

School-To-Work Opportunities Act (CFDA No. 84.278)

I. Legislation

School-to-Work Opportunities Act, Public Law 103-239, 108 Stat 568, May 4, 1994, (20 U.S.C.6 101-6235) (expires October 1, 2001).

II. Funding History

<u>Fiscal Year</u>	<u>Appropriation</u>
1994	\$45,000,000*
1995	122,500,000*
1996	180,000,000*

*Identical amounts were included in the 1994 and 1995 budgets for the Department of Labor; \$170 million was included in 1996.

III. Analysis of Program Performance

A. Goals and Objectives

The School-To-Work (STW) program--or school-to-careers program as it is often called--is a one response to more than a decade of renewed interest in improving American education. Since the early 1980s, researchers, educators, employers, and policymakers have sought ways to make education relevant to students' future careers, adapt instruction to the ways in which students learn best, and ensure that students learn the habits and skills that employers value. By adding meaningful context from the world of work, educators hope to engage the interest and intellect of students and help them learn more effectively. Whether learning by doing and in context is accomplished at school, in a work setting, or both, STW seeks to improve career prospects and academic achievement in high school, and thereby boost enrollment in postsecondary education and increase the likelihood of high-skill, high-wage employment.

B. Strategies to Achieve the Goals

Services Supported

The STW program operates through a partnership between the Departments of Education and Labor. Every state has access to seed money to design a comprehensive school-to-work transition system, and to date, 37 states have competed successfully to receive one-time five-year grants to implement school-to-work systems. These systems integrate academic and vocational education, link secondary and postsecondary education, provide learning opportunities at the work site, and fully engage the private sector in the process.

Although states and localities have broad discretion to design their own systems, each system must have the following core components:

Chapter 410-2

- **School-based learning**, including a coherent multiyear sequence of integrated academic and vocational instruction--involving at least two years of secondary education and one or two years of postsecondary education--tied to occupational skill standards and challenging academic standards;
- **Work-based learning**, providing students with workplace mentoring and a planned program of work experience linked to schooling; and
- **Connecting activities**, to ensure coordination of work- and school-based learning components by involving employers, improving secondary-postsecondary linkages, and providing technical assistance.

STW funds are used primarily for grants to states and local communities to build lasting systems.

In addition, the Departments of Education and Labor conduct a number of national activities designed to support the work carried out by state and local grantees. These activities include the following:

- Conducting a national evaluation of the School-to-Work Opportunities Act.
- Establishing, in collaboration with states, a system of performance indicators and measures for assessing state and local progress.
- Providing training and technical assistance to states, local partnerships, and others. A Learning and Information Center has been established to provide technical assistance and disseminate information. In addition, the Learning Center manages a “line of credit” that each state with an implementation grant can use to purchase technical assistance products and services from a wide range of qualified experts.

Major School-To-Work Grants and Contracts*

Awards	1996	1997	1998**
State development grants	15	0	0
State implementation grants			
New awards	10	15	0
Continuation awards	27	37	52
Average amount of award	\$7,260,000	\$6,260,000	\$6,270,000
Local partnership grants			
New awards	29	0	0
Continuation awards	0	0	0
Average amount of award	\$482,760	0	0
Urban/Rural Grants			
New awards	25	20	0
Continuation awards	53	78	98
Average amount of award	\$448,720	\$408,160	\$408,160

Grants to outlying areas	7	7	7
Average amount of award	\$200,000	\$200,000	\$200,000
Program for Indian youth			
New awards	8	5	0
Continuation awards	18	26	31
Average amount of award	\$69,230	\$64,520	\$61,290
National evaluation	1	1	1
Learning and information center	1	1	1

* Awards reflect funds appropriated to both the Department of Education and the Department of Labor.

** FY 98 awards are projected based on Administration budget request.

Strategic Initiatives

Three major initiatives undertaken to support STW are (1) organization of state-level strategic planning institutes, (2) development of a STW Web site, and (3) creation of a technical assistance resource bank. Since August 1996, teams from 20 states have attended institutes designed to strengthen the connection among grant proposals, subsequent state strategies, and performance agreements. The STW Learning Center has developed and maintains an Internet home page with links to more than 40 other STW-related sites (<http://www.stw.ed.gov>). Finally, a resource bank of 141 technical assistance providers has been selected in accordance with criteria related to ability to deliver technical assistance to states receiving grants for STW implementation. Grantees access services of the resource bank through a "line of credit," enabling each state to customize technical assistance to meet its own needs.

