



Implementing School Improvement Strategies That Work: An Analysis of School Performance at Tennessee *High Schools That Work* Sites

SREB

SREB's *High Schools That Work (HSTW)* initiative works with more than 1,100 schools in 30 states and the District of Columbia to improve school and classroom practices and prepare more students for success in postsecondary studies, training and careers. Thirty-two Tennessee high schools participate in the *HSTW* network.

SREB has developed 11 indices to measure implementation of school and classroom practices that are predictive of higher student achievement. A school's overall level of implementation is based on students' reported experiences related to:

- teachers' and school leaders' expectations.
- using reading and writing in all academic and career/technical courses.
- using mathematics across the curriculum to complete authentic assignments and explaining how mathematics is used to solve problems.
- challenging science courses in which they have opportunities to design, conduct and analyze authentic experiments.
- completing the *HSTW*-recommended curriculum.¹
- completing assignments in career/technical courses that require them to use reading, writing and mathematics (CT students only).
- experiencing high-quality career/technical studies (CT students only).
- having quality work-based learning experiences.
- receiving timely guidance and advisement and being connected to an adult mentor/adviser who helps them set goals and develop a program of study to achieve those goals.
- seeing a connection between their studies and their goals and understanding the importance of high school studies.
- receiving the extra help they need to succeed.

Schools participating in the *HSTW* network use the *HSTW* Assessment to measure student achievement as well as progress in implementing the *HSTW* framework of Key Practices. This assessment includes three subject tests (reading, mathematics and science), a student survey and a

Southern
Regional
Education
Board

592 Tenth Street, N.W.
Atlanta, Ga 30018
(404) 875-9211
www.sreb.org

¹ The *HSTW*-recommended curriculum includes at least four college-preparatory English courses; at least four mathematics courses, including Algebra I, geometry, Algebra II and a fourth higher-level mathematics course; and at least three lab-based science courses.

teacher survey. By measuring students’ perceptions of their school and classroom experiences, SREB is able to help schools identify which strategies have been implemented schoolwide, which have not, and which need to be implemented with greater fidelity to affect achievement and graduation rates more positively.

SREB analyzed the 32 Tennessee *HSTW* schools’ state report cards, achievement data, and student and teacher survey results to determine how schools’ implementation of the *HSTW* design is affecting student achievement in Tennessee. The implementation level was determined by the extent to which students’ school and classroom experiences indicated that the *HSTW* Key Practices have been implemented in ways that positively affect student achievement.

Approximately 1,840 students from 32 Tennessee high schools participated in the 2008 *HSTW* Assessment. Their responses on the student survey indicate the extent to which the school has implemented the *HSTW* Key Practices. Using the results from the *HSTW* Assessment, SREB classified the 32 Tennessee *HSTW* sites into three categories: Sixteen schools were classified as moderate- and high-implementation schools (nine moderate-implementation schools and seven high-implementation schools), and 16 were classified as low-implementation schools. (See Table 1.)

TABLE 1

Implementation of Select Indices at Tennessee <i>HSTW</i> Schools			
	Low-Implementation Schools (16 schools)	Moderate-Implementation Schools (9 schools)	High-Implementation Schools (7 schools)
Completed the <i>HSTW</i>-Recommended Curriculum			
English	43%	49%	59%
Mathematics	36	45	59
Science	39	45	48
Intensive Implementation of Selected <i>HSTW</i> Indicators			
Literacy Across the Curriculum	16	24	43
Numeracy Across the Curriculum	31	40	48
Guidance and Advisement	58	70	85
Quality Extra Help	26	36	55
Quality CT Class	33	39	59
Students’ Perceived Importance of High School	44	49	58

Source: 2008 *HSTW* Assessment

In high- and moderate-implementation schools, more students:

- take higher-level courses in English, mathematics and science.
- make greater use of reading and writing skills for learning across the curriculum.
- experience higher-quality mathematics instruction and more opportunities to use applied numeracy strategies across the curriculum.
- receive intensive guidance and advisement throughout high school to help them plan and successfully complete a program of study leading to a post-high school goal.

- receive the extra help they need to succeed in more demanding courses.
- experience high-quality career/technical classes that require them to use their academic skills to complete authentic, real-world assignments.
- understand how their high school studies relate to their goals and understand that success in high school studies is important to success in their future.

The 2008 *HSTW* Assessment results reveal that schools that have more deeply implemented the *HSTW* design have higher student achievement than schools that have made less progress in implementing this comprehensive improvement framework. At high-implementation sites, approximately three-fourths of the students met the *HSTW* readiness goals² in all three subjects, compared with only about two-thirds of students at moderate-implementation sites and about one-half of students at low-implementation sites. This means that at high-implementation sites, approximately 20 more of every 100 students have the reading, math and science skills needed in postsecondary studies, advanced training and careers as compared with low-implementation sites.

TABLE 2

Students Meeting <i>HSTW</i> Readiness Goals at Tennessee <i>HSTW</i> Schools				
	Low-Implementation Schools	Moderate-Implementation Schools	High-Implementation Schools	All 2008 TN <i>HSTW</i> Schools
Number of Students Assessed	913	518	407	1,838
Percentage of All TN Students Meeting the <i>HSTW</i> Readiness Goals				
Reading	55%	65%	78%	63%
Mathematics	54	61	73	60
Science	53	61	73	59

Source: 2008 *HSTW* Assessment

* Career/technical students are those students who complete a sequence of at least four courses in a broad career/technical field

The pattern here is clear: The more progress schools make in implementing the *HSTW* design, the higher their student achievement.

