature of the model is the placement of the Outcome State in the Planning and Decision-Making Function. The outcome state is the desired result of the reform—the integrated outcomes that comprehensively define the condition to be achieved. Desired changes to the outcome state include Improved System Function that serves to sustain the reform efforts, Scaling-Up of successful initiatives (taking initiatives statewide), and Improved Student Outcomes that are both meaningful and measurable. The outcome state as depicted in the model can be thought of as the current state in relation to the desired outcome state. It serves as a gauge for judging the actual results being achieved and as the basis for course corrections. Thus, it is placed within the Planning and Decision-Making Function because it drives planning and decision-making and is the focal point of the entire reform.

Once the Systemic Evaluation Inquiry Model was established, categories of evaluation questions were developed and focused through the perspective of the inquiry model. The capital letters on the inquiry model correspond to the categories of evaluation questions in Exhibit 5. The evaluation questions displayed (letters A through N and the subquestions) were tested for clarity and validity with key state informants. Initially, the testing effort for the evaluation questions was confined to SEA personnel. Later, the formative evaluation probe was extended to include the various partners and agencies within states that collaborated on implementation.

### **Exhibit 5. Evaluation Questions Derived from Systemic Inquiry Model**

- A. How are historical, political, and other contextual issues considered in the identification of the needs and the selection of the stakeholders involved in determining the needs?**
1. How were the needs identified that are related to each project goal?
  2. What contextual issues influenced the selection of needs?
  3. How does the SIG project relate to past initiatives or programs in the state that have addressed similar needs?
- B. How are needs translated into the vision of the desired outcome state?**
1. For each project goal, what is the vision of the desired outcome state or the core purpose?
  2. How were the identified needs translated into the vision of the desired outcome state or into the core purpose?
  3. Who participated in defining the vision or purpose?
  4. How has the vision or core purpose been communicated?
- C. How are decisions made about goals and broad strategies that transform the vision into plans?**
1. For each project goal, what is the planning and decision-making process for translating the vision of a desired outcome state into project activities?
  2. Who was involved initially in deciding upon and crafting the details of the plan for project activities?
  3. Who is involved in ongoing decisions regarding the continuing overall direction of project activities?

- D. How do plans and ongoing decisions lead to collaborations, actions, and activities that pursue the vision?**
1. What is the process of translating plans into project activities?
  2. For each project goal, who is collaborating/partnering to implement the planned activities, and what is the nature of those partnering relationships?
  3. What effort has been undertaken to build and sustain the collaborative relationships?
- E. How are the outputs and outcomes associated with decisions and activities identified, selected, and measured?**
1. What have been the direct outcomes (short-term and intermediate) of the activities in each project goal?
  2. Which organizations and individuals have these outcomes affected, and do these affected organizations and individuals represent multiple levels of the targeted systems?
  3. What unintended outcomes have occurred?
- F. How are relevant, external environmental changes identified and incorporated?**
1. For each project goal, how are pertinent changes in the policy and practice environment identified or monitored?
  2. How are these changes communicated?
- G. How are the vision of the desired outcome state and the core purpose promoted, sustained, and used to drive plans and actions?**
1. How are the vision of the desired outcome state and the core purpose used to stimulate commitment to the project?
  2. What is the process for comparing the vision of the desired outcome state and the core purpose to plans, activities, and management processes?
- H. How is evaluative information used to adjust plans, activities, and management?**
1. What data are collected on the outcomes of the activities in each project goal?
  2. How are these data analyzed?
  3. How are unintended outcomes identified and measured?
- I. How is evaluative information used to determine the worth or value of actions and activities vis-à-vis the desired outcome state?**
1. For each project goal, to whom and in what format are outcome data, related evaluation reports, and environmental change information distributed?
  2. At what points in the overall systemic change process has this information been used to initiate changes?
  3. What has been the decision-making process for making data-based changes to the project?
- J. How are determinations of the worth of actions and activities used to alter plans and management processes?**
1. For each project goal, when problems with the project's implementation and the resulting outcomes have been identified, to what extent has a systematic process of reflection on organizational function (by project stakeholders) occurred?
  2. To what extent has reflection resulted in the modification of organizations' underlying norms, policies, and objectives?
  3. Has resulting change occurred in organizations at various levels of the targeted system?
- K. How do reflections on the worth of actions and activities lead to modifications of the vision/purpose, and alterations to organizational structures and management processes?**
1. For each project goal, how have changes in organizational functioning affected the decision-making and planning process for the project?
  2. Has organizational change led to the propagation of inter-organization activities related to the focus area that are self-renewing, self-perpetuating, and sustaining?
  3. Has organizational change led to broader, ongoing systemic improvements?
- L. How is evaluative information used to determine the worth or value of actions and activities vis-à-vis the desired outcome state?**
1. For each project goal, to whom and in what format are outcome data, related evaluation reports, and

environmental change information distributed?

2. At what points in the overall systemic change process has this information been used to initiate changes?
3. What has been the decision-making process for making data-based changes to the project?

**M. How are determinations of the worth of actions and activities used to alter plans and management processes?**

1. For each project goal, when problems with the project's implementation and the resulting outcomes have been identified, to what extent has a systematic process of reflection on organizational function (by project stakeholders) occurred?
2. To what extent has reflection resulted in the modification of organizations' underlying norms, policies, and objectives?
3. Has resulting change occurred in organizations at various levels of the targeted system?

**N. How do reflections on the worth of actions and activities lead to modifications of the vision/purpose, and alterations to organizational structures and management processes?**

1. For each project goal, how have changes in organizational functioning affected the decision-making and planning process for the project?
2. Has organizational change led to the propagation of inter-organization activities related to the focus area that are self-renewing, self-perpetuating, and sustaining?
3. Has organizational change led to broader, ongoing systemic improvements?

The initial purposes of testing these questions with informants were (1) to determine if the questions were understandable by potential state and local informants; (2) to determine if their application provided data that was useful in understanding systemic functions within states; and, thus, (3) to validate the inquiry model. Additionally, the SIG Program Evaluation team saw value in using the interview questions to develop a subset of exploratory interview protocols for identifying the leadership strategies employed by SEA staff and associated with positive outcomes, as described in the next section.

## **Administrative Leadership Strategies**

The work of the SIG Program Evaluation in identifying administrative leadership strategies followed from the development of the Systemic Evaluation Inquiry Model. Focused on the examination of leadership in relation to consequential SIG project outcomes, the useful end result was a compiling of strategies associated with successful systemic change. This component of the evaluation is exploratory, considering the limitations of the outcome information presented in the previous chapter of this report and the limited scope of the data on strategies available for the investigation. Nevertheless, the findings provided support for an overall theory of systemic change in the state education context presented in the next chapter. The leadership strategies, which are a key dimension of the theory, are discussed here.

### **Procedures for Identifying and Confirming Administrative Leadership Strategies**

Over the years of observing SIG projects in action, specific administrative leadership strategies became apparent to the evaluation team. The team had conducted many observations and interviews during site visits to SIG projects considered successful. In fact, most (but certainly not all) of the SIG projects considered successful had been visited by at least two

members of the evaluation team at some time during the SIG Program Evaluation, and a number of states had been visited multiple times. Follow-up to the site visits always involved compiling and organizing the site visit notes. The organizing of the observation and interview data was followed by analysis that focused on, among other issues, administration and leadership. Specific leadership strategies became evident, in particular, as the team viewed SIG project operations through the lens of the Systemic Evaluation Inquiry Model.

An important distinction was realized about the nature of SIG project management. SIG project leaders combined administrative and leadership roles, whereby SIG project directors were required to manage the overall project operations (an administrative role) as well as to engage partners in a compelling vision through collaborative planning (a leadership role). The evaluation team began using the term “administrative leadership” to capture this combination of roles. Returning to the data for a finer-grained review revealed more about how successful SIG project directors exercised their administrative leadership, and the overlapping strategy categories of *influence*, *authority*, and *accountability* were identified.

*Influence* was operationalized as a broad concept of how the SIG project director persuaded and guided the efforts of partners through vision identification, shared purpose-setting, and clear communications regarding the SIG project activities. *Authority* was the more traditional interactive style of many SEA personnel that devolves from their positional authority within the state agency and their ability to control funds and other requirements. *Accountability* was the establishment of expectations or standards of performance. When combined with authority, accountability became the basis for decision-making about continuance of or changes to various SIG project efforts. These three broad strategy categories provided the SIG Program Evaluation team with a clear basis for preparing the exploratory protocols, mentioned in the previous section, for additional interviews with SIG project directors related more specifically to their exercise of leadership.

The evaluation team then planned an additional investigation to examine the concept of administrative leadership and the newly identified categories of leadership strategies. Three sources of information were used to select sites that were considered fertile for understanding administrative leadership. The first source was the observations by SIG Program Evaluation team members that had occurred over the course of the evaluation. The second was the review of SIG project annual performance reports and final reports undertaken as part of the outcomes study described previously. The third was interviews conducted with staff of OSEP-funded Regional Resource Centers who were familiar with the performance of SIG projects in the states to which they provide technical assistance. Nine SIG projects were identified as projects that were judged to have been well implemented and that were likely to obtain notable outcomes. From a systemic improvement point of view, and consistent with the inquiry model, success criteria also included attributes such as alignment, focus, coherence to overall project purposes, and effective resource management.

The formal protocol that was designed for interviewing SIG project directors and SIG project team members probed the leadership aspects of SIG project implementation, distinguished by influence, authority, and accountability. Telephone interviews were conducted by SIG Program Evaluation team members with SIG project directors and invited team members from the nine selected states. All interviews were transcribed and analyzed independently by

two team members. Categorizing and coding in the analysis occurred by use of techniques of pattern coding, memoing, and the development of supporting propositions. Each set of interviews was reviewed and reconciled to obtain agreement between the two independent evaluators. A product from each interview emerged that categorized the interview information.

Although the nine SIG projects were selected primarily based on criteria related to successful implementation and outcomes, they also represented variations in state size, state demographic composition, and geographical areas. Cross-state work was accomplished by developing a matrix for comparing information across SIG projects. For instance, each site's findings on influence strategies of administrative leadership were lined up side-by-side. The comparative data comprised the recorded words of each SIG project director, by major category (i.e., influence, authority, and accountability), and by coded characteristics within each major category. This latter coding provided labels for multiple entries for the same specific strategies, ultimately resulting in the identification and confirmation of 12 unique leadership strategies. The next section describes these findings.

### **SIG Project Use of Twelve Administrative Leadership Strategies**

Through comparative analysis of the findings from the nine states, 12 specific administrative leadership strategies emerged under the three broad categories previously identified. Although the specific strategies were often a mixture of influence, authority, and accountability, each was placed in the one most appropriate broad category. This enabled the evaluation team to study each strategy across several states to arrive at a composite. The number of strategies in each category reflects the frequency of the use by states of strategies in each category: five strategies in the influence category, four strategies in the authority category, and three strategies in the accountability category.

Exhibit 6 provides a summary of the 12 major administrative leadership strategies. Each strategy is presented as a composite description derived from observation of the use of the strategy in more than one state. Examples of the manifestations of the strategies provide descriptions of each.

