ISSUES & ANSWERS

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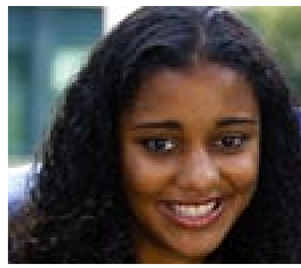

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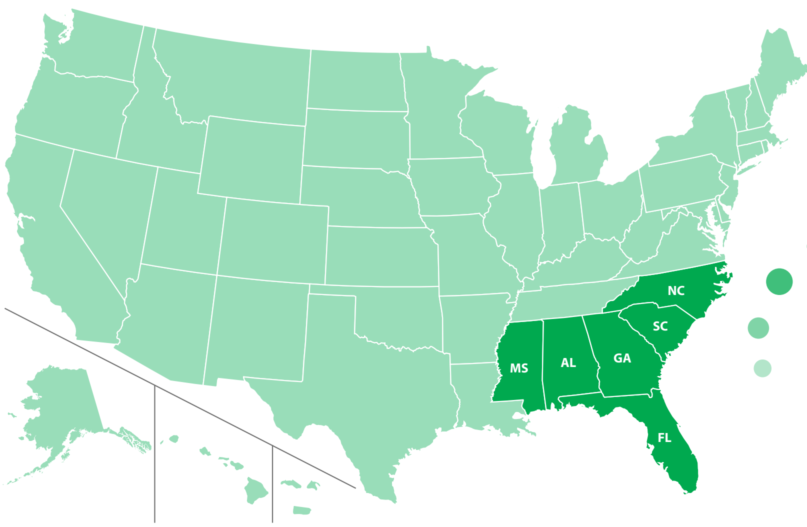

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September 2007

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Summary

Levers for change: Southeast Region state initiatives to improve high schools

This descriptive report aims to stimulate discussion about high school reform among Southeast Region states. The report groups recent state activities in high school reform into six "levers for change." To encourage critical reflection, the report places the reform discussion in the context of an evidence-based decisionmaking process and provides sample research on reform activities.

This descriptive report examines the strategies of the six Southeast Region states (Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina) to improve high school graduation rates and student achievement and to increase the number of students leaving high school with the skills and knowledge necessary for the twenty-first century. For ease of discussion, these state-level strategies are organized into six themes or "levers for change:"

1. *Standards and assessments.* States are working to align standards and assessments with expectations for post-secondary education and with twenty-first century skills.

2. *Course requirements.* States are revising their graduation requirements to include courses required for college and mandatory course sequences that make a stronger connection to work readiness.

3. *Student support and access to courses.* States are working to increase students' access to both the courses and the support they need through strategies such as virtual schools, support for Advanced Placement courses, and mandated remediation.

4. *Model schools and practices.* States are supporting efforts on a continuum, from creating new model high schools, such as Early College High Schools, to redesigning existing schools, to implementing specific practices such as career academies.

5. *Local capacity-building.* States are building the capacity of local schools and districts to support reform by providing direct professional development or providing coaches or technical assistance teams at schools.

6. *Partnerships and public involvement.* States are establishing partnerships to support high school reform. State leaders are using their visibility to increase attention to high schools.

Deciding which strategies within each lever have the highest potential for accomplishing

the desired results is a challenge. Engaging states in a systematic examination of strategies can help states make wise decisions about what policies and interventions can best improve student learning in their state. Thus this report provides information that can help states engage in such a systematic process. The list of strategies described under each lever can give policymakers ideas about approaches to consider. But the authors do not mean to endorse every strategy or approach currently being used by states. Instead, policymakers should examine the research literature to discover what studies have found about a strategy's implementation issues and its effectiveness in improving student outcomes. Based on the research, policymakers will want to consider the appropriateness of using a specific strategy to improve student outcomes. This report introduces examples of the key research for each lever.

After choosing a strategy, policymakers should monitor implementation of the strategy and evaluate its outcomes. The report concludes with three examples of ways states are currently evaluating strategies in three different levers.

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This descriptive report aims to stimulate discussion about high school reform among Southeast Region states. The report groups recent state activities in high school reform into six "levers for change." To encourage critical reflection, the report places the reform discussion in the context of an evidence-based decisionmaking process and provides sample research on reform activities.

WHAT SOUTHEAST REGION STATES ARE DOING TO IMPROVE HIGH SCHOOLS

States have paid much attention to high school improvement over the past few years. But because much of their work is so new, it is important first to take stock of where states are putting their resources and attention and then, using this information as a base, to begin a discussion about how research and evaluation can inform states' decisions. This report provides an overview of the Southeast Region states' initiatives to improve high school outcomes. It organizes their initiatives into six "levers for change"—areas in which states are currently encouraging and supporting work at the local level. The report does not comment on the effectiveness of these levers, but describes how states are using them to facilitate high school improvement. The six levers for change are

1. *Standards and assessments.* States are working to align standards and assessments with expectations for post-secondary education and with twenty-first century skills.

2. *Course requirements.* States are revising their graduation requirements to include courses that are required for college and mandatory course sequences that make a stronger connection to work readiness.

3. *Student support and access to courses.* States are working to increase students' access to both the courses and the support they need through strategies such as virtual schools, support for Advanced Placement courses, and mandated remediation efforts.

4. *Model schools and practices.* States are supporting efforts on a continuum, from creating entirely new model high schools, such as Early College High Schools, to redesigning existing schools, to implementing specific practices such as career academies.

5. *Local capacity-building.* States are building the capacity of local schools and districts to

support reform by providing direct professional development or by providing coaches or technical assistance teams at schools.

6. *Partnerships and public involvement.* States are establishing partnerships to support high school reform, and state leaders are using their visibility to increase attention to high schools.

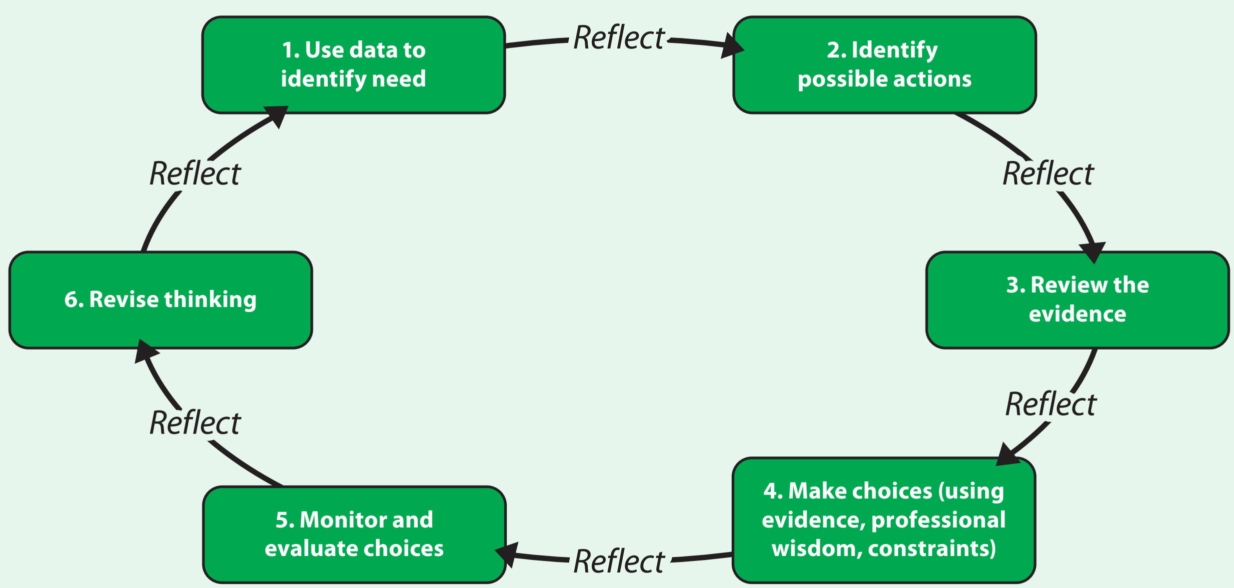
Merely listing state activities is not enough, however. Experience shows that ideas often spread from state to state even though little or no evidence exists about their implementation or impact. Educators are often accused of pursuing the "flavor of the month" in their sincere desire to make schools better for students. Understanding whether state efforts have the potential to result in positive changes at the school and student level requires examining current needs, identifying possible solutions, reviewing studies and others' experiences with those solutions, and monitoring and evaluating implementation. To help decisionmakers evaluate the potential of their high school improvement efforts, this report uses the evidence-based decisionmaking cycle—developed by the Regional Educational Laboratory Southeast and the Institute of Education Sciences—to frame the discussion of high school improvement efforts (figure 1). The evidence-based decisionmaking cycle has six steps:

Step 1: Identify the need or problem. When selecting strategies, states and districts must first identify the problem they are trying to solve by looking at their data. What do the data say about needs?

Step 2: Identify possible actions. States should look at what other states are doing, what local or national organizations are proposing or recommending, and what local constituencies are suggesting. States should also examine strategies recommended by the literature.

Step 3: Review the evidence base. After developing a list of possibilities, states should examine the

FIGURE 1
Evidence-based decisionmaking cycle



Note: The EBDM Cycle incorporates the different sources of information used in evidence-based decisionmaking as articulated by Whitehurst (2002) into a systematic process.

BOX 1

Methodology

Protocols were used to collect information on state-level high school reform initiatives from contacts in each state and from state department of education web sites. Results from the initial information-gathering stage were used to create state profiles, which were then analyzed to identify themes or "levers for change." The discussion of strategies within the levers is framed by the evidence-based decisionmaking cycle (see figure 1 in the text) to encourage educators to systematically examine the research base for strategies and make plans to monitor and evaluate implementation and outcomes.

Identification of research. To identify relevant research examples, electronic databases were searched for a connection between the levers for change and student outcomes. The described research studies do not represent an exhaustive summary, but illustrate the kinds of studies that state officials may find on specific topics and demonstrate the nature of the conclusions that can be drawn from different types of methodologies.

Study limitations. Although the report attempts to present a full picture of the work states are attempting in high school reform, it has several limitations. First, most contacts are state department of education employees and thus may have an incomplete knowledge of state-level work conducted by other organizations. In addition, the individuals may not be aware of all the work undertaken by the state department of education; in one state just one individual was contacted for information (although this individual was the primary contact for high school redesign). A review of web sites helped to compensate for the limitations of contacts, but web sites may be updated infrequently and often do not include information about planning or discussion phases. As a result, while this report includes the most significant state-level efforts in high school improvement, it almost assuredly does not present a complete picture of state efforts.

Second, this report focuses almost exclusively on work that has been started within the last two years. States may have other long-term initiatives related to high school improvement that are not represented here. In addition, this report looks at activities conducted during or prior to the 2006/07 school year; thus, activities may have changed since information was collected for the report.

Third, the scope of this report is limited by balancing the need to provide sufficient detail with the need for manageable size. As a result, readers may wish for more information on specific initiatives. Where possible, links to more information on initiatives have been provided. While an exhaustive discussion of the research base for each lever is the work of a much larger report over a much longer time frame, it was critical to include some representation of the research in order to point decisionmakers to the available information. Readers may know of other studies that were not included, and, indeed, should search out more research to support their decisionmaking.

evidence base of the proposed approaches, policies, or strategies. What effectiveness studies have been published and what are their findings? Do various studies come to the same conclusions on impact or effectiveness? How have other states or districts used strategies within a particular lever for change and what results do they report? Do any implementation studies provide information about how a strategy or approach works in different contexts? What trade-offs in possible impacts are discussed?

Step 4: Make choices. In deciding what strategies to implement, state policymakers need to consider the research literature in light of their own experience—what is often called professional wisdom—and in light of political and resource constraints (Whitehurst, 2002).

Step 5: Monitor and evaluate the choices. The state's work does not end after a decision has been made. It must also monitor implementation and evaluate the impact of the decision. Was this the right decision? Did the strategy accomplish what it was supposed to accomplish? What needs to change to make the strategy more powerful? Are there any unintended consequences that need to be discussed?

Thirty-one percent of 12th graders in the Southeast Region performed below the "basic" level in reading in 2005, compared with 27 percent at the national level

Step 6: Revise thinking as appropriate. Based on evaluation results, policymakers should examine their approaches and revise them as needed.

This report is designed to model how states can use the EBDM cycle to make decisions about high school improvement. In the section "Examining levers for change," the report helps states identify possible strategies or approaches in each of the levers (step 2 of the evidence-based decisionmaking process) by describing current state strategies. This section also presents studies related to each of the levers to help states move toward step 3 of the cycle (examining the evidence base). While the list of studies is not exhaustive, it does give examples of the types of literature state policymakers may encounter and provides some assistance in interpreting the literature.

The final section of the report describes the monitoring and evaluation work currently being done by some states and encourages states to think about ways to monitor and evaluate their own work. Appendix A lays out the report's research methodology (also see box 1). Appendixes B–G supplement the main body of the report with state profiles that provide more detailed description of how each of the six states in the Southeast Region use these six levers for change.

UNDERSTANDING THE REGIONAL CONTEXT

Low graduation rates, the requirements of the No Child Left Behind Act of 2001, and the unpreparedness of high school graduates have made high school reform a priority at both the national and the state level (Swanson, 2004; American Diploma Project, 2004). Low graduation rates are particularly acute in the Southeast Region (table 1).

The recent release of the National Assessment of Educational Progress (NAEP) data for 12th graders highlighted the low performance of many students, particularly in the Southeast Region. For example, 31 percent of 12th graders in the Southeast Region performed below the "basic" level in reading in 2005, compared with 27 percent at the national level. Nationally, 39 percent of 12th graders performed below the basic level in mathematics in 2005 (National Center for Education Statistics, 2007a). Low student performance is also highlighted by the percentage of schools not

TABLE 1
Four-year high school graduation rates by state and race/ethnicity, 2001 (percent)

State	Total high school graduates	African American	Hispanic	White
Alabama	61	54	44	66
Florida	53	41	52	58
Georgia	56	44	43	62
Mississippi	58	53	na	63
North Carolina	64	54	58	69
South Carolina	51	na	na	na
National	68	50	53	75

na = not available

Note: The graduation rates in this table may differ from "official" graduation rates reported by states because the data were calculated using the Cumulative Promotion Index, which multiplies grade promotion ratios for each grade together to "estimate the likelihood that a ninth grader from a particular school system will complete high school with a regular diploma in four years given the conditions prevailing in that school system during the (targeted) school year" (Swanson, 2004, p. 7). This approach is not identical to the approach all 50 states have agreed to use, which relies on tracking individual students over four years; however, the National Governors Association (2006) considers it a viable estimate.

Source: Swanson (2004).

TABLE 2
Adequate yearly progress data and eighth-grade National Assessment of Educational Progress data by state

State	Percent meeting adequate yearly progress, 2005/06		Percent of eighth graders at or above proficiency levels, 2005[a]	
	All schools	High schools only	Math	Reading
Alabama	88	na	15	22
Florida	28 (39 provisional)	na	25	26
Georgia	79	53	23	25
Mississippi	83	na	14	18
North Carolina	45	48	32	27
South Carolina	38	25	30	25
National	73	na	30	31

na = not available

a. The proficiency tests were administered from January to March 2005. They are a snapshot in time, unlike adequate yearly progress, which considers an entire school year.

Note: Because each state's definition of adequate yearly progress varies, the table includes state National Assessment of Educational Progress (NAEP) scores in reading and math for eighth graders. Eighth grade is the highest grade at which state-level NAEP data are available. NAEP data for the 12th grade are available only at the national and regional level.

