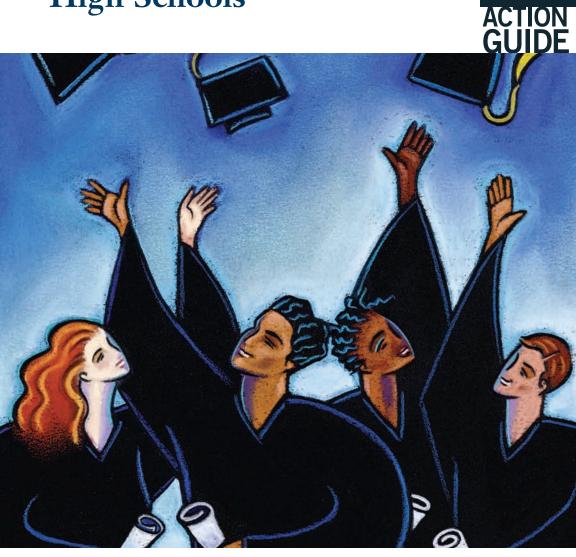
# Strategies to Improve High Schools



NCREL®

Congress passed the No Child Left Behind (NCLB) Act as a reauthorization of the Elementary and Secondary Education Act. Signed into law by President Bush in January 2002, the NCLB Act has brought many significant changes to schools nationwide. This Quick Key Action Guide was developed to assist educators and administrators in building capacity to comply with NCLB requirements that relate to improving the achievement of high school students and increasing high school graduation rates.

High school graduates must be prepared for the demands of the 21st century—whether these demands come from postsecondary education or the workforce.

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### The NCLB Act and High Schools

Although the focus of the No Child Left Behind (NCLB) Act has been on K–8 education, high schools must comply with the following NCLB requirements:

- States must set adequate yearly progress (AYP) objectives to ensure all high school students achieve at proficient levels by 2014.
- States must require that high school students are tested annually in at least one grade (Grades 10–12) in reading and mathematics. By the 2007–08 school year, testing in science also will be required at least once in high school.
- States must include high school graduation rates in the AYP objectives for high schools.
- States must comply with the understanding of graduation rates, defined as the percentage of students who graduate from high school with a regular diploma in the standard number of years. As a result, states may no longer include recipients of general educational development (GED) certificates or alternative diplomas in their graduation rates.
- All high school teachers who teach core subjects must meet the state's "highly qualified" requirement by the end of the 2005–06 school year.

To meet the demands of the NCLB Act, high schools must strive during the next decade to increase achievement and graduation rates for all students.

# **Challenges Faced by High Schools**

The main challenges faced by high schools are preparing students for the workforce of the 21st century and for postsecondary educational opportunities. Yet in a 2004 review of the graduation requirements of all 50 states, Achieve Inc. discovered that "no state requires its graduates to take the courses that reflect the real-world demands of work and postsecondary education" (p. 3).

In their 2003 study, Carnevale and Desrochers contend that as the baby boomers retire and the information-based economy increases the demand for a globally competitive workforce, there will be a significant shortage of highly skilled workers. Improving the quality of high school education is essential to maintain U.S. economic competitiveness. The high school curriculum must integrate academic and applied curricula to ensure that students have both a solid academic foundation and well-developed skills in problem solving, critical thinking, and interpersonal communication.

High school students also must complete a more challenging curriculum to be prepared for postsecondary educational opportunities. These opportunities may include a bachelor's degree, an associate's degree, or a technical training program. In a 2003 review of U.S. Department of Education data, Greene found that only 32 percent of high school graduates are prepared for postsecondary education. ACT's 2004 analysis of the college readiness of high school seniors in the class of 2004 revealed more disparaging results: Only 22 percent of high school seniors met the ACT-defined college readiness benchmarks.

As a result of this lack of rigor in the curriculum, students who enter college are often not adequately prepared for college-level work. The National Information Center for Higher Education Policymaking and Analysis (2002) generated the following data about the national educational pipeline: For every 100 students who enter ninth grade, 68 will graduate from high school within four years, 39 will enter college, 26 still will be enrolled after their sophomore year, and 18 will complete an associate's degree within three years or a bachelor's degree within six years. (See Figure 1.)

