





# SITE DEVELOPMENT GUIDE #7

---

## BUSINESS AND EDUCATION

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.  
 Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

### ***Employers and Schools Working Together to Improve Student Achievement***

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

*M.A. Sullivan*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The purpose of this guide is to help employers and educators work together to raise student achievement by making high school valuable and relevant. More specifically, the purpose is to involve employers in SREB's *High Schools That Work (HSTW)* effort to build community support for higher-quality learning by all students.

#### **The Problem**

Since 1987, *High Schools That Work* has developed an approach to raise academic, intellectual and technical standards and to prepare all youth for employment, further education or both. (Many students both work and attend postsecondary institutions.) SREB and its state partners ask member high schools to eliminate easy courses, integrate academic and occupational instruction, set specific achievement goals and measure progress.

Even when schools do all they can, they often cannot reach desired levels of student performance by acting alone. They need the support of the private sector and the community participation that results when schools and businesses work together.

Employers seeking to hire high school graduates in jobs that lead to careers have been outspoken in demanding higher achievement. Specifically, they have pointed to the inadequacies of high school

graduates who apply for jobs. Many employers have numerous stories about unprepared applicants, and they have read reports claiming that skilled workers are scarce:

- One-third of corporate economists surveyed in 1995 said their firms were having difficulty finding skilled workers.<sup>1</sup>
- A recent survey of over 900 leaders of small and mid-sized businesses showed that 25 percent of them were worried that a lack of qualified workers would hamper company growth.<sup>2</sup> This percentage almost doubled between 1993 and 1995.

Employers who see deficiencies in high school graduates are increasingly looking to two-year and four-year college graduates as a source of entry-level workers. This solution is only partial, since many college students also lack basic workplace skills. For example:

- An estimated one of every three students entering college nationally needs some type of remedial help before becoming a full-fledged student.<sup>3</sup> In one SREB state, taxpayers spent over \$25 million in 1995-96 to support remedial programs to teach basic mathematics and reading skills that college students should have gained in elementary and high school.

<sup>1</sup> National Association of Business Economists: Industry Survey. 1996.

<sup>2</sup> *Survey of Small and Mid-Sized Businesses: Trends for 1995*. Arthur Andersen Enterprise Group.

<sup>3</sup> Southern Regional Education Board. *1996 Educational Benchmarks*.

**Southern Regional  
Education Board**

## **Southern Regional Education Board High Schools That Work**

### **Goals**

- To increase the mathematics, science, communication, problem-solving and technical achievement and the application of learning for career-bound students to the national average of all students.
- To blend the essential content of traditional college preparatory studies—mathematics, science and language arts—with quality vocational and technical studies by creating conditions that support school leaders, teachers and counselors in carrying out the key practices.

### **Key Practices**

- Setting higher expectations and getting career-bound students to meet them.
- Increasing access to challenging vocational and technical studies, with a major emphasis on using high-level mathematics, science, language arts and problem-solving skills in the context of modern workplace practices and in preparation for continued learning.
- Increasing access to academic studies that teach the essential concepts from the college preparatory curriculum through functional and applied strategies that enable students to see the relationship between course content and future roles they envision for themselves.
- Having students complete a challenging program of study with an upgraded academic core and a major. An upgraded academic core includes at least four years of college preparatory English and three years each of mathematics and science, with at least two years in each area equivalent in content to courses offered in the college preparatory program. The major includes at least four Carnegie units in a career or academic major and two Carnegie units in related technical core courses.

Providing students access to a structured system of work-based and high-status school-based learning—high school and postsecondary—collaboratively planned by educators, employers and workers and resulting in an industry-recognized credential and employment in a career pathway.

- Having an organizational structure and schedule enabling academic and vocational teachers to have the time to plan and provide integrated instruction aimed at teaching high-status academic and technical content.
- Having each student actively engaged in the learning process.
- Involving each student and his/her parent(s) in a career guidance and individualized advising system aimed at ensuring the completion of an accelerated program of study with a career or academic major.
- Providing a structured system of extra help to enable career-bound students to successfully complete an accelerated program of study that includes high-level academic content and a major.
- Using student assessment and program evaluation data to continuously improve curriculum, instruction, school climate, organization and management to advance student learning.

- The percentage of two-year college freshmen assigned to remedial mathematics courses in SREB states<sup>4</sup> ranges from 30 percent in one state to just over 75 percent in another. Only in half of the SREB states are 80 percent or more freshmen entering public four-year colleges ready to do college-level work.<sup>5</sup>

Because catching up in college comes at the expense of getting on with college-level studies, it is not surprising that employers also report educational deficiencies in college graduates. A recent national report concluded that the literacy levels of college graduates “range from a lot less than impressive to mediocre to near alarming.”<sup>6</sup>

Most high school students do not have enough information about the skills associated with a good job. They are much more aware of the educational and personal requirements of part-time “youth jobs.” Unfortunately, these jobs may lead students to believe that it doesn’t matter if they make the effort to do quality schoolwork. The signals given by employers are critical. Large numbers of high school students are working part time, and their employment can either contribute to or detract from their success in school.