Source: National Education Association (2005); Alabama Department of Education (2006); Florida Department of Education (2006); Georgia Department of Education (2006); Mississippi Department of Education (2006); North Carolina Department of Public Instruction (2006); South Carolina Department of Education (2006). Data in columns 3 and 4 from NCES (2007a).

making adequate yearly progress under the No Child Left Behind Act (table 2).

Supported by prominent business and philanthropic players such as the Carnegie Foundation and the Bill & Melinda Gates Foundation, states across the country have begun broad-based policy discussions and extensive initiatives to address low graduation rates and poor student achievement. In the Southeast Region, North Carolina is establishing model high schools and revisiting its policies and standards to support rigorous instruction. Florida recently passed the A++ legislation, revising course requirements and assessments and encouraging implementation of career academies.

The Southeast Region states have also established new offices within their state departments of education to support high school redesign. Alabama recently set up an office called High School/ Middle School Initiatives to address curriculum and instruction in grades 6–12. Georgia established a Secondary Redesign Unit, while both Mississippi and South Carolina set up High School Redesign offices. The North Carolina Department of Public Instruction reorganized its curriculum and school-improvement specialists along grade lines. States are still feeling their way through these reorganizations, however, trying to figure out the best approaches for creating and supporting change in high schools. Thus engaging state decisionmakers in an evidence-based decision-making process is critical. Good information from data, published research, and planned state-based evaluation activities will ensure that states can make necessary mid-course corrections and further improve policies, programs, and support.

EXAMINING LEVERS FOR CHANGE

Evidence-based decisionmaking is particularly important for new, complex initiatives with difficult-to-achieve goals

Evidence-based decision-making is particularly important for new, complex initiatives with difficult-to-achieve goals. Looking at state strategies for high school improvement across the Southeast Region contributes to a fuller understanding of the range of strategies available to individual states, particularly because these states have similar demographics and centralized control over education at the state level.

This report organizes state strategies to improve high school education into six "levers for change"—six ways to manage resources, policies, programs, or regulations to influence the behavior of districts, schools, and teachers (table 3).

The following sections present the six levers in more detail, introducing a conceptual framework for understanding each lever and briefly describing key state activities within that lever. Readers interested in more detail on state-specific strategies should refer to individual state profiles in appendixes B–G.

TABLE 3
Six levers for change

Levers for change	Description	State-specific strategies
1. Standards and assessments	States are working to align standards and assessments with expectations for post-secondary education and with twenty-first century skills.	• Align standards with post-secondary workforce expectations (Alabama, Georgia, Mississippi, and North Carolina) • Offer a "Ready-to-Work" certification program (Florida)
2. Course requirements	States are revising their graduation requirements to include courses required for college and work readiness.	• Increase rigor of course requirements (Alabama, Mississippi, North Carolina) • Establish specific course requirements for middle and high schools (Florida) • Require high school students to select a major (Florida, South Carolina) or a career pathway (Mississippi)
3. Student support and access to courses	States are working to increase students' access to both the support and the courses they need (remedial and advanced).	• Support Virtual High Schools (Alabama, Georgia, Florida, Mississippi, North Carolina, South Carolina) • Expand access to Advanced Placement courses (Alabama, Georgia) • Mandate intensive instruction in math and literacy for middle and high school students performing at the lowest levels (Florida)
4. Model schools and practices	States are supporting efforts on a continuum, from creating new model schools to redesigning existing schools to implementing innovative practices.	• Support implementation of specific strategies in schools (Mississippi) • Support redesigned high schools to serve as models (North Carolina, Florida) • Fund replication of model programs (Florida) • Support implementation of specific models including Early College High Schools (North Carolina) and High Schools That Work (South Carolina)
5. Local capacity-building	States are building local capacity by providing direct professional development or by providing coaches or technical assistance teams onsite at schools.	• Provide professional development targeted at a content area, such as math and science (Alabama) • Provide coaches to work with schools, for example graduation coaches (Georgia) or leadership facilitators for low-performing high schools (North Carolina) • Develop regional education centers (South Carolina) • Provide technical assistance to low-performing high schools (Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina)
6. Partnerships and public involvement	States are establishing partnerships to support high school reform. State leaders are using their visibility to increase the attention paid to high schools.	• Do presentations around the state (Mississippi) • Engage in a comprehensive advocacy initiative (North Carolina) • Use partnerships with other agencies to leverage change (Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina)

LEVER 1: STANDARDS AND ASSESSMENTS

With the standards-based reform movement in the 1990s—reinforced by the No Child Left Behind Act of 2001—states are using standards and aligned assessments to clarify performance expectations for teachers and students (Newmann, 1993; Smith & O'Day, 1991; Swanson & Stevenson, 2002). Standards and assessments become the cornerstone that other state activities build upon and align with (Hamilton, McCaffrey, Stecher and others, 2003).

State activities

Southeast Region states have initiated several activities to raise standards and improve assessments.

Aligning standards with twenty-first century skills. The most significant state efforts to revise standards arise from the desire to align state standards with the expectations of post-secondary education and the workforce in the twenty-first century. To do this, four out of the six Southeast Region states are participating in the American Diploma Project (ADP), established by the Thomas B. Fordham Foundation, the Education Trust, and Achieve. ADP researchers have identified high school courses taken by workers in professional and skilled jobs and used the course content to develop initial benchmarks, focusing on English/language arts and mathematics. Front-line managers in high-growth occupations reviewed these benchmarks. After revising the benchmarks to reflect expectations of these managers, ADP then brought together a panel of post-secondary educators in diverse fields to identify the essential competencies to succeed in credit-bearing work at universities. The result of these efforts was a set of benchmarks for English/language arts and mathematics.

Alabama, Georgia, Mississippi, and North Carolina all plan to align their standards and assessments to the ADP benchmarks by 2008 and have agreed to work toward the following agenda (American Diploma Project, 2007):

- Aligning high school standards with post-secondary and workplace expectations.
- Upgrading high school course requirements so that students take a college- and work-ready curriculum.
- Streamlining assessment systems so that high school tests can indicate readiness for college and twenty-first century jobs.
- Holding high schools and post-secondary institutions accountable for student success.

The most significant state efforts to revise standards arise from the desire to align state standards with the expectations of post-secondary education and the workforce in the twenty-first century

In addition to working with the American Diploma Project, North Carolina has aligned itself with the Partnership for 21st Century Skills, a national organization of technology, businesses, and education groups that strives "to bring 21st century skills to every child in America" (Partnership for 21st Century Skills, 2007). The partnership has identified skills necessary for life in the twenty-first century, including information and communication skills, thinking and problem-solving, interpersonal and self-direction skills, global awareness, entrepreneurial skills, and financial, economic, civic, and business literacy. North Carolina's Center for 21st Century Skills—the first state offshoot of the national organization—plans to align the curriculum with twenty-first century standards and create pilots, such as a multimedia biology assessment, that assess twenty-first century skills in a content assessment (North Carolina Business Committee for Education, 2007).

Increasing the rigor of graduation exams. All six Southeast Region states have moved away from the minimum competency tests that have historically characterized graduation exams (Warren, Jenkins, & Kulick, 2006) toward assessments more closely aligned with state standards (Center on Education

TABLE 4
Graduation exam requirements by state, 2005/06

State	Tests required for graduation	Grade level alignment	Types of questions asked
Alabama	Alabama High School Graduation Exam	11th grade	Multiple choice
Florida	Florida Comprehensive Assessment Test	10th grade	Multiple choice Short answer Other extended response
Georgia	Georgia High School Graduation Test and Georgia High School Writing Test	11th grade	Multiple choice (GHSGT) Writing prompt (GHSWT)
Mississippi	End-of-course tests in algebra I, English II, biology, and U.S. history from 1877	End of course	Multiple choice Writing prompt
North Carolina	End-of-course tests in algebra I, English I, biology, U.S. history, civics, and economics	End of course	Multiple choice Other extended response
South Carolina	High School Assessment Program	Through 10th grade	Multiple choice Other extended response

Source: Center on Education Policy (2006).

Policy, 2004). Table 4 shows the graduation exam requirements by state, the grade level to which the content of the test is aligned, and the types of questions included on the various tests.

Despite the changes in state testing, a report by Achieve (2004) found that state graduation tests still have significant shortcomings and proposed that such tests should not be the only measure used. Some states now require performance-based measures for graduation. North Carolina recently began requiring that students complete a graduation project to ensure that they complete an independent research project before they graduate. The state is developing a scoring rubric and providing training to ensure that schools implement the graduation project appropriately (North Carolina Department of Public Instruction, 2007b).

Including industry certification and career technical assessment. Some states are addressing the assessment of skills students may need in the workplace. Under a law signed by the governor in June 2006, Florida will offer a Ready-to-Work certification program that will supplement the state's regular testing program and allow students who wish to go to work directly out of school to obtain industry certification. Available in secondary schools, community colleges, workforce-education programs, vocational rehabilitation centers, regional workforce boards, and Department of Juvenile Justice programs, the program will identify workplace skills, assess skill levels, offer online and print-based job skill training and credentialing programs, and offer a completion certificate and portfolio process. Because the program has just been established, many elements, including the skills to be assessed, must still be determined.

While most students want to go to college, they do not take courses in high school that prepare them for college coursework

Examining the research on this lever

Most research studies about state-level policies for standards and assessments face limitations in interpreting causality and are unable to state with certainty that increases or decreases in student achievement are caused by the changes in standards and assessments. Table 5 introduces state decisionmakers to some of the research and conclusions relevant to this lever.

LEVER 2: COURSE REQUIREMENTS

States are requiring more academic courses partly in response to studies finding that enrollment in a more rigorous selection of courses is connected with increased enrollment in and success in college

TABLE 5
Sample research for lever 1

Topic	Citation and contribution to research	Methodology	Study conclusion
Alignment of standards and assessments	Rothmann, Slattery, Vranek, & Resnick, 2002 Alignment study using a popular methodology.	Analysis of standards and assessments in five states using Achieve alignment criteria.[a]	In general, state assessments were not well aligned with standards and objectives requiring higher order thinking.
Teachers' understanding of standards-based reforms	Cohen & Hill, 1998 Frequently cited study on standards-based reform.	Correlational study examining the relationship between types of professional development, teacher practices, and student achievement.[b]	For education policy to have an impact on student performance, it needs to focus on teaching and learning by supporting professional development for teachers that overlaps with the students' curriculum and assessments.
Relationship between more rigorous graduation exams and dropout rates	Warren & Edwards, 2005 Study that uses a fairly typical methodology to examine the association between a policy and a student outcome.	Correlational study examining the relationship between the existence of high school graduation exams and dropout rates, using a single indicator of dropout rates.[c]	The existence of high school exit exams was not associated with reduced rates of graduation.
	Warren, Jenkins, & Kulik, 2006 Study highlighting how changing an indicator (dropout rates) can affect the conclusions of a study.	Correlational study examining the relationship between different types of exams and dropout rates, using three indicators of dropout rates.[d]	The use of more rigorous graduation exams was associated with increased dropout rates.

a. Limitation: Includes results from only five states.

b. Limitation: Information on professional development and practices comes from a survey administered only once. The researchers also report that the practices scale on the survey is incomplete.

c. Limitation: Used only a single indicator of dropout rates.

d. Limitation: Study includes only very basic information about exams. No data beyond 2002 were used. Analysis did not include receipt of General Educational Development credentials. Study does not include mechanism by which exams influence dropout rates.

Source: Authors' analysis based on data search described in appendix A.

(Adelman, 2006; Finn, Gerber, & Wang, 2002). One report on why students were not ready for postsecondary programs concluded that while most students want to go to college, they do not take courses in high school that prepare them for coursework (ACT, 2005). As a result, the study authors recommend that graduation requirements delineate the specific courses needed to graduate rather than just the number of credits needed in each subject area.

In addition to a more academic curriculum, states are also trying to engage students through more relevant courses of study, primarily by including majors or career pathways connected to workforce expectations.

State activities

Southeast Region states are requiring that courses more closely resemble college expectations; some states have also tried to ensure that courses have greater relevance by requiring students to take a concentration of thematically-related courses.

Increasing course requirements. Alabama has moved to a 4 x 4 curriculum, requiring all students to take four courses each of English, math (including algebra I and geometry), science (including biology and a physical science), and social studies. Mississippi has also made its course requirements more rigorous by requiring that freshmen entering

TABLE 6

Course requirements for graduation by state, 2006/07

State	Total courses required	English	Math	Science	Social studies	Other credits	Other requirements
Alabama	24 (3 diploma tracks)	4	4 (algebra I and geometry) (algebra II and trigonometry*)	4 (biology, physical science)	4 (world history, U.S. history, economics, government)	1 physical education, 0.5 health, 0.5 arts, 0.5 computer applications, 2 foreign language,* 3 career/tech preparation**	State exam
Florida[a]	24	4	4 (algebra I or equivalent)	3 (2 with a lab)	3 (U.S. history, world history, economics, U.S. government)	1 physical education, 1 fine arts, 4 credits in a major of interest, 4 elective courses	State exam, different tracks have different requirements
Georgia	22 (for college preparatory or technology/ career tracks) or 24 (for both tracks "with distinction")	4 (American literature, composition)	4* (algebra I & II, geometry for college prep track); 3** (including algebra I)	3 (includes 1 physical and 1 life science)	3 (U.S. history, world history, U.S. government, economics)	1 health/physical education, 1 arts or computer technology or career technical or foreign language, 2 foreign language,* 4 career/tech preparation**	State exam
Mississippi	20	4	4 (algebra I)	3 (biology I)	3 (U.S. history, world history, U.S. government, Mississippi studies)	1 health, 1 technology, 1 arts	End-of-course tests
North Carolina	20 (4 diploma tracks)	4	4 (algebra I)** (algebra I, II, geometry + higher level math)*	3 (physical science, biology, earth/environmental science)	3 (U.S. history, world history, civics/ economics)	1 health/physical education; 2 foreign language,* 4 arts or Junior Reserve Officer Training Corps or career/ tech prep**	End-of-course tests Graduation project Computer test
South Carolina	24 (2 diploma tracks)	4	4	3	3 (U.S. history, economics, U.S. government)	1 physical education or Junior Reserve Officer Training Corps, 1 computer science, 1 foreign language,* 1 career/tech preparation**	State exam Computer test

* For college preparatory or advanced academic diploma only. ** For career preparatory diploma track only.

a. The requirements for Florida start in 2007/08. Florida also offers an accelerated track allowing students to finish in three years.

Source: Alabama Department of Education (2007); Yecke (2006); Georgia Department of Education (2002); North Carolina Department of Public Instruction (2006b); Mississippi Department of Education (2002); South Carolina Department of Education (2007).

BOX 2

Florida's A++ legislation—improving the relevance of course requirements

Florida began its revision of graduation requirements by adjusting expectations at the middle school level. The A++ middle school reforms, in place for the 2006/07 school year, require:

- Students in middle school to complete 12 core academic courses (three each in English, math, science, and social studies), as well as one course in career and education planning.
- Every middle school to offer at least one high school level math class for which high school credit may be earned.
- Students to complete a personalized academic and career plan during the seventh or eighth grade.

The revised expectations for high school address both academic rigor and relevance:

- Ninth graders entering high school in the 2007/08 school year will now be required to earn 16 core academic credits and eight elective credits in order to graduate. Core requirements consist of four credits each of English and math, three credits each of social studies and science, one credit of fine arts, and one credit of physical education and health.
- To improve the relevance of coursework, students must earn four credits in a major area of interest that they identified in their personalized education and career plan. Students may change their areas of emphasis, if they wish. The remaining four elective credits may be in any area. Major areas of interest must be approved annually by the district and the Commissioner of Education.

Source: Yecke (2006).

in 2008/09 take four years each of English, math (including two math courses beyond algebra I), science (including one laboratory course), and social studies (including U.S. history and economics). Georgia is currently in the process of revising its course requirements. Table 6 shows the course requirements by state.