Table 4 presents a tally of the use of administrative leadership strategies by the states studied. The 12 strategies are listed by category as column headings and are identified by the capital letters used in Exhibit 6. The nine states studied are shown in the rows, lettered from *a* to *i* and identified by funding cohort. The strategies that each state used are checked, and the number of strategies used are tallied.

## Exhibit 6. Administrative Leadership Strategies

Strategy Name	Manifestation of Strategy
<b>Strategy Category: Influence</b>	
<p><b>Strategy A:</b> <i>Implementing professional development (PD) as a systemic tool for change</i></p>	<ul style="list-style-type: none"> <li>• Connecting PD efforts to a long-term school improvement process</li> <li>• Discontinuing “one-shot” workshops</li> <li>• Designing PD at the building level</li> <li>• Discontinuing train-the-trainer model</li> <li>• Discontinuing outside experts coming in to fix a school or system</li> <li>• Designing PD to include ongoing coaching and support</li> <li>• Designing PD with sustainability in mind</li> <li>• Including IHE faculty and partners in PD</li> </ul>
<p><b>Strategy B:</b> <i>Communicating a vision of change</i></p>	<ul style="list-style-type: none"> <li>• Communicating a vision for change that is clear and consistent</li> <li>• Articulating messages that are simple and clear because the audience is large, varied, and will change over time</li> <li>• Committing to allies and partners to make changes</li> <li>• Bridging historic divides between general and special</li> <li>• Promulgating and championing change</li> <li>• Specifying how things will be done differently with different outcomes than past efforts</li> </ul>
<p><b>Strategy C:</b> <i>Creating local buy-in</i></p>	<ul style="list-style-type: none"> <li>• Publicizing successful student outcomes, school outcomes, and district outcomes</li> <li>• Creating a culture of “outcome envy”</li> <li>• Documenting and sharing the successful practices that lead to improved outcomes</li> </ul>
<p><b>Strategy D:</b> <i>Integrating PD efforts with general education reform</i></p>	<ul style="list-style-type: none"> <li>• Finding opportunities to coordinate with general education</li> <li>• Developing and sharing PD strategies and protocols with general education</li> <li>• Combining special education funds with general education funds in order to increase the impact of PD</li> <li>• Understanding general education reforms (e.g., NCLB, Safe and Drug Free Schools, Title I, Reading First) and identifying opportunities to work together (especially behavior and reading)</li> </ul>
<p><b>Strategy E:</b> <i>Using collaborative working partnerships that promote joint learning</i></p>	<ul style="list-style-type: none"> <li>• Facilitating and mobilizing a working relationship with partners around shared needs and outcomes</li> <li>• Establishing and resuscitating relationships with a variety of partners, including IHEs, parents, local school administrators, and departments within the SEA</li> <li>• Planning, problem-solving, and sharing interactively on a regular, periodic basis</li> <li>• Convincing individuals and organizations to become partners by explaining mutual benefits and common goals</li> <li>• Waiting (sometimes for years) for connections or relationships with partners to form</li> <li>• Joint learning</li> </ul>
<b>Strategy Category: Authority</b>	
<p><b>Strategy F:</b> <i>Asserting delegated authority</i></p>	<ul style="list-style-type: none"> <li>• Guiding and shaping the goals of the SIG project from the beginning in a public way</li> <li>• Insuring that different initiatives are integrated and working</li> </ul>

Strategy Name	Manifestation of Strategy
	together <ul style="list-style-type: none"> <li>• Articulating who on the SIG project administrative team has authority to do what</li> </ul>
<b>Strategy G:</b> <i>Setting direction</i>	<ul style="list-style-type: none"> <li>• Declaring a new direction publicly</li> <li>• Communicating new processes and expectations to SIG project grantees and partners</li> <li>• Altering the process of contracting with partners</li> <li>• Making SIG project funding contingent upon changes in grantees' or partners' procedures if not congruent with SIG project approach</li> </ul>
<b>Strategy H:</b> <i>Justifying actions by evoking a higher authority</i>	<ul style="list-style-type: none"> <li>• Deflecting resentment or resistance to a person higher up the chain of command</li> <li>• Deflecting resentment or resistance to a piece of legislation, policy, or regulation</li> <li>• Using OSEP's endorsement to secure local support</li> </ul>
<b>Strategy I:</b> <i>Providing support for partners and subgrantees who buy-in</i>	<ul style="list-style-type: none"> <li>• Anticipating the need for and providing support to SIG project grantees and partners in the form of resources, technical assistance, and training</li> </ul>
<b>Strategy Category: Accountability</b>	
<b>Strategy J:</b> <i>Standardizing the evaluation methodology</i>	<ul style="list-style-type: none"> <li>• Standardizing evaluation protocols, procedures, and rubrics by clearly stating the outcomes and codifying them in contracts with partners</li> <li>• Establishing a universal language among the partners and focused them on the same outcomes</li> <li>• Creating an accountability expectation for professional development</li> <li>• Requiring progress reports and annual reports from SIG project grantees and partners</li> <li>• Providing feedback to SIG project grantees and partners on the data they report and discussing progress made toward project outcomes</li> </ul>
<b>Strategy K:</b> <i>Prioritizing the tasks associated with accountability</i>	<ul style="list-style-type: none"> <li>• Recognizing the importance of consistent monitoring, ongoing two-way communication, and organized record-keeping</li> <li>• Dedicating staff time to the tasks of keeping the initiatives focused and productive</li> <li>• Disseminating SIG products to any interested party, inside or outside the state</li> <li>• Expecting SIG project grantees and partners to conduct self-evaluations and hold themselves accountable after initial training and TA in data collection and analysis</li> </ul>
<b>Strategy L:</b> <i>Using accountability data to justify changes in project</i>	<ul style="list-style-type: none"> <li>• Establishing a "business-like" approach to planning and decision-making by requiring that performance data be the basis for many decisions</li> <li>• Reviewing the program annually with collaborative partners</li> <li>• Summarizing and reviewing performance data of the overall SIG project</li> <li>• Reflecting on data and making decisions based on the data</li> <li>• Looking at the "bottom line" as a public practice for deciding what programs to continue, revise, assist, or terminate</li> </ul>

**Table 4. Tally of Administrative Leadership Strategies by State**

Cohort	State	Administrative Leadership Strategies												TOTAL
		Influence					Authenticity				Accountability			
		A	B	C	D	E	F	G	H	I	J	K	L	
FY1999	a	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	9
FY1999	b				✓	✓		✓	✓		✓	✓	✓	7
FY1999	c	✓		✓	✓	✓	✓							5
FY1999	d	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	10
FY1999	e	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	11
FY1999	f			✓	✓	✓	✓	✓			✓			5
FY2000	g	✓	✓	✓	✓	✓	✓	✓			✓	✓		9
FY2000	h		✓	✓	✓	✓	✓	✓		✓		✓		8
FY2001	i	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	11
<b>TOTAL</b>		6	6	6	7	9	8	8	4	5	6	6	4	75

***Influence Strategies***

In general terms, strategies in the influence category were the most practiced ways of exercising leadership. Strategy D (integrating professional development efforts with general education reform) and strategy E (using collaborative working partnerships that promote joint learning) were the two used most commonly. These two strategies are closely related, and both were employed in all but one of the nine states. Leaders of these successful SIG projects determined that their goals would be met most effectively by collaborating with multiple partners under the umbrella of the state’s general education reform effort. Many successful SIG projects identified a major enabler related to these two strategies—it was often stated that the SIG project funding enabled special educators within the SEA to achieve a “place at the table” of general education reform.

Interview responses indicated that the use of influence by the SEA depended to a large degree on the tenure and quality of existing working relationships with other partners. States with a long history of working with partners appeared to possess the goodwill and social capital to engage partners immediately. Presumably, states in a less propitious situation would first need to find ways to build trust in a longer term working relationship with partners.

***Authority Strategies***

Although not as common as influence strategies, authority strategies were the most pervasive of the three categories because influence and accountability strategies depended, to some degree, on partners and stakeholders recognizing the inherent authority of the state to make

final decisions on a course of action. Four strategies (F, G, H, and I) were identified exclusively, however, in the authority category. The nine successful SIG projects examined during this component of the evaluation used two authority strategies in particular: F (asserting delegated authority) and G (setting direction). Each of the nine states employed at least one of these strategies, and six states employed both.

Although all SEAs have a regulatory role with school districts, particularly in regard to special education services, the exercise of authority depended upon the state's historical context. Interview respondents referred to some states as highly centralized in authority and regulation; others referred to a long history of local control. In an area like professional development, states without a history of assertive authority or a regional infrastructure to support such activities, tended to rely less on their authority to create improvement. This was the case particularly in smaller population states. The history of the use of state-funded professional development in these states tended to be at the discretion of local school districts. This type of state-supplied professional development was often described as "menu-driven" in that a needs assessment would be performed and some type of menu of professional development would be offered. Many times this resulted in the infamous "one-shot" workshop with little or no follow-through. Successful SIG projects used authority to the extent possible to work against this history.

The more successful SIG projects had visible connections to and support from the state director of special education and others in authority in the SEA. Through this visible support, SIG project leaders asserted delegated authority (Strategy F) to enact change was made possible. For many of the SIG projects asserting authority was new and difficult. Existing practices were popular with regional and local school agencies. Resistance might also occur because newer systemic professional development required new ways of planning and measuring progress. Without the delegated authority to communicate a vision of change and the allocation of funds to support this vision, the past practices could not be challenged. SIG projects that asserted delegated authority often moved to collaborative partnerships; in these partnerships, the need for a unified direction by all partners was emphasized. Many times this direction-setting helped hone clear, succinct messages concerning effective professional development and the role of the SIG in putting such professional development into place.

### *Accountability Strategies*

Accountability was emphasized by OSEP as an integral part of SIG projects. A requirement for each applicant was the inclusion of some type of evaluation process as the basis for making and assessing systemic improvements. SIG projects generally had an evaluator responsible at least for the collection and analysis of local evaluation data. The findings here, however, regarding the use of accountability strategies were mixed in comparison to expectations.

Consistent with the inquiry model (Figure 4 above), accountability is ideally enacted by collecting and analyzing data and providing specific feedback to partners on the worth of the evaluated activities and the opportunity to reflect on what was learned for future activities. Strategy J (standardizing the evaluation methodology) and strategy K (prioritizing the tasks associated with accountability) identify two efforts that go beyond the accountability requirements in the SIG Program. Personnel at some successful SIG projects identified a need to

have consistency and coherence across all regional and local projects. Thus, when SIG projects specifically (1) assisted partners in using a standardized evaluation methodology and (2) provided assistance to partners to organize their data collection, record keeping, and reporting, accountability as a leadership strategy began to emerge. The SIG project personnel could then engage partners in a timely discussion for review and planning for the next cycle of work. When states did not see the need for this type of assistance, the feedback loops between the state and partners were far less effective.