While survey results differ somewhat depending on how the questions are asked, over half of 11th-graders and two-thirds of 12th-graders work while attending high school. Seven out of 10 career-bound students<sup>7</sup> at *High Schools That Work* sites work part time; almost one-fourth work from 21 to 30 hours per week; 12 percent work more than 31 hours per week.

Declines in the school performance of students who work more than 20 hours per week are well-documented. Many students work until late at night, leaving them little time to study. Teachers often say, “I don’t expect career-bound students to do quality work, because they work long hours at their jobs.”

The lack of communication between schools and employers who hire high school youth causes many students to doubt if high school really counts. The issue is not whether students become part-time workers; the issue is that it is essential for them to remain high-performance students.

Often, schools are criticized when they establish high standards, throw out the easy courses, increase graduation requirements and require quality intellectual learning from all students. To make these actions stick, schools need the combined support of employers who hire youth in their twenties and those who hire high school youth. Students need to see what real jobs are like and what they require. Employers can help students see that completing demanding courses in high school will ultimately help them advance beyond a youth job.

This guide begins by spelling out what schools are doing through *High Schools That Work*. Then it describes how businesses and business organizations can support higher student achievement by working with schools and the community.

## Making High Schools Work

The *High Schools That Work* goal is quality education that results in higher performance by career-bound students. Making high schools work involves:

- Having all students complete an upgraded academic core of college preparatory-level mathematics, science, English and social studies courses.
- Helping students gain the knowledge and intellectual skills needed for success in postsecondary education or in a work setting. Career-bound students may do more of their learning in an applied context, but they should arrive at the same place academically.

<sup>4</sup> The 15 SREB states are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

<sup>5</sup> Southern Regional Education Board. *1996 Educational Benchmarks*.

<sup>6</sup> *Learning by Degrees*. Paul Barton and Archie Lapointe. Educational Testing Service. 1995.

<sup>7</sup> The Southern Regional Education Board defines career-bound youth as high school students who plan to work, attend a two-year community college or vocational school, participate in an apprenticeship program, or enter the military after high school graduation. Career-bound students are not planning to enter a four-year college or university but may make that decision at some future time.

- Having students acquire technical knowledge and skills in a broad career field. *HSTW* uses occupational instruction—in a hands-on environment—to engage students in using academic knowledge and acquiring skills to complete projects that have value to them.
- Helping students do more than simply make high test scores in academic subjects. The aim is to develop students' intellect, their capacity to receive and comprehend academic and technical ideas, and their understanding of how to use fundamental concepts in new situations.
- Preparing students for further study in an educational setting, a work setting or both by having them complete a sequence of courses constituting a technical major. These courses should be matched to an appropriate sequence of academic courses, and both types of courses should be taught by teachers working together to integrate academic and technical learning.
- Helping students become "technology literate" so that they can function in a contemporary workplace and a world driven by electronic communication.
- Helping students develop the personal qualities necessary for success in employment and life. These include:
  - Accepting responsibility;
  - Cooperating;
  - Communicating;
  - Being dependable;
  - Being an independent learner;
  - Being honest in personal relationships.

High academic, technical and intellectual achievement—combined with outstanding personal qualities—are what employers, parents and citizens want from high school graduates. In a national poll conducted by *USA Today*, CNN and Gallup in January 1996, more people (67 percent) named education as a high priority than named crime or the economy.

The goals that *HSTW* sites are pursuing for their students turn up on survey after survey of what em-

ployers want. They are the goals that educators, political leaders and parents need to embrace, although achieving them may be a daunting task. The actions for reaching these goals are necessary to preserve democracy and the nation's economy.

## **Business Support for High Standards**

Business leaders are strongly in favor of high academic standards as demonstrated by the leadership role played by business executives in the National Education Summit, held in New York in March 1996. At this high-profile meeting, the nation's governors and business leaders rededicated themselves to achieving higher standards for America's youth.

In the summit's policy statement, the business leaders committed themselves to improve student performance and to develop state coalitions of business leaders to expand support for increased achievement. Their goal is to "clearly communicate to students, parents, schools and the community the types and levels of skills necessary to meet the workforce needs of the next century." The group also pledged to implement hiring practices that will require applicants to demonstrate academic achievement through school-based records such as academic transcripts, diplomas, portfolios and certificates of initial mastery.

- Lewis Gerstner, Chairman and CEO of IBM, who organized the 1996 National Education Summit, said, "I envision schools that set high academic standards for all their students and are held accountable for results."
- John Clendenin, chairman and CEO of the BellSouth Corporation, was even more specific when he said, "Employers need workers with the ability to read with understanding; the ability to communicate clearly both by the written and spoken word; the ability to think through a problem or situation; the ability to calculate with at least a rudimentary understanding of algebra, geometry, and elementary statistics; and the ability to analyze."

