

The SIG Transformation Model: A Summary of Requirements and Research Findings

DEVELOPING AND INCREASING TEACHER AND SCHOOL LEADER EFFECTIVENESS	
Requirements:	Research Findings
Replace Principal*	Effective visionary leadership from the principal is almost always present when a reform effort is successful. ^{1,2,3} Cross-sectional studies of leadership show that effective leaders tend to have strengths in the following: Analysis and problem solving, driving for results, measurement and reporting, and influencing others outside/inside the organization. Two central leadership abilities are focusing on and achieving a few tangible successes during year one and implementing practices even when they go against the organization's norms or policies. Strong leadership should be paired with comprehensive strategies for sustainability. ³
Use rigorous, transparent, and equitable evaluation systems for teachers and principals designed with their input that take into account student growth treated as significant factor; as well as multiple observations of teacher practices and PD related to student achievement; high school graduation rates also treated as a factor.	Multiple evaluation methods linked to compensation; including student-performance gains, demonstration of teachers' skill and knowledge, and peer and principal reviews are most successful. ^{4,5} A review of 120 studies of teacher effectiveness used by school districts analyzes specific tools and approaches. Scores from a value-added model may provide information about a teacher's contribution to learning but will not help teachers improve their performance. ⁵ There is research that maintains that compensation strategies tied to performance can assist with removing ineffective teachers. Policy that ties pay to performance over time will result in better recruitment and retention of teachers in the upper distribution of teaching ability while low-productivity teachers will either improve or leave. ⁶ There are significant challenges in developing equitable evaluation systems. A recent three-year study found that using value-added estimates of teacher performance resulted in an unreliable error rate of 25%. Furthermore, 90% of the variation in student gain scores was due to student-level performance factors outside the control of the teacher. ⁷
Identify and reward school staff who have increased student achievement and high school graduation rates with increased compensation and leadership opportunities.	Extrinsic rewards have limits - teachers derive intrinsic satisfaction from seeing academic improvements with their students. ⁸ Extrinsic systems focus solely on monetary rewards while reward systems that provide leadership opportunities also have an intrinsic component; which is a critical factor in adult motivation. The first randomized control study of incentive pay found no overall benefit for the students of teachers with the opportunity to earn \$15,000 bonuses. Only 5 th grade students showed a small benefit which diminished by 6 th grade. Incentives did not lead teachers to make substantial changes to their teaching. ⁵ The program had little effect on what teachers did in the classroom. Merit-pay plans coupled with teacher evaluation, embedded PD, teacher coaching on use of student data and leadership development were credited with

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Identify and reward school staff who have increased student achievement and high school graduation rates with increased compensation and leadership opportunities (continued).	raising the number of third grade students scoring proficient or advanced on state reading tests by 27 percent from 2003-2007. ⁹ Minnesota's QCOMP program is attributed to positive gains in student achievement. It features five components: career ladder options, job-embedded PD, teacher evaluation, performance pay, and an alternative salary schedule. ⁶ Overall, there is little evidence that monetary rewards make a difference in student achievement and research has not been able to isolate the factors which contribute to performance improvements in comprehensive programs.
Identify and remove teachers who have not improved their professional practice after ample opportunities to do so under reform.	Colorado requires tenured teachers earning multiple consecutive unsatisfactory ratings to go on probationary status. Rhode Island, Maryland, Ohio, Washington, Delaware, and Tennessee have passed laws either changing the nature of tenure and/or including student achievement as a portion of the teacher's evaluation. ⁹
Provide ongoing, high quality, job-embedded PD that is aligned with the school's comprehensive instructional program and designed with school staff to ensure they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies.*	The U.S. Department of Education maintains that capacity is the major variable in turning around low-performing schools. ² Capacity building in struggling schools should start with qualified teachers and leaders. Failure to provide students with qualified teachers has been posited by many research studies as a critical factor in school change initiatives. The two most important components of a turnaround strategy are capacity and leadership of the school. ³
Implement such strategies as financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions designed to recruit/place/retain staff with necessary skills for students in a transformation school.*	Providing monetary incentives to improve teacher performance is not supported by research; though, incentives do appear to improve teacher retention. ⁶ The Career Ladder Program in Arizona (performance-based compensation plan that provides incentives to teachers who choose to make career advancements in teaching without leaving the classroom), has led to students significantly outperforming control schools on student achievement measures, especially in math and reading. ¹¹ This research replicates positive findings for Arizona's Career Ladder Program reported for six previous evaluations. Examples of performance-based incentives include: significant teacher input at each stage of development and implementation, clear performance goals, multiple measures of teacher performance, and monetary incentives large enough to affect teacher behavior. ¹⁰