C. Program Performance—Indicators of Impact and Effectiveness

The Departments of Education and Labor have identified a variety of indicators with which to assess program performance. These indicators include student participation, outcomes for in-school and out-of-school youth, involvement of employers and educational institutions, and building school-to-work systems. For details, see attachment A at the end of this chapter.

Several major activities to obtain accurate and timely data measuring program performance are under way. First, a five-year evaluation is being done to assess the progress states and communities are making in developing and implementing STW systems. Second, the National School-to-Work Office is working closely with states to develop a system of performance indicators and measures. Finally, several large-scale national surveys are assessing the participation of employers (V.3) and youth in STW (V.4).

Student participation in School-To-Work

Even this early in the development of STW, according to the National School-to-Work Office, states are reporting relatively large numbers of students participating in STW. In communities building STW systems as of June 1996, 10 percent of high school students were engaged in work-based learning tied to classroom instruction, and 26 percent of high school students were in classes where academic and vocational instruction is linked (V.5). Other data suggest, however, that students' exposure to an in-

depth comprehensive set of school-to-work activities is limited. Preliminary data from a national evaluation show that 63 percent of high school seniors in an eight-state survey¹ have participated in certain career development activities, including work site visits, job shadowing, employer presentations, work-readiness class, and use of career interest inventories. Such activities are available to most students but tend to be of limited scope and duration. Therefore, relatively few students are selecting career majors integrated with academic coursework and participating in work-based learning tied to school activities. In fact, the evaluation estimates that at this point only about 2 percent of the seniors surveyed have participated in a comprehensive STW program of study that includes multiple key components of STW (V.1).

Student Achievement

Data on the educational status of out-of-school youth will be available in July 1998 from a National Longitudinal Survey of Youth being conducted by the Department of Labor's Bureau of Labor Statistics (V.4). In addition, the national evaluation of STW is collecting high school transcripts to determine whether students participating in STW also take a full range of academic courses. This evaluation is also following high school graduates as they enter postsecondary education or the workplace. States and local partnerships will also develop ways to track the post-high school transitions of their graduates, and report this information in their progress measures.

System Building--Leveraging State and Local Funds

States report that in 1995 every federal dollar invested in STW grant funds leveraged one to two additional dollars from other public and private sources. These sources include new contributions, funds redirected from other programs, or in-kind contributions such as staff or facilities (V.2). Additional data is being collected in 1997.

Employer Participation

A recent national employer survey reported that 19 percent of employers were participating in one of the following work-based learning activities for high school and college students: internships, mentoring, cooperative education, job shadowing, registered apprenticeships, youth apprenticeship (V.6). Initial evidence from the national evaluation of STW and from grantee-reported progress measures suggests that considerable effort has been made to get employers to participate but that recruiting enough employers to provide many secondary school students with in-depth work-based learning opportunities remains very difficult (V.1, V.5).

IV. Planned Studies

Several major research, evaluation, and data collection activities are in progress:

1. National Evaluation of STW Systems

¹ Survey results are representative of all 12th-grade students in Florida, Kentucky, Maryland, Massachusetts, Michigan, Ohio, Oregon, and Wisconsin.

An independent national evaluation is currently underway to answer three basic questions: (1) Are states making progress in the development of school-to-work systems? (2) Is STW accessible to all students, and do trends in participation of various stakeholders indicate that STW is a viable long-term strategy? and (3) What are the educational and labor market experiences of students participating in school-to-work systems? This evaluation will provide concrete answers to policy-makers' questions about STW. It will also provide states and communities with substantial feedback to improve their management and evaluation capacity. This evaluation, which is based upon a comprehensive data base suitable for detailed analysis, complements the very basic summary performance indicator information reported by states.