The private sector's call for moving from minimum standards to high-quality intellectual learning in a range of academic and technical disciplines is con-

sistent with the *HSTW* goal of raising the achievement of all students. National, state and local business leaders can support educators in targeting higher student performance by encouraging local employers to:

- Provide information and activities to prepare students for challenging careers;
- Partner with schools and teachers to improve students' academic and technical knowledge and skills;
- Provide educators, students and parents with specific information about the preparation needed to enter and advance in employment;
- Strengthen the capacity to provide youth with quality learning opportunities at work sites.

Ciba-Geigy is an international corporation that has made a full commitment to form partnerships with educators to promote higher student performance. This corporation has created the Ciba Educational Foundation with the purpose of supporting efforts to unite schools and the business community. Each proposal funded by the foundation involves a local Ciba-affiliated plant working in cooperation with local educators to advance the quality of student learning. In addition, local plant leaders encourage the involvement of other employers. The effort will develop ways to link high schools, community and technical colleges and the workplace together to provide youth with an accelerated program of academic and technical studies. This approach has the potential to expand the opportunities of all youth.

To meet the ambitious goals of *High Schools That Work*, appeals for business involvement need to be heard at the community level. The purpose of this guide is to help local *High Schools That Work* sites form strong partnerships with local business and community leaders in raising student achievement.

## High School Students Who Work

Most career-bound youth have jobs while in high school, but educators and local employers do practically nothing to aid or improve their broad-based learning. Only 30 percent of students report being in a job related to their technical studies and career goals. Fewer than 15 percent report spending any

time in on-the-job training. Many teachers fail to hold working students to the high standards that other students are expected to meet.

School and work are two separate worlds for career-bound students. *As a general rule, educators don't know what goes on in the workplace, and employers don't know how their employees are doing in school.* There is a need for greater communication and understanding between employers and educators in promoting quality learning in school and at work.

Educators can:

- Determine where students work and how many hours they work;
- Counsel students who work long hours and get bad grades, including discussing the situation with employers and parents;
- Welcome input from employers concerning academic and technical deficiencies they have observed either in a particular student or in students as a group;
- Collaborate with students and employers in developing projects that require students to solve typical workplace problems;
- Provide employers with timely information about student performance;
- Work with employers to connect progressively challenging school and workplace learning.

Employers can:

- Motivate students by demonstrating that the workplace values achievement and cares about learning.
- Set standards for school attendance and performance.
- Recognize, and perhaps reward, high achievement in school studies. Present Student-of-the-Month awards similar to Employee-of-the-Month recognition.
- Use school information such as attendance records, transcripts and student portfolios as criteria for employing high school youth.

- Limit the number of hours a student works during the school year.
- Base promotion and salary increases in part on the achievement that a student demonstrates at school.

The work experience becomes a learning experience when employers:

- Help students learn various aspects of running a business;
- Use job rotation and have students complete progressively complex tasks;
- Familiarize students with the role of suppliers;
- Help students make choices by expanding their knowledge of available occupations;
- Provide mentoring and tutoring opportunities.

## **Employers as Partners in Teaching and Learning**

Most students seek their own part-time jobs, which are usually not connected to school studies. As a result, there is a growing need to provide students with workplace experiences that go beyond what they are getting in youth jobs. Jointly planned and carried out by the school and the employer, such activities can become part of a student's educational plan and improve student performance. Organized workplace learning:

- Provides a real-world setting in which students connect mathematics, science, language arts and technology skills to projects, problems and issues that have value beyond the school building;
- Helps students discover future career options;
- Clarifies the benefits of working hard to succeed in high school and postsecondary studies;
- Provides education and training in use of state-of-the-art equipment at the workplace;
- Imparts the culture of the workplace in ways not possible inside the school;
- Develops work habits, cooperation, teamwork and real-world problem-solving skills;

- Provides feedback to the schools on students' academic, intellectual, technical and personal strengths and weaknesses;
- Strengthens the link between work and learning.

There is no single correct approach to using the workplace in education. Variations occur in how much time a student spends at work, how many workplaces are involved, students' status as unpaid learners or regular part-time employees, the skill content of work activities, the amount of training provided at work (as compared to the classroom), and the extent of using applied settings to impact broad occupational knowledge and academic instruction.

Many local employers are already helping schools raise student achievement. Their involvement ranges from career awareness talks in the classroom to youth apprenticeships at the workplace. (See the chart on page 7 for a participation model developed and designed by employers.)

This type of involvement may seem to be asking a lot of American employers, who have had limited direct participation in educating high school students. Collaboration between employers and educators can make quality learning "contagious" for all students and produce better educated high school graduates who will contribute to this nation's success in international competition. These are among the reasons that prominent business leaders are supporting school and workplace connections.

On a day-to-day basis, what do employers gain from supporting high schools in raising achievement? School/employer cooperation:

- Creates an avenue of direct access to schools and students in raising educational standards and improving achievement.
- Assures that high school graduates will have workplace experience and will be familiar with the preparation needed for entering and advancing in a career.
- Allows employers to see students at work and to select graduates they want to keep. Participating employers benefit by reducing recruitment costs and improving employee selection.