Importantly, the expectations for appropriate evaluation were reinforced by SIG projects that provided technical assistance and support to partners in the methods for performing appropriate evaluation. This included providing infrastructure (such as data management systems) for collecting and reporting data, having SIG project personnel monitor the evaluation process closely, and establishing systems of notifying and following up on the timely reporting of evaluation data. SIG personnel reported success in using the evaluation findings as a basis for meeting with partners to review and adjust the implementation of the SIG project activities. By doing so, SIG project leaders emphasized the priority that the evaluation process had in the SEA's view, breaking past cycles of regional and local agencies collecting and reporting data with no feedback from the state agency.

### ***Multiple Strategies***

As is apparent in Table 4 (above) and from the discussion above, directors of successful SIG projects commonly used several specific administrative leadership strategies together. Multiple strategies were essential for complex partnering arrangements, particularly where leveraging of non-SIG resources was important. For example, many successful SIG projects connected their work to the ongoing general education reform work occurring in their state (strategy D). The projects built collaborative partnerships that created joint learning (strategy E) and a synergy in resource use. The authority for the SIG project to set direction (strategy G) in concert with general education came through the assertion of delegated authority (strategy F) that was visible from the highest levels of the state agency. Similarly, successful SIG projects demonstrated their commitment to accountability by standardizing the evaluation process (strategy J) and prioritizing the accountability task (strategy K) in the eyes of all the partners. The power in the overlap of one strategy with another and the use of paired strategies becomes apparent when viewed through these examples.

### **Conclusions Related to the Twelve Administrative Leadership Strategies**

Successful SIG projects connected their work to the ongoing general education reform work occurring in their state. They built collaborative partnerships that created joint learning and a synergy in resource use. The authority for the SIG project to undertake systemic change was visible from the highest levels of the state agency; this allowed project personnel to set the direction of the SIG project with some degree of assertiveness. Finally, successful SIG projects demonstrated their commitment to accountability by standardizing the evaluation process and prioritizing the accountability task in the eyes of all the partners.

The operational context, particularly the state's history of infrastructure development and collaborative partnerships, affected the SIG project leadership efforts. This effect was reported

both in terms of strategies selected and the level of effort required to achieve success in promoting a systemic reform. For example, a state's current capacity to manage and process data was an important contextual factor related to establishing data-based decision-making and accountability of SIG project partner-contractors. Also, the availability of a technical assistance infrastructure within the state had clear implications for the support available to partners working with school districts. Additionally, if a state's history of working collaboratively with higher education or parent organizations was minimal, extensive upfront time was needed to building the relationships required for true partnerships.

## Chapter 4. A THEORY OF SYSTEMIC CHANGE

The SIG Program Evaluation team developed the Systemic Evaluation Inquiry Model, described previously and presented in Figure 4 (above), as a means of structuring an examination of the management of systemic change. The model was useful in many stages of the evaluation, including the inventorying of outcomes and the identification of systemic leadership strategies, both of which have been described above. By the conclusion of these activities, the evaluation team had refined a theory of systemic change, which is described in this concluding chapter.

Figure 5 provides a graphical representation of the theory. It was first presented in the *Third Interim Report* as a Model of Systemic Change Management Attributes. The revised version is based on more recent findings, particularly from the study of leadership. It incorporates the three categories of administrative leadership strategies and labels more clearly the actions leaders must take to successfully effect systems change. By including these two changes, and by redefining the outcomes of interest, the model more accurately articulates a theory of change.

The theory of systemic change is organized by the hierarchical relationship among four broad, conceptual categories: grounding principles, design functions, operations functions, and adjustments. Desired outcomes are at the top of the triangle. In the SIG projects these desired outcomes are typically changes in the operation of the education system that benefit students. The theory also includes the intermediate outcomes of improvements in how systems function and positive changes in how adults behave or perform. The desired outcomes fuel the systemic reform. In this theory, the driving forces are leadership strategies that, if applied effectively, move the reform effort from a set of principles through actions that lead to the desired results.

### Concepts Underlying the Theory

The following paragraphs briefly describe the 14 actions depicted across the four conceptual categories and the outcomes.

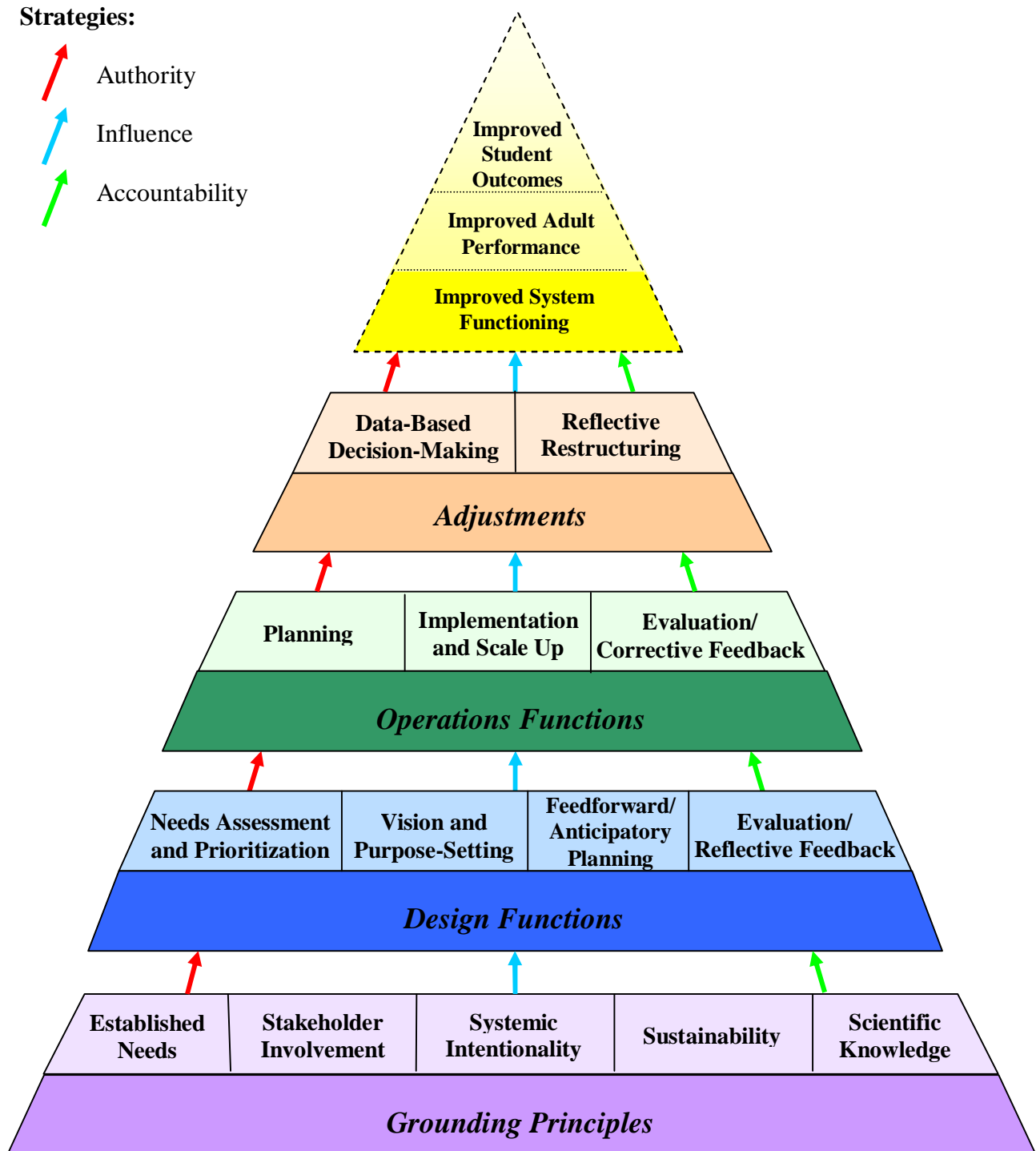
#### Grounding Principles

The five grounding principles imply actions that were all expressly addressed in the SIG Program legislation and the grant priorities. They are the foundation of a systemic change effort, hence their position at the base of the triangle. Ideally, reformers subscribe to these principles when designing a systemic change effort and later use these principles to guide implementation of and make adjustments to the reform.

##### *Established Needs*

Reform goals and activities are based on established needs, which are identified and updated by various stakeholders and supported by data. Needs may exist at multiple levels of the system (e.g., student level, school level, state level).

Figure 5. Model of a Theory of Systemic Change



### ***Stakeholder Involvement***

Relevant stakeholders are an integral part of the planning of the reform. They are active participants with significant involvement in decisions. The input, participation, and commitment of multiple relevant stakeholders with diverse viewpoints are continuously solicited.

### ***Systemic Intentionality***

Systemic change is deliberate and volitional. The reform requires that leaders and stakeholders recognize the need for systems change, accept individual responsibility for belief and behavior change, and commit to a systemic way of carrying out the change process. The essence of systemic intentionality is the individual and collective commitment not to conduct business as usual.

### ***Sustainability***

Provisions are made for long-term continuation of successful reform beyond the initial funding period. Sustainability focuses on the continuation of the successful initiatives and on the continuation of new ways of interacting and conducting business. Reformers plan with sustainability in mind and purposefully and strategically commit resources toward this end.

### ***Scientific Knowledge***

Systemic reform begins with scientifically validated, research-based knowledge about the content of the reform and ideas about strategies for achieving it. This knowledge informs the reform's implementation, management, and evaluation and is continuously confirmed and advanced through the collection and analysis of data in local contexts.

## **Design Functions**

In developing the initial design and in planning ongoing redesigns, reformers identify and prioritize needs, develop a shared vision and purpose, plan for the allocation of resources, and continuously consider feedback as the plans unfold.

### ***Needs Assessment and Prioritization***

The reform must be grounded in clearly identified and articulated needs. Specific activities associated with needs assessment include collecting needs data, engaging stakeholders, prioritizing, and documenting and justifying the legitimacy of the identified needs.

### ***Vision and Purpose-Setting***

A shared vision of an outcome state guides the reform. Ideally, the vision and purpose are developed and updated through a consensus-building process, resulting in group solidarity in sentiment and belief. Support for the vision and purpose is actively sought from system stakeholders.

### ***Feedforward/Anticipatory Planning***

Reformers act as change agents by promoting a vision of an outcome state. Resources are allocated based on immediate, short-term needs, as well as projected long-term needs. Feedforward is the prospective use and communication of information for the purpose of anticipating and manipulating possible eventualities. Outgoing communication from the SIG project serves to promulgate the vision and related ideals, garner support, urge change, coordinate initiatives, and publicize results.

### ***Evaluation/Reflective Feedback***

Reformers monitor progress toward the desired outcome state, and modify reform efforts when needed. Evaluative information on results of project activities and project decisions is used to inform project management. Related specifically to design, data and other information are used to determine the overall value of results and the performance of organizations and systems in achieving results.

## **Operations Functions**

Central to the progress of a reform are the management functions of planning, implementation and scale up, and evaluation based on data.

### ***Planning***

Reformers plan with consideration of the historical, cultural, and political characteristics of the reform environment. They consider, in particular, opportunities for alignment with existing policies and initiatives and with other reforms. In addition, they monitor ongoing environmental changes, making adaptations when appropriate. Reform requires the deliberate and calculated allocation of sufficient resources to undertake systemic strategies. These resources include, but are not limited to, money, time, labor, materials, and political support. Communication with individuals at different levels of the system serves to ground planning in the concerns of stakeholders.