Workforce preparedness. At the same time that states are moving to a more college preparatory course of study, they are also increasing the relevance of high schools by making course offerings more applicable to the twenty-first century workforce. This approach requires students to take a set of courses that are related to each other or to a possible career. Florida's A++ legislation incorporates such a strategy (box 2).

Mississippi is considering requiring students to follow one of seven career pathways and will conduct further research to develop curricula for select pathways. South Carolina is requiring all students to select a major in a career cluster of study; the newly passed South Carolina Education and Economic Development Act reads:

> The Department of Education shall develop a curriculum, aligned with state content standards, organized around a career cluster system that must provide students with both strong academics and real-world problem-solving skills. Students must be provided individualized educational, academic, and career-oriented choices and greater exposure to career information and opportunities. This system must promote the involvement and cooperative effort of parents, teachers, and school counselors in assisting students in making these choices, in setting career goals, and in developing individual graduation plans to achieve these goals (Code of Laws of South Carolina, 1976, Section 59-59-20 [A]).

Examining the research on this lever

Most research that connects course requirements with student outcomes is correlational. Such studies may ask whether states or districts with a higher number of course requirements also have higher student achievement or lower dropout rates. Table 7 introduces some research studies relevant to this lever.

TABLE 7

Sample research for lever 2

Topic	Citation and contribution to research	Methodology	Study conclusion
Relationships between increased graduation requirements and student outcomes	Hoffer, 1997 Study uses typical methodology to examine the impact of state-level policy on student outcomes.	Correlational study examining relationship between increased course requirements and three outcomes: dropout rates, student achievement, and socioeconomic disparities in student outcomes.[a]	Increased graduation requirements were not associated with increased dropout rates, increased achievement, or reduced disparities because of socioeconomic background.
	Lillard & DeCicca, 2001 Economic analysis of potential costs of increasing graduation standards.	Correlational study examining relationship between course requirements and dropout rates, using multiple datasets with both state-level and individual data.[b]	Increasing the number of courses required for graduation was associated with higher dropout rates, particularly for students of lower socioeconomic status.
	Teitelbaum, 2003 Multi-level analysis focusing on math and science.	Multilevel correlational study examining relationship between increased math and science requirements and number of courses taken, number of higher level math and science courses taken, and student achievement in math and science.[c]	Increased math and science requirements resulted in students taking more math and science courses; however, the increase in students taking more advanced courses was small. There was no association between increased course requirements and increased student achievement, probably because of relatively few numbers of students taking advanced coursework.
	Lee, Croninger, & Smith, 1997 Study that looked at school-level policies and achievement.	Correlational study of national data set, examining the relationship between different factors in a school's academic organization and student performance.[d]	Schools that required students to take the same core courses ("constrained curriculum") had higher achievement and reduced inequities between students.
Impact of "applied academics" on student achievement	Dare, 2000 Review of conceptual and empirical literature on applied academics or career-focused interventions.	Review of literature including summary of existing quasi-experimental studies and one correlational study connecting the use of applied academics with student achievement.[e]	Four studies reported negative outcomes for applied academics, three studies reported no difference, and three studies reported positive outcomes.

a. Limitation: Study could not look at changes at the school or state level because it did not compare results before implementation of increased requirements with those after implementation.

b. Limitation: Study examined only potential costs of higher requirements and not potential benefits.

c. Limitation: Study did not include information on schools' course offerings, looking instead at the level at which students stopped taking courses.

d. Limitation: None reported.

e. Limitation: The review did not describe its selection process and did not provide sufficient detail on the methodology of individual studies.

Source: Authors' analysis based on data search described in appendix A.

LEVER 3: STUDENT SUPPORT AND ACCESS TO COURSES

To increase the number of students graduating and going to college, states have begun paying more attention to students' access to the courses that they need, both more rigorous courses and remedial courses. A correlational analysis of the National Education Longitudinal Study of 1988 dataset, which includes high school transcripts and post-secondary data, found that "academic intensity of the student's high school curriculum still counts more than anything else in precollegiate history in providing momentum toward completing a bachelor's degree" (Adelman, 2006). Studies have also reported that certain types of courses, such as Honors, Advanced Placement (AP), International Baccalaureate (IB), are generally seen as more rigorous and are associated with student success (Barton, 2003). Yet many students do not have access to Advanced Placement courses (table 8).

States have begun paying more attention to students' access to the courses they need, both more rigorous courses and remedial courses

As more and more students are expected to pass higher level courses, however, there is also a greater need for adequate and appropriate remediation or support for students who begin high school below grade level (Balfanz, McPartland, & Shaw, 2002).

TABLE 8
State participation in Advanced Placement programs, 2004/05 (percent)

State	Public schools offering at least one AP course	Graduating seniors who took at least one AP exam	Graduating seniors who passed at least one AP exam
Alabama	35	10	5
Florida	84	33	18
Georgia	88	24	14
Mississippi	41	9	3
North Carolina	95	30	17
South Carolina	91	22	13
National	68	23	14

Source: Southern Regional Education Board (2006a) and College Board (2006).

TABLE 9
Virtual schools in the Southeast Region

State	Year established	Number of courses	Type of courses provided	Students enrolled
Alabama	2006	46	Advanced Placement, core academic, elective, technical, catch-up, remediation	1,575 (Spring 2006)
Florida	1997	76	Advanced Placement, core academic, elective, technical	67,675 (2005/06)
Georgia	2005	125	Advanced Placement, core academic, elective	1,285 (Spring 2006)
Mississippi	2005	31	Advanced Placement, core academic, elective	603 (Spring 2006)
North Carolina	2005[a]	222[a]	Advanced Placement, elective	1,855 (Spring 2006)
South Carolina	2006	37	Advanced Placement, core academic, elective	Pilot only

a. North Carolina has offered online courses to the 50 most rural high schools since 1988 through the North Carolina Department of Public Instruction Consortium.

Source: Southern Regional Education Board (2006b).

TABLE 10
Sample research for lever 3

Topic	Citation and contribution to research	Methodology	Study conclusion
Impact of online instruction on student learning	Zhao, Lei, Lai, & Tan, 2005 Meta-analysis of connection between online instruction and student achievement.	Meta-analysis of 51 studies on the impact of online instruction on student achievement. Calculated overall effects for the studies and also coded studies according to specific program aspects, correlating intervention aspects to student outcomes.[a]	Across the 51 studies, no significant difference in outcomes between distance learning and face-to-face learning was found; however, there was a large range in the reported effects, indicating that some programs were more effective than others. Some factors, including the amount of interaction with students and the nature of subject area taught, were associated with better student outcomes. Results also suggested that some students might benefit more than others.
Impact of increased enrollment in AP or high-level courses	National Center for Education Statistics, 2007b The only national longitudinal transcript study.	Descriptive analysis of 2005 high school transcript data from a national sample, included correlational analysis of transcripts with National Assessment of Educational Progress (NAEP) data.[b]	Students have increased their grade point average and the level of their courses over the last 10 years. More rigorous course-taking was associated with higher NAEP scores. Despite increases in the level of courses taken by students, overall NAEP scores have remained constant over the last 10 years.
Impact of remediation programs on student learning	Balfanz, Legters, & Jordan, 2004 Study examining the impact of a program designed not just to remediate but to accelerate.	Comparison of student achievement from schools implementing Talent Development High Schools' (TDHS) "catch-up" courses in reading and math with student achievement results in "double-dosing" courses in comparison high schools.[c]	The study reported positive effects for student achievement. Students in the TDHS group gained approximately a half-year grade equivalent in math and a 7-month grade equivalent in reading compared with students in the comparison group.

a. Limitation: Results apply primarily to college-level students.

b. Limitations: The study provides descriptive level information.

c. Limitation: The study did not include a comparison with students in a regular classroom experience with no extended time.

Source: Authors' analysis based on data search described in appendix A.

State activities

Southeast Region states are increasing access to courses in three primary ways: offering online courses through virtual schools, expanding AP offerings, and mandating or providing additional remedial opportunities for students.

Creating virtual schools. As states increase the equity of course offerings among schools, they are turning to technology to provide better access to courses, particularly in remote areas. Each state in the Southeast Region has established a state-level virtual school that provides online high school courses (table 9). Some courses are developed by the state, but in many cases are purchased from other states or vendors. The virtual schools provide students access to advanced courses, help students make up lost credits, and meet the needs of students who cannot attend a regular school. Florida developed the first virtual school in the nation and currently provides courses to other states.

Increasing access to advanced courses. Although the virtual schools provide access to many advanced courses, states are also increasing the number and improving the quality of their AP offerings. Alabama has a grant from the National Governors Association to work in two districts to provide resources, professional development, and student-preparation strategies designed to increase participation and success in AP courses. Alabama is also creating a plan for increasing statewide access to AP courses. Georgia has a similar grant to provide resources and training to improve access to AP courses in 12 diverse high schools.

Providing remediation. Though providing direct intervention to struggling students is considered primarily a local responsibility, states are using some of the policy levers and resources at their disposal to focus attention on the needs of struggling students. Florida's recent A++ legislation mandates intensive instruction in math and literacy for middle and high school students scoring at the lowest levels on statewide assessment tests.

Examining the research on this lever

The strategies included in this lever have a much more direct link to student achievement than some of the policies discussed in the first two levers. As a result, the research base is much more extensive. In looking for research on various interventions or approaches, states should look for information on the impact of specific strategies (examined through quasi-experimental and experimental studies) and on lessons on implementation of these strategies (examined through descriptive and case studies). States should pay particular attention to meta-analyses, which use systematic approaches to combine the results of multiple studies to draw conclusions about the overall impact of an approach or a strategy. Table 10 includes one sample study for each of the strategies discussed under this lever.

LEVER 4: MODEL SCHOOLS AND PRACTICES

The focus on high school redesign is driven by the belief that the typical high school does not prepare students for life in the twenty-first century. The Bill & Melinda Gates Foundation (2007)—which has provided significant resources for efforts in the Southeast Region—has articulated the need this way: "It is time to rethink the purpose and structure of the American high school. Today's large comprehensive high schools are obsolete; they prepare a privileged fraction of students for college while placing many students on tracks to nowhere" (p. 3).

Some states are reforming high schools by turning a small set of high schools into model or *lighthouse* schools where other educators can come and learn. The model schools may be entirely new schools or may be schools redesigned through comprehensive reform or innovative practices.

Some states are reforming high schools by turning a small set of high schools into model or *lighthouse* schools where other educators can come and learn

An evaluation of the Gates Foundation efforts to create small high schools found that it was easier to create an entirely new school than to redesign existing schools (American Institutes for Research/SRI, 2003). Closing all existing schools to create new model high schools is not possible, however, so other approaches have focused on comprehensive reform of existing schools.

Whole-school reform models are designed to improve multiple aspects of the school. Although most whole-school reform models are for elementary or middle schools, a few high school models do exist. However, recent reviews show that few models have sufficient research showing they improve student learning (see table 11 for examples).

Instead of comprehensive redesign, schools may choose individual practices or strategies to improve achievement. One particularly popular practice is to create smaller theme-based communities within schools, such as those focused on specific career paths.

State activities

Southeast Region states are setting up model schools primarily by redesigning existing schools or implementing innovative practices.

Creating new model schools. States that start up new high schools may adopt existing models or design a model locally. One of the most prevalent new-school models in the Southeast Region is Early College High School. For example, North Carolina's Learn and Earn Initiative plans to create 75 of these schools (box 3).

Improving existing schools. States are redesigning existing high schools in two key ways: supporting or mandating the implementation of comprehensive reform models and mandating or supporting key strategies.

North Carolina, with support of the Bill & Melinda Gates Foundation, is transforming existing comprehensive high schools into small, thematically focused schools. South Carolina, as part of the 2005 Education and Economic Development Act, mandates that all schools implement High Schools That Work or a similar model. Florida requires that low-performing high schools implement comprehensive reform models such as High Schools That Work, while North Carolina gives low-performing schools a choice among a limited number of models.

States are also working with individual schools to implement promising strategies and practices that can serve as models for other schools. Georgia is working with five pilot schools to implement innovative strategies. The Mississippi Legislature allocated $5 million for redesign activities for the 2007/08 school year. School districts will be selected through a competitive process to be pilot sites for implementing the Information and Communication Technology and Science, Technology, Engineering, and Mathematics Applications curricula in the 2007/08 school year. The Florida Secondary School Redesign Initiative is supporting the redesigning of up to 50 comprehensive schools—participating schools will receive professional development, coaching, curriculum tools, and networking opportunities. Florida is

BOX 3

North Carolina's Learn and Earn Initiative—student support and access to courses

As part of a comprehensive effort to improve high schools, North Carolina is establishing new schools and redesigning existing schools through the Learn and Earn Initiative, funded by the North Carolina General Assembly. Located on college campuses, Learn and Earn Early College High Schools are designed to increase the number of students graduating from high school prepared for post-secondary education.

The schools provide an accelerated curriculum that permits students to graduate in four to five years with a high school diploma and an Associate's degree or two years of transferable credit.

Despite the acceleration, these schools do not serve advanced students. Rather, they focus on reaching students who may not have thought of themselves as college material.

Early College High Schools are fairly new and little research has been done on their impact; however, several current studies will provide information on the model. The SERVE Center at University of North Carolina at Greensboro is leading a partnership effort to examine the impact of the Learn and Earn Schools using an experimental design. North Carolina is also part of a national evaluation of Early College High Schools conducted by American Institutes for Research and SRI on behalf of the Gates Foundation. Finally, the North Carolina schools will be part of a national data-collection effort for Early College High Schools conducted by Jobs for the Future.

Source: North Carolina New Schools Project (2007).

TABLE 11
Sample research for lever 4

Topic	Citation and contribution to research	Methodology	Study conclusion
Impact of comprehensive school reform models on student outcomes	Borman, Hewes, Overman, & Brown, 2003 One of the few meta-analyses of comprehensive school reform models.	Meta-analysis of 232 studies for 29 comprehensive school reform models.[a]	Effect sizes for third-party comparison studies were reported as positive for the following relevant models: School Development Program: +.11 (This model had the highest number of qualifying research studies.) Modern Red Schoolhouse: +.25 Expeditionary Learning Outward Bound: +.02 America's Choice: +.25 ATLAS Communities: +.40 Paideia: +.57 (These five models had fewer studies to summarize so the research base was considered not as strong.)
	Comprehensive School Reform Quality Center, 2006 Review of comprehensive school reform models, including more recent studies not available to Borman and others.	Systematic review of middle and high school comprehensive school reforms that rated the quality of the research base and the strength of the reported outcomes.[b]	Only three high school models were reported to have a solid body of evidence about their effectiveness: America's Choice, School Development Program, and Talent Development High Schools.
Impact and implementation of career academies	Kemple & Snipes, 2000; Kemple & Scott-Clayton, 2004 One of the few longitudinal experimental studies of a high school–level intervention.	Experimental study of career academies, examining the impact of the model on various student outcomes. The study also measured program implementation in terms of "interpersonal support" and correlated those findings to student outcomes.[c]	Participation in career academies improved labor market outcomes for young men, particularly for those most at risk. Participation had no impact on achievement or graduation rates. Strong school implementation of interpersonal support was associated with positive student outcomes. Poor implementation of the model was associated with worse student outcomes than if the model had not been implemented at all.

a. Limitation: Many reforms did not have a strong enough research base (set of studies examining impact) to provide useful information. In addition, effect sizes are for studies across all grade levels.

b. Limitation: Overall effect sizes were not calculated.

c. Limitation: Results apply only to students who applied to participate in the program. Only nine schools were in the study, not a large enough sample to explore variations in program implementation.