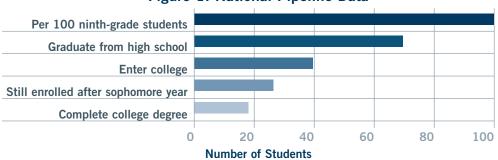


Figure 1. National Pipeline Data

Source: National Information Center for Higher Education Policymaking and Analysis (2002)

# Research on Improving High Schools

The research base on high school programs and strategies currently is quite limited. Some evidence exists for a number of reforms, but there is little high-quality research. High-quality, or *gold-standard*, research is defined as a study that utilizes experimental designs with random assignment. Stern and Wing (2004) note that there are only three existing gold-standard research studies about high school interventions.

Additional research, although not gold standard, provides some evidence of high school reform strategies that might be effective. This evidence suggests that high schools can be improved by focusing on the following areas:

- Planning. Develop and implement high school improvement plans at the state and district levels.
- Rigor. Hold students to high standards and expectations but provide them with the support necessary to succeed in challenging courses.
- Relevance. Increase the relevance of the high school curriculum to engage students and allow them to develop career and technical skills.
- Relationships. Improve student-teacher and student-student relationships. Create a culture
  of personalization.
- **Transitions**. Ease the transition to postsecondary educational opportunities and the workforce by integrating college and community partnerships.
- **Data.** Use data to make decisions about curriculum and instruction.

Each of these strategies is covered in more detail within this booklet.

#### **Key Resource**

**Breaking Ranks II: Strategies for Leading High School Reform** (www.principals.org/s\_nassp/sec.asp?CID=563&DID=48223) emphasizes collaborative leadership, rigorous academics, personalization, and tested strategies for positive change that have been used successfully in various high school settings.

# Planning at the State and District Levels

States and districts vary widely in their development and implementation of high school improvement plans. Hilary Pennington (2003) of Jobs for the Future suggests that the traditional high school model needs to be transformed to create a system of multiple pathways through which students will master a common set of high standards. These pathways will provide students with options that suit their needs and interests and prepare them for a variety of postsecondary educational and workforce opportunities.

#### Actions

- Align standards and curricula to postsecondary education and labor market requirements.
- Set statewide benchmarks to ensure that students are prepared for a variety of postsecondary educational opportunities.
- Strengthen connections between high schools, postsecondary options, and the community.
- Stimulate the creation of new pathways and smaller learning communities to increase the variety
  of educational options that are available for high school students.
- Focus on the lowest performing schools and provide those schools with additional resources.
- Provide high schools with significant autonomy over money, time, staff, curriculum, and instruction.

### **Practical Examples of Statewide High School Improvement Plans**

**Iowa**. Foundation for Change: Focusing on Iowa High Schools www.state.ia.us/educate/ecese/fohs/doc/ffcfoihs.pdf

**Maine**. Promising Futures: A Call to Improve Learning for Maine's Secondary Students mainegov-images.informe.org/education/cse/promisin.pdf

**Ohio**. High-Quality High Schools: Preparing All Students for Success in Postsecondary Education, Careers, and Citizenship

www.ode.state.oh.us/achievement\_gaps/Task\_Force\_on\_Quality\_High \_Schools\_for\_a\_Lifetime\_of\_Opportunities/HSTF.pdf

**Rhode Island**. Strategies for Transforming Rhode Island High Schools www.ridoe.net/careerdev/PDFs/HS\_Summit.pdf

### **Key Resource**

**Redesigning the American High School** (www.nga.org/chairman04/), an initiative launched by the National Governors Association, identifies and addresses state issues for high school improvement.

# Increasing the Rigor of the Curriculum

For students to compete effectively in the information economy of the 21st century, high schools must provide a more challenging curriculum. Increasing the level of rigor for all high school students will promote the attainment of higher level skills.

#### Actions

- Develop a rigorous, college-preparatory curriculum.
- Increase graduation requirements.
- Align high school graduation requirements, college admission requirements, and workforce prerequisites.
- Develop academic benchmarks that align with college and workplace competencies.

#### **Supporting Research**

Adelman's 1999 study demonstrated that students who complete a challenging high school curriculum are better prepared for college. In fact, he found that students who completed a mathematics course beyond Algebra II were more than twice as likely to complete a bachelor's degree.

#### **Practical Examples**

**Core 40** (www.doe.state.in.us/core40/) is a rigorous statewide college-preparatory curriculum developed by the Indiana Department of Education. Students who complete the Core 40 receive a special diploma and are eligible for additional financial-aid opportunities.