### ***Implementation and Scale Up***

Systemic change is a collaborative process, and reform leaders are persuasive advocates for change, effective facilitators of collaborations among organizations, and strategic negotiators able to influence policymaking. They seek to distribute power, authority, and responsibility among system stakeholders. Actions, activities, and initiatives are implemented through strategic partnerships that reformers continuously nurture. Hallmarks of organizational collaboration include shared agendas, shared resources, shared authority, and shared responsibility. Systemic change efforts ultimately affect *all* of the relevant organizations at *all* levels of a system. Large-scale implementation requires fundamentally different activities and approaches than does small-scale implementation. Ideally, reformers design systemic change strategies specifically for scaling up and for large-scale implementation.

### ***Evaluation/Corrective Feedback***

Reformers monitor progress toward the desired outcome state, modifying reform efforts when needed. With regard to operations, data are used to identify successful activities and then to develop or revise continuation plans. Data are also used to identify promising activities that were less than fully successful and then to develop improvement plans or to identify and discontinue activities that failed.

### **Adjustments**

Reform is an ongoing change process that requires continuous adjustment and correction. Reformers collect and use data to modify actions, activities, and initiatives, and to reflect upon the need for changes to the reform's vision and to organizations.

#### ***Data-Based Decision-Making***

Reformers identify, collect, analyze, and interpret the data necessary to make adjustments, corrections, and other redesign and implementation decisions. They use data in particular for decisions related to scaling up. The objective use of data promotes accountability, equity, and efficiency.

#### ***Reflective Restructuring***

Reformers use data and other information to judge the overall value of results of initiatives in achieving the vision. Reformers also use data and other information to judge the performance of pertinent organizations and systems. As appropriate, reformers modify the vision or strive to restructure organizations and systems to increase the opportunity to achieve the vision.

### **Desired Outcomes**

The outcomes are the tangible results on which the actions and decisions are focused. The unique status of desired outcomes is depicted in the model by the dashed border.

#### ***Intermediate Outcomes***

Intermediate or proximal outcomes are the direct results of actions, activities, and initiatives. In a systemic reform in education, these outcomes are ***improved system functioning*** and ***improved adult performance***. Intermediate outcomes can serve as touchstones or benchmarks of the progress of the reform and lead to improved student outcomes.

#### ***Student Outcomes***

Student outcomes are the ultimate goal of the systemic reform effort.

## **Final Thoughts Regarding Systemic Change**

The theory of systemic change presented here is grounded in 6 years of observations and analysis of SIG project operations. As such, it summarizes the collective knowledge of the many individuals who have served on the SIG Program Evaluation team. More so, however, the theory captures the learning of the many state-level individuals who have served as leaders of SIG projects and of the federal officials who have managed the overall SIG Program. These persons have determined, often through a discovery process, how best to put systemic change into operation. The evaluation team has attempted to capture, and to coherently articulate, their theory as evidenced from their practice.

In putting together the theory of systemic change, the SIG Program Evaluation team observed clear successes and certain failures. But most often, given the relatively short duration of the evaluation and the ambitious changes many states have attempted, the evaluation team had to make judgments, based on limited data, about which strategies and actions would ultimately prove to be productive. Thus, the theory of systemic change is preliminary. It, like the reforms states are attempting, is a work in progress.

**Appendix. COMPREHENSIVE LIST OF SIG PROJECT OUTCOMES AND SCORES**

## Appendix. COMPREHENSIVE LIST OF SIG PROJECT OUTCOMES AND SCORES

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
		<b>ROBUST OUTCOMES</b>					
1	a	A reading initiative for students with disabilities in kindergarten through third grade resulted in better test scores.	3	3	3	3	<b>81</b>
3	d	Alternative and modified assessments for special education students were developed and piloted by SIG across the state.	3	3	3	3	<b>81</b>
3	d	The state developed an alternative assessment tool and effectively trained stakeholders in its use.	3	3	3	3	<b>81</b>
3	e	98.7 percent of the state's students with disabilities participated in annual assessments.	3	3	3	3	<b>81</b>
		<b>SOLID OUTCOMES</b>					
1	a	Demonstration centers using appropriate research-based instruction improved reading scores for most students with disabilities.	3	3	3	2	<b>54</b>
1	a	Approximately 100 students with disabilities in four middle schools made significant progress on tests measuring reading skills.	3	3	3	2	<b>54</b>
1	b	Referral and suspension rates dropped at SIG sites statewide.	3	3	3	2	<b>54</b>
1	d	The large majority of 37 school teams reported improved child behavior resulting in increased instructional time after the staff participated in professional development about behavioral interventions.	3	3	3	2	<b>54</b>
1	e	Statewide, the percentage of special education students graduating with regular diplomas increased, and the percentage of students with disabilities who dropped out of high school decreased.	3	2	3	3	<b>54</b>
2	a	Mentoring programs have positively affected special education teacher retention.	2	3	3	3	<b>54</b>
2	b	A parent training center helped nearly 3,000 parents gain valuable skills to help their children in school.	3	3	3	2	<b>54</b>
2	b	Faculty behavior towards students with behavior concerns improved in more than 100 sites trained in a system of behavioral support.	3	3	3	2	<b>54</b>
2	b	On a 20-item checklist, 22 of 23 participating LEAs reported improved skills in monitoring transition services for older students with disabilities.	3	3	3	2	<b>54</b>
3	a	Collaboration increased among local educational agencies, colleges and universities, parent organizations, and divisions in the department of education.	3	3	2	3	<b>54</b>
3	b	A continuum of care for students with disabilities was comprehensively streamlined and included administrators on all school team trainings.	3	2	3	3	<b>54</b>
3	b	A data-driven professional development model was adopted and institutionalized through new regional structures linking universities and school districts.	3	3	2	3	<b>54</b>
3	b	An alternative teacher preparation program was developed out of a model collaboration of the state department of education, local agencies, and universities.	3	3	2	3	<b>54</b>
3	d	Standards and a career ladder for paraprofessionals in special education were implemented by the state.	2	3	3	3	<b>54</b>
3	d	A new accountability model for students with disabilities was implemented statewide.	3	2	3	3	<b>54</b>
3	e	State assessment programs included more students with disabilities.	3	2	3	3	<b>54</b>
3	e	Almost 100% of students with disabilities currently participate in state assessments.	3	2	3	3	<b>54</b>
3	f	A new multi-categorical licensing endorsement partnership added 124 new special education teachers to the work force.	3	3	3	2	<b>54</b>
3	f	An effective regional recruitment, preparation, and retention model increased the number of certified special education teachers in the state.	3	2	3	3	<b>54</b>

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	f	The number and percentage of special educators holding emergency certificates decreased in the state because of the development of new alternative certification programs, recruitment, and tuition support.	3	2	3	3	54
3	f	The percentage of special educators teaching without appropriate licenses decreased across the state due to coordinated recruitment efforts, stipends, and a new website.	2	3	3	3	54
3	f	More certified special education teachers are now employed by schools across the state because of the introduction of new distance and alternative certification programs, a new website, recruitment efforts, and a strong retention program.	2	3	3	3	54
3	f	New undergraduate and graduate dual certification teacher education programs for special educators were developed in at least five universities, dramatically increasing the number of special education teachers graduating in-state.	3	2	3	3	54
3	g	The state scaled up programs for targeted regional technical assistance and expanded successful interventions.	3	2	3	3	54
3	g	Statewide professional development processes were changed from "one-shot" training models to intensive, locally-relevant technical assistance using school infrastructure and continuous monitoring.	2	3	3	3	54
3	h	Timeliness of evaluation and service provision for special education students improved considerably.	3	2	3	3	54
3	i	The percentage of time that students with disabilities received instruction in the general education setting increased.	3	2	3	3	54
4	c	Positive behavioral supports were implemented in 108 sites serving two-thirds of the state.	3	2	3	3	54
<b>PROBABLE OUTCOMES</b>							
1	a	Professional development for inclusion improved test scores for students with disabilities.	3	2	3	2	36
1	a	A new problem-solving process for delivering services to students with intensive educational needs improved test scores for students with disabilities.	2	3	3	2	36
1	a	The statewide percentage of students with disabilities becoming proficient in math and reading increased.	2	2	3	3	36
1	a	Improved reading scores were documented in schools supported by SIG training initiatives.	2	3	3	2	36
1	a	The percentage of students with severe disabilities meeting or exceeding expectations on the statewide alternative assessment portfolios increased significantly.	2	3	2	3	36
1	a	The large majority of SIG-funded schools had more students with disabilities performing at or above standard on the state's standard course of study.	3	2	3	2	36
1	a	District-level unified strategic plans, including best practices and progress monitoring, led to positive student outcomes.	2	3	3	2	36
1	b	Schoolwide positive behavioral support for students with challenging behaviors reduced the number of suspensions for students with disabilities in 35 pilot sites.	3	2	3	2	36
2	b	A statewide training clearinghouse enabled special educators and parents of students with disabilities to use newly-learned skills at home and at school.	2	3	2	3	36
2	b	SIG-initiated training helped 90% of the state's higher education institutions integrate IDEA information into their preservice teaching curriculum.	2	3	3	2	36
2	b	66 teachers received certification from training workshops to verify that they had mastered teaching skills for reading strategies instruction.	3	3	2	2	36
2	b	Approximately 160 paraprofessionals used transition training information for the benefit of older students with disabilities, and nearly 100 paraprofessionals trained colleagues.	3	2	3	2	36
2	b	A large majority of teachers in four middle schools trained in differentiated instruction stated that their teaching skills for diverse learners improved.	2	3	3	2	36
3	a	Collaboration across all levels of the state education department increased.	2	3	2	3	36
3	a	A new problem-solving process for delivering services to students with intensive educational needs increased collaboration in the pilot schools.	2	3	3	2	36