To pursue the questions just listed and give states and local communities feedback on STW to improve program management, the evaluation has three major data collection and analysis components:

- a. **Local partnership survey:** A survey of all local partnerships in the 27 states with implementation grants as well as those receiving direct federal grants is under way and will be repeated in the fall of 1997 and 1999. This survey collects information on partnership organization, STW program features, links between secondary and postsecondary education, employer participation, strategies for addressing the needs of particular subpopulations, and aggregate measures of student participation in particular program activities.
- b. **In-depth case studies:** Detailed studies of program implementation and factors affecting program design and progress were conducted following site visits in spring 1996, and will be repeated in 1997 and 1999. The visits were conducted in eight states that have implementation grants and in four local partnerships in each of those states, as well as in six local partnerships that received direct federal grants.
- c. **Student survey.** In the eight states selected for implementation grants, a survey will be conducted of three cohorts of 12th-grade students, selected in spring of 1996, 1998, and 2000. Representative samples of these students will be surveyed about their high school experiences (including participation in STW activities); follow-up interviews 18 months later will ask the students about their postsecondary or labor market experiences. High school transcripts will be collected to provide further information about their course-taking patterns and academic performance. The 1996 student survey has been completed (80 percent response rate), and data analysis and collection of student transcripts currently underway.

The first report from this national evaluation of STW was released in spring 1997 (V.1). Findings are summarized on pages 15 through 18 of this chapter.

2. Performance Measures

The School-to-Work Act directs the Secretaries of Education and Labor to develop a system of performance reporting. In collaboration with the national School-to-Work Office, states have helped define measures of student, school, and employer participation in career awareness, career exposure, career exploration, and work-based learning activities, as well as "leveraged" funding for STW. Over the next few years these measures are expected to evolve into a stable, ongoing system of performance indicators as well as a foundation of core measures around which state and local management information systems can be built.

3. National Longitudinal Survey of Youth (NLSY)

A National Longitudinal Survey of 12 to 17-year olds will be undertaken in 1997 to track broad national trends in the transition from school to work, and to create a benchmark against which to gauge state performance data. The survey is administered by the Bureau of Labor Statistics to collect basic demographic, educational, and labor market data on youth (including out-of-school youth). The Departments of Education and Labor have supplemented the core survey by adding several items relevant to the STW experience: participation in career majors, job shadowing, career counseling, work-site activities, and participation in various STW programs. Baseline results will be available in 1998. A companion survey of school administrators measures school policies and practices with regard to school and work-based learning. Initial results are due in 1997.