**Project Lead The Way** (www.pltw.org/aindex.htm) is a rigorous four-year sequence of courses designed to prepare students for postsecondary engineering programs. It provides schools with technical assistance to implement the model, and teachers receive intense professional development.

North Central High School in Indianapolis, Indiana, has successfully narrowed the achievement gap between minority and nonminority students. School leaders increased graduation requirements and the rigor of the curriculum. They also created cohorts of minority students and provided these students with the supports needed to succeed in a rigorous curriculum.

#### **Key Resource**

**Ready or Not: Creating a High School Diploma That Counts** (www.achieve.org/dstore.nsf/Lookup/ADPreport/\$file/ADPreport.pdf) describes the need to increase the rigor of the high school curriculum through a focus on benchmarks, requirements, and valid assessments.

# Increasing the Relevance of the Curriculum

To increase the relevance of the curriculum, many high schools have implemented career academies based on various career pathways. Students combine core academic courses with technical-skills training and real-world experience in their field of study. This solid foundation engages students in a career theme and also prepares them for success in a variety of postsecondary educational opportunities.

#### Actions

- Implement career academies—schools designed to integrate academics with work experience.
- Combine a rigorous, college-preparatory curriculum with a career concentration.
- Integrate core academic knowledge with technical skills.

#### **Supporting Research**

Career academies are a means of increasing relevancy for students. One of the gold-standard studies examined by Stern and Wing (2004) revealed that academy students reported receiving more support while in high school, were more likely to combine academic and technical courses, and were more likely to work in careers connected to their schooling.

### **Practical Examples**

**Central Educational Center** (www.cowetaschools.org/gacec/) is a public charter high school in Georgia that provides its students with a solid foundation in both academic and technical skills. Students may complete courses for college credit and have opportunities to participate in workand project-based learning.

**High Schools That Work** (www.sreb.org/programs/hstw/hstwindex.asp) is a high school reform model that aims to prepare students for postsecondary education and work by requiring students to complete a rigorous college-preparatory curriculum and a career or technical concentration. Students are provided with supports to succeed in challenging courses and have the opportunity to participate in work-based learning opportunities.

#### **Key Resources**

Career Academy Support Network (casn.berkeley.edu) supports the development and growth of career academies and other smaller learning communities. It provides professional development, gathers research, and develops supporting materials.

**National Academy Foundation** (www.naf.org) supports a national network of career academies. It builds partnerships between schools and businesses, works with districts to create small learning communities, provides professional development, and serves as a network to career academy educators across the country.

**Tech Prep** (www.ed.gov/about/offices/list/ovae/pi/hs/factsh/tpdp.html), a program funded by the U.S. Department of Education, integrates academic and technical skills with work-based learning experiences. It combines at least two years of high school coursework with two years of postsecondary education in a seamless course of study.

# Improving Student Relationships and Personalization

One popular strategy to improve student relationships and personalization is implementing smaller learning communities. Large comprehensive high schools can be divided into smaller learning communities based on themes or career pathways. These smaller learning communities are typically limited to approximately 400 students per community or 100 students per grade. Teams of teachers work with fewer students on a daily basis, so they can spend more time concentrating on the needs and interests of students in their smaller learning community. Students spend more time with their peers and with the core group of teachers. As a result, they develop stronger relationships with other students and with adults.

#### Actions

- Implement smaller learning communities within the larger school.
- Encourage caring and supportive relationships between teachers and students.
- Provide opportunities for youth service and leadership.

#### **Supporting Research**

Cotton's 2001 review of the research about small learning communities found the following: Student achievement was equal to or better than that in larger schools, graduation and attendance rates were higher, student preparation for college was equal to that in larger schools, there were fewer incidences of negative social behavior in small schools, and parents were more involved. Although small schools are one strategy that can facilitate improvement in student outcomes, Cotton cautions that reducing school size without changing instruction will not necessarily lead to increased student achievement.

#### **Practical Examples**

**Des Moines Public Schools** has received funding from the U.S. Department of Education to transform its high schools into smaller learning communities. It has created freshman academies to help ease the students' transition to high school, increased the focus on adolescent literacy, added common planning time for teachers, and implemented a scheduling model that provides struggling students with extra time and support. As a result, the district has increased student academic achievement, improved the percentage of students who earned enough credits to move on to sophomore year, reduced the number of discipline referrals, and decreased the dropout rate.