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	a	Dialogue among public and private organizations, especially between universities and the department of education, increased significantly.	2	3	2	3	36
3	a	An exceptional children's assistance center aligned its informational resources with SIG priorities.	2	3	3	2	36
3	a	Collaboration between special education training centers, institutions of higher learning, regional teaching agencies, and school districts was enhanced.	3	3	2	2	36
3	a	SIG staff worked with the state university system to determine and describe best practices for students with disabilities.	2	3	2	3	36
3	b	All schools in the state conduct root cause analyses based on localized needs assessments to overcome barriers to learning for students with disabilities.	3	2	2	3	36
3	b	All schools have developed procedures and interagency linkages for providing locally-administered mental health services.	2	2	3	3	36
3	b	The department of education in the state now provides school-based behavioral support for more than 90% of the students who are required to receive mental health care.	3	2	2	3	36
3	b	An integrated monitoring process provided a means for systematic review of data impacting the system of services for students with disabilities.	3	2	2	3	36
3	b	Several new non-traditional certification programs were developed to reduce the number of teachers employed under emergency special education certificates.	3	2	2	3	36
3	b	Newly revised charter school application processes require more accountability for programs that serve students with disabilities.	3	2	3	2	36
3	b	Charter schools statewide increased compliance with mandated special education regulations.	3	2	3	2	36
3	d	Uniform achievement standards for students in special education from kindergarten through 12th grade were established and implemented.	3	2	2	3	36
3	d	A new monitoring system began using district data reports to evaluate special population services statewide.	2	2	3	3	36
3	d	A new database was created to track post-secondary outcomes for students with disabilities.	3	2	3	2	36
3	d	A database was created to report the types of services received by students with disabilities.	3	2	2	3	36
3	d	A large university developed a certification track for student services coordinators interested in interdisciplinary and diversity studies.	3	2	3	2	36
3	d	Training materials concerning disability issues were developed and widely disseminated in the state to stakeholders at all levels of service and support for children with disabilities.	3	2	2	3	36
3	d	An alternate assessment for students with disabilities was built into the state's testing accountability system.	3	2	2	3	36
3	d	A new alternate assessment to measure math and reading achievement for students with disabilities was implemented statewide.	3	2	2	3	36
3	d	Schools statewide gather information from staff about each school's learning climate with an inventory.	3	3	2	2	36
3	d	A new management information system was implemented to coordinate special, regular, and vocational educational assessment data.	3	2	2	3	36
3	d	Administrative certification was modified to include information on legal and instructional leadership provisions for special education.	2	2	3	3	36
3	d	A new statewide literacy model and matrix emerged from a collaboration between special and general educators.	3	3	2	2	36
3	d	New training materials that promise to improve statewide use of a behavior support system were completed and distributed.	3	3	2	2	36
3	d	Text Reader site licenses were implemented and supported in more than 1,300 schools.	3	2	3	2	36
3	d	Emergent literacy was infused into a new statewide curricular framework for young children with disabilities.	2	2	3	3	36
3	e	97% of the state's students with disabilities participated in statewide testing, up from 69%.	2	2	3	3	36

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	e	Every year of the SIG, more students with disabilities are evaluated on alternate assessments.	3	2	2	3	36
3	e	Participation of all students with disabilities in statewide assessments has increased.	2	2	3	3	36
3	e	All students with disabilities are tested on the annual state assessment measure.	2	2	3	3	36
3	f	At least 152 pre-interns became fully certified and at least 210 of 326 newly certified teachers obtained teaching positions.	3	2	3	2	36
3	f	SIG recruitment efforts have reduced the number of uncertified special education teachers in the state.	2	2	3	3	36
3	f	A college personnel preparation project for teachers of children with low incidence disabilities attracted new candidates for licensure.	3	2	3	2	36
3	f	The percentage of charter school teachers under-certified in special education has decreased.	3	2	3	2	36
3	f	Professional development partnerships supporting mentoring and teacher preparation follow-up created more certified teachers in special education.	2	3	3	2	36
3	f	Enhanced preservice training for occupational and physical therapists increased the number of therapists hired by schools.	2	3	3	2	36
3	f	A public school internship program offered by a large university generated more and better trained speech and language pathologists for the state's schools.	3	2	3	2	36
3	f	Tuition reimbursements supported nearly 200 newly certified special educators.	3	3	2	2	36
3	f	More teachers became certified in special education in the state.	3	2	3	2	36
3	j	A SIG state task force created a data feedback loop for continuous change and aligned SIG objectives with the state's key performance indicators.	2	3	3	2	36
3	j	All state professional development activities are now informed by data-based decision-making.	2	2	3	3	36
4	a	An effective system that includes school coaches for dealing with students who exhibit challenging behaviors was scaled up statewide.	2	2	3	3	36
4	a	The state implemented a system of positive behavioral support for students in forty school districts.	3	2	3	2	36
1	a	Standardized reading test scores indicated improved results for students with disabilities in all grades and in all subjects tested.	3	1	3	3	27
1	b	Teacher professional development on behavior management reduced the number of students with disabilities referred for disciplinary infractions.	3	3	3	1	27
1	e	More students with disabilities earned a regular high school diploma and fewer dropped out of school.	3	1	3	3	27
1	e	The dropout rate for students with disabilities decreased significantly.	3	1	3	3	27
2	b	SIG training expanded the capacity of early care providers to enhance language development for preschool-aged children.	1	3	3	3	27
2	b	Dissemination of research-based materials on special education improved teacher practice across the state.	1	3	3	3	27
2	b	SIG training improved teacher practices for inclusive educational environments.	1	3	3	3	27
3	d	Educational interpreters are now required to pass a competency test to become licensed.	3	1	3	3	27
3	d	A directory of resources for parents of students with disabilities was created and distributed throughout the state.	3	3	1	3	27
3	d	An inclusive early childhood certification license was approved in the state.	3	1	3	3	27
3	d	Guides for disability documentation and subsequent training modules for students transitioning out of high school were created for the state.	3	3	1	3	27
3	d	A web-based survey of preservice programs was designed to analyze programming for teachers of young children with disabilities.	3	3	1	3	27
3	d	The state created a new, inclusive performance-based teacher licensure system.	3	1	3	3	27
3	d	Administrative licensure requirements were changed to include special education.	3	1	3	3	27

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	d	New special education regulations were implemented statewide.	3	1	3	3	27
3	d	Licensure and standards for teachers were revised, and new accountability measures for special education were introduced.	3	1	3	3	27
3	e	Participation rates for students with disabilities in state assessments have increased.	3	1	3	3	27
3	e	Participation of students with disabilities in the state testing programs at all grade levels has dramatically increased.	3	1	3	3	27
3	f	The percentage of unlicensed special education administrators in the state decreased.	3	1	3	3	27
3	g	The state learned to focus new professional development on narrow, more promising initiatives.	1	3	3	3	27
3	g	Sophisticated learning resulted from this project and is being applied in SIG II.	1	3	3	3	27
1	a	Direct, local, mini-grant-funded technical assistance for teachers resulted in improved student test scores.	2	2	3	2	24
1	a	Reading First initiatives with SIG funds improved test scores for students with disabilities.	2	2	3	2	24
1	d	Professional development for teachers who work with students who have severe disabilities demonstrated improved child outcomes.	2	2	3	2	24
1	f	A new problem-solving process for delivering services to students with intensive educational needs reduced the number of students in special education classes.	2	3	2	2	24
1	f	More students with disabilities were educated in regular settings in the SIG-focused districts.	3	2	2	2	24
2	b	Professional development for teachers who work with students who have severe disabilities improved their teaching practices.	2	2	3	2	24
2	b	Teachers used new skills acquired through SIG-supported Reading First professional development.	3	2	2	2	24
2	b	A new problem-solving process for delivering services to students with intensive educational needs helped teachers make collaborative decisions based on data.	2	3	2	2	24
2	b	Faculty at fourteen teacher preparation institutions partnered to create research-based curricular models for inclusive educational practices.	2	3	2	2	24
2	b	A new monitoring system for special educators improved their instructional skills.	2	3	2	2	24
2	b	Systemic changes to better prepare teachers to work in inclusive classrooms occurred in higher learning institutions across the state.	3	2	2	2	24
2	b	A significant percentage of professionals serving students with disabilities who were trained in novel and appropriate professional development programs claimed that the quality of their work was enhanced.	3	2	2	2	24
2	b	The majority of 800 professionals statewide who returned surveys about a new assistive technology manual claimed that using it improved their practice with students who have disabilities.	2	2	3	2	24
2	b	Reading programs and universal literacy screening were implemented with a great degree of accuracy.	2	3	2	2	24
3	a	A unique statewide partnership, including members of the SIG evaluation task force, forged a collaboration of 100 stakeholders concerned with special education.	2	2	3	2	24
3	a	The Governor's office now mandates special education staff involvement in all state-level teams.	2	2	2	3	24
3	a	Improved communication among IHE partners.	2	3	2	2	24
3	a	Local partnerships were formed between educational agencies and universities that yielded new course requirements and better placements for special educators in training.	2	3	2	2	24
3	a	Partnerships were formed between school districts and institutions of higher learning to facilitate appropriate placements for student teachers.	2	3	2	2	24
3	a	Professional development partnerships required statewide collaboration between schools, districts, and universities.	2	3	2	2	24

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	a	Regional councils concerned with special education have increased collaboration between universities, schools and districts, community agencies, and parents.	2	3	2	2	24
3	a	Collaboration among state colleges and universities that train teachers developed effective preservice curricular alignments.	3	2	2	2	24
3	a	Families who have children with special needs were included in a statewide mentoring network.	3	2	2	2	24
3	a	A newly modified statewide mentor training program for novice special education teachers improved teacher retention throughout the state.	3	2	2	2	24
3	a	SIG improved cooperation within state agencies.	2	3	2	2	24
3	b	A statewide system to handle due process complaints at the local level was developed and implemented, reducing the number of documented due process concerns.	2	2	2	3	24
3	b	The state created whole-school, job-embedded professional development that was focused, coordinated, research-based, and data-driven.	2	2	2	3	24
3	b	Certification requirements to alleviate barriers to recruitment of out-of-state teachers were changed at the state-level.	2	2	2	3	24
3	b	Increased support in research-based practices for behavior and instruction was provided to more than two-thirds of the schools in the state.	2	3	2	2	24
3	b	An effective, well researched mentor training program was developed and implemented.	3	2	2	2	24
3	b	Streamlined preservice inclusion programs for general and special education teachers were created by collaborating state institutions of higher learning.	2	2	3	2	24
3	b	A coalition of parent and disability-related organizations was created and integrated into regional agencies.	3	2	2	2	24
3	b	Statewide reading initiatives were coordinated using SIG funding.	2	2	3	2	24
3	b	A unique system for paraeducator training in special education was devised and implemented.	3	2	2	2	24
3	c	A mentoring program designed for veteran special education administrators to partner with new ones has targeted director retention gaps in the state.	2	2	3	2	24
3	d	SIG developed an evaluation database for training and technical assistance.	3	2	2	2	24
3	d	Personnel preparation standards and an accreditation rubric for potential special education teachers were effectively established and implemented.	2	2	2	3	24
3	d	Entry-level competency-based teacher standards for inclusive practices were adopted and implemented statewide.	3	2	2	2	24
3	d	Six institutions of higher learning sustainably and significantly changed the preservice curriculum for all teachers by including new special education course requirements.	3	2	2	2	24
3	d	Online courses were developed by major state universities to attract speech and language pathology candidates.	3	2	2	2	24
3	d	All contractors for the state's professional development activities are now required to include parents, teachers, and school administrators.	2	2	2	3	24
3	d	A restructured special education teacher certification system was developed to align with IDEA legislation and to increase positive behaviors for students with disabilities.	2	2	2	3	24
3	d	A data-driven revision of graduate work in the field of special education was developed and piloted.	3	2	2	2	24
3	d	A new licensure program was developed for teachers who work with students who have visual impairments.	3	2	2	2	24
3	d	A new behavioral accountability scheme was developed for students with disabilities in targeted SIG schools.	3	2	2	2	24
3	d	New curriculum was developed for graduate level special education certification and mentoring.	2	2	3	2	24
3	d	Preservice programs added new reading curricula to teacher training.	2	2	3	2	24