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COMPREHENSIVE INSTRUCTIONAL REFORM STRATEGIES	
Requirements:	Research Findings
<p>Use data to identify and implement an instructional program that is research-based and vertically aligned with State academic standards.*</p>	<p>Research-based programs that are vertically aligned with State standards are generally considered necessary for success. Research on curriculum alignment offers the following guidelines¹⁰. States: Provide guidance about the alignment between state standards and assessments and provide examples, release test items, and disseminate policy interpretation. Districts: Support capacity-building for school staff and faculty members to help them understand the analysis and make strategic plans to implement action steps to address instructional adjustments and needed resources. Schools: Conduct investigation to align school/teacher enacted curriculum, state standards, and local curricula, including articulation across grade levels and content areas. Provide resources (e.g., time, expertise, planning support, professional development) to enable teachers to incorporate changes required to align instruction with standards. Comprehensive school reform (CSR) using research-based programs has had mixed results for effectiveness as an intervention strategy; CSR is reported to be effective 50% of the time.¹ In a review of four CSR initiatives, adoption of a nationally proven model was the most important variable in promoting academic gains but teacher buy-in was seen as a necessary component for success. CSR initiatives must have stakeholder buy-in, allow adequate planning time, provide high quality PD, and support full implementation of the program.⁸</p>
<p>Promote the continuous use of student data to inform and differentiate instruction in order to meet the academic needs of individual students.*</p>	<p>Research shows that assessment for learning leads to achievement gains in student performance as measured by standardized tests.¹² Formative assessment is one of the most effective interventions with the largest gains made by the lowest achievers.¹³ Student data should serve the following functions: inform instruction, pre-assessment, formative assessment, adjust instruct and reteach (summative assessment).¹⁴ Feedback and corrective procedures (e.g., instructional adjustments) will enable most students to attain the same level of achievement as the top 20% of students.¹⁵</p>

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INCREASING LEARNING TIME AND CREATING COMMUNITY-ORIENTED SCHOOLS

Requirements:	Research Findings
Establish schedules and strategies that provide increased learning time.*	A minimum of 300 additional hours per school year for well-designed programs is needed to show effectiveness. ¹⁶ Adding increased learning time is a common intervention implemented by struggling schools. Examples include: before & after school programs, Saturday learning opportunities, extended school year, programs, and/or block scheduling. ¹ Increased learning time is correlated with achievement. ¹⁷ However, not all increased learning opportunities are equally effective as student engagement with the teacher is a necessary element for increased learning time to have desirable outcomes. ¹⁴
Provide ongoing mechanisms for family and community engagement.	A strong connection between parental engagement and student achievement is supported by research. The U.S. Department of Education (2001) considers involving parents an effective turnaround intervention. ² As an example, Burgess Elementary School in Atlanta increased parent involvement which was attributed to a 30% increase on the ITBS in reading and math over 3 years. ³ Recruiting parents to be members of the instructional leadership team, scheduling meetings to accommodate parents' work schedules, showing videotaped classroom improvements, and providing childcare during parent meetings are strategies that have been successful in fostering parental commitment to change in schools. ³ Co-locating community and school resources within the school environment has been found to have positive outcomes for school and community stakeholders. ¹⁸

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PROVIDING OPERATIONAL FLEXIBILITY AND SUSTAINED SUPPORT

Requirements:	Research Findings
Give the school sufficient operational flexibility to implement fully a comprehensive approach to substantially improve student achievement outcomes and increase high school graduation rates.*	Schools under reform tend to be most successful when they are given latitude from district regulations regarding scheduling, transportation, discipline, and curriculum. ³ A study of 442 schools in eight urban districts found a direct correlation between principal control over budget and improvements in student performance. ¹⁹ Field interviews of turnaround principals highlight the importance of principal autonomy and skill set to staff, schedule, program and analyze data. ¹⁰ A “contract flex” was given to principal in Kansas City which allowed schools to approach the teachers’ union about contract changes directly – decisions were made on a school-by-school basis. This resulted in a culture of shared responsibility between the district and the schools. ²⁰ The authority to hire/fire personnel and alter working conditions is seen as especially important areas for principal control. ³
Ensure that the school receives ongoing, intensive technical assistance and related support from the LEA, the SEA or a designated external lead partner organization.*	Research on LEA and SEA support is scant. Research does indicate a need for ongoing support to struggling schools; supporting school leader initiatives such as creating opportunities for school change and setting a focus on student achievement, goals, and consequences. ³

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