Note: Many studies are beginning to report effect sizes or measures of how practically significant the study's result is; the larger the effect size, the more impact the intervention had. Effect sizes are generally lower at the high school level (than at younger levels) and an effect size of .20 can be considered average for an intervention (Hill, Bloom, Black & Lipsey, 2007).

Source: Authors' analysis based on data search described in appendix A.

also providing grants to 113 partnerships between schools that want to implement promising strategies or approaches and the schools that have already implemented the strategy. The most frequently implemented strategy is career academies.

Examining the research on this lever

When looking at research on specific models or specific instructional strategies, states should pay particular attention to meta-analyses. One of the studies reported in table 11 is a meta-analysis on comprehensive school reform models. The studies include reviews of comprehensive school reform programs as well as an experimental study of career academies.

LEVER 5: LOCAL CAPACITY-BUILDING

Successful implementation of state-level policies depends on the capacity of the local district and school to implement them (Elmore & Fuhrman, 1995; McLaughlin, 1987). Thus, improving the knowledge and skills of teachers and principals through professional development is a key component of implementing standards-based reform and translating state-level policies to the local level (Youngs & King, 2002; Swanson & Stevenson, 2002). In addition to directly providing professional development, some states are moving toward models of coaching and technical assistance that provide external facilitators at the school (Neufeld & Roper, 2003).

State activities

States build school- and district-level capacity by developing intensive professional development programs and providing coaches or onsite technical-assistance teams.

Direct professional development. States are using several approaches to building capacity through staff development.

- *State-developed direct professional development to teachers and school teams to improve instruction.* Several states support extensive direct professional development for their teachers. Alabama, which has placed a priority on math and science skills, has supported statewide professional development for teachers at all levels (box 4). It has also made

BOX 4

The Alabama Math, Science, and Technology Initiative—building local capacity

The Alabama Math, Science, and Technology Initiative, commonly referred to as AMSTI, is the Alabama Department of Education's initiative to improve math and science teaching statewide.

The initiative provides three basic services: professional development, equipment and materials, and on-site support. Schools become official AMSTI Schools by sending all of their math and science teachers, and administrators to two week Summer Institutes for two summers. At the Summer Institutes teachers receive grade and subject specific professional development that is highly applicable to their own classrooms.

AMSTI sites provide AMSTI School teachers with essentially all of the equipment, supplies, and resources needed to effectively engage students with hands-on, inquiry-based learning . . . The resources arrive packaged in "kits" ready for immediate use. Each kit is customized for the specific activities that will be taught.

AMSTI sites also provide extensive, on-site support and mentoring. Once teachers complete the Summer Institute, math and science specialists from the site regularly visit the schools where they serve as mentors, helping teachers implement what was learned during the summer.

AMSTI currently has three AMSTI sites serving 72 schools, 1,800 teachers, and 42,000 students (at all levels) on a daily basis.

Excerpted from the Alabama Math, Science, and Technology Initiative web site (www.amsti.org/overview_000.htm).

TABLE 12
Sample research for lever 5

Topic	Citation and contribution to research	Methodology	Study conclusion
Types of effective professional development	Garet et al., 2001 One of the few national studies that systematically examines the reported impact of different types of professional development.	Correlational study describing relationship between components of professional development and reported changes in instruction for teachers at all grade levels.[a]	Professional development associated with higher levels of reported changes in instruction focused on content knowledge, provided opportunities for active learning, and were consistent with other learning activities. High school teachers were less likely to participate in activities with these characteristics than teachers at lower levels.
	Killion, 2002 Summary of high school–level professional development with evidence of positive connection to student achievement.	Reviewed programs according to four criteria: student performance, well-defined staff development program, content-specific staff development, and implementation at multiple sites.[b]	Sixteen professional development programs met the four criteria. The study identified characteristics that programs share, including a focus on improving student learning.
Implementation of coaching models	Brown, Stroh, Fouts, & Baker, 2005 Review of literature on the coaching model.	Summary of existing literature, examined work of coaching organizations and interviewed recipients of coaching services.[c]	School and district coaches needed certain characteristics to be successful, including being knowledgeable and the ability to communicate, to listen, to facilitate reflective thinking, and to form honest relationships. The coaching programs perceived as most effective had clearly delineated roles and expectations. Effectiveness of current coaching varied considerably.

a. Limitation: Results depend on teacher self-report of changes in instruction.

b. Limitation: Programs were identified through a nomination process; other successful programs may have been excluded. In addition, not all programs used experimental designs for evaluating their results.

c. Limitation: Report did not include enough information on the methods for reviewing the literature to assess the validity of the conclusions.

Source: Authors' analysis based on data search described in appendix A.

a commitment to improved literacy instruction through the Alabama Reading Initiative, which originally provided training in literacy instruction for teachers at the middle and high school levels.

- *Professional development in specialized areas for lowest-performing schools.* Providing large-scale professional development is a significant commitment of state resources, so most states target professional development to specific populations or purposes. North Carolina, for example, provides professional development resources for the lowest-performing high schools.

- *Support for enhancing the instructional leadership skills of principals.* Principals are one of the most important contributors to the high-quality implementation of reforms (Berends, Bodilly, & Kirby, 2002), and so states are also focusing on improving the skills of principals and school leaders. Alabama has established a Leadership Academy and Lead Teacher Network. North Carolina offers a professional development program for principals in priority high schools. South Carolina provides Breaking Ranks II training from the National Association of Secondary School Principals for high school principals throughout the state.

Coaching and technical assistance. As an alternative model for building capacity, many states have adopted approaches—particularly for low-performing schools—that provide onsite coaching or technical assistance.

- *Coaches for specific functions.* Some states provide coaches for specific strategies or practices. Georgia has recently provided graduation coaches to help each school analyze data, identify potential at-risk students, determine priorities for serving students, and develop intervention strategies for individual students. North Carolina's high school redesign effort provides participating schools with a school change coach for the first two years of the redesign process and instructional coaches for the following three to four years.

- *Technical assistance teams.* Many states provide onsite technical assistance teams for low-performing schools as a variation on the coaching model. These teams, such as Alabama's State Support Teams, provide broad-based technical assistance to build capacity in curriculum, instruction, management, and leadership. Florida uses the Southern Regional Education Board to provide technical assistance for priority high schools implementing High Schools That Work. North Carolina provides technical assistance teams and leadership facilitators for each low-performing high school. In the 2006/07 school year 17 of the lowest-performing high schools had coaches.

States are creating partnerships within their agencies and with other organizations and involving the public in the reform work

Examining the research on this lever

It can be challenging to make connections between capacity-building efforts and student outcomes. Many studies of professional development or coaching strategies are thus more likely to describe impacts on teachers or principals. While there are many studies on professional development programs, table 12 highlights three that are broad in scope.

LEVER 6: PARTNERSHIPS AND PUBLIC INVOLVEMENT

Many reforms fail because they center on insiders without convincing the broader society of the benefits of the reform (Tyack & Cuban, 1995). State policymakers have often underestimated the need to develop partnerships and to involve the public, particularly when dealing with potentially controversial topics (Friedman, Gutnick, & Danzberger, 1999). However, building partnerships and involving disparate groups in education can be very challenging (Firestone & Fisler, 2002; Hatch, 1998). Although research on the impact of public engagement is limited, examinations of failed education reforms have highlighted the importance of having the local community support reform (Frahm, 1994; Greenfield & Klemm, 2001).

State activities

State activities under this lever are concentrated in two primary areas: creating partnerships within their agencies and with other organizations and involving the public in the reform work.

External and internal partnerships. Some states are engaging a variety of state-level agencies in high school reform. Florida's effort is headed up by the K–12 chancellor, who works with an interagency committee of K–12 educators, legislators, representatives from colleges and universities, and the Agency for Workforce Innovation. Florida attributes much of its success in getting the recent A++ legislation passed to including legislators in this work.

North Carolina's high school reform work is led by the Education Cabinet, in which the governor works with the heads of the state's education agencies. The North Carolina New Schools Project, a nongovernmental agency that administers most of the state's funding from the Bill & Melinda Gates Foundation, manages and coordinates much of North Carolina's work in high school–reform models.

States also have partnerships that facilitate the connection between K–12 and post-secondary education. For example, all of Florida's publicly funded education system is included under the commissioner of education. Georgia has a P–16 Council (preschool through college) that includes broad-based representation and is designed to improve student outcomes systemwide.

As part of its Education and Economic Development legislation, South Carolina is creating regional education centers that will use partnerships between businesses and education to facilitate and coordinate workforce-development programs and provide professional development to teachers and counseling for students.

Public involvement. Governors and state superintendents of education have, as state-level figures, the ability to focus the attention of the media and the public on high school reform. Mississippi's state superintendent is promoting the proposal on "Redesigning Education for the 21st Century Workforce in Mississippi," working with the Mississippi Economic Council to make presentations around the state about education and workforce preparation. North Carolina's governor is focusing attention on redesigning high schools to meet workforce demands. North Carolina has received funding from the Gates Foundation for an advocacy initiative to build consensus around the need for change and the approaches necessary to foster change at the high school level.

Examining the research on this lever

Research on partnerships and public involvement is often descriptive. National research organizations have summarized the public's attitudes toward various components of public education, primarily through polling. Other researchers have used case studies to explore examples of partnerships, which

TABLE 13
Sample research for lever 6

Topic	Citation and contribution to research	Methodology	Study conclusion
Factors affecting the success of partnerships and public involvement	Mac Iver & Legters, 2001 Qualitative investigation of an education partnership with multiple nonschool partners.	Case study of a partnership between businesses and school districts to implement career-centered high school–reform initiatives in all district schools.[a]	Partnerships among external organizations can support and sustain reform but cannot effect change on their own. Partnerships need to be able to help schools make sense of conflicting messages and make decisions among priorities.
	Hatch, 1998 Qualitative investigation of four experienced school reform organizations coming together to create a new model of schooling.	Case study of the collaboration between Coalition of Essential Schools, School Development Program, Project Zero, and the Education Development Center to create the ATLAS Communities Project.[b]	Each participating organization had a different "theory of action" that had significant implications for how the organizations thought about schooling and what schooling should be.

a. Limitation: Authors acknowledge the risk that their methodology may have included their own biases.

b. Limitation: Author was a participant in the activities, which may reduce objectivity.

Source: Authors' analysis based on data search described in appendix A.

can be useful for developing theories about how partnerships work or how they might be successful. But case studies need to be supplemented by more experimental studies to examine the impact of partnerships more fully. Table 13 presents two studies on partnerships and public involvement.

MONITORING AND EVALUATING STRATEGIES

This overview of high school improvement efforts in the Southeast Region and the state profiles in the appendixes demonstrate that states are facilitating high school reform in many ways. As states consider implementing new strategies, approaches, or policies, they should review prior research as part of their decisionmaking. Even when the research base for a particular strategy or approach is strong and there are many well-designed studies with positive findings, the state will need to consider how its own demographics and context will affect implementation. The states will thus need to monitor and evaluate any implemented strategy to determine how well it is implemented, what improvements are needed, and whether it achieves the hoped-for outcomes in the state context. Where strategies lack a research base or have a contradictory research base, states may want to consider a pilot to monitor the strategy's implementation and evaluate its impact.

Evaluating the quality of standards and assessments by holding them against a benchmark is only as good as the benchmark itself

Despite their importance, monitoring and evaluation often get short shrift because of a lack of resources or because priorities are placed elsewhere. This section provides examples of three ways that states in the Southeast Region are evaluating strategies and lists resources that states can use as they monitor and evaluate their work (box 5).

Within the standards and assessments lever

The central component of standards-based reform is a state's standards and assessments. With so much depending on this component, it is crucial that states ensure that the standards are appropriate and well implemented. Monitoring and evaluating standards thus requires examining their quality and the extent to which they are implemented in practice.

States usually evaluate the quality of their standards and assessments by holding them against a benchmark that represents the "best" or "ideal" standards. This approach is only as good as the benchmark itself and thus can be controversial. Achieve is one organization that helps states evaluate standards by comparing them with benchmark standards from other states, other countries, and their own work. This process involves asking questions such as:

- Are the standards as rigorous as those of highly regarded states and nations? Is there a clear progression of knowledge and skills as students grow older? Do the standards include samples of student work to illustrate the quality and complexity of student expectations?
- Are the standards clearly written and easy to understand? Are they specific enough to provide clear guidance to students, teachers,

BOX 5

Evaluation resources

The American Evaluation Association (www.eval.org) has links to resources for all levels of evaluators.

W.K. Kellogg Foundation (www.wkkf.org) has an extensive list of resources related to evaluation—many suitable for novices. (Click on Publications and Resources, then Toolkits.)

The National Science Foundation (www.nsf.gov) has published the *User-Friendly Handbook for Project Evaluation.* (Go to Publications, Select Reports, and Education.) In addition, NSF is also supporting the Online Evaluation Resource Library (www.oerl.sri.com). While it was developed for NSF projects, it has broader applicability.

parents, administrators, and curriculum and assessment developers? Do they focus on measurable content, knowledge, and skills?

- Are the standards teachable, or do they sacrifice breadth for depth? Do the standards balance mastery of knowledge with conceptual understanding? Are connections among the disciplines emphasized? (excerpted from Achieve, 2007).

Achieve also examines assessments to ensure that they are aligned with the states' standards, as do other organizations. Achieve's protocol includes the following factors:

- *Content.* "Does the test measure what the state standards indicate that all students should know and be able to do at a particular grade level? If not, is it because the standards are too vague to make a determination, or is it because test items measure only part of what the standards ask for?
- *Performance.* Are students asked to demonstrate the skills the standards expect? For example, if the standards say that students will analyze the characteristics of various literary forms, does the test ask them to evaluate different literary forms, or does it merely ask students to identify one type of literature?
- *Level of challenge.* Are most test items easy, medium, or hard, and is the range of challenge appropriately distributed across all the items? What makes them challenging—the content they are assessing or another factor, such as the language of the question? Overall, is each assessment appropriately rigorous for students who have been taught to the state standards?
- *Balance and range.* Does the test as a whole adequately sample the depth and breadth of the standards and objectives described in the state documents? If not, are the standards that are assessed the most important ones for the grade level? Overall, do the assessments for elementary, middle, and high school focus on the most important content that all students should know?" (excerpted from Achieve, 2007).

The Council of Chief State School Officers also helps states align their assessments with their standards using the Surveys of Enacted Curriculum model and the Webb model (Webb, 1997; Webb, 1999). Its web site includes a Web Alignment Tool to help states align their standards and assessments (http://www.ccsso.org/projects/alignment_analysis/).

Both the benchmarking and alignment processes have potential limitations. Benchmarking depends on the existence of already strong standards against which a state's standards can be measured. And while aligning assessments to standards is critical if standards-based reform is to be implemented correctly, aligning assessments to poor standards may do more harm than good.

Within the local capacity-building lever

States that choose local capacity-building strategies often dedicate substantial resources to professional development or to local technical assistance efforts. Thus, determining whether the strategies are implemented appropriately and have the desired impact is important. Yet local capacity-building to support student learning is challenging to evaluate. In some cases, capacity-building may take many years for changes to manifest in the school or classroom.

Local capacity-building to support student learning is challenging to evaluate

Alabama has committed to formally evaluating the impact of its statewide professional development. The Alabama Reading Initiative (ARI) was the subject of a multiyear external evaluation that assessed progress in 424 schools and looked at achievement for students in grades 3–8 (Shannon, Murray & Prim, 2002). The study results showed that ARI schools overall outperformed non-ARI schools but that implementation varied widely. However, this study was a quasi-experimental study that tried to match ARI schools with non-ARI schools, taking into account schools' differing demographics and previous achievement. That is, schools weren't randomly assigned, which is the strongest way to design an evaluation of an intervention.