# Opportunities for Local Employers to Work Directly with Schools and Students

Employers have a variety of opportunities to help youth understand the link between “learning and earning.” This chart describes activities in which local businesses can participate with the schools in targeting higher student performance.

| Purpose                   | Employer Activity by Grade Level   | Length of Activity   | Approximate Employee-to-Student Ratio   |
|---------------------------|--|--|---|
| <b>Career Awareness</b>   | <p><b>Career talks:</b> Employers and employees visit the classroom to explain the work of their industries and companies. (Grades K through 16)</p> <p><b>Career days/career fairs:</b> Special events allow students to meet with postsecondary educators, employers and employees or human resource professionals to learn about education and work opportunities. Career day activities are designed to help students think about their interests and abilities in regard to potential careers. (Grades K through 16)</p> <p><b>Workplace and industry tours:</b> Students visit the workplace, talk with employees and observe workplace activities. (Grades K through 16)</p>  | <p>1 to 2 hours</p> <p>From 2 hours to a full day</p> <p>1 to 2 hours</p>  | <p>1 : 25 or 30</p> <p>Varies</p> <p>1 : 10 or 25</p>   |
| <b>Career Exploration</b> | <p><b>Job shadowing:</b> A student “shadows” an employee at a company location to learn about a particular occupation or industry. Job shadowing can help students learn about different industries, jobs and careers. (Grades 6 through 16)</p> <p><b>Job rotation:</b> At a workplace, students transfer among a number of positions and tasks that require different skills and responsibilities. The intent is to understand the steps that go into creating a product and/or service, the role of personal effort in quality and efficiency of production and customer service, and the way each part of the organization contributes to productivity. (Grades 9 through 16)</p>  | <p>1 day to 2 weeks</p> <p>Varies by program</p>   | <p>1 : 1 to 5</p> <p>1 : 1 to 8</p>   |
| <b>Career Preparation</b> | <p><b>Internships:</b> Students work for an employer for a specified period to learn about a particular industry or occupation. Students’ workplace activities may include special projects, samples of tasks from different jobs or tasks from a single occupation. These activities may or may not include financial compensation. (Grades 10 through 16)</p> <p><b>Cooperative education:</b> Students alternate or coordinate their high school or postsecondary studies with a job in a field related to their academic or occupational objectives. Students and participating businesses develop written training and evaluation plans to guide instruction. Students receive course credit for their classroom and work experiences. Credit hours and placement intensity often vary with the course of study. (Grades 10 through 16)</p> <p><b>Youth apprenticeships:</b> These multi-year programs combine school-based and work-based learning in a specific occupational area or cluster. They are designed to lead directly into a related postsecondary program, an entry-level job or a registered apprenticeship program. Youth apprenticeships may or may not include financial compensation. (Grades 10 through 14)</p> <p><b>Apprenticeships (registered):</b> Registered apprenticeship programs meet specific federally-approved standards designed to safeguard the welfare of apprentices. The programs are registered with the U.S. Department of Labor’s Bureau of Apprenticeship and Training (BAT) or one of 27 state apprenticeship agencies or councils approved by BAT. Apprenticeships are relationships between an employer and an employee during which the worker or apprentice learns an occupation in a structured program sponsored jointly by employers and labor unions or operated by employers and employee associations. (Grades 13 through 16)</p> <p><b>Mentoring:</b> Employees who possess desired skills and knowledge instruct students, critique their performance, challenge them to perform well and work in consultation with teachers or youth organizations and the employer. (Grades 9 through 16)</p> | <p>Minimum of one semester (5 to 10 hours a week) or a full-time summer session (4 to 6 weeks)</p> <p>Minimum of 10 to 15 hours a week for one semester</p> <p>Minimum of one semester (5 to 10 hours a week)</p> <p>Defined by the program</p> <p>Minimum of 10 months (3 to 4 hours a month)</p> | <p>1 : 1 to 8</p> <p>1 : 1 to 8</p> <p>1 : 1 to 8</p> <p>Defined by the program</p> <p>1 : 1 or 2</p> |

Adapted from a chart in The Employer Participation Model created by and based on the practical experiences of the member companies of the National Employer Leadership Council, 1001 Connecticut Avenue, NW, Suite 310, Washington, DC 20036. Phone 1-800-360-NELC.



- Enables employers to remedy specific educational deficiencies before students finish high school.
- Enhances the company's and the employer's reputation by positioning them as leaders in educational improvement.
- Enhances employee morale, supports employees as parents and improves employer/employee relationships.