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	f	SIG funds were instrumental in establishing a resident teacher program that added well prepared special educators to the field in the state.	2	2	3	2	24
3	f	Academies to prepare personnel for special education positions in areas with acute teacher shortages certified more professionals to work in the state.	3	2	2	2	24
3	f	Four universities now offer on-line courses leading to more certified teachers for students in low-incidence populations.	2	2	3	2	24
3	f	New distance learning courses in special education provided training for teachers in rural communities across the state.	2	2	3	2	24
3	f	400 adults participated in newly developed early care career preparation training programs.	3	2	2	2	24
3	g	Locally-administered professional development grants successfully required new projects to record and use data effectively.	2	2	2	3	24
3	g	Organizational learning was demonstrated in sites adapting and disseminating model teaching practices.	2	3	2	2	24
3	g	The state's professional development model now includes multidisciplinary teams with ongoing coaching.	2	2	3	2	24
3	i	On-site monitoring and coaching for teachers allowed students with disabilities more time in less restrictive environments.	3	2	2	2	24
3	j	Data was reliably and systematically collected statewide in order to analyze outcomes for students with disabilities and their families.	2	2	2	3	24
3	j	Data related to students with disabilities was incorporated in the state's monitoring system.	2	2	2	3	24
3	j	The state is now using data to drive educational systems reform.	2	2	2	3	24
4	a	A scientifically-based assessment tool for determining emergent literacy skills was adopted statewide for both general and special educators.	3	2	2	2	24
4	a	Regional projects with parents of students with disabilities as participants in preservice teacher preparation were scaled up statewide.	2	3	2	2	24
4	c	A state-level infrastructure was built to sustain a system of training in positive behavioral support for all qualifying school districts.	3	2	2	2	24
1	a	Teacher professional development on behavior management improved test scores for students with disabilities.	2	3	3	1	18
1	a	Students with disabilities scored higher on the state writing and reading tests.	2	1	3	3	18
1	a	A school-specific behavioral intervention model improved student performance in four schools.	2	3	3	1	18
1	a	A new elementary level reading program improved literacy skills for students with disabilities.	2	1	3	3	18
1	a	Students with disabilities in SIG reading program improved in reading more than all students statewide.	3	1	2	3	18
1	a	Reading test scores have improved statewide for students with disabilities.	2	1	3	3	18
1	b	Disciplinary office referrals were reduced in at least 9 elementary schools after professional development for teachers and administrators.	2	3	3	1	18
1	d	Schoolwide training in positive behavioral supports for students improved school discipline in 39 schools.	2	3	3	1	18
1	e	Interagency transition monitoring and planning for high school students with disabilities improved graduation and school completion rates across the state.	1	2	3	3	18
1	f	Special education students returning to regular education.	2	1	3	3	18
1	f	Fewer student referrals to special education occurred in schools trained in a positive behavior program funded by SIG.	1	3	3	2	18
2	a	An effective mentoring program improved the rate of teacher retention in special education.	2	3	3	1	18
2	a	The teacher retention rate increased because of SIG funded tuition reimbursements.	2	3	3	1	18
2	b	Teachers reported that curriculum and teaching practices were much more effective at three model SIG schools.	1	3	3	2	18

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
2	b	Professional development for teachers who work with students who have orthopedic impairments improved their teaching practices.	3	2	3	1	18
3	a	The state education department collaborated with the university system to uniformly align the accreditation processes and standards for new teachers.	1	3	2	3	18
3	a	General and special educators increased collaboration time at three SIG pilot schools in the state.	1	3	3	2	18
3	a	Collaboration between special and general educators has been institutionalized.	3	3	2	1	18
3	a	The state developed more effective post-school transition policies and products for older students with disabilities.	3	1	3	2	18
3	a	A district developed collaborative, integrated play groups for diverse young children, involving parents, providers, and children in a natural environment.	3	1	3	2	18
3	b	A new project was developed to align information dissemination, technical assistance, and training efforts focused on transition planning for students with disabilities.	2	1	3	3	18
3	b	Councils to identify and prioritize professional development needs by region were strengthened with SIG funding.	1	3	2	3	18
3	b	The state formalized a system-wide plan for coordinated staff development for providers teaching children from birth to the age of three.	1	3	2	3	18
3	b	Seven large agencies collaborated to improve services for children with disabilities.	3	1	2	3	18
3	b	Targeted schools implemented a way to record effective participation in a system of behavior support for students with disabilities.	2	3	3	1	18
3	c	Staffing patterns were improved by combining special and general educator expertise to benefit student academic performance.	3	3	2	1	18
3	c	Two physical therapists and two occupational therapists were trained to provide direct services and mentoring in several schools.	3	3	2	1	18
3	d	SIG developed a policy task force, which led to tying special education improvement plans to strategic goals reported annually to the state.	1	3	2	3	18
3	d	A model transition tracking program was developed for children with disabilities transitioning out of early intervention and into public school settings.	3	3	2	1	18
3	d	Legislative changes related to sufficiently qualified personnel in special education were adopted by the state.	3	1	2	3	18
3	d	The SIG helped to develop a mandatory data system to help participating schools inform school improvement decisions in an ongoing process.	3	3	2	1	18
3	d	A parent-as-consultant directory was created to disseminate to preservice teachers in early intervention and early childhood programs.	3	3	1	2	18
3	d	An online Master's program at a major state university prepared students for graduate degrees in speech and language pathology.	3	3	2	1	18
3	d	A research-based classroom evaluation tool for teachers of young children with and without disabilities was successfully piloted in SIG schools in the state.	3	2	3	1	18
3	d	The state adopted a new unified license for practitioners in early childhood and early childhood special education.	3	1	3	2	18
3	d	A state-level agency mandated that early intervention services be provided in children's natural environments.	3	1	3	2	18
3	d	A handbook about performance assessments for special education teachers was published by a consortium of thirteen institutions of higher learning in the state.	3	3	2	1	18
3	d	Six institutions of higher learning modified or developed mandatory classes for teacher preparation in order to include positive behavior support training.	3	2	3	1	18
3	d	The SIG developed products for the effective transition of students with disabilities from high school	3	3	2	1	18
3	e	Rates of statewide test participation for students with disabilities doubled.	3	1	2	3	18

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	f	SIG funding increased the number of teachers certified in special education.	2	3	3	1	18
3	f	Scholarships provided by the SIG encourage 62 special educators to remain in the state.	1	3	3	2	18
3	f	A Master's program for teachers of students with visual impairments was bolstered by scholarships and increased recruitment efforts.	2	3	3	1	18
3	f	Monetary incentives helped itinerant teachers serve hard-to-staff areas across the state.	3	3	2	1	18
3	f	SIG programs provided more fully-qualified speech and language pathologists and assistants across the state.	2	1	3	3	18
3	f	A program for educational interpreting was established and produced new teachers.	3	2	3	1	18
3	f	University partnerships with local agencies trained new special educators and speech and language specialists.	2	3	3	1	18
3	g	Through a new monitoring system, a state learned to mandate administrative support for the training process in order to sustain it.	1	3	2	3	18
3	g	Organizational learning occurred as a result of ineffective program initiatives funded by the SIG.	1	3	2	3	18
3	i	The state's inclusion of students with emotional disabilities in regular education for most of the school day increased significantly.	3	1	2	3	18
3	i	Three SIG schools reduced reliance on self-contained classrooms by mainstreaming students with emotional disabilities into general education classes.	1	3	3	2	18
3	i	Increased inclusion for students with disabilities was reported in the state's SIG schools.	3	2	3	1	18
2	b	Participants in statewide regional leadership learning communities for general educators, special educators, and families reported using new skills after training.	2	2	2	2	16
2	b	A schoolwide discipline program based on positive behavioral supports changed teacher behaviors towards students with disabilities.	2	2	2	2	16
2	b	Regional agencies that trained 5,000 special educators on positive behavioral supports and literacy strategies improved participating teachers' classroom practices.	2	2	2	2	16
2	b	Locally accessible, focused and targeted training improved teaching practices for students with disabilities.	2	2	2	2	16
2	b	Schools trained in a successful model for student behavior support communicated more effectively across grade levels, specialty areas, and administrative levels.	2	2	2	2	16
2	b	State-level education staff and SIG grantees claimed to have benefited from SIG support.	2	2	2	2	16
3	a	Institutions of higher learning collaborated to align teacher preparation and distance education coursework with the state learning standards.	2	2	2	2	16
3	a	Partnerships for young children were created to promote best practices in developmentally appropriate standards, readiness indicators, and assistive technology.	2	2	2	2	16
3	b	Regional special education coordinating agencies geographically aligned with regional general educational agencies and narrowed training to link outcomes, technical support, and data-based evaluation.	2	2	2	2	16
3	b	The statewide technical assistance model was changed from broad, general training with follow-up to specific, local support that was direct, immediate, and easier to access.	2	2	2	2	16
3	b	Student behavior improved in sites that implemented whole-school positive behavior supports.	2	2	2	2	16
3	b	Separate charter school applications made available on the state recruitment website increased special education teacher placements.	2	2	2	2	16
3	d	A SIG advisory group helped incorporate individual education plans for students with disabilities into the state data collection system.	2	2	2	2	16
3	d	A website for recruitment improved the number of teachers interested in special education in the state.	2	2	2	2	16
3	f	More teachers were certified in special education due to a new series of online courses.	2	2	2	2	16

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	g	From survey samples representing stakeholders in education from across the state, data analyses yielded organizational learning in SIG sites related to instructional and decision-making practices, collaboration, and ongoing needs assessment.	2	2	2	2	16
3	j	District and school-level personnel are now using data for planning and decision-making.	2	2	2	2	16
4	a	Professional development to enable students with disabilities greater access to the general education curriculum in inclusive classes was scaled up statewide.	2	2	2	2	16
4	a	Curriculum for writing proficiency that was piloted in one school was scaled up to include all special education staff in the district.	2	2	2	2	16
4	a	A scientifically-based program of behavioral support for students with and without disabilities was scaled up statewide.	2	2	2	2	16
4	a	An effective reading program is being used across the state.	2	2	2	2	16
4	a	An inclusive school initiative is taking root statewide.	2	2	2	2	16
		<b>POSSIBLE OUTCOMES</b>					
1	a	Language test scores for students with disabilities rose 5 percentile points in targeted sites that utilized scientifically-based reading practices.	2	2	3	1	12
1	a	Students receiving special education services made substantial gains in achievement in pilot schools using a new model for schoolwide strategies.	2	1	3	2	12
1	a	Model literacy demonstration sites improved reading scores for students with disabilities.	2	2	3	1	12
1	a	Preschoolers taught by teachers trained at a state learning center showed improvement on emergent literacy test scores.	2	2	3	1	12
1	a	Elementary special education students in the SIG-targeted schools improved their reading competency scores.	2	2	3	1	12
1	a	Test scores for students with disabilities improved in schools where the staff was trained in a positive behavioral support system.	1	2	3	2	12
1	a	A special program funded by SIG improved math scores for all students in about 30 schools.	2	3	2	1	12
1	a	Literacy test results for students with disabilities across the state improved.	2	2	3	1	12
1	b	Schoolwide training initiatives improved outcomes for students with challenging behaviors.	1	2	3	2	12
1	b	A model reading program significantly decreased student referrals to special education.	2	1	3	2	12
1	b	A special schoolwide strategies model reduced referrals to special education in pilot schools across the state.	2	1	3	2	12
1	b	Positive behavioral support training decreased inappropriate student behavior in two school districts.	2	2	3	1	12
1	b	Special education referrals for students exhibiting behavioral challenges were reduced in schools that implemented a system of positive behavioral support.	1	2	3	2	12
1	c	Professional development targeting post-school transition intervention for students with disabilities improved student outcomes.	2	2	3	1	12
1	d	Young children with disabilities benefited from inclusion classes co-taught by general and special education teachers.	2	2	3	1	12
1	d	A new system for positive behavioral support improved student behavior in four demonstration sites.	2	2	3	1	12
1	d	89% of students targeted for behavioral intervention made significant gains in the piloted schools.	2	2	3	1	12
1	d	Teachers reported improved child behavior when they used a system of behavioral support consistently.	2	2	3	1	12
1	d	Mentees reported improved children's behavior that they attributed to successful mentoring.	2	2	3	1	12
1	e	60% of the state's students with disabilities received high school diplomas (up from 40%); only 3% dropped out of school (down from 7% in 1998).	2	1	2	3	12
1	f	180 self-contained students were reassigned to general education classes.	3	2	2	1	12
2	b	A guidance strategy course for teachers changed their behavior management strategies.	2	2	3	1	12