States should be responsive to the different needs of secondary and elementary students and schools

Another study, completed by the American Institutes of Research and funded by the Carnegie Foundation (Bacevich & Salinger, 2006), examined how ARI participation influences teachers and principals, looking at changes in student outcomes in participating schools, identifying the program components perceived as most effective, and identifying obstacles to implementation. The study team used interviews and surveys to get information from middle school and high school respondents but did not look at any quantitative data for student outcomes. The study identified four primary lessons:

- Be responsive to the different needs of secondary and elementary students and schools—a one-size-fits-all approach won't work.
- Develop partnerships among teachers, administrators, and schools to create a coherent and well-defined K–12 continuum of reading instruction.
- Provide secondary teachers and schools with consistent support from specialized staff.
- Be attentive to the local, state, and national policy environment related to reading (excerpted from p. 3).

This descriptive study provided useful information about the implementation of the ARI model and about participants' perceptions of the model, but was not intended to provide any definitive information on program impact, particularly relating to student outcomes.

Alabama is also doing two external evaluations of the Alabama Math, Science, and Technology Initiative (AMSTI) project. One evaluation compared student achievement results on the grade-appropriate measure (the High School Graduation Exam) in AMSTI schools with the results in non-AMSTI schools with similar demographics (AMSTI, 2006). At the high school level, students in AMSTI schools passed the reading and science portions of the exam at a rate of approximately 2 percent higher than students in the non-AMSTI schools. For example, in 11th-grade math, 83.3 percent of AMSTI students passed compared with 80.9 percent of non-AMSTI students. In 11th-grade science, 88.5 percent of AMSTI students passed compared with 86.5 percent of non-AMSTI students. Because the study's executive summary (the only part of the report being disseminated) does not describe the methodology, it is difficult to understand these findings. The summary does not report test results prior to implementation of AMSTI, or whether schools participating in AMSTI started with higher test scores.

To answer questions about the impact of AMSTI more definitively, Alabama is participating in a multi-year experimental study of the impact of the program at the middle school level. Part of the work of the Regional Educational Laboratory Southeast, this study will randomly assign middle schools to either participate or not participate in AMSTI and will track differences in outcomes between the two sets of schools. These kinds of rigorous evaluations of professional development are important when states are expending significant resources on strategies.

Within the model schools and practices lever

Many states have dedicated substantial resources to implement model schools and practices, yet they often do not track whether these strategies have had the desired impact. In many cases states depend on anecdotal reports from schools to determine whether a model or intervention is working. Yet this lever may be the most straightforward to evaluate. Because the new schools and practices are designed to have a direct impact on student achievement, student outcomes should be a key indicator for evaluating the impact of these models. It is also critical, however, to track the extent to which the models and practices are being implemented in the schools. Undesirable outcomes at a specific model school may be due to poor implementation rather than a poor model.

North Carolina is doing substantial work in redesigning high schools. It is also participating in evaluations of this work by a variety of partners. Through funding from the Bill & Melinda Gates Foundation, North Carolina is participating in an external evaluation conducted by Fouts & Associates. The evaluation uses a mixed methodology to describe the strategies implemented by the North Carolina New Schools Project, the perceptions of the school, and the standardized student outcome data.

Jobs for the Future, the Gates-funded intermediary for the Early College High School program, is collecting student-level data from the Learn and Earn Early College High Schools in North Carolina. These data, which include transcript data and student achievement results, will help track the performance of students in the Learn and Earn Early College High Schools. This information, which will be included in a national database, will primarily be descriptive.

To determine the impact of the Learn and Earn program, North Carolina is participating in a longitudinal experimental design. This study takes advantage of the fact that the Learn and Earn schools have more applicants than they have spots. Schools participating in the study agree to randomly select students, and the study will track different outcomes (attendance, achievement, dropout rates) for students in the Early College High Schools and students attending the traditional high school. The study will also document implementation of the model through a variety of collected data, including site visits, student and staff surveys, and annual reports submitted by the schools. It is hoped that the study will identify program components that are associated with positive student outcomes.

Together, information from these three studies should provide good descriptive data on the results of these models and some conclusive information on the impact of the Learn and Earn Early College High School Model. It is likely, however, that none of these studies will look at the issue of implementation in enough depth to provide guidance to other schools or states who are attempting to implement the model.

Within all levers

The previous examples are all fairly comprehensive, time- and resource-intensive evaluations. States need not always engage in sophisticated and expensive evaluations of all of their work. The amount of resources dedicated to the program should guide how extensive the evaluation should be. If an initiative costs $15 million, undertaking an extensive evaluation of the initiative is being a good steward of the taxpayers' money. Much smaller initiatives should have proportionally fewer resources dedicated to evaluation.

The amount of resources dedicated to the program should guide how extensive the evaluation should be

Doing high quality evaluations is easier if a state can develop partnerships with universities or other research organizations that have the skills to do some of the complex work. In addition, partnerships between states and other groups are attractive to funding agencies interested in supporting research. To help states think through evaluation issues, box 5 includes evaluation resources, most of them appropriate for people from evaluation novices to more advanced evaluators.

APPENDIX A
RESEARCH METHODOLOGY

This appendix outlines the approach to information gathering, analysis, and validation of information necessary for developing the list of levers.

Information gathering

Collecting information on the state-level activities supporting high school reform included developing a protocol, completing protocols for each state, and examining state web sites.

Developing protocol. Regional Educational Laboratory Southeast (REL Southeast) staff developed an initial protocol to collect state-level information. The protocol, which included questions identified in the Fast Response Project Proposal, was discussed with REL Southeast state outreach staff assigned to Southeast Region state departments, who provided feedback on the clarity and utility of the questions. The REL Southeast state outreach staff used the final protocol (appendix H) as guidance in collecting information.

Completing protocols for each state. The REL Southeast state outreach staff contacted key individuals in their assigned state education agency to collect information on state activities. The contacted individuals varied by state, but included, at a minimum, the individual overseeing or having the key responsibility for high school reform. The state outreach staff collected the information on the protocol from the individuals listed below. Because individuals had different expertise, the complete protocol may not have been used with each individual contacted.

- Alabama—classroom improvement director. Additional information was collected during the review process from the section coordinator for High School/Middle School Initiatives and from a research specialist.
- Florida—deputy chancellor of secondary reform, who also reviewed the final document. Although the deputy chancellor was the only contact for Florida, this individual was highly enough placed that the information is considered representative of the state department's perspective.
- Georgia—program manager for Graduation and Secondary Redesign, a graduation specialist, and a program manager for Analysis and Planning in the School Improvement Division. The report was reviewed by the program manager for Graduation and Secondary Redesign.
- Mississippi—executive assistant to the state superintendent (deputy superintendent-level) for Instructional Programs and Services. Additional information was gathered during the review process from the original contact and from the state superintendent of education, the associate state superintendent for Vocational and Technical Education, and the division director for Special Populations in the Office of Innovative Support.
- North Carolina—high school improvement director. In addition, the REL Southeast state liaison for North Carolina is also a project director through another funding source for a high school research project in the state and thus, was an information resource. Additional information was collected during the review process from the president of the North Carolina New Schools Project and the director of the Division of Secondary Education.
- South Carolina—director for High School Redesign and ACT/SAT Improvement; two education associates for Career and Technology Education, a director for School Quality, and an education associate for Safe Schools and Youth Services. The REL Southeast state liaison also provided information for the department's high school reform discussions and was a key information resource. The report was reviewed by the director of High School Redesign and ACT/SAT Improvement.

Examining state web sites. To supplement and validate the information provided by state contacts, REL Southeast staff searched each state department's web site using a specific information-gathering protocol (appendix H). In some states, this scan revealed information that had not been described by the state contact. When this occurred, the state liaison contacted the appropriate individual to determine the accuracy of the information from the web site. In cases where individuals described activities not on the web site, the information was verified by other sources of data.

Information analysis

REL Southeast staff submitted the information requested on the protocols for their assigned state. The project director for this Fast Response product used these responses to develop a set of state profiles that describe each state's efforts in high school reform. Using a cross-case analysis approach (Creswell, 1998), we categorized state activities into themes—or levers. Nine themes or levers were originally identified, but, after noticing substantial overlap, we consolidated themes that had commonalities and then tested these themes against other literature (for example Cohen, 1995; Hamilton et al., 2003; McNeil, 2003). The result was a final list of six "levers for change."

Assuring validity of information

The initial approach to assuring the validity of information involved collecting data from multiple sources—also known as "triangulation" (Gall, Borg, & Gall, 1996)—including state department employees and state web sites. In addition, the process of "member checking" was used to assure validity and accuracy of information. After the state profiles were written from the information in the protocols, each state liaison reviewed the accuracy of the written profile and corrected any misrepresentations. The final "member checking" was a review by the key contact persons noted above.

Identification of research

To make this report more useful and encourage states to examine their own work and the work of other states more critically, it references studies that connected strategies within these levers to student outcomes. The included studies are representative of the research, but are not an exhaustive list, which would have been beyond the scope of this project. The literature cited fit into one of three categories: published in a peer-reviewed journal, published on the web with a detailed description of the methodology, or published on the web as representative of the opinion or approach of a large organization influential in high school reform. The limitations of each included study are listed in the table notes.

For each lever, the Education Index online database was searched using the terms identified in the following sections. The results from these searches were supplemented by studies and reports from online sources, including key organizations working with high school reform or reporting on research from high school reform. These organizations included Achieve, the Alliance for Excellent Education, the Bill & Melinda Gates Foundation, Consortium for Policy Research in Education, Educational Testing Service, Southern Regional Education Board, RAND, and the U.S. Department of Education (including the National Center for Education Statistics and the What Works Clearinghouse).

Standards and assessments. Search of Education Index database using the following keywords: graduation exams and dropout rates; graduation exams and student achievement. Only peer-reviewed studies that identified a relationship between exams and student outcomes were examined. Because the studies showed no agreement on this topic, it was important to represent the different conclusions. Two studies by the same author that came to opposing conclusions highlight this. These two studies were supplemented with one study that had used a common methodology to examine standards and assessments and a frequently cited study that examined the role of professional development in implementing standards.

Course requirements. Search of Education Index database using the following keywords: course requirements and dropout rates; course requirements and student achievement. Only peer-reviewed studies that identified a relationship between course requirements and student outcomes were examined. Because the studies showed no firm agreement on this topic, studies that reflected the different types of conclusions reached were included.

Student support and access to courses. Search of Education Index database using the following keywords: compensatory education and meta-analysis; virtual schools and student achievement; online instruction and student achievement; reading interventions and student achievement and high schools; math interventions and student achievement and high schools. Only peer-reviewed studies that examined the relationship between an approach and student achievement were examined. Studies specific to certain populations, such as special education, were not looked at. A meta-analysis of virtual learning was included, as was a recent U.S. Department of Education publication that highlighted potential concerns about increasing requirements without ensuring the quality of those requirements. Finally, the highest quality study found of a reading or math remediation intervention at the high school level was also included.

Model schools and policies. Search of Education Index database using the following keywords: comprehensive school reform and student achievement. One study that represented a meta-analysis of comprehensive school reform results was included and supplemented with another, more recent, report that provided a broad review of comprehensive school reform efforts. Because the possible strategies were too numerous, research on career academies—a strategy frequently implemented through the Region—was included.

Local capacity-building. Search of Education Index database using the following keywords: professional development and student achievement; professional development and student outcomes; characteristics of effective professional development. Only peer-reviewed studies that identified some relationship between the design of the professional development and student or teacher-level outcomes were considered; most studies were correlational. One large-scale study that provided empirical support for described characteristics of professional development associated with positive student or teacher-level outcomes was included. It was supplemented with two reports summarizing literature on the coaching model and on professional development at the high school level.

Partnerships and public involvement. Search of Education Index database using the following keywords: partnerships and school improvement; collaboration and school improvement. Only peer reviewed studies that involved multiple partners beyond a university–school partnership were examined. The only two studies found were included.

Study limitations

While this report attempts to present a comprehensive picture of state efforts in high school reform, it has several limitations. First, the state contacts are weighted heavily in favor of employees from the state departments of education. As a result, these individuals may have an incomplete knowledge of state-level work being conducted by other organizations. In addition, the individuals do not always know about all the work being undertaken at the state department. The report compensates for this by supplementing individuals' information with a review of web sites; however, web sites may be updated infrequently and often do not include information about activities in the planning or discussion phases. Readers should thus remember that, while this report includes the most significant state-level efforts in high school improvement, it is not exhaustive.

APPENDIX B
ALABAMA

An overwhelming majority of Alabama schools have met requirements for adequate yearly progress. Table B1 presents key No Child Left Behind (NCLB) data reported by Alabama using its own calculations. The table also includes National Assessment of Educational Progress (NAEP) data for Alabama.

Alabama's use of the levers for change

Alabama approaches school reform primarily through a focus on improving the content knowledge and skills of teachers in literacy instruction, mathematics, and science. It has committed substantial resources to implementing and evaluating the Alabama Reading Initiative and the Alabama Math, Science, and Technology Initiative. To heighten the focus on high schools, Alabama recently established the High School Initiative. Alabama is using strategies within all six levers for change to support high school improvement.

Standards, assessments, and course requirements. The purpose of the Alabama High School Initiative is to raise expectations and achievement so that all students graduate with the knowledge and skills they need to be successful in college and work. Alabama has joined with other states, the National Governors Association, and Achieve, Inc., in the American Diploma Project to help high schools meet the challenge of students dropping out of high school or completing high school with serious deficiencies in mathematics, reading, and writing skills. The goals of Alabama's plan (Achieve, 2007) include:

1. Aligning high school standards and assessments with the knowledge and skills required for success after high school (August 2005–January 2008). Specifically, the state will work with the K–12, post-secondary, and business communities to define the knowledge and skills students need to succeed in credit-bearing courses in Alabama post-secondary institutions, colleges and universities, and high-growth industries.

2. Requiring all high school graduates to take challenging courses that actually prepare them for life after high school (August 2005–January 2008). The state will determine the required college- and work-ready curriculum, with an appropriate opt-out provision and process. It will also identify state policies and programs needed to support implementation of the new requirements.

3. Streamlining the assessment system so that the tests students take in high school also

TABLE B1
Key No Child Left Behind and National Assessment of Educational Progress Data in Alabama, 2005/06 (percent)

No Child Left Behind data	Results
Schools meeting adequate yearly progress	88
Pass rate on state reading[a]—11th graders	86
Pass rate on state math[a]—11th graders	84
Graduation rates	82
Percentage of highly qualified teachers—secondary level	81 (core academic classes)
National Assessment of Educational Progress 8th-grade math	15 (at or above proficient, 2005)[b]
National Assessment of Educational Progress 8th-grade reading	22 (at or above proficient, 2005)[b]

a. Scores are on the Alabama High School Graduation Exam. Students start taking the exam in 10th grade and can retake it each year until they pass all four areas: English, mathematics, science, and social studies. In 12th grade, the pass rate is more than 95 percent. These scores are included in the adequate yearly progress calculations.

b. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: Alabama Board of Education (2006). National Assessment of Educational Progress data from National Center for Education Statistics (2007a).

can serve as "readiness tests" for college and work (August 2005–August 2008). The state will also look at additional ways of assessing college and work readiness, combining high school assessments and college placement exams where possible, and making high school assessments matter for students.

4. Holding high schools accountable for graduating students who are ready for college or careers, and holding post-secondary institutions accountable for students' success once enrolled (August 2005–August 2008). To do this, Alabama plans to make its college- and work-ready curriculum the minimum academic requirement for admission to Alabama's colleges and universities. It will also link and report data across the K–12 and post-secondary systems, identify performance indicators, and add these indicators to high school and college report cards to highlight progress and challenges.