SREB also analyzed the Tennessee Department of Education Report Cards for the 32 *HSTW* sites in the state to determine whether graduation rates followed trends in student achievement in relation to schools' implementation of the *HSTW* design. For the past three years, high-implementation sites have achieved higher graduation rates than both low- and moderate-implementation sites. In 2008, the median graduation rates at *HSTW* schools in Tennessee ranged from 85 percent³ at low-implementation sites to 93 percent at high-implementation sites. (See Table 3.)

² The *HSTW* readiness goals for reading, mathematics and science are set at the Basic level on each test. Students who meet these goals are likely prepared for postsecondary studies and careers. Students who achieve at or above the Proficient level are likely prepared for postsecondary studies and careers in more specialized fields that require greater understanding of reading, mathematics and science concepts and skills.

³ Graduation rates reported have been rounded to the nearest whole number.

TABLE 3

Median Graduation Rates of Tennessee <i>HSTW</i> Schools					
	Low-Implementation Schools	Moderate-Implementation Schools	High-Implementation Schools	All 2008 TN <i>HSTW</i> Schools	TN State Average (mean)
2006	86%	86%	92%	88%	81%
2007	85	89	92	89	82
2008	85	87	93	86	82

Source: 2008 *HSTW* Assessment

Notes: Graduation rates reported are the rates for on-time graduates with regular high school diploma. Percentages have been rounded to the nearest whole number.

Tennessee has set a statewide graduation rate goal of 90 percent, and five of the seven high-implementation sites surpassed that goal in 2008. Two of the nine moderate-implementation sites and five of the 16 low-implementation sites also have reached that goal. **It is worth noting that the median graduation rate for all *HSTW* schools in Tennessee, including the low-implementation sites, is higher than the Tennessee state mean graduation rate of 82 percent.**

Nearly three-fourths of the *HSTW* schools in Tennessee met Adequate Yearly Progress (AYP) requirements in 2008. Of those that did not meet AYP, five were low-implementation schools, three were moderate-implementation schools and one was a high-implementation school. (See Table 4.)

TABLE 4

Tennessee <i>HSTW</i> Sites Not Meeting AYP			
	Low-Implementation Schools	Moderate-Implementation Schools	High-Implementation Schools
Did Not Make AYP	5	3	1
Reasons AYP Was Not Met	<ul style="list-style-type: none"> ■ Three schools did not meet the federal benchmark for percentage of students at the proficient and advanced levels in reading/LA/writing. (One of these schools failed to meet the bench-mark for Hispanic students only.) ■ Three schools failed to meet the federal graduation rate benchmark. (One of these schools also failed to meet the reading/LA/writing benchmark.) 	<ul style="list-style-type: none"> ■ One school did not meet the federal benchmark for percentage of students at the proficient and advanced levels in reading/LA/writing. ■ One school did not meet the federal benchmark for percentage of students at the proficient and advanced levels in reading/LA/writing and in mathematics. ■ One school failed to meet the federal graduation rate benchmark. 	<ul style="list-style-type: none"> ■ The school failed to meet the federal benchmark for percentage of students at the proficient and advanced levels in reading/LA/writing.

The most frequently cited reason for not making AYP (six out of the nine schools) was the failure to meet federal benchmarks for the percentage of students achieving at the proficient and advanced level in reading, language arts and writing. In the six schools that failed to meet the reading/language arts/writing AYP benchmark, fewer students reported experiencing an intensive emphasis on literacy across the curriculum than students in schools that met this AYP benchmark. (See Table 5.) Students in these six schools were less likely to report that they completed writing assignments in classes such as science and social studies, and they also were less likely to have completed the *HSTW*-recommended English curriculum.

TABLE 5

Students' Literacy Experiences at Tennessee <i>HSTW</i> Schools		
	Six TN Sites Not Meeting AYP Benchmark in Reading/LA	26 Schools Meeting AYP Benchmark in Reading/LA
Students experiencing an intensive emphasis on literacy across the curriculum	19%	22%
Students completing the <i>HSTW</i> -recommended English Curriculum	43	49
Students reported:		
They often used word-processing software to complete an assignment or project.	48	53
They completed short writing assignments of one to three pages for which they received a grade in their science classes at least monthly .	26	31
They completed short writing assignments of one to three pages for which they received a grade in their social studies classes at least monthly .	31	39

Source: 2008 *High Schools That Work* Assessment

An intensive emphasis on literacy across the curriculum is a key element of the *HSTW* design. This effort does not require all teachers to become English teachers, but it does require all teachers to incorporate reading and writing as learning strategies into all courses in ways that improve student literacy as well as student achievement in each content area. AYP results and *HSTW* Assessment data reveal a need to increase efforts to improve student literacy in Tennessee high schools by increasing students' access to high-level English/language arts courses and embedding literacy skills and strategies into all content areas and courses. *HSTW* sites failing to meet the reading/language arts/writing AYP benchmark should:

- enroll more students into an accelerated language arts curriculum that engages them in reading the equivalent of eight to 10 books a year, completing a short writing assignment each week and completing a research paper each year.
- train all teachers to embed reading and writing standards and strategies into their courses in ways that enhance students' reading achievement *and* mastery of the subject matter.
- develop a schoolwide literacy plan with a focus on helping subject area teachers utilize teaching strategies to engage students in the language of their field.

Data on implementation of the *HSTW* school improvement design, graduation rates and student achievement indicate that building a school culture designed to help students learn at high levels matters a great deal in improving student outcomes. When schools take steps to help students understand why school is important, to connect academic studies to students' future goals, to ensure more students have access to a rigorous curriculum and to support students to meet higher expectations, more students will graduate, and they will graduate prepared for a full range of post-high school options.