The following examples from *High Schools That Work* sites illustrate a variety of employer/educator partnerships:

- The school-to-work council in Winchester, Kentucky, includes representatives from banking and finance, residential and commercial construction, city and county government, manufacturing, employment services, the insurance industry, medical services and utilities. This council has created opportunities for teachers at George Rogers Clark High School to learn firsthand the knowledge and skills required of workers. In on-site tours, teachers learn about business, what is expected of employees and how classroom knowledge is applied on the job. They learn about training requirements, working conditions and job progression. The purpose of the program is to improve the quality of classroom learning by enabling teachers to connect curriculum content to problems and projects beyond the school.
- In Fayetteville, Arkansas, 150 businesses support the Vital Link Internship Program. This initiative between the Fayetteville School District and the Fayetteville Chamber of Commerce is designed to help students discover the knowledge and skills necessary for success in a career. In a program for entering seventh-graders in 1995 and 1996, some 120 students each year spent a week in the workplace where employers encouraged them to question assumptions, develop ideas and solve work-related problems. The students kept journals describing their experiences. The program was expanded in the spring of 1996 to include a one-week internship for eighth-graders enrolled in a career orientation class. In the future, every eighth-grader will participate in the fall or the spring. School leaders have found that the experience helps students plan challenging four-year

programs of academic and technical study by heightening their awareness of workplace demands.

- Community professionals in Boyle County, Kentucky, helped the high school create a mentoring program to allow 11th- and 12th-graders to pursue independent study in an area unavailable in the regular curriculum. Students in the mentoring class welcome opportunities to work in areas such as electrical engineering, interior design, fashion design and genetics. Students keep a daily journal, engage in ongoing conversations with their mentors, critique articles from career fields, complete a self-evaluation, produce three major papers and make four oral presentations, including one for a school or community group. They also produce a research paper, a painting or a project. Typical student comments include:

*"This class has made me an independent learner."*

*"I really like working with a professional artist."*

*"I see a relationship between school and work."*

- Sixteen *High Schools That Work* sites in Georgia are participating in a student internship program to provide structured learning experiences in high-tech manufacturing. The program is being developed by an educator and employer consortium organized by the Southern Regional Education Board with support from the Ciba Educational Foundation. Thirty-seven students participated in summer internships in 1996 at companies such as the CIBA Vision Corporation, the Siemens Corporation, United Parcel Service, the Ivan Allen Company, Ford Motor Company and Rockwell International. The program introduces students to the diversity of careers available in the manufacturing field and to the educational preparation needed to enter and excel in these jobs. Students complete challenging projects at the workplace, prepare written reports and present oral accounts of their experiences.
- In Berks County, Pennsylvania, employers and educators formed the Berks Business Education Coalition to raise student achievement. Since its inception in 1992, the coalition has supported numerous programs, including:

- A summer internship program for teachers to gain experience in the business world and to earn credits at an area university.
- A job incentive program to provide qualified high school seniors with good jobs in local companies. Coalition employers reserve good positions for high school graduates who meet academic, technical and personal standards. By promising to place youth in good jobs, the Berks County business community motivates career-bound students to meet high performance standards.
- The Dow Corning Corporation designed an apprenticeship program for students at Eastern Guilford High School in Gibsonville, North Carolina. Students continue in the program while attending the local community college. Workplace mentors share valuable insights as youth gain firsthand experience in manufacturing, industrial maintenance, accounting and quality assurance. Students who participate in the program must have a 3.0 GPA and a 95 percent attendance rate during the previous school year. They must also be completing an upgraded academic core and a technical program of study.
- A strong cooperative education program at Buchholz High School in Gainesville, Florida, is based on the commitment of business and industry to helping students refine their career choices

and complete demanding academic and vocational programs of study. Sixty students are enrolled in co-op programs in the fields of business and marketing. Employers who set up “training stations” promise to provide varied and challenging experiences. For students enrolled in the school’s entrepreneurial academy, employers agree that a certain portion of a student’s time will be devoted to management-level tasks. The program enjoys the support of an active advisory board and the local chamber of commerce, which has invited three co-op students to attend committee meetings and report back to the other students. Mathematics, English and social studies teachers gain new ideas for curriculum integration by participating in internships in the companies where co-op students work.

An employer or an employer organization can begin by taking the lead in developing work-based learning opportunities and partnerships of local employers, education agencies, community and technical colleges, lawmakers, employees, students, parents and others. Employers can join with school districts, high schools and community colleges to create a joint task force to take stock of local work-based learning programs and to look at successful programs in other communities. The intent is to build an ongoing system in which employers support schools in targeting higher student performance through use of work-based learning and other employer-based resources.

### **Telecourse Materials on Replacing the General Track Can Help Employers Get Started in Working with Schools**

A five-part *High Schools That Work* telecourse—scheduled for 1996-97—contains examples of how business and industry can support high schools in replacing the general education track. Videos and other materials from the telecourse are available from SREB to assist teams of employers and educators as they develop ways to get every student to complete an upgraded academic core and a major. The materials identify critical elements in replacing the general track and provide case studies of high schools that have successfully enrolled all students in higher-level academic and technical courses. Contact SREB for more information on these resources.

## Making Achievement Count in Hiring

High-level academic and technical skills are vital in today's economy, but employers don't always emphasize this fact in working with career-bound students. Youth absorb the values of people around them. They continually receive subtle—and not so subtle—signals about the importance of high achievement. As gatekeepers to adulthood and financial independence, employers can play a major role in student performance.