**First Things First** (www.irre.org/ftf/) is a school-reform framework with three goals: support improved relationships between and among students and adults; increase student engagement and the level of rigor in the curriculum; and allocate money, staff, and time to support these first two goals. Key components of the reform effort include creating smaller learning communities, supporting the improvement of teaching and learning, and setting up a family advocate system.

#### **Key Resources**

Big Buildings, Small Schools: Using a Small Schools Strategy for High School Reform (www.jff.org/jff/PDFDocuments/smallschools.pdf) highlights issues of implementing small schools within a larger school.

**Strategic Instruction Model** (www.kucrl.org/iei/sim/) helps teachers personalize education by differentiating instruction to meet the needs of diverse learners. The model includes strategies for teachers and students that are designed to increase student achievement.

**Smaller Learning Communities** (www.ed.gov/programs/slcp/index.html), a program of the U.S. Department of Education, provides funding for districts interested in developing smaller learning communities. The Web site contains a review of the research, information on applying for grants, additional resources, and technical assistance.

# Improving Transitions for Students

The transition to ninth grade, to work, or to college may be difficult for students. Many schools have created small freshman academies to provide structured supports for students as they move from elementary to high school. Career academies, discussed under "Increasing the Relevance of the Curriculum" in this booklet, can help students make smooth transitions to work or advanced technical training in their chosen career pathway. Various course offerings can help ease the transition to college.

#### Actions

- Create freshman academies to ease ninth graders' transition to high school.
- Create more career academies to ease students' transition to the workplace.
- Provide more opportunities for high school students to earn college credit through Advanced Placement (AP), distance learning, Tech Prep, dual enrollment, or early college programs, thus easing the transition to college.

#### **Supporting Research**

In a 2004 study, Kemple and Herlihy examined the effects of the Talent Development high school model on ninth graders. For schools in the study, first-time ninth graders achieved substantial gains in academic course credits and promotion rates as well as modest improvements in attendance.

In addition, the three gold-standard studies examined by Stern and Wing (2004) described programs that improved transitions for students. The first study indicated that the Quantum Opportunity Program, a youth development program, significantly increased high school completion rates and resulted in additional positive outcomes. The second study found that Upward Bound participants who had not expected to earn a bachelor's degree significantly increased their rate of four-year-college attendance. The third study found that there was a significant impact on employment and earnings for students who attended career academies.

#### **Practical Examples**

University Park Campus School, a small public school serving Grades 7–12, is located in Worcester, Massachusetts, adjacent to the Clark University campus. Most of the students are from low-income families and are members of minority groups. All students complete a college-preparatory curriculum and are eligible to take courses at Clark in their junior year. Students receive free tuition if they are accepted to Clark through the traditional admissions process. Recent assessments indicate that although more than half of the students were reading at the third-grade level when they entered seventh grade, all tenth-grade students passed the rigorous state exam with scores that were significantly higher than state averages.

Wakefield Advanced Placement Network (www.arlington.k12.va.us/schools/wakefield/activities/apnetwk/index.php), developed by Wakefield High School in Arlington, Virginia, encourages students to take a least one AP course. It is designed to support and nurture male African-American and Latino students who are taking AP courses. Groups of these students meet at lunch to talk about class and provide moral support to one another. As a result, the number of African-American and Latino males in AP courses has increased fourfold since the 2000–01 school year.

#### **Key Resources**

**AVID**, or **Advancement Via Individual Determination** (www.avidonline.org), is an in-school academic support program that aims to prepare students for postsecondary education. Geared for students in Grades 5–12, it provides a focused curriculum and a special AVID course, which teaches organizational skills and provides extra academic support.

**Early College High School Initiative** (www.earlycolleges.org) creates small high schools in which students earn both a high school diploma and two years of college credit in four or five years. Currently, there are 46 early college high schools in 18 states and the District of Columbia and more than 170 are scheduled to be up and running by 2008. The Bill and Melinda Gates Foundation has supported this initiative with more than \$120 million in grants.

**Jobs for the Future** (www.jff.org) is involved in a variety of projects that create different pathways to postsecondary education for youth. It conducts and publishes research and provides technical assistance to schools and districts in many areas related to high school education and transitions to higher education and work.