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
2	b	Training targeted at teaching students with autism changed teacher behaviors.	2	2	3	1	12
2	b	A series of collaborative parent and teacher workshops improved parent skills related to awareness and advocacy for their students with special needs.	2	3	2	1	12
2	b	Special education teachers who were trained in mentoring reported benefits from the alliances.	3	2	2	1	12
2	b	College special and general education faculty infused universal design learning concepts into their teacher preparatory courses.	3	2	2	1	12
2	b	More inclusive teaching practices at three SIG schools resulted in smoother transitions into regular education classes for students with disabilities.	1	3	2	2	12
2	b	100 school teams reported that the needs of special education students are being met because of standards-based reform efforts in their sites.	1	3	2	2	12
2	b	Professional Development Plans are affecting instruction.	1	3	2	2	12
2	b	Ten schools improved instructional practices in reading based on data from a new, evidenced-based evaluation tool.	2	3	2	1	12
2	b	245 teachers trained to collaborate and use instructional strategies reported improved services for their students with disabilities.	2	3	2	1	12
2	b	Administrators in the state who attended professional training about special education claimed to use the information when they returned to their respective schools.	2	2	3	1	12
2	b	Preschool teachers reported using new skills learned in professional development to measure student behaviors.	2	2	3	1	12
2	b	Special educators and administrators reported increased skills from mentoring.	2	2	3	1	12
2	b	Teachers included special needs students in general education classes more successfully.	2	2	3	1	12
3	a	A funding system provided financial aid to nearly 3,500 families of students with disabilities, facilitating parental participation in educational decision-making.	2	1	3	2	12
3	a	More than 40 schools (out of 100) reported that SIG technical assistance helped general and special educators collaborate to support students with disabilities in multiple settings.	2	2	3	1	12
3	a	The SIG funded collaboration with a statewide, community-based training agency to provide 'wrap-around' services for students with profound disabilities.	2	3	2	1	12
3	a	SIG-supported liaisons helped make schools more family-friendly to encourage parental involvement for students with disabilities.	1	2	3	2	12
3	a	All stakeholders, including parents, contributed to policies and procedures affecting students with disabilities.	1	2	2	3	12
3	a	Schoolwide training in a system of behavior support for students increased parent involvement in schools across the state.	1	3	2	2	12
3	a	Regional educational agencies across the state collaborated to integrate a special education focus into sustainable professional development programs.	1	3	2	2	12
3	a	Local educational agencies and institutions of higher learning effectively increased communication regarding local school staffing needs.	1	2	3	2	12
3	a	Statewide agencies collaborated to improve transition processes for preschool children with disabilities.	2	1	3	2	12
3	a	A federation for children with disabilities linked statewide agencies with families who have students with disabilities.	2	1	3	2	12
3	b	A website for personnel recruitment in special education was centralized and expanded.	3	1	2	2	12
3	b	A mentor institute with all major stakeholders in education was sponsored by SIG to enhance teacher quality and retention.	3	2	2	1	12
3	b	Local structures were developed to support inclusive parent involvement in schools.	3	2	1	2	12
3	b	A mentoring program was developed for the state's preschool teachers.	2	2	3	1	12
3	b	A scientifically sound, inclusive kindergarten model was implemented in a district.	2	1	3	2	12

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	d	An online library was created for special education topics and almost 5,500 resources were accessed during five years.	3	2	2	1	12
3	d	A new fidelity instrument to measure professional development implementation of reading strategies teaching skills was implemented.	2	3	2	1	12
3	d	Eleven schools implemented a research-based measure of preschool literacy skills.	2	3	2	1	12
3	d	A scientifically-based online mentor training was developed for SIG-targeted schools.	3	2	2	1	12
3	d	A uniform, generic format summary for performance related to school-to-community transition for students with disabilities was developed by the state.	3	2	1	2	12
3	d	A book was developed to describe to stakeholders in special education the process of effective transition from school to the community.	3	2	2	1	12
3	d	Earlier access to vocational rehabilitation services for students with disabilities was facilitated by a revised statewide transition policy.	2	2	3	1	12
3	d	A new behavioral accountability system was instituted in five schools.	2	2	3	1	12
3	d	Compliance and performance indicators for students with disabilities, a database for child protection, and a centralized Part C data system were added to the state's monitoring system.	2	1	3	2	12
3	d	Eighteen state universities with special education programs implemented a cooperative grant to align their programs to revised state certification endorsements.	1	2	2	3	12
3	d	Alternate certification programs were implemented in 14 universities to prepare teachers for special education.	3	1	2	2	12
3	d	A training series for non-certified educators in early care was developed.	2	3	2	1	12
3	f	A new website recruited new teachers for special education.	1	2	2	3	12
3	f	One major university initiated a special education supervisory certification process.	3	2	2	1	12
3	f	An urban school district collaborative created an innovative program which provided degrees for teachers of English Language Learners with special needs.	1	2	3	2	12
3	f	A new online application process matched teachers with appropriate jobs in the state.	2	1	3	2	12
3	f	SIG support for a para-to-fully certified program in special education produced more certified teachers.	3	2	2	1	12
3	f	Teacher recruitment improved after the state began using a national website designed to find and place job-seekers in the field of education.	2	1	2	3	12
3	f	Regional professional development academies awarded state-sponsored credit hours for teachers and paraprofessionals seeking certification in special education.	3	2	2	1	12
3	f	More teachers in the state were certified to work with students who have low-incidence disabilities.	2	3	2	1	12
3	f	An internet recruitment site was credited with filling 80 vacant special education positions in the state with qualified personnel.	1	2	3	2	12
3	f	Twenty-two speech and language practitioners achieved Master's level credentials, in part because of tuition support.	2	3	2	1	12
3	f	A new program for speech and language specialists trained them to effectively collaborate in schools.	2	3	2	1	12
3	f	160 new early intervention specialists were certified.	2	1	3	2	12
3	g	The grant management system for special education and early intervention was redesigned as a team process based on a survey of recipients.	2	3	2	1	12
3	j	Local school systems used SIG performance reports to design professional development activities.	1	2	2	3	12
3	j	A SIG parent organization used technology for more effective data collection and dissemination.	2	3	2	1	12
3	j	Data-based decisions were used to effectively address disproportionality in the state.	2	2	3	1	12

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
4	a	Trainings for stakeholders involved in the transition of students with disabilities out of high school were implemented through partnerships between 3 state-level agencies.	3	2	1	2	12
1	a	Statewide achievement tests showed a smaller gap in the performance of students with and without disabilities.	1	1	3	3	9
1	a	Instructional support teams reduced referral rates for students with disabilities by improving pre-referral services.	1	3	3	1	9
1	a	Intensive teacher professional development on inclusive practices for students with disabilities improved the students' test scores.	1	3	3	1	9
1	a	SIG-funded reforms improved test scores for students with disabilities in targeted schools.	1	3	3	1	9
1	a	Students with disabilities in SIG schools improved their reading test scores .	1	1	3	3	9
1	d	A master teacher provided technical support for academic content areas and student behavior that benefited students with disabilities in ten schools.	1	3	3	1	9
2	b	Teachers used new skills from training to help their struggling readers.	1	3	3	1	9
3	b	Courses to prepare teachers for inclusive settings were redesigned at state universities, in partnership with SIG staff and local educational agencies.	3	3	1	1	9
3	d	Certification in deaf education and a Master's degree in special education was initiated at a major state university.	3	1	3	1	9
3	d	A new rubric for certification of a highly qualified special education teacher was approved by the state.	3	1	1	3	9
3	d	Transitions for young people with disabilities were improved in the state by an accessible website designed as a clearinghouse to disseminate information about transition.	3	3	1	1	9
3	d	Internet information about special and general education professional development opportunities and strategies was made available statewide.	3	3	1	1	9
3	e	More students with disabilities participated in statewide assessments.	1	1	3	3	9
3	f	A special education lateral entry certification program was created, increasing the number of certified teachers in the state.	1	3	3	1	9
3	g	Unsuccessful distance education initiatives for rural students resulted in statewide changes that allowed significantly increased access to online special education teacher preparation programs.	1	3	1	3	9
1	a	Test scores for the majority of SIG-supported schools increased for students with and without disabilities.	2	2	2	1	8
1	b	Disciplinary referrals were reduced in three of the five statewide mental health school/community partnership schools.	2	2	2	1	8
2	a	Academies for new teachers of students with emotional or behavioral disorders were created to provide training and mentoring.	1	2	2	2	8
2	b	Whole-school institutes at the state-level improved instruction for struggling readers.	1	2	2	2	8
2	b	A model inclusion project for young children improved teachers' skills in emergent literacy.	2	2	2	1	8
2	b	25 schools using positive support for student behavior improved teacher responses schoolwide.	2	2	2	1	8
2	b	Teachers in two school districts claimed that professional development improved their instructional practices.	2	2	2	1	8
2	b	Approximately 100 pre- and in-service high school teachers reported using professional development information to promote effective school-to-work transitions for students with disabilities.	2	2	2	1	8
3	a	General and special education collaboration was achieved in one school district through professional development.	2	2	2	1	8
3	a	Increased collaboration between special educators, paraprofessionals and general educators occurred.	2	2	2	1	8
3	a	Collaboration fostered NAEYC accreditation for participating preschool programs.	2	2	1	2	8