Employers in general—both individually and collectively—have supported recent efforts to improve the products of American high schools. But employers who actually hire young people often fail to communicate the importance of high standards. For example:

- In surveys of hiring practices, educational achievement is often far down the list of qualities employers are seeking.
- Employers may ask if a student has a high school diploma, but they rarely ask schools for a transcript of grades and courses as colleges do.
- Employers seldom reward students for taking core academic courses or for doing well in them.

Employers need to be clear in their words and actions. In emphasizing the need for high performance, employers can:

- Encourage students to take high-level courses in the 11th and 12th grades. Employers can reflect this preference in job interviews and advice to part-time student workers.
- Require applicants to document their academic achievement and workplace experience by submitting transcripts, portfolios and certificates. The BellSouth Corporation plans to target recruitment efforts to *HSTW* site graduates who receive the SREB Certificate of Educational Achievement. The certificate states that recipients completed an upgraded academic core and a major and met performance goals in reading, mathematics and science. BellSouth is seeking youth who complete concentrations in business/marketing, technology/electronics and graphics.

- Give community-wide recognition to youth who win awards, score high on statewide achievement tests or receive Certificates of Educational Achievement.
- Ask for school records when youth apply for jobs. CEOs at the 1996 National Education Summit emphasized this point. The Business/Industry/Education Alliance in Delaware asks participating employers to look at high school records as a meaningful part of the hiring process and to visit schools each year to talk to students. The alliance's HIRE ED program has placed fax machines in public and private high schools throughout the state to facilitate timely response to employer requests for school records.
- Award scholarships to high school graduates who complete a challenging program of academic and career studies. In Franklin, Virginia, youth who meet rigorous academic and technical standards are guaranteed scholarships and paid summer internships from the Union Camp Corporation.

## Students Making Choices

Students need help to see the connections between school studies and the world beyond high school. The choices they make will either open paths of opportunity or limit their options in the future.

*High Schools That Work* not only concentrates on quality teaching and learning but on improving career and educational guidance and advising. High school guidance programs are often inadequate, failing to give students the help they need in choosing a demanding and focused program of study. Students need help in:

- Experiencing various industries and broad career fields;
- Determining which careers will be in demand in the future;
- Learning about requirements for entering and advancing in a career;
- Making educational choices that will prepare them for transition from school to work.

## Employers Can Help Recognize High School Students' Outstanding Achievement

Employers have a number of options for working with *High Schools That Work* sites to recognize students who complete a challenging program of study and achieve high levels of academic performance. One option is a certificate such as the *High Schools That Work* Certificate of Educational Achievement. In 1996, any *HSTW* graduate who met three performance goals and three of four curriculum goals received a certificate documenting his or her academic achievement.

The three performance goals are:

- **Reading proficiency**—Students are able to seek and use information from manuals, journals, periodicals and other documents; to use information from several sources; to identify and solve stated problems; to recognize limitations in available information; and to use maps, legends, symbols and schedules to solve real-world problems.
- **Mathematics proficiency**—Students are able to apply a variety of strategies and explain their reasoning in a variety of situations; to solve routine problems using whole numbers, decimals and fractions; to solve multi-step problems; to read and use instruments; to compute areas of geometric shapes; to recognize relationships among common units of measure; to visualize geometric shapes in various positions on a plane; to calculate averages; to select and interpret data from a variety of graphs; to find the probability of a simple event; to evaluate simple expressions; to solve linear equations; and to graph points on coordinate axes.
- **Science proficiency**—Students are able to apply knowledge, skills and reasoning abilities to interpret scientific and technical data from simple tables and to make inferences about outcomes of experimental procedures; to evaluate the appropriateness of the design of an experiment and to apply knowledge in interpreting information from text and graphs.

The four curriculum standards are:

- **English**—Four full-year college preparatory-level courses;
- **Mathematics**—Three or more full-year courses with two credits equal to Algebra I, geometry or higher-level courses;
- **Science**—Three or more full-year courses with two credits in chemistry, applied physics or a lab-based biology course;
- **Vocational**—Four credits above the core courses in a vocational major.

Employers who ask students to provide evidence of achievement are demonstrating that high school really counts and are commending students for making the extra effort to prepare for work and education in the future.

An effective career guidance effort requires considerable participation by employers, who are in a position to provide accurate workplace information that students cannot obtain at school. Teachers and guidance personnel also need input from employers.

Employers can support schools by:

- Providing internships to familiarize teachers and counselors with career opportunities and requirements.
- Placing advisors in the schools. The Boston Private Industry Council's Job Collaborative serves 1,500 students annually by supporting a network of career specialists in each high school. The specialists help students develop work readiness skills, write résumés, prepare for interviews and find jobs after graduation. The council's Boston Extended Compact connects youth from Boston high schools with employers in the area. The Louisville Education and Employment Partnership in Kentucky coordinates and provides support for a program of "career planners"—professionals who assist some 1,000 students in 18 Jefferson County high schools. The career planners are trained to "mentor" students who are in danger of failing or dropping out. An independent study conducted in 1994-95 and covering the years since 1989 showed that nine out of 10 Partnership graduates were attending a postsecondary institution, had accepted a job or had entered the military.
- Offering job shadowing programs for students.
  - Howard High School of Technology in Wilmington, Delaware, works with 79 employers to provide job shadowing experiences for all students in grades 9 and 10. All 11th-graders participate in an in-depth internship program.
  - In Mississippi County, Arkansas, all high school students participate in job shadowing and other work-based experiences to help them explore career options.
  - All students in grades 10 through 12 at Altus High School in Oklahoma spend four days annually in the school's comprehensive job shadowing program. Workplace mentors interview the students in advance, introduce

them to all aspects of a career field in the actual shadowing experience, and prepare a follow-up assessment of each student's potential for success. Each student develops a portfolio containing a résumé, the mentor's assessment, research on the career field and a list of high school courses taken.