**Talent Development** (www.csos.jhu.edu/tdhs/) is a comprehensive high school model that employs the following strategies: creating smaller learning communities, increasing the rigor of the curriculum, developing a positive school climate for learning, offering professional development, and increasing parent and community involvement.

### **Using Data to Make Decisions**

In the current climate of accountability, educators are compelled to use data to make solid and critical decisions. Analyzing data—including student achievement data, demographic data, program data, and perception data—can reveal system weaknesses and provide direction to combat those weaknesses. Data also can help teachers track student progress and identify strengths and weaknesses in student performance so they can adjust their instruction accordingly. Later, data can be used to measure the impact of strategies and practices, continuing the school improvement cycle.

#### Actions

- Create and support an integrated K–16 data system.
- Disaggregate student data to analyze achievement gaps; develop strategies to address these gaps.
- Provide training and support for teachers, enabling them to use data for tracking student progress and developing more effective instructional strategies.
- Use data to measure the impact of improvement strategies and determine new approaches.

#### **Practical Example**

**Boston Public Schools** *Focus on High Schools* (highschoolrenewal.org/CarnegieProposal.pdf) emphasizes data to improve student learning. All teachers in core subject areas receive diagnostic data on students in their classrooms eight times during the year so they have the opportunity to adjust their instruction appropriately. As a result, assessment scores are increasing and the achievement gaps have narrowed.

#### **Key Resources**

*Nine Essential Elements of Statewide Data-Collection Systems* (www.nc4ea.org/files/9%20elements%20brochure.pdf) describes the essential elements of statewide data-collection systems and outlines actions for state policymakers.

**Learning Point Associates Data Retreats** (www.ncrel.org/datause/howto/dataretreats.php) are two-day training opportunities that provide school leadership teams with a unique opportunity to analyze and uncover patterns in their school's data and to develop strategies that will improve student achievement. These retreats can be customized for high schools.

**National Center for Educational Accountability** (www.nc4ea.org) provides publications and resources to assist states with the development of data systems that can be used to make decisions about curriculum and instruction and to improve student performance.

# Accessing Funds to Support Improvement Efforts

The flexibility provisions in the NCLB Act allow administrators to reallocate some funds to support programs that will best meet the goal of increasing student achievement. State funding varies widely, but funds from the U.S. Department of Education are available through Title I of the Elementary and Secondary Education Act, the Carl D. Perkins Vocational and Technical Education Act, and Individuals with Disabilities Education Act (IDEA) formula grants. In addition, funds to improve the quality of high school education are available through grants from four U.S. Department of Education program offices listed below under Key Resources.

#### Actions

- Reallocate funds that currently are available.
- Seek additional funding.

#### **Key Resources**

Office of Elementary and Secondary Education (www.ed.gov/about/offices/list/oese/programs.html) provides funding for Comprehensive School Reform, Mathematics and Science Partnerships, and 21st Century Community Learning Centers.

Office of Innovation and Improvement (www.ed.gov/about/offices/list/oii/programs.html) provides grants for Advanced Placement, Charter Schools, Magnet Schools, and Teaching American History.

**Office of Postsecondary Education** (www.ed.gov/about/offices/list/ope/programs.html) provides funding for Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) and Trio programs.

Office of Vocational and Adult Education (www.ed.gov/about/offices/list/ovae/pi/grntprgm.html?src=rt/) provides funding for America's Career Resources Network, College and Career Transitions Initiative, Community Technology Centers, Tech Prep, School Dropout Prevention, Smaller Learning Communities, and State Scholars.

# **National Organizations Focusing on High School**

**Achieve Inc.** (www.achieve.org) aims to raise standards and achievement in U.S. schools. Its initiatives provide strategies and tools for educators, policymakers, and parents to support achievement in the classroom and beyond.

Alliance for Excellent Education (www.all4ed.org) focuses on three areas: adolescent literacy, college preparation, and smaller learning communities. Its mission is "to promote high school transformation to make it possible for every child to graduate prepared for postsecondary education and success in life."

American Youth Policy Forum (www.aypf.org) works with policymakers and their senior staff members to develop effective education, training, and transition to employment for America's youth.