4. National Employer Survey

This survey of 3,200 employers is designed and conducted by the National Center on the Educational Quality of the Workforce and the Bureau of Census. Initially administered in 1994, and again in 1996, this survey will be expanded and repeated in 1997. It will gather information on the extent of employer involvement with schools, and school-to-work in particular, and measure the costs and benefits to employers of such involvement. Findings from the 1996 survey indicate that larger establishments (more than 1,000 employees) were significantly more likely to offer work-based learning opportunities than were small and midsize companies.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
Students			
<p>1. All youth, including disadvantaged, limited English proficiency, academically gifted, out of school, and/or disabled, have the opportunity to engage actively in School-to-Work systems that meet high academic standards</p>	<p>Student participation in STW systems:</p> <p>1.1 All youth: By fall 1997, 750,000 high school youth will be engaged actively in STW systems; by 2000, 2 million youth will be engaged actively in STW systems</p> <p><i>As of December 1995, 500,000 high school youth participated in STW systems that offered curriculum that integrated academic and vocational education and providing work-based learning experiences connected to classroom activities.</i></p> <p><i>By fall 1997, baseline data will be available on high school youth enrolled in at least one postsecondary course in an accredited community college or other postsecondary institutions.</i></p> <p>1.2 Special populations: By fall 1997, a percentage of high school youth actively engaged in STW will be from special populations, including disabled, low income, and academically talented youth.</p> <p>1.3 Out-of-school youth: By fall 1997, a percentage of out-of-school youth will be served by alternative education providers that incorporate key components of a STW system.</p>	<p>1.1 Progress Measures (program performance reports), 1997; National Evaluation of School to Work , 1997; National Longitudinal Survey (NLS) Youth Module, 1997</p> <p>1.2 Progress Measures, 1997; National STW Evaluation 1997</p> <p>1.3 National STW Evaluation, 1997</p>	<ul style="list-style-type: none"> ● Align core technical assistance, including the bank of technical assistance providers, with identified state needs. ● Develop linkages and technical assistance with key stakeholder groups, including the postsecondary, disabled, and out-of-school youth communities. ● Sponsor development and identification of exemplary models for serving out-of-school youth and other targeted populations. ● Evaluate states' progress towards building comprehensive systems through site-visits, meetings, and the continuation approval process.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
<p>2. All youth earn a high school diploma or equivalency tied to challenging academic standards, have the opportunity to receive a skills certificate, and are prepared for postsecondary education and careers.</p>	<p>Student achievement in STW systems:</p> <p>2.1 In-school youth: By fall 2000, in local STW systems, the percentage of students from the prior 4 high school graduating classes completing high school will exceed the percentage of students who completed high school in spring 1997.</p> <p>2.2 Math and science: By fall 1998, a baseline will be established for math and science course-taking and achievement, proxy measures for academic rigor. Benchmarks will be established for 2000.</p> <p>2.3 Postsecondary enrollment: By fall 1998, a percentage of youth who participated in STW activities will be enrolled in a postsecondary education course of study consistent with their expressed career interest/major.</p> <p>2.4 Postsecondary completion: By fall 2000, in local STW systems, the percentage of students from the 4 prior high school graduating classes completing a postsecondary course of study (certificate, AA, BA, etc.) will exceed the percentage of students who completed courses of study in spring 1997.</p> <p>2.5 Skills certificate: By fall 2000, in local STW systems, 50% of 12th graders who earned skills certificates in high school.</p> <p>2.6 Out-of-school youth: By fall 2000, in local STW systems, the percentage of out-of-school youth acquiring high school equivalency diplomas will be higher than the percentage who achieved diplomas in spring 1997.</p>	<p>2.1 Progress Measures, 1996; National STW Evaluation, 1997; NLS Youth Module, 2000</p> <p>2.2 National STW Evaluation, 1997</p> <p>2.3 National STW Evaluation, 1998</p> <p>2.4 NLS Youth Module, 2000</p> <p>2.5 National STW Evaluation, 1999</p> <p>2.6 National STW Evaluation, 1997; NLS Youth Module, 1997</p>	<ul style="list-style-type: none"> ● Showcase models for whole school reform. ● Sponsor training to develop the capacity of grantees to institutionalize school-based, work-based, and connecting activities into state and local structures. ● Facilitate peer-to-peer exchange of information among states and local partnerships on integrated curriculum development, restructuring schools, and teaching all students. ● Sponsor and disseminate research that identifies models and best practices for applied learning. ● Use available state-level data to track progress of STW systems in meeting student achievement indicators and provide targeted technical assistance in response to identified weaknesses.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
System building			