- Encouraging students to take rigorous academic courses throughout high school.
  - In Springdale, Arkansas, 1,800 11th-graders and their teachers met with employers and postsecondary representatives to talk about taking demanding courses in the 12th grade to get ready for further learning in a work or an educational setting.
  - The Appalachian Inter-Mountain (AIM) Scholars Program in four counties in Tennessee and Virginia involves business and industry in recognizing high school students who complete a rigorous program of study preparing them for higher education and employment. A large group of employers supports the program by:
    - ▲ Making presentations to eighth-graders on the importance of taking high-level English, mathematics, science, social studies and technical courses;
    - ▲ Providing financial or in-kind support;
    - ▲ Serving on committees to develop and guide the program;
    - ▲ Participating in recognition ceremonies for AIM Scholars;
    - ▲ Asking the question, "Are you an AIM Scholar?" on job applications;
    - ▲ Publicizing the program to employees;
    - ▲ Displaying plaques and certificates of support at the workplace.

The AIM Scholars Program is managed by a coordinating committee composed of high school and postsecondary educators and business representatives. A representative of Eastman Chemical Company in Kingsport, Tennessee, facilitated the development of the

program. One of the committee's responsibilities was to develop a challenging core curriculum that students from all four school systems would complete to be eligible for the program.

The percentage of high school graduates earning recognition as AIM Scholars rose from 18 percent the first year (1994-95) to 25 percent in 1995-96.

## Getting Teachers and Educators into the Workplace

Employers ask, "How can we get the schools to listen to our message?" Teachers and educators work in environments far removed from the world of work. They often think only in terms of state-prescribed curricula and textbooks and classroom-based exercises.

Teachers need to experience the workplace. They need to see where employees work, what they do and how adults learn. For example, English teachers can see actual business memos, letters and reports and find out what kinds of reading, listening and oral communication skills workers need. Mathematics teachers can gain insights into the use of numeracy skills in a variety of work settings.

Spending time in the workplace can be "eye opening." As one teacher said, "Schools have a lot to learn from business about treating high school youth as adults, giving them challenging assignments, expecting them to assume responsibility and encouraging them to learn from each other."

Workers are frequently given projects that they are expected to complete by reading a manual and gathering information from other employees. When teachers see what is involved in being a good employee, they are more apt to change their teaching methods.

Business leaders at the 1996 National Education Summit committed themselves to arrange for teachers throughout the nation to spend time in plants and offices. Such visits are already taking place at many *HSTW* sites. For example:

- English, mathematics, science and social studies teachers in Dorchester School District Two in South Carolina visit the Robert Bosch Corporation (which offers a youth apprenticeship program in machine tool technology) and other workplaces to get ideas for authentic projects and assignments. The teachers say students are achieving more as a result of engaging in learning activities that reflect workplace practices.
- The Teachers in the Workplace effort created by the Central Midlands Tech Prep Consortium in Columbia, South Carolina, arranges for businesses to hire teachers for three weeks in the summer. The purpose is to give teachers a greater understanding of ways to prepare youth to be productive workers and lifelong learners.
- The Osceola School District in Arkansas worked with community and business leaders to develop a plan for school improvement. The plan included summer internships to prepare secondary and postsecondary teachers to help students connect classroom learning to career goals.
- Eighty-five teachers from high schools and a few middle schools in Jefferson County, Kentucky, shadowed workers on the assembly line and in offices in approximately 30 local businesses and industries during the summer of 1996. They spent an additional three days writing curricula to impart what they learned to their students. Some teachers planned to restructure their classrooms as a result of seeing academic concepts used in making and selling products and delivering services. One thing is certain: Students will be going on more field trips, engaging in more job shadowing experiences and completing more work-related projects because their teachers took time to visit the workplace.
- Woodrow Wilson High School in Portsmouth, Virginia, worked with business leaders to provide job shadowing for 40 teachers. The goal was to improve classroom instruction by incorporating practical applications found at the workplace. As a consequence of this experience, teachers prepared lesson plans for teaching key academic concepts through applied methods. They shared their experiences with other teachers.

## Taking a Leadership Role in the Community

This guide presents the kinds of things that employers, working with schools, can do to support higher student achievement. A one-shot approach does little to advance the quality of student learning. Continuing and lasting improvement occurs in communities in which educators and employers work on a long-term agenda involving a community-wide effort.