Student support and access to courses. Alabama is one of six states funded by the National Governors Association (NGA) to improve disadvantaged students' access to, and success in, college-level Advanced Placement (AP) courses. Alabama matched the $500,000 NGA grant with an additional $500,000. As part of this effort, Alabama is undertaking two strategies:

"1) Development of a statewide AP expansion strategy that includes the implementation of programs and policies that increase student preparation for and success in AP courses—and that prepares many more teachers to teach AP; and 2) the implementation of an intensive AP expansion effort in one urban and one rural public school district, whereby a number of innovative AP expansion strategies can be field-tested and evaluated. Specifically, the state will:

- Provide resources to add AP courses to select high schools and districts during the 2006/07 year, including the support of professional development; classroom supplies; lab equipment; college-level textbooks; and support activities for students.

- Implement sequential professional development events for each AP subject area.

- Implement several programs and strategies at the middle grades and junior high levels that increase the preparation of all students for success in AP courses.

- Participate in a learning laboratory for teams of policymakers and educators from the six states that will be co-hosted by the NGA Center and the College Board." (excerpted from National Governors Association, 2005)

In the 2006/07 school year, the Alabama Department of Education offers districts competitive grants to help cover the costs of instructional materials and supplies for AP teachers. Instructional materials funding is available for 125 new AP courses and 125 existing AP courses. For each new AP teacher who completes a College Board-approved 2007 summer institute, the local education agency can apply for $1,200 per classroom to purchase instructional materials to support implementation of the new AP class. For existing AP classes, the local education agency can request $1,200 per classroom to purchase instructional materials and supplies for the 2006/07 school year provided that the teacher has attended a College Board-approved AP summer institute in the specific subject area within the past three years.

Six high schools in Alabama participate in the International Baccalaureate program.

As another way of providing statewide access to advanced courses, Alabama has begun the ACCESS (Alabama Connecting Classrooms, Educators, and Students Statewide) Distance Learning initiative. It provides opportunities for Alabama public high school students to engage in AP, elective, and other courses to which they may not otherwise have access. Students use web sites and videoconferencing to take coursework from

Alabama-certified teachers. E-teachers receive extensive professional training to effectively conduct courses via the internet. The state department and local education agencies provide materials and support for schools and students, who take the courses during the regular school day. ACCESS was piloted in 24 high schools across the state in the 2005/06 school year.

Model schools and practices. Alabama is creating a model engineering academy as a partnership between Auburn University and Auburn High School. Information from this pilot and other research will inform the creation of additional engineering academies.

Local capacity-building. Over the last several years, Alabama has made statewide professional development in reading, math, and science a priority. Through the Alabama Math, Science, and Technology Initiative, Alabama provides extensive professional development for teachers, including onsite coaching (see box 4). The high school science component is provided by Alabama Science in Motion (ASIM), a statewide network of resources, training, and support for conducting laboratory activities in public high school science classrooms. ASIM provides intensive professional development, resource teachers who act as mentors and coaches, and labs and science equipment and supplies. ASIM has 11 sites, each with two vans, science equipment and supplies, and two master's level teachers.

Alabama's Reading Initiative originally served teachers in secondary education, but since Alabama's receipt of a large federal Reading First grant it focuses exclusively on earlier grades.

For low-performing high schools, Alabama's Accountability Roundtable coordinates technical-assistance, while the state support team provides the actual technical assistance to struggling schools. Special services teachers and academic officers are assigned to academic priority schools to build capacity in curriculum, instruction, management, and leadership. Principals of priority schools are also invited to participate in the Alabama Leadership Academy, professional development focused on helping the principal become a "leader of learners."

Partnerships and public involvement. Alabama's governor and state superintendent have jointly established the Governor's Congress, which is looking at issues of leadership and teacher quality. In addition, a broad base of politicians, educators, and community groups are part of the High School Redesign Council, overseeing Alabama's work with the American Diploma Project.

References and other information about Alabama's efforts

General

Alabama Department of Education. (December, 2006). *Alabama Board of Education Report Card: A State Summary.* Montgomery: Author.

Web site for Classroom Improvement Curriculum and Instruction, which houses the High School Initiative: http://www.alsde.edu/html/sections/section_detail.asp?section=54

American Diploma Project

Achieve. (2007). *Alabama ADP policy agenda*. Available from http://www.achieve.org/node/672

Professional development efforts and evaluations

Information on the Alabama Math, Science, and Technology Initiative program can be found at http://www.amsti.org.

Information on the Alabama Reading Initiative can be found at http://www.alsde.edu/html/sections/section_detail.asp?section=50&footer=sections.

AMSTI. (2006). *Summary of AMSTI external evaluation: Student achievement data, 2005.* Available from http://www.amsti.org/documents/AMSTIevalsummary5-06.pdf

Bacevich, A., & Salinger, T. (2006). *Lessons and recommendations from the Alabama Reading Initiative:*

Sustaining focus on secondary reading. Prepared for the Carnegie Corporation. Available from http://www.air.org/publications/documents/ARI%20Popular%20Report_final.pdf

Muscovitch, E. (2006). *2005 evaluation of the Alabama Reading Initiative*. Available from ftp://ftp.alsde.edu/documents/50/Executive%20Summary%20Revised%20Final%20May%2006.doc

Advanced Placement

National Governors Association. (2005). *Phase two: Expand Advanced Placement participation* (Press release). Available from http://www.nga.org

Virtual School

Information about ACCESS Distant Learning is at http://accessdl.state.al.us/

APPENDIX C
FLORIDA

In Florida slightly more than a quarter of the schools have made adequate yearly progress with an additional 39 percent granted provisional status. Table C1 summarizes key No Child Left Behind and National Assessment of Educational Progress data for Florida.

Florida's use of the levers for change

Florida's current High School Reform initiative began with the creation of a High School Reform Task Force. Recommendations from its February 2006 report are included the A++ Plan for Education legislation (House Bill 7087, 2006). Florida's A++ plan focuses on secondary reform, which includes both middle and high schools. Through the A++ Plan for Education and other initiatives, Florida is using a variety of levers for change.

Standards and assessments. For students who choose to enter the workforce directly after high school, the Florida legislature established the "Ready to Work" Certification program in 2006. The program is administered by the Florida Department of Education and the Agency for Workforce Innovation, which is responsible for implementing policies related to workforce development. Available in secondary schools, community colleges, workforce-education programs, vocational rehabilitation centers, regional workforce boards, and Department of Juvenile Justice programs, the program will offer job skills training and credentialing programs for high school students and adult learners. The program will include identification of workplace skills, assessment of skill level, online and print-based instructional program, and a completion certificate and portfolio. Specific skills will be identified as the program is implemented.

Course requirements. Florida began its revision of graduation requirements by revising the expectations at the middle school level (grades 6–8). The A++ middle school reforms will be in place for the 2006/07 school year and will require:

- Students in middle school to complete 12 core academic courses (three each in English, math, science, and social studies), as well as one course in career and education planning.
- Every middle school in the state to offer at least one high school–level math class for which high school credit may be earned.
- Students to complete a personalized academic and career plan during the seventh or eighth grade.

TABLE C1
Key No Child Left Behind and National Assessment of Educational Progress data in Florida, 2005/06 (percent)

National Assessment of Educational Progress data	Results
Percentage of schools meeting adequate yearly progress	28 39 (provisional AYP)
Pass rate on state reading[a]—10th graders	32
Pass rate on state math[a]—10th graders	65
Graduation rates	71
Percentage of highly qualified teachers (all grades)	90
National Assessment of Educational Progress 8th-grade math	26 (at or above proficient, 2005)[b]
National Assessment of Educational Progress 8th-grade reading	25 (at or above proficient, 2005)[b]

a. Scores are on Florida's Comprehensive Assessment Test, which is tied to the state standards. Passing the tenth grade test is required for graduation.

b. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: Florida Department of Education (2006, 2007a and b); NAEP data from National Center for Education Statistics (2007a).

The revised course requirements for high school students demonstrate expectations of academic rigor and relevance.

- Ninth graders entering high school in the 2007/08 school year will now be required to earn 16 core academic credits and eight elective credits in order to graduate with a high school diploma. Core requirements consist of four English credits, four math credits, three social studies credits, three science credits, one fine arts credit, and one physical education and health credit.

- To improve the relevance of coursework, students must earn four credits in a major area of interest that they identified in their personalized education and career plan. Students may change their areas of emphasis, if they wish. The remaining four elective credits may be in any area. Major areas of interest must be approved annually by the district and the Commissioner of Education.

Student support and access to courses. The A++ legislation provides for required intensive reading and mathematics instruction for middle and high school students performing at the lowest levels. The legislation increased the focus on reading by establishing in law the Florida Center for Reading Research and making funding for reading a permanent part of the Florida Education Finance Program. This will ensure that school districts have annual funding to serve the reading needs of their students, with a specific focus on research-based programs for students who are behind.

In addition to the A++ Plan, Florida is expanding opportunities for all students through Florida Virtual School, the nation's first statewide public virtual school. The Virtual School is part of the Florida public education system and serves students in all 67 Florida districts, as well as students, schools, and districts around the nation, through technology-based instruction and training. More than 80 courses, ranging from GED to AP courses, are available to public, private, and home school students. State departments of education for Alabama, Georgia, and West Virginia, along with districts and schools in 27 other states have used Florida's Virtual School. During the 2005/06 school year, the Virtual School served more than 33,000 students in 65,000 half-credit courses; 31,000 of those students were in Florida.

The state also provides Success/Succeed Grants, prioritized for the lower-performing high schools, to promote the implementation of career academies, Advanced Placement, International Baccalaureate, and "college transfer" programs.

Model schools and strategies. The A++ Plan for Education includes a Career Paths Program to provide startup grants to offset planning and implementation costs of a career and professional academy. Florida's career academy programs are partnerships between a district school board and one or more businesses, industries, or post-secondary education institutions. Funded academies provide a rigorous and relevant standards-based academic curriculum that correlates with career and industry certifications in high-growth, high-demand, and high-paying occupations (Florida Department of Education, 2007a). Thirty-five schools have been funded to create career academies.

In fall 2006, Florida held an "Innovation Fair" at its regular K–12 School Conference where schools exhibited their best programs, generally career academies. Schools applied for grant funding to replicate the model programs at their schools. Grants totaling $5.65 million were awarded to 113 school partnerships—the partnerships included one school that had successfully implemented the strategy and one school seeking to duplicate that strategy. Each partnership received $50,000, with $40,000 going to the school seeking to replicate the program and the remaining $10,000 to the school with the existing program to assist with training and mentoring costs. The program benefited 50 of the 67 districts in Florida, the Florida School for the Deaf and Blind, the Florida Virtual School, and the P.K. Young School (the developmental school of the University of Florida).

Model schools are also being developed as part of the Florida Secondary School Redesign Initiative, a collaboration of the Florida Association of School Administrators, the International Center for Leadership in Education, and the Florida and the Islands Regional Comprehensive Center. The first cohort of this initiative will consist of up to 50 schools that will receive professional development, coaching, curriculum tools, and networking opportunities.

Local capacity-building. The Southern Regional Education Board (SREB) is working with those Florida high schools that have been graded "F" for three consecutive years. SREB is implementing the High Schools That Work model with the faculty at four schools. At the same time, SREB is working with the high schools' feeder middle schools to implement Making Middle Schools Work. Low-performing schools must also implement a continuous improvement model, which builds on the FOCUS model, requiring schools to:

F – Formulate a plan and disaggregate student performance data.

O – Optimize time by preparing and following a timeline. Plan the instructional calendar.

C – Concentrate on teaching standards and collaborate with the instructional team. Teach the instructional focus in the classroom.

U – Utilize assessments at short, frequent intervals. Conduct frequent student assessments and maintain and monitor the teaching and learning process.

S – Sustain learning with tutorial, enrichment, and maintenance activities. Provide tutorials for reteaching or enrichment for objectives that have been mastered (excerpted from Florida Department of Education, 2007b).

Partnerships and public involvement. High school reform in Florida is headed up by K–12 Chancellor Cheri Pierson Yecke, with input from an interagency committee consisting of representatives from colleges and universities, Agency for Workforce Innovation, and K–12 educators. Along with external stakeholders, these committee members oversee secondary reform. Additional major players in the reform effort are the Southern Regional Education Board, the International Center for Leadership in Education, Florida Association of School Administrators, and the Florida and the Islands Regional Comprehensive Center.

References and other information about Florida's efforts

A++ Plan

Florida Department of Education. (2006, February). *High school reform task force report and recommendations*. Available from http://www.fldoe.org/hsreform/pdfs/FinalReport.pdf

Florida Department of Education. (2006, June). *Press release: Governor Bush signs A++ Plan for Education.* Available from http://www.fldoe.org/news/2006/2006_06_05.asp

House Bill 7087. (2006, May 12) *An act relating to education.* Available from http://www.flsenate.gov/Session/index.cfm?Mode=Bills&SubMenu=1&Tab=session&BI_Mode=ViewBillInfo&BillNum=7087&Chamber=House&Year=2006&Title=%2D%3EBill%2520Info%3AH%25207087%2D%3ESession%25202006

Career academies

Florida Department of Education. (2007a). *Career academies: Succeed Florida*. Available from http://www.fldoe.org/workforce/careeracademies/ca_succeed06.asp

Planning process

Florida Department of Education. (2007b). *Florida's continuous improvement model*. Available from http://www.bsi.fsu.edu/schoolimprove/cim.htm

Florida data

Florida Department of Education. (2005, May). *Raising student achievement: Florida's compelling evidence.* Available from http://www.fldoe.org/NCLB/pdfs/Final_Florida_Achievement.pdf

Florida Department of Education. (2007). *Florida's Comprehensive Assessment Test.* Retrieved August 31, 2007 from http://fcat.fldoe.org/results/default.asp

Florida Department of Education. (2007, March). *Statistical brief: Florida's public high school graduation rates, 2005–2006.* Retrieved August 31, 2007, from http://www.fldoe.org/eias/eiaspubs/pdf/gradrate.pdf

Florida Department of Education. (2006, September). *2006 assessment and accountability annual meeting.* Available from http://www.fldoe.org/evaluation/pdf/2006annual-meeting.pdf

Virtual School

Florida Virtual School. Available from http://www.flvs.net/index.php

APPENDIX D
GEORGIA

About half of the high schools in Georgia did not make annual yearly progress, although the state's pass rates on the reading and math portions of the Georgia High School Graduation Test are quite high (primarily because of a difference in pass scores for Georgia and for NCLB). Table D1 presents key No Child Left Behind and National Assessment of Educational Progress data for Georgia.

Georgia's use of the levers for change

Georgia has increased its emphasis on high school reform over the past several years, creating a special unit focused on secondary redesign and supporting varying redesign activities. To improve all high schools, Georgia is using a variety of levers.

Standards and assessments. The Division of Career, Technical, and Agricultural Education is revising its curriculum standards to implement eight career pathways to align with the Georgia Performance Standards and with common standards for industry certifications in various fields.

Course requirements. Georgia is participating in the American Diploma Project to develop a more rigorous set of requirements. This revised list of course requirements is pending Georgia Department of Education State Board approval.

Student support and access to courses. As part of the National Governors Association Advanced Placement Improvement Project, Georgia is working with 12 diverse high schools to improve opportunities for students to take a more challenging curriculum. The program is monitored by the Governor's Office of Student Achievement.

Established in 2005 as part of the Georgia Department of Education (DOE), the Georgia Virtual School provides students with access to more than 125 online Advanced Placement, college preparatory, and career and technical courses. Georgia purchased six courses from Florida Virtual School and developed the rest themselves. In the spring of 2006, 1285 students were enrolled with 835 passing the courses with grades of over 70 (Southern Region Educational Board, 2006b).