<p>3. Build comprehensive school-to-work systems in every state</p>	<p>3.1 Leveraged state and local funds</p> <ul style="list-style-type: none"> – By fall 1997, states in their <u>first</u> year of implementation will have a two to one ratio of federal dollars to <i>new</i> state and private dollars (i.e. for every two federal dollars invested, one dollar will be leveraged from new state appropriations or private contributions that have been made for the purpose of supporting a STW initiative). – By fall 1997, states in their <u>second</u> year of implementation will have a one to one ratio of federal dollars to <i>new</i> state and private dollars. <p>3.2 Skill standard adoption. By fall 2000, 25% of STW implementation states will adopt at least one set of industry recognized skill standards. <i>As of October 1996, no state has adopted at least one set of recognized skill standards.</i></p> <p>3.3 The percentage of STW grantees who report that the STW learning and information center services are timely and useful. By fall 1997, over 75% of STW grantees will report that the Learning and Information Center services are: 1) timely, and 2) “Useful” or “Very Useful”.</p>	<p>3.1 Progress Measures, 1997</p> <p>3.2 Mathematica Rapid Response Survey, 1999</p> <p>3.3 DTL, Inc. Survey of Grantees, 1997</p>	<ul style="list-style-type: none"> ● Institute STW system-building activities in all states through the state implementation plan approval and 5-year grant ward process. ● Conduct public outreach to a broad array of stakeholder groups to build public support for STW system. ● Develop capacity in states to conduct in-depth strategic planning to leverage new resources. ● Identify and disseminate tools and effective practices of STW grantees for broad dissemination among all grantees. ● Support peer-to-peer delivery of technical assistance and training among grantees. ● Provide technical assistance to states in identifying academic and occupational standards in broad career major that lead to portable skill certificates. ● Work with DTI, contractors for the Learning and Information Center, to develop processes for identifying customer needs and swiftly responding to requests for information.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
	<p>3.4 Total recruitment costs of employers who have hired graduates of STW systems. By fall 1998, recruitment costs for entry level employees from STW systems will be reduced by 15% as a result of less frequent turnover and more strategic recruiting.</p>	<p>3.4 National Employer Survey II, 1998</p>	<ul style="list-style-type: none"> ● Build strong school-employer relationship that lead to employers committed to hiring STW graduates who have high academic and workplace skills. ● Use research and evaluation findings to support public outreach efforts to convince employers that hiring STW graduates in cost-effective
Institutions			
<p>4 High schools, postsecondary institutions, and adult high schools are engaged in building School-to-Work systems.</p>	<p>Number of institutions involved in STW activities:</p> <p>4.1 High schools: By fall 1997, with full reporting of STW implementation states, 10% of high schools will have the key STW system components; by fall 2000, 30% of high schools will have the key STW system components.</p> <p><i>As of December 1995, 36% of all high schools in local partnerships from 11 states had the key STW components.</i></p> <p>4.2 Community and technical colleges: By fall 1997, 10% of community colleges and technical colleges will have signed articulation agreements that grant academic credit for work-based learning.</p> <p>4.3 Four-year colleges: By fall 1997, the percentage of four-year colleges that have admissions policies in place that acknowledge academic credit for work-based learning will increase.</p>	<p>4.1 Progress Measures , 1997; National STW Evaluation, 1997; NLS Youth Module, 1997</p> <p>4.2 Mathematica Policy Research Rapid Response Survey, 1997</p> <p>4.3 Office of Educational Research and Improvement (OERI), 1997</p>	<ul style="list-style-type: none"> ● Sponsor and disseminate policy options for awarding academic credit for work-based learning. ● Convene meetings and provide resources to local partnerships working with postsecondary institutions on admissions policies, articulation agreements, and other relevant activities designed to strengthen postsecondary linkages to STW.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
	4.4 Adult education programs: By fall 2000, 20% of adult high schools will provide key STW system components to their students (e.g., work-based learning that is connected to the classroom).	4.4 Funds are needed for data collection.	
Employers			
5. Build strong employer participation.	<p>Participation of employers in STW systems:</p> <p>5.1 Active engagement. By fall 1997, 400,000 employers nationally will engage in at least one recognized STW activity; by fall 2000, 600,000 employers will engage in at least one recognized STW activity.</p> <p><i>As of December 1995, 150,000 employers nationally engaged in at least one STW activity.</i></p> <p>5.2 Provide work-based learning slots. By fall 1997, 50% of all employers participating in STW systems will offer work-based learning slots; by fall 2000, 70% of all employers participating in STW systems will offer work-based learning slots. <i>As of December 1995, 39% of all employers participating in STW systems offered work-based learning slots.</i></p> <p>5.3 Provide work-based learning slots. By 2000, a significant percent of all U.S. employers will offer work-based learning slots to secondary and postsecondary students.</p>	<p>5.1 Progress Measures, 1997; National STW Evaluation, 1997</p> <p>5.2 Progress Measures, 1997; National STW Evaluation, 1997; National Employer Survey II, 1998</p> <p>5.3 Progress Measures, 1997; National STW Evaluation, 1997</p>	<ul style="list-style-type: none"> ● Develop and implement an action plan for recruitment of employers. ● Develop prototype products and employ variety of public outreach strategies, including working with key employer organizations, designed to raise a critical awareness of STW among employers and organized labor. ● Support the development, testing, dissemination, implementation, and showcasing of various approaches to employer participation. ● Work collaboratively with the National Employer Leadership Council to increase the number of US employers in offering work-based learning opportunities as well as the number of opportunities per firm.