Each community is in a different stage of employer involvement in education and can best move forward by taking stock of where it is now. Each employer will have its own best way of supporting the effort.

One starting point is to conduct a meeting to create a formal compact between business and education. Local communities can expand the effort by creating a community-wide mechanism to involve parents, elected officials and representatives of volunteer and service organizations. This larger role for business is advocated by leading CEOs. For example:

- Business leaders at the 1996 National Education Summit agreed to organize town meetings to build public support and engage parents and communities in improving student performance.
- James F. Orr, Chairman of the National Alliance of Business, said, "We want to enter into partnerships with everyone who has a stake in education—parents, students, community members, business people, civic leaders, teachers and administrators."

For the past three years, SREB has assisted local communities in getting employers and educators to work together to improve student achievement. As a result of this endeavor, SREB has concluded that some type of formal plan is essential to build an enduring effort and to get employers and schools to move beyond a few *ad hoc* projects. The Boston Private Industry Council's Extended Compact and the Louisville Education and Employment Partnership are examples of formal efforts. However, large cities are not the only ones that have created formal alliances. For example:

- The Charlottesville-Albemarle School Business Alliance in Virginia was organized in late 1995 and is in the early stages of developing an agenda. The group's goals include increasing the technical skills of high school students, establishing internships for teachers to learn what business requires of high school graduates, and creating opportunities for high school students to participate in the workforce.
- Berks County, Pennsylvania, converted the Berks Business Education Coalition into a nonprofit organization that combines the resources and expertise of local businesses with those of the education community. The coalition's goal is to improve academic achievement and to connect students with the workplace. The nonprofit board consists of 24 members, including 15 from local businesses and nine from public, private and higher education institutions.
- Rockbridge, Virginia, used a chamber of commerce education committee to develop a

### **SREB Will Help Local Teams of Educators and Employers Examine Student Achievement Data in Improving High Schools**

In 1996, SREB received a grant from The Pew Charitable Trusts to increase employer participation in building community support for raising students' classroom and workplace achievement. As one of its services, SREB will facilitate workshops for teams of educators and employers at *High Schools That Work* sites. The teams will use employment and *HSTW* assessment data in developing an agenda for preparing youth for further study in work and educational settings.

workforce endorsement agreement. The agreement calls for the business community to assist educators in developing the technical, personal and academic competencies of high school youth; to request full and frank performance reviews from educators when considering young people for employment; and to give strict consideration to youth who signed an agreement to pursue a challenging and demanding high school program of study. Forty-four large and small businesses are participating in the agreement.

The following steps may be helpful in getting business and education alliances underway:

Employers can:

- Gauge the extent of collaboration between high schools and employers and identify what remains to be done.
- Gain as much consensus as possible for an employer/business plan.
- Approach the school system to learn its priorities in supporting efforts to raise student achievement.
- Aim for agreement with system and school leaders on a joint program of support and action—a compact for high achievement.
- Set goals for recruiting employers to carry out the plan.

Schools can:

- Designate a top-ranking school district official to play a leadership role in a joint employer-school

program. Announce the appointment to employers and business organizations.

- Be prepared to say what the school system believes to be the more important features of a joint approach. Also, be prepared to listen to employer viewpoints about what is needed.
- Encourage key business leaders to take the lead among employers.
- Be prepared to explain to businesses what the school is doing—or will do—to raise achievement. Convince employers that schools are serious and that they have a plan.
- Become acquainted with models of collaboration in other communities.
- Invite key business leaders to participate in *HSTW* site action plan updates by relying heavily on *HSTW* Assessment data.

## Conclusion

Communities that take the time to care about their youth are communities that have high schools that work. In too many instances, accountability means placing the blame on someone else. If high schools do not work, the problem lies with the “system”—employers, parents and community leaders as well as educators and students. It is time to stop blaming others and get on with the task of fixing the system. This means fixing the school and everything around it—the home, the workplace and the community.



*High Schools That Work* is the nation's largest and fastest-growing effort to combine challenging academic courses and modern vocational studies to raise the achievement of career-bound high school students—the 60 to 70 percent who plan to work, attend a two-year community or technical college or enter the military. The program was established in 1987 by the SREB-State Vocational Education Consortium, a partnership of states, school systems and school sites.

*High Schools That Work* has grown from 28 sites in 13 states to over 650 sites in 21 states. The states are Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia and West Virginia.

*High Schools That Work* is based on the belief that career-bound students can master complex academic and technical concepts if schools create an environment encouraging students to make the effort to succeed. Member schools implement 10 key practices for integrating academic and vocational education and raising mathematics, reading, science and technical achievement.

For more information, contact Gene Bottoms, Director, *High Schools That Work*. Phone (404) 875-9211.

---

**SOUTHERN REGIONAL EDUCATION BOARD**

592 Tenth Street, N.W.  
Atlanta, GA 30318-5790



**U.S. DEPARTMENT OF EDUCATION**  
*Office of Educational Research and Improvement (OERI)*  
*Educational Resources Information Center (ERIC)*



## NOTICE

### REPRODUCTION BASIS

This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").