Local capacity-building. In 2006 the Georgia Assembly allocated $15 million for a graduation coach program, which will "assist schools and communities throughout Georgia in implementing a state-defined, comprehensive program which results in a substantial increase in the number of students

TABLE D1
Key No Child Left Behind and National Assessment of Educational Progress data in Georgia, 2005/06 (percent)

No Child Left Behind data	Results
Percentage of schools meeting adequate yearly progress	79 (all schools) 53 (high schools only)
Pass rate on state reading[a]—11th graders	96
Pass rate on state math[a]—11th graders	92
Graduation rates	71
Percentage of highly qualified teachers	95
National Assessment of Educational Progress 8th-grade math	23 (at or above proficient, 2005)[b]
National Assessment of Educational Progress 8th-grade reading	25 (at or above proficient, 2005)[b]

a. Adequate yearly progress results for math and reading are for students passing on the first attempt the English/Language Arts or Mathematics components of the Georgia High School Graduation Test.

b. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: Georgia Department of Education (2006) (rows 1, 4); Governor's Office on Student Achievement (n.d.) (rows 2, 3, 5); NAEP data from National Center for Education Statistics (2007a).

who continue their education at least through high school graduation and prepare for post-secondary schools where they are able to take their place in the workforce and in their communities as contributing citizens" (Beaty, 2006). Each high school will have one coach who helps schools analyze their data, identify potential at-risk students, determine priorities for serving students, and develop intervention strategies for individual students. The coaches provide monthly reports outlining progress on school assessments/needs, implementation of program components, student performance (attendance, scores on Georgia High School Graduation Test, overage or with credit deficiencies), strategies implemented by the coaches, and coach self-assessments.

Schools implementing the High Schools That Work program could participate in a professional learning series, presented by the DOE/Career Technical and Agricultural Education and Southern Regional Education Board, on creating a data-driven culture at their school. This training was conducted in January to June 2007.

Georgia's work with low-performing high schools relies heavily on local capacity-building. All low-performing/Needs Improvement schools K–12 work with the DOE School Improvement division, although the intensity of DOE interventions depends on Needs Improvement status (number of years in Needs Improvement) and whether schools have made adequate yearly progress. The Georgia School Standards, which detail components of school improvement, are a key tool in this work. Leadership facilitators on the School Improvement staff work with Needs Improvement schools on the Georgia School Standards, focusing on how school's work with students whose achievement scores qualified the school for not meeting adequate yearly progress. The Department is also partnering with Regional Education Service Agencies to work with schools at risk of becoming Needs Improvement (those in their first year of not meeting adequate yearly progress). This work focuses mainly on building capacity around "five high-impact practices": leadership teams, data-driven decisionmaking, action planning with measurable goals, standards-based classroom instruction, and Georgia's Pyramid of Interventions (which provides ever more targeted instruction and interventions to students who need it). Additionally, the Georgia's Raising Standards initiative, which began in 2006/07, focuses on providing intensive support and professional development to middle schools and high schools in their seventh and eighth years of Needs Improvement status (contract monitored status). Leadership facilitators and collaborative implementation specialists work with school administrators, instructional coaches and teachers on standards-based instruction in English Language Arts, Math, and Science. The goal is to effect comprehensive improvement so that the school makes adequate yearly progress. Contract monitors provide accountability support and guidance for the initiative.

Partnerships and public involvement. Georgia's 16 regional education service agencies provide services to help local school systems improve services and education programs and to provide direct instructional programs to selected public school students.

The Georgia P-16 Council, housed at the University of Georgia system, provides state-level coordination and leadership for the P-16 Initiative, which is designed to raise achievement systemwide. Members of the council include representatives from the legislature, public schools, technical institutes, colleges/universities, health and human services, the private sector, and the community. The Department of Education works with Georgia's P-16 Council and the Georgia Board of Regents on the American Diploma Project and other secondary-related projects.

References and other information about Georgia's efforts

General

Web site for Georgia's Secondary Redesign Unit: http://www.doe.k12.ga.us/tss_school_redesign.aspx

ADP Initiative

Georgia's plan can be found at http://www.achieve.org/node/681r.

Graduation coaches

General information: http://gadoe.org/tss_school_improve.aspx?PageReq=TSSGraduationCoach

Beaty, R. (2006). *Designing and implementing a high school graduation program*. Presentation at High School Graduation Coach Training. Available from http://gadoe.org/tss_school_improve.aspx?PageReq=TSSGraduationCoach

Peach State Pathways

Sample form: http://www.cisga.org/partnerships/documents/PeachStatePathways2-07.doc

P-16 Initiative

Georgia P-16 Initiative. Available from http://www.usg.edu/p16/initiatives/

Standards and assessments

Georgia Department of Education. (2007). *Curriculum Frequently Asked Questions.* Available from http://www.georgiastandards.org/faqs.aspx#q2

Virtual School

Georgia Virtual School. Available from http://www.gavirtualschool.org/index.htm

APPENDIX E
MISSISSIPPI

Mississippi has a high percentage of schools making adequate yearly progress. Table E1 shows key data from No Child Left Behind and the National Assessment for Educational Progress for Mississippi.

Mississippi's use of the levers for change

The Mississippi Department of Education views high school reform as part of an integrated effort to improve education from pre-K to post-secondary. The goal of all such efforts is to graduate students from high school who are well prepared for the demands of higher education or of work in an increasingly technological society. The department's efforts have focused on making students ready for high school, preparing highly qualified teachers to teach at all grade levels and for all subjects, creating a rigorous, integrated high school curriculum, setting rigorous assessments and graduation standards that reflect this curriculum, and making the curriculum relevant by connecting it both to the "real world" workplace and to higher education.

The Mississippi Department of Education is working on a new design to ensure that high school graduates are prepared academically as well as equipped with learning-and-thinking skills, global awareness, information and communications technology literacy, and life skills. In its work to improve all schools, Mississippi has used several different levers, centering on revising course and graduation requirements and creating model schools.

Standards and assessments. Mississippi is a member of the American Diploma Project network and has committed to aligning expectations for its students with twenty-first century expectations.

Course requirements. Starting in 2008, Mississippi students will be required to complete a more rigorous course of study, including four years each of English, math, science, and social studies. Two of the math courses must be beyond algebra I, one science course must be a laboratory science, and one social studies course must be an economics course. Mississippi received an Honor State Grant from the National Governors Association to implement the ACT's model course syllabi in 10th-grade courses. Three high schools in two districts will be piloting this work.

To increase the relevance of academic requirements, the Mississippi Department of Education is reworking course requirements so that seventh, eighth, and ninth graders will take

TABLE E1
Key No Child Left Behind and National Assessment of Educational Progress data in Mississippi, 2005/06 (percent)

No Child Left Behind data	Results
Percentage of schools meeting adequate yearly progress	83 High schools: not available
Pass rate on algebra I—10th graders	85
Pass rate on English II—10th graders	73
Graduation rates	85
Percentage of highly qualified teachers	94
National Assessment of Educational Progress 8th-grade math	14 (at or above proficient, 2005)[a]
National Assessment of Educational Progress 8th-grade reading	18 (at or above proficient, 2005)[a]

a. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: Mississippi Department of Education (2006). NAEP data from National Center for Education Statistics (2007a).

enhanced exploratory career courses that focus on the technology and skills needed in each of the career clusters and will provide ninth graders with an introductory course in science, technology, engineering, and mathematics. Students in grades 10–12 would select one of seven career pathways:

- Health care.
- Agriculture and natural resources.
- Construction and manufacturing.
- Transportation.
- Business management and marketing.
- Science, technology, engineering and math.
- Human services.

In 2000 Mississippi replaced its minimal competency exam, the Functional Literacy Exam, with four required end-of-course exams: algebra I, biology I, U.S. history from 1877 to present, and English II.

Student support and access to courses. The Mississippi Virtual Public School provides online courses to students in grades 9–12, focusing on Advanced Placement courses and courses for which it is difficult to find qualified teachers. In addition, the Virtual Public School offers core academic and elective courses. In 2006 it offered 31 courses, all leased from other developers, including the Florida Virtual School. In spring 2006, 603 students were enrolled and 420 completed the courses (Southern Region Educational Board, 2006b).

Model schools and practices. Mississippi supports districts' efforts to pilot the Redesigning Education for the 21st Century Workforce in Mississippi (Redesign) initiative. This initiative responds to the Perkins IV Act, which goes into effect in 2007 and requires all school districts to have at least one career pathway in place for students by the 2007/08 school year, and to the No Child Left Behind Act requirement of education proficiency for all students by 2014. In order to reach these goals, Mississippi re-examined its education focus and the delivery mechanisms in place for providing adequate education for all students and established Pathways to ensure that students will be prepared for the twenty-first century job market and for employment in jobs with projected high demand.

This initiative also addresses the increasing dropout rates, the inadequate mathematics, science, communication, and technology skills among high school graduates, increasing post-secondary remediation needs, widening achievement gaps, and the misalignment of workforce training and economic development.

Mississippi school districts will develop proposals to participate in the Redesigning initiative as pilot school districts over the next three years, subject to availability of funds. Pilot site school districts will be operational for the 2007/08 school year.

Local capacity-building. Mississippi uses this lever primarily to support low-performing schools. The Mississippi School Accountability Model was enabled by Senate Bill 2488 of the 2000 Mississippi Legislative Session to create a state-of-the-art school evaluation and improvement system. Later incorporated into Section 37, Chapter 18 of the Mississippi Code of 1972, Annotated, the bill specified that the State Department of Education will identify as priority schools those schools not meeting expected levels of student achievement. It further specified that an appropriately trained evaluation team should conduct an onsite audit to collect data regarding:

- Instructional process/curriculum delivery.
- Personnel appraisal.
- Effective community involvement.
- Public relations.
- Safe and orderly school climate.
- School board policy development and implementation.

- Effective school resource allocation.

In response to the evaluation report prepared by the evaluation team and a public hearing concerning the report's contents, the State Board of Education will then help the school develop and implement a school-improvement plan to raise student achievement and improve school functioning (Mississippi Department of Education Office of Student Achievement and Growth, 2007).

Partnerships and public awareness. Mississippi's state superintendent is using various ways to promote the "Redesigning Education for the 21st Century Workforce in Mississippi" initiative. He has focused his weekly "Monday Memo" on a different section of the plan each week. He presented the plan at each of 25 stops on the "Trailblazer Tour," a series of conferences focused on education and workforce preparation held around the state in fall 2006 by the Mississippi Economic Council.

The broader work of high school redesign is a collaborative effort by the Offices of Academic Education, Innovative Support, Quality Professionals, Vocational/Technical Education, and Accreditation. Local colleges and universities also assist with the implementation of activities.

References and other information about Mississippi's efforts

General

Resources on the "Redesigning Education for the 21st Century Workforce in Mississippi" initiative can be found at http://www.mde.k12.ms.us/extrel/workforce.html.

Mississippi Department of Education. (2007, spring). *Redesigning Education for the 21st Century Workforce* (Issue Brief No. 1). Jackson, MS: Author.

Assistance to low-performing schools

Mississippi Department of Education, Office of Student Achievement and Growth. (2007). *Mississippi accountability model.* Available from http://www.mde.k12.ms.us/sag/msaccountability.htm

Virtual School

The Virtual School web site is http://www.mvs.mde.k12.ms.us/.

Southern Region Educational Board. (2006b). *Report on state virtual schools.* Atlanta, GA: Southern Regional Education Board. Available from http://www.sreb.org/programs/EdTech/SVS/State_Virtual_School_Report_06.pdf

APPENDIX F
NORTH CAROLINA

In North Carolina, fewer than half the high schools in the state made adequate yearly progress. Table F1 shows key No Child Left Behind and National Assessment of Educational Progress data for North Carolina.

North Carolina's use of the levers for change

High school reform has been a significant focus of North Carolina's governor and has been supported by $22 million in funding from the Bill & Melinda Gates Foundation, which has leveraged other funding and changes. Over the last three years, the state has used many of the policy levers available to it.

Standards and assessments. North Carolina received a grant from the National Governors Association to examine its standards and assessments and align them to benchmarks established by the Achieve American Diploma Project. In 2006 the state joined the American Diploma Project's network of states and began examining its English/language arts and mathematics standards.

The State Board of Education revised its graduation requirements in 2006 to require that all students entering ninth grade in the 2006/07 school year:

- Successfully complete a graduation project that is developed, monitored, and scored within the local education agency using state-adopted rubrics.
- Score at proficiency level III or above, with one Standard Error of Measurement, on the end-of-course assessment for English I, U.S. history, biology, civics and economics, and algebra I (North Carolina State Board of Education, 2006 [a]).

The graduation project requirement is intended to ensure that all students have the experience of completing an independent research project before they graduate. Although more than 100 high schools in North Carolina have already implemented some version of a graduation project, the North Carolina Department of Public Instruction will provide training to support the rollout of this new requirement. Training will initially focus on schools that do not currently have a graduation project and will include ways that the project should reflect the North Carolina curriculum standards and incorporate twenty-first century skills. Additional training for all schools will include topics related to implementing the program. The Department also supports a pilot that will examine ways to collect and electronically store students' work related to their graduation projects.

TABLE F1

Key No Child Left Behind and National Assessment of Educational Progress data in North Carolina, 2005/06 (percent)

No Child Left Behind data	Results
Percentage of schools meeting adequate yearly progress	45 (high schools only)
Pass rate on algebra I[a]	80
Pass rate on English I[a]	83
Graduation rates	68[b]
Percentage of highly qualified teachers	87
National Assessment of Educational Progress 8th-grade math	32 (at or above proficient, 2005)[c]
National Assessment of Educational Progress 8th-grade reading	27 (at or above proficient, 2005)[c]

a. North Carolina uses algebra I and English I pass rates in their AYP calculations.

b. For 2005/06, North Carolina reported a four-year cohort graduation rate for the first time.

c. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: North Carolina Department of Public Instruction (2007 and 2006). NAEP data from National Center for Education Statistics (2007a).

In addition, the North Carolina Center for 21st Century Skills is working with the North Carolina Science, Mathematics, and Technology Center to pilot a multimedia biology assessment. The goal of this assessment is to integrate the assessment of twenty-first century skills with the assessment of content knowledge.

Course requirements. In 2006 the North Carolina State Board of Education approved a new set of course requirements for students. All students starting ninth grade in the fall of 2008 will have to complete 21 core courses in order to graduate. The new core includes four English courses, four mathematics courses, three science courses, three social studies courses, two foreign language, and one health/physical education course. Students must also take at least four courses in one of the following areas: career/technical, arts education, Junior Reserve Officers Training Corps (JROTC), Advanced Placement/International Baccalaureate, or a second language.

Within the core framework, students can choose specific courses and, in some cases, make substitutions (North Carolina Department of Public Instruction, 2007). The Department conducted hearings in spring 2007 to gather input on how to implement the new core requirements and may revise the core framework as a result of comments at the hearings.

Student support and access to courses. The North Carolina Virtual Public School will provide online courses for students in an effort to expand schools' offering to students (North Carolina Virtual Public School, 2007). The school will be up and running for the 2007/08 school year and will offer more than 300 courses from a variety of developers, including Advanced Placement courses and non-core electives.

Model schools and practices. With funding from a Bill & Melinda Gates Foundation grant and from the North Carolina state legislature, North Carolina has supported the creation of new and redesigned high schools. These new and redesigned high schools follow two general models—the first is the Learn and Earn Early College High School Initiative (see box 3) and the second breaks up large comprehensive high schools into small, autonomous, thematically-focused schools. Both models are administered by the North Carolina New Schools Project, a public-private partnership, and include a set of design principles that focus on rigorous and relevant curriculum and instruction, academic and affective student support, multiple methods of assessment, ongoing professional development, and democratic school governance. For the 2007/08 school year there will be close to 100 new or redesigned schools.