School-to-Work Opportunities Core Performance Indicators Plan			
Goal: To Build School-to-Work Systems that Result in Increased Student Achievement and Career Opportunities.			
Objectives	Indicators	Source and Next Update	Strategies
	5.4 Teacher internships. The percentage of all employers in STW systems offering teacher internships will increase.	5.4 Progress Measures, 1997; National STW Evaluation, 1997	
Professional development and training			
6. Prepare teachers to fully participate in STW systems.	<p>Teacher Preparation:</p> <p>6.1 Teacher institutions' participation. An increasing percentage of teacher preparation institutions will prepare teachers to incorporate significant STW elements into their pedagogy and curriculum.</p> <p>6.2 Teachers engaged. An increasing percentage of middle and secondary school teachers will be engaged in professional development emphasizing STW elements.</p>	<p>6.1 FY 1998 resources are needed for data collection and analysis.</p> <p>6.2 NLS School Staffing Survey, 1997</p>	<ul style="list-style-type: none"> ● Support the identification and showcasing of institutions with teacher preparation programs that model the incorporation of STW elements. ● Develop and disseminate to colleges of education integrated curriculum strategies.
Integration of STW with other ED reforms and workforce development systems			
7. Align School-to-Work Opportunities with Goals 2000: Educate America Act, Improving America's Schools Act (IASA), Perkins Vocational Education Act, Adult Education Act, Individuals with Disabilities Act (IDEA), Job Training and Partnership Act (JTPA) and other federal programs.	<p>Number of states participating in the Departments's alignment efforts:</p> <p>7.1 Alignment. By fall 1997, at least 15 STW states will have plans for alignment of STW and Perkins performance measures and standards in states.</p> <p>7.2 Consolidated plans. As of October 1996, Perkins and STW were part of consolidation plans in 8 states. By fall 1997, Perkins and STW will be part of consolidated plans in at least 12 states.</p> <p>7.3 Integrated grant management strategies. By fall 1998, STW grantees will report a high level of satisfaction with grant management assistance offered by the NSTWO, ED, and Labor</p>	<p>7.1 MPR, 1997</p> <p>7.2 Office of Vocational and Adult Education (OVAE) review of plans, 1997</p> <p>7.3 National School to Work Office (NSTWO), 1997</p>	<ul style="list-style-type: none"> ● STW and OVAE work collaboratively with MPR to identify barriers to alignment and build consensus among local school systems for changes in measurement systems. ● Align grant procedures of two Departments so they are seamless. ● Identify opportunity for streamlining grant awards. Align the two Departments' Office of Inspector General (OIG) audit and audit resolution programs for STW grantees.