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	b	The state educational agency introduced a call resolution process that reduced parental complaints that could have resulted in formal investigations.	2	1	2	2	8
3	b	Community councils representing almost half of the state's counties were formed to implement a transition model for students with disabilities who were exiting secondary school.	2	2	2	1	8
3	b	A unique special education career pathway program was initiated for high school students interested in teaching.	2	2	1	2	8
3	b	The state focused monitoring on districts demonstrating the lowest levels of IDEA compliance.	2	1	2	2	8
3	d	Special education coursework is now a required part of the general education certification process.	2	1	2	2	8
3	d	Fifteen new courses were created for early childhood and early intervention preservice teacher training.	2	2	2	1	8
3	d	A college created a unified program for all teacher candidates, resulting in positive changes for both faculty and students.	2	2	2	1	8
3	d	A parent survey was introduced to measure satisfaction with school improvement programs for reading.	1	2	2	2	8
3	d	New, inquiry-based math curriculum was implemented in one school district.	2	2	2	1	8
3	d	A statewide needs assessment tool for school district professional development was created and used.	2	2	2	1	8
3	d	Effective new on-line courses related to hearing impairments and occupational and physical therapy were made available statewide for preservice professionals, community members, and high schools.	2	2	2	1	8
3	d	Training materials were developed to implement a new model of service delivery for students with special needs that included general education and paraprofessional teachers with the special educators.	2	2	2	1	8
3	d	A document was developed in the state's core curriculum standards to facilitate instruction for students with special needs.	1	2	2	2	8
3	d	Materials were developed to support inclusive parent involvement in local schools.	2	2	1	2	8
3	d	The website for teachers enhanced its recruitment and reading program content.	2	2	1	2	8
3	f	New programs that provide training in orthopedic impairments resulted in more teachers certified in this specialty area.	2	2	2	1	8
3	f	Special education teacher incentive grants put special education teachers in classrooms.	2	2	2	1	8
3	f	Three new bilingual education teachers were certified with scholarship support.	2	2	2	1	8
3	f	A special interstate center trained new teachers to work with students who have visual impairments.	2	2	2	1	8
3	f	More highly qualified early childhood teachers were certified in a new credentialing system.	2	1	2	2	8
3	f	Distance-learning alternative certification increased the number of teachers in the field of special education.	2	2	2	1	8
3	g	New reading initiatives resulted from the state-level schoolwide institutes.	1	2	2	2	8
3	i	Most school districts in the state reported a more stringent referral process to avoid disproportional representation of students in special education.	1	2	2	2	8
3	j	More counties in the state are participating in post-secondary surveys to track graduates of special education.	2	1	2	2	8
4	a	Positive behavioral support programs for students with disabilities were scaled up statewide.	1	2	2	2	8
4	a	Post-secondary outcomes for students with disabilities improved with successful transition projects that were replicated across the state.	2	2	1	2	8
4	c	Universities partnered with an effective SIG mentoring project to sustain it statewide on a long-term basis.	2	1	2	2	8
1	a	The reading achievement gap between students with and without disabilities is closing.	1	1	2	3	6

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
1	a	Grants to encourage partnerships between universities and licensed educational agencies increased reading achievement for students with disabilities.	1	3	2	1	6
1	a	Fewer students with disabilities were referred for disciplinary interventions as a result of systematic positive behavioral supports statewide.	1	3	2	1	6
1	a	A model literacy project improved reading skills for preschoolers.	1	3	2	1	6
1	a	Professional development for parents and teachers improved test scores for students with disabilities in three school districts.	1	2	3	1	6
1	a	Test scores increased in SIG-supported schools.	1	2	3	1	6
1	b	A behavior support system that was piloted in ten schools reduced student disciplinary referrals.	1	2	3	1	6
1	d	A guidance strategy course improved the behavior of students with disabilities.	1	2	3	1	6
1	d	More than 500 programs using a university tutoring program reported improvement in graduation rates for struggling students.	1	2	3	1	6
1	d	Professional development for teachers who work with students who have orthopedic impairments demonstrated improved child outcomes.	1	2	3	1	6
2	a	A mentoring project helped retain special educators in the state.	1	2	3	1	6
2	a	More special education teachers and administrators remained in the field after successfully-focused training initiatives.	1	2	3	1	6
2	b	Educational interpreters were trained to enable deaf and hard of hearing students' greater access to the general curriculum.	1	2	3	1	6
2	b	Local professional development with ongoing coaching and training in differentiated instruction improved teachers' classroom practices for students with disabilities.	1	3	2	1	6
2	b	Teachers are learning to use assistive technology in new statewide online training	1	2	3	1	6
2	b	Regional collaboratives of multiple partners in general and special education improved teacher and parent skills in 325 school districts.	1	3	1	2	6
2	b	Intensive professional development for teachers preparing for employment at SIG-inclusive schools improved certification test scores for those teachers.	1	3	2	1	6
2	b	Intensive professional development at SIG-inclusive schools improved teacher efficacy in the classroom.	1	3	2	1	6
2	b	Approximately 35 educators reported that professional development related to emotional and behavioral disabilities helped them serve children more successfully.	3	1	2	1	6
2	b	Paraprofessionals reported improved classroom skills after attending a professional development training on student behavioral issues.	1	2	3	1	6
2	b	Preschool teachers used new skills from training to help their emergent readers.	1	2	3	1	6
2	b	Professionals in targeted childcare centers learned how to better document family service plans for young children with special needs.	1	2	3	1	6
3	a	A collaborative institute for families and educators reported that nearly 750 participants in 13 state projects gained knowledge and confidence in policies and decisions affecting their students with disabilities.	2	1	3	1	6
3	a	SIG staff reported that special educators are now working with general educators systematically across the state.	1	1	2	3	6
3	a	Collaboration between federal and state social services programs improved services for families with special needs.	3	1	1	2	6
3	b	One school modeled data-driven decision-making that affected both academic and behavioral concerns among the faculty as a whole.	1	2	3	1	6
3	b	Professional development activities are now based on student assessment data for 15 rural school districts.	1	1	2	3	6
3	b	A collaborative initiative for student success mandated systemic change that addressed a contextualized school vision and a process for continuous school improvement.	2	3	1	1	6

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	b	A new quality assurance process using data for decision-making increased effective connections between curriculum and assessment, general and special education, and parent and teacher communication.	1	3	2	1	6
3	d	A manual and DVD for best practices in dealing with students who exhibit challenging behaviors was produced by a state university.	3	2	1	1	6
3	d	Twelve schools implemented a schoolwide data collection system.	2	3	1	1	6
3	d	A new document about mentoring in special education was created by a statewide coalition and was field-tested in 6 school districts.	3	2	1	1	6
3	d	A uniform educational planning form and technical assistance materials were developed for special educators in the state.	3	1	1	2	6
3	e	More students with disabilities are participating in standards-based alternate assessments.	1	1	2	3	6
3	e	Students with disabilities are now included in all statewide and standardized assessments.	1	1	2	3	6
3	f	Two new special education teacher preparation programs increased the supply of qualified teachers hired by the state.	1	2	3	1	6
3	f	The number of licensed special education teachers increased due to credentialing stipends.	2	1	3	1	6
3	f	An office to promote autism certification was established at a university, increasing the supply of special education teachers in the state.	1	2	3	1	6
3	f	A preservice program to serve visually impaired students produced new school staff.	1	2	3	1	6
3	g	Effective school team training occurred as a result of organizational learning from unsuccessful previous efforts.	1	3	2	1	6
3	j	Ten schools used data more effectively to keep track of suspensions, accommodations, time in general settings, and proficiency levels on state assessments for students with disabilities.	1	3	2	1	6
3	j	Statewide data is now disaggregated for students with disabilities.	2	1	3	1	6
4	a	Parent participation at the SIG family resource centers more than doubled in two years, and all families were trained to collect and use data for decision-making about their children's welfare.	1	3	2	1	6
1	a	A school improvement pilot project that was scaled up using the same change models for schools in 30 districts resulted in better test scores for students with disabilities.	1	2	2	1	4
1	d	The percentage of students participating in activities related to effective transition from high school to the community increased every year of the SIG.	1	2	2	1	4
1	f	The number of referrals to special education for young children decreased because of better communication with parents of children with special needs.	1	2	2	1	4
1	f	African-American referrals to special education decreased in the state because of professional development training for educators.	1	2	2	1	4
2	b	Parents in two school districts claimed to be better able to help their children with disabilities in academic and social domains after professional development training.	1	2	2	1	4
3	a	Family leadership academies linking families and schools effectively involved diverse groups of parents.	1	2	2	1	4
3	a	A training partnership built a collaboration that determined criteria for disproportionality.	1	2	2	1	4
3	a	The state expanded and monitored a successful parent-child-home program.	2	1	2	1	4
3	b	A special mentoring cadre improved charter school special education services.	2	1	2	1	4
3	d	Preservice preparation programs integrated the state's learning standards and IDEA regulations into the teacher course content.	2	1	1	2	4
3	d	Professional development for consistent core curriculum across content areas was created for the state.	1	2	1	2	4
3	d	A comprehensive website was developed to ensure that training materials and technical assistance are available for teachers through Internet access.	2	2	1	1	4
3	d	Internet access was provided for effective teacher recruiting services across the state.	1	1	2	2	4
3	d	A draft of changes to transition law for students with disabilities was completed.	1	2	1	2	4

Category	Sub Category	Outcome Description	Evidence	SIG Link	Quality	Impact	Outcome Score
3	d	Professional development is now documented for all schools in the state.	1	2	1	2	4
3	d	A special education teaching component was created specifically for cadet teachers.	2	2	1	1	4
3	f	Paraeducator training created more special education teachers in schools.	2	1	2	1	4
3	f	A pilot program to certify teachers of students with moderate disabilities was put in place.	2	1	2	1	4
3	j	More child outcome data is being collected statewide.	1	2	1	2	4
1	a	Test scores were improved on literacy measures for SIG schools.	1	1	3	1	3
1	d	Positive student outcomes were demonstrated in schools trained in inclusive literacy models.	1	1	3	1	3
3	a	A project specifically for African-American families reported ongoing 5-year progress for 100 families learning to successfully advocate for their children with disabilities.	1	1	3	1	3
3	d	A successful network of parent liaisons created and disseminated materials to help families of students with disabilities promote service coordination and information about special needs.	1	3	1	1	3
3	d	The state department of education established a system of standards and accountability for improving the education of students with disabilities.	1	1	1	3	3
3	d	Training modules for special educators were posted on the state department of education's website.	1	1	1	3	3
3	f	Stipends helped recruit and retain speech and language pathologists in rural areas of the state.	1	1	3	1	3
1	f	One high school increased the participation of its students with disabilities in regular education classes from 20 percent to 77 percent.	1	1	2	1	2
2	b	Parents reported using new advocacy skills that they learned from school training supported by SIG.	1	2	1	1	2
3	a	An exceptional learning collaborative improved the dissemination of research-based classroom practices.	1	1	1	2	2
3	b	SIG structures such as behavior supports, family partnerships, and effective data collection helped school communities weather the hurricane with a greater sense of normalcy.	1	2	1	1	2
3	d	Several universities combined early childhood and special education certification programs.	2	1	1	1	2
3	d	Online special education course modules were added to an accessible statewide resource library.	1	2	1	1	2
3	d	A special website for student teachers and university supervisors was created to connect practitioners in the field of special education.	1	2	1	1	2
1	a	One school's gender-centric curriculum without self-contained classes for special education led to higher scores on annual state tests.	1	1	1	1	1