Bill and Melinda Gates Foundation (www.gatesfoundation.org/education/) is committed to expanding the development of small schools through a multimillion-dollar grant program that is being implemented across the country. The goal of the program is to "improve high school graduation and college preparedness rates by fostering dynamic high schools that help all students prepare for college and work through a rigorous and challenging curriculum, stronger relationships between students and teachers, and more relevant coursework."

The Center for Comprehensive School Reform and Improvement (www.centerforcsri.org) assists schools and districts by providing reliable information about research-based strategies and assistance for comprehensive school reform. It maintains an online virtual-learning community through an easy-to-access Web site.

**Center for High School Excellence** (www.chse.org), created by Learning Point Associates, provides information on existing high school research, high school policies at the federal and state levels, and resources that move research into strategies for action.

**The Education Trust** (www.edtrust.org) works for the high achievement of all students—kindergarten through college—and for the end of achievement gaps based on income or race. It consults with community-based organizations, colleges, schools, and districts; conducts and disseminates research; analyzes policies; and supports advocacy campaigns.

**Jobs for the Future** (www.jff.org) conducts and publishes research and provides technical assistance to schools and districts in many areas related to high school education as well as transitions to higher education and work. It develops reports, newsletters, toolkits, and other resources for improving the academic achievement of high school students.

**Learning Point Associates** (www.learningpt.org) is a nonprofit organization whose mission is to deliver knowledge, strategies, and results to help educators make fact-based decisions that produce sustained school improvement. It provides the following resources and services specific to high schools: school improvement planning, Data Retreats, Lesson Study, adolescent literacy, afterschool programming, evaluation, and policy research.

**National Association of Secondary School Principals** (www.principals.org) provides information, research, and other resources on many aspects of high school education. Its 2004 publication *Breaking Ranks II: Strategies for Leading High School Reform* is a key component of the organization's work to assist schools with high school improvement.

**National Center on Education and the Economy** (www.ncee.org) studies international models of education and workforce training to inform the U.S. system of education. In addition to publishing education standards across grade levels and subject areas, it publishes reports and publications that provide examples of standards-based student work and broader implementation efforts.

National Governors Association: Redesigning the American High School (www.nga.org/chairman04/). This initiative is a joint effort of the National Governors Association Center for Best Practices in collaboration with Achieve Inc., the National Conference of State Legislatures, and Jobs for the Future. These organizations seek to identify issues that states must address for high school improvement. The second year of this work includes detailed consultation with individual states to move forward with statewide high school improvement efforts.

**National High School Alliance** (www.hsalliance.org), a partnership of more than 40 organizations, seeks to bring together knowledge and resources to ensure all high school students achieve at high levels. It informs policy, practice, and research through dissemination of research and model policies and practices.

**U.S. Department of Education's High School Home Page** (www.ed.gov/about/offices/list/ovae/pi/hs/) serves as a clearinghouse for information on high school improvement and the Preparing America's Future High School Initiative. The themes of this initiative are high expectations, student engagement and options, teaching and leadership, and accelerated transitions. As part of this initiative, the U.S. Department of Education hosted national summits in October 2003 and December 2004 and regional summits in spring 2004. Materials from the summits and issue briefs on a variety of topics related to high schools are available online (www.ed.gov/about/offices/list/ovae/pi/hsinit/index.html). Many of the presentations from the regional summits also are available online (www.nccte.org/news/pafhsiVideos.asp).

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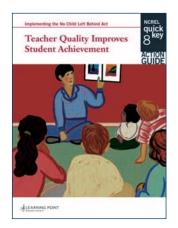
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The **Center for High School Excellence** at Learning Point Associates provides research-based information that identifies critical challenges facing American high schools and aligns this research with strategies that can be implemented for measurable results.

The Center's Web site (www.chse.org) acts as a portal to:

- Information on existing high school research.
- High school policies at the federal and state levels.
- Resources that move the research into strategies for action.
- Learning Point Associates services that are specific to high schools, such as the following:
  - > School improvement planning workshops and technical assistance
  - > Data Retreats
  - > Adolescent literacy resources
  - > Evaluation services

Learning Point Associates developed the *Quick Key* series to assist educators, policymakers, and other stakeholders in understanding and implementing the No Child Left Behind Act. The *Quick Keys* are available online (www.ncrel.org/policy/curve/resource.htm#resources).



#### Look for the Previous Quick Key:

#### **Quick Key 8 Action Guide**

"Implementing the No Child Left Behind Act: Teacher Quality Improves Student Achievement"



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