Low-performing high schools are required to implement a comprehensive school-reform model, selecting one of four approaches: the North Carolina New Schools Project, the Talent Development High School model, First Things First, or America's Choice.

Local capacity-building. As part of the support for redesigned schools participating in the North Carolina New Schools Project, North Carolina provides each school with a "change coach" to help the school through the planning and change process. After the first year of implementation, each redesigned school then receives an instructional coach to help schools implement effective and innovative instructional practices.

This lever is also used for low-performing high schools. Turnaround assessment teams (organized and trained by the state department) conducted site visits and assessed low-performing high schools in spring 2006. Each high school is required to complete a Framework for Action that articulates specific steps for accomplishing the goals and objectives in their school-improvement plans. Leadership coaches (selected and trained in part by the Leadership Group for the Carolinas, a North Carolina-based private corporation) provide onsite assistance to the high school principals and act as an advocate for the schools with the district. Low-performing schools that choose to implement models supported by the North Carolina New Schools Project also benefit from the coaching and professional development provided by that organization. The state superintendent and the North Carolina Department of Public Instruction work with district superintendents and school boards to educate them about the kind of support they should be providing these low-performing schools.

Professional development for all identified low-performing school principals is provided by the Principal's Executive Program at the University of North Carolina and the Kenan-Flagler Business School. In addition, the Department has resources to provide professional development targeted to teachers' needs at these schools.

Partnerships and public involvement. High school reform in North Carolina requires collaboration among many different groups and agencies, including:

- The Governor's Office, the impetus behind the Learn and Earn Initiative.
- The North Carolina State Board of Education, which has revised graduation requirements (including the graduation project requirement).
- The North Carolina Department of Public Instruction, which is working on standards and assessments and provides assistance to low-performing high schools. Within the Department, the Curriculum and School Reform Services Area has been reorganized to focus on grade levels. Thus, there is now a Division of Secondary Education.
- The North Carolina New Schools Project, a private non-profit that received $22 million from the Gates Foundation to support new and redesigned high schools.
- The Partnership for 21st Century Skills located at the North Carolina Business Committee for Education, a nonpartisan, nonprofit consortium of businesses that works "actively with business leaders, educators, and policymakers to create new curricula, new assessments, and new ways of linking student work in the classroom to the workplace in the 21st century" (North Carolina Business Committee for Education, 2007).
- The University of North Carolina system, which is adopting the Learn and Earn Early College High School model for some of its campuses and is also cooperating in the delivery of professional development.
- The North Carolina Community Colleges system, which is a key collaborator on the Learn and Earn Initiative and in removing barriers to college credit for high school students.

The work of these disparate groups is coordinated through two main structures, one formal and one informal. The formal structure is the Education Cabinet, which consists of the governor and the leaders of all the education agencies in North Carolina, including the state superintendent, the chair of the State Board of Education, the president of the University of North Carolina System, and the president of the Community College system. The informal group includes high-level staffers in each of these agencies, such as the governor's education advisor, the deputy superintendent of North Carolina Department of Public Instruction, the president of the North Carolina New Schools Project, and the director of the North Carolina Business Committee for Education.

In North Carolina, the governor is using his bully pulpit to focus attention on the need to redesign high schools to meet workforce demands. In addition, North Carolina has received funding from the Gates Foundation for an advocacy initiative focused on building a consensus on the need for change and on the approaches necessary to foster change. Occurring on both a broad and a grassroots level, the advocacy initiative includes developing an online community of support for redesign work, developing toolkits for local activists, and conducting public opinion research. North Carolina is also in the process of developing business partnerships to provide resources for individual schools as well as for the state-level work.

References and other information about North Carolina's efforts

General

North Carolina Department of Public Instruction, Division of Secondary Education. Available from http://www.ncpublicschools.org/secondary/

North Carolina New Schools Project. (2007). *About the New Schools Project.* Available from http://www.newschoolsproject.org/about.html

Information about the Center for 21st Century Skills can be found at: North Carolina Business Committee for Education. (2007). *About us.* Available from http://www.ncbce.org/about.html

American Diploma Project Initiative

North Carolina Department of Public Instruction. (2006, August 17). *Biweekly principals' message.* Available from http://www.ncpublicschools.org/principalsarchive/messages/2006/20060817?&print=true

Assessments

Information about the work of the North Carolina Center for 21st Century Skills on assessments can be found at http://www.ncbce.org/Nov06News/c21iniatives.html.

Early College High Schools

North Carolina New Schools Project. (2007). Learn and Earn Early College. Available from http://www.newschoolsproject.org/early.html

Graduation requirements (including graduation project)

North Carolina State Board of Education. (2006). *Policy HSP-N-004: State graduation requirements.* Available from http://sbepolicy.dpi.state.nc.us/

North Carolina Department of Public Instruction. (2007, January 25). *Press release: regional meetings to focus on high school core course of study.* Available from http://www.ncpublicschools.org/newsroom/news/2006-07/20070125-01

Detailed information about the exit standards, including the graduation project, can be found at http://www.ncpublicschools.org/docs/secondary/exitstandardsguidehs.pdf.

A copy of the rubric for the graduation project is located at http://www.ncpublicschools.org/docs/secondary/4rubrics.pdf.

Virtual Schools

North Carolina Virtual Public School. (2007). *About NCVPS.* Available from http://www.ncvps.org/aboutus.html

APPENDIX G
SOUTH CAROLINA

One-quarter of South Carolina high schools achieved adequate yearly progress. Table G1 shows key No Child Left Behind and National Assessment of Educational Progress data for South Carolina.

South Carolina's use of the levers for change

South Carolina's high school redesign efforts have had a distinctly workforce- and career-related focus. The primary vehicle for improving high schools in South Carolina is the 2005 Education and Economic Development Act, which articulates a system called Personal Pathways to Success to help South Carolina students prepare for current workforce demands. With $14.8 million in funding from the legislature, the act combines rigorous academic standards with more opportunities to explore career options and develop necessary working skills. South Carolina relies on a range of levers for change to implement the act and the other high school improvement efforts.

Course requirements. Starting with the 2006/07 school year, career awareness must be integrated into grades 1–5, and students must complete career-interest inventories and individual graduation plans in middle school. Eighth-grade students and their parents or guardians will sit down with counselors to create the individual graduation plans that lay out personal education and career strategies. The graduation plans outline the cluster choice, high school coursework, out-of-class learning experience, and major and post-secondary goals. Each year parents review the choices and make adjustments or changes as necessary. All students are supposed to receive hands-on work experience in the field of their choice. Schools will partner with local institutions and businesses to provide the experiences for students.

Students will declare a career major in one of a number of different clusters of study, including, but are not limited to agriculture, food, and natural resources; architecture and construction; arts, audiovideo technology, and communications; business, management, and administration; education and training; finance; health science; hospitality and tourism; human services; information technology; law, public safety, and security; manufacturing; government and public administration; marketing, sales, and service; science, technology, engineering, and mathematics; and transportation, distribution, and logistics. High school curricula must be organized around clusters of study. Each school must provide students with an opportunity to choose

TABLE G1

Key No Child Left Behind and National Assessment of Educational Progress data in South Carolina, 2005/06 (percent)

No Child Left Behind data	Results
Percentage of schools meeting adequate yearly progress	38 (all schools) 25 (high schools only)
Pass rate on state English/language arts	76
Pass rate on state mathematics	75
Graduation rates	74
Percentage of highly qualified teachers	Not available
National Assessment of Educational Progress 8th-grade math	30 (at or above proficient, 2005)[a]
National Assessment of Educational Progress 8th-grade reading	25 (at or above proficient, 2005)[a]

a. NAEP tests were administered in spring 2005 and are a snapshot of the 2004/05 school year.

Source: South Carolina Department of Education (2006a and 2006b). NAEP data from National Center for Education Statistics (2007a).

from no fewer than three clusters of study before July 1, 2007.

Student support and access to courses. The Education and Economic Development Act requires high schools to hire more guidance counselors to achieve a ratio of one counselor for every 300 students. Counselors specializing in career guidance will help students plan their educations. The law also requires that students at risk for dropping out be identified early and that models be developed to help these students graduate. To help students get ready for college, the state provides funds for tenth-grade students to take the PSAT or the PLAN.

In addition to the Personal Pathways to Success, the South Carolina Department of Education began a pilot program to create a virtual school. It first offered high school courses in 10 districts that already offered some online courses and thus had the infrastructure and procedures in place. The Department also created online English II and algebra II course work. During the 2007/08 school year, both initial credit and credit recovery courses will be offered. An external evaluator will be selected to evaluate the pilot project.

Model schools and practices. By 2010 all South Carolina high schools are to be reorganized on the High Schools That Work model or a similar approved model. According to a Department of Education staff member, this model, which has a long history in South Carolina, was chosen because it sought to meet the needs of all students, had a track record of NAEP improvement, was recognized for rigorous course requirements, and had been adopted throughout the United States.

Local capacity-building. High school principals participate in a number of leadership development programs designed by the South Carolina Department of Education to enhance their leadership skills. Principals participate in the Principal Induction Program, the South Carolina School Leadership Executive Institute, and the Program for Assisting, Developing, and Evaluating Principal Performance. To provide additional support to high school principals, the South Carolina School Administrators Association provides them with Breaking Ranks II training, developed by the National Association of Secondary School Principals in cooperation with the Education Alliance at Brown University. Breaking Ranks II focuses on collaborative leadership, professional learning communities, and the strategic use of data; personalizing the school environment; and creating rigorous student-centered curriculum, instruction, and assessment (National Association of Secondary School Principals, 2004).

South Carolina also uses this lever to support its low-performing schools. Under a South Carolina General Assembly budget proviso (H. 4810), schools that receive an absolute rating of below average must submit school renewal plans (similar to school improvement plans) to the Department of Education. After the Department and the State Board approve the plans, the schools will each receive an allocation of not less than $75,000 to fund the plan's strategies and activities, which may include professional development, the Teacher Advancement Program, homework centers, diagnostic testing, supplement health and social services, or comprehensive school-reform efforts. The schools will work with the South Carolina Department of Education to broker the services of technical-assistance personnel, such as teacher specialists and curriculum specialists, as needed and as stipulated in the plans. The funds may also be used for additional personnel or incentives to retain teachers or for other efforts.

Schools rated as unsatisfactory must undergo an external-review team evaluation after which they must submit to the Department of Education a school renewal plan that includes actions consistent with the alternative technical assistance criteria approved by the Education Oversight Committee and the Department of Education. Upon approval of the plan by the Department of Education and the State Board, the schools will receive an allocation of not less than $250,000, taking into consideration the enrollment of the school and the recommendations of the external-review team. The funds must be used for strategies and activities as expressly outlined in the school-renewal plan.

Partnerships and public involvement. South Carolina is involving various groups in the high school redesign work. The Education and Economic Development Act Coordinating Council is composed of the state superintendent of education, the executive director of the Commission on Higher Education, other elected officials, educators, and ten business people appointed by the governor. The Council, which is co-chaired by the state superintendent and a businessperson, advises the Department of Education on the implementation of the Act, reviews accountability and performance measures for implementation, designates and oversees the coordination and establishment of the regional centers, makes recommendations for developing and implementing a communication and marketing plan to promote statewide awareness of the provisions, provides input to the State Board of Education and other appropriate governing boards on regulations necessary to carry out the provisions of the Act, and reports annually to the governor, the General Assembly, the State Board of Education, and other appropriate governing boards on the progress, results, and compliance with the law and its ability to provide a better prepared workforce and student success in post-secondary education.

The Education and Economic Development Act also created regional education centers, designed to support high school reform in the regions. The centers will facilitate business-education partnerships to coordinate workforce development programs and provide professional development to teachers and counseling for students.

References and other information about South Carolina's efforts

General

The Office of High School Redesign and ACT/SAT Improvement. Available from http://ed.sc.gov/agency/offices/hsr/

Education and Economic Development Act

South Carolina General Assembly. (2005). *H3155: Education and economic development act*. Available from http://www.scstatehouse.net/sess116_2005-2006/bills/3155.htm

High Schools That Work

South Carolina Department of Education. (2007). *What is High Schools That Work and how is South Carolina involved?* Available from http://ed.sc.gov/agency/offices/cate/hstw/WhatIsHSTW.htm

Low-performing schools

South Carolina General Assembly. (2006). *H. 4810 General Appropriations Bill for fiscal year 2006-2007, Section 1A:44.* Available from http://www.scstatehouse.net/sess116_2005-2006/appropriations2006/tap1b.htm

Professional development

Information about the South Carolina Department of Education's programs for principals can be found at the web site for their Office of School Leadership: http://ed.sc.gov/agency/offices/pd/index.html.

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Virtual School

Information available from https://blackboard.ed.sc.gov/webapps/portal/frameset.jsp?tab_id=_1_1

APPENDIX H
PROTOCOLS FOR COLLECTING STATE-LEVEL INFORMATION

Protocols for collecting state-level information for Task 1.2.2 High School Reform in the Southeast

State: ________ *Policy Analyst:* ____________

Please answer the following questions. If you have contacted someone to find out the answer to this information, please include the person's name and position in the line marked "information source." If you found the information in a specific written or online resource, please list the resource under "information source."

Question 1: How is the state department of education organized to support high school reform? Specific information should include:

- The organizational structure within the department (where high school "fits")
- Key individuals who are involved in high school reform at the state department, their roles and responsibilities, and their interaction with others
- Other organizations working at the state level and their interaction with the state department
- Significant legislation related to high school reform
- Significant funding sources related to high school reform

Information source:

Answer:

Question 2: What strategies (ex: pilot high school projects in Mississippi, support for model schools in North Carolina, career academies in South Carolina) is your state using to support high school reform and innovation? What evaluations, if any, are being done of these strategies? What information, if any, is being collected on these strategies?

Information source:

Answer:

Question 3: What strategies is your state using to support low-performing high schools? What evaluations, if any, are being done of these strategies?

Information source:

Answer:

Question 4: What strategies is your state using to support diverse populations of high school students, including English Language Learners, minority students, low-income students, and students with disabilities? Another way of thinking about this may be: What subgroups under NCLB is the state concentrating on at the high school level? What strategies are they using to meet the needs of these subgroups?

Information source:

Answer:

Question 5: Are any large districts doing work in any of these areas, or are there any initiatives not supported by the state that are being implemented by numerous districts? If so, please describe this work.

Information source:

Answer:

Question 6: Please comment on any other special initiatives or issues related to high school that have not already been discussed.

Protocol for examining state department of education web sites for Task 1.2.2 High School Reform in the Southeast

State: _______ *Analyst doing search:* _______________

Step	Web page citation(s)	Information
Go to home page for state department of education. Describe any references to high school initiatives on this page.		
Connect to any initiatives highlighted on main page and describe them here.		
Find page that presents department's organization. How is high school represented in organizational structure?		
If a section/division has a clear connection to high school, go to the section(s)/page(s) and describe their responsibilities relative to high school.		
Find page that describes state's response to NCLB and low-performing schools. Describe what this page says about assistance to low-performing high schools.		
Find the page that describes work related to diverse learners, closing the achievement gap, or similar language. Describe any initiatives related to high school.		
Find the page that describes research and evaluation in the department. Describe any research or evaluation reports related to high school work (include initiative evaluated, brief overview of design, and results).		
If the state's web site has search capability, search on "high school redesign" or "high school reform" and connect to any pages identified. Describe any information you have not already found in the remaining rows.		

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