Analysis and Highlights**
Partners In Progress: Early Steps in
Creating School-To-Work Systems

Mathematica Policy Research, Inc.
April 1997

School-to-Work (STW)

The School-to-Work Opportunities Act (STWOA) provides states with 5-year grants as “seed money” to help implement STW systems. While states and localities have broad discretion to design their own systems, each must have the following core components:

Work-based learning, providing students with workplace mentoring and a planned program of work experience linked to schooling;

School-based learning, including a coherent multi-year sequence of integrated academic and vocational instruction--involving at least 2 years of secondary education and 1 or 2 years of postsecondary education--tied to occupational skill standards and challenging academic standards; and

Connecting activities, to ensure coordination of work-and school-based learning components by involving employers, improving secondary-postsecondary linkages, and providing technical assistance.

Evaluation Procedures

This report is the first product of a 5-year evaluation of efforts undertaken by states and communities since enactment of the School-to-Work Opportunities Act in 1994. The report presents a description of very early steps in implementing this initiative, as a baseline for later judgments of its success in changing how American youth are prepared for the future.

The report is based upon two main sources of information: 1) extensive site visits in 8 states (Florida, Ohio, Massachusetts, Michigan, Wisconsin, Oregon, Kentucky and Maryland) and 39 communities conducted in Spring 1996; and 2) a survey of a representative sample of 1996 high school seniors in the same eight states. The site visits report on early state and local efforts to create school-to-work systems, while the student survey is truly a baseline indicator of students’ educational and work-related learning experiences against which future progress will be gauged.

**Prepared by Planning and Evaluation Service, Office of the Under Secretary, U.S. Department of Education, 4/97

Main Findings

Mathematica's main findings are summarized below:

1. **School-to-Work has generated considerable interest and effort** among educators and employers around efforts to link school and workplace learning to better prepare students for successful careers.
2. **States have begun building a system by creating employer incentives, promoting career development models, facilitating college enrollment, defining target career clusters, and providing technical assistance to local partnerships.** Their approaches so far reflect different priorities. Some states have focused on school-based aspects of STW and others have concentrated on work-place activities. Only one of the eight states visited has so far done all these things.
3. **Two of the eight states visited (Kentucky and Oregon) have made STW reforms a central part of the state's more general school reform agenda affecting all students.** In other states, STW and education reform are proceeding more independently of one another. In several states included in the study, efforts to raise academic performance through school accountability and proficiency testing have absorbed the attention of local schools, making it difficult for some schools to pursue STW implementation goals at the same time.
4. **As envisioned in the legislation, early state efforts often build on programs originating in vocational education,** such as co-op ed, tech-prep, or youth apprenticeship. Building upon established programs has some initial advantages, but ultimately school-to-work must broaden its appeal to larger segments of the student population.
5. **Career development activities designed to permit students to become aware of and explore careers is one of the main ways in which large numbers of students are exposed to school-to-work.** Participation in career development activities is high--through counseling, career interest assessments, career awareness and work-readiness classes (sometimes conducted as part of academic classes), worksite visits, job shadowing, and employer visits to schools. However, for most students such experiences are infrequent and disconnected. Ensuring a coherent sequence of career development activities is a challenge to be addressed.
6. **Curricular changes envisioned in STW, such as career majors and the integration of academic and vocational instruction, are at this early point, a relatively low priority compared to other aspects of STW--notably promoting career development and workplace activities.** Only two of the eight states visited have established goals for participation in career-focused programs of study. Although many students report having expressed a career interest sometime during high school, relatively few students have their courses of study affected by this choice, take an English, math or science course designed for students with similar interests, or report a class assignment in their career area.
7. **Efforts to integrate academic and vocational instruction are widely pursued but sometimes with more emphasis on form than content of instruction.** Approaches that emphasize use of applied methods of instruction in academic classes or upgrading the academic content of vocational courses so far tend to overshadow the aim of creating challenging learning experiences rich in academic content.
8. **Considerable effort has been made to recruit employers** to provide work-based learning activities. Four of the eight states visited set specific goals for the percent of students who will have some sort of

work-based learning experience, and developing work-based learning activities is the top priority for most local partnerships. In an effort to reach a large number of students, at this point most attention is given to expanding brief job-shadowing. There are difficult obstacles to significantly expanding the scale of structured, extended work-place activities linked to the school curriculum as envisioned in the STWOA.

9. School-sponsored workplace experiences are more educationally beneficial than work that students obtain on their own. Most 1996 seniors (88 percent) report some sort of paid or unpaid work experience while in high school. Although relatively few students find their jobs through schools, the quality of those jobs is likely to be better than the jobs students obtain on their own; jobs obtained through school are likely to be in more diverse industries and occupations outside of the retail and restaurant sector, include training, and be linked to schooling through a grade or school assignment.

10. At this early stage in the development of STW systems, the percentage of students who engage in a range of key components envisioned in the Act--career development, career majors, and workplace activity linked to schooling-- amounts to 2 percent of 12th graders in the states studied. Participation in school-to-work can be described in other ways, as well. Based on the survey of 1996 high school seniors, there is wide participation in some STW components (63 percent in comprehensive career development activities), and modest levels of involvement in others (12 percent involved in something like a career major concept, and 16 percent with a workplace activity linked to a school grade or assignment). These patterns of participation reflect both early implementation priorities and initiatives begun before STWOA. Follow-up studies will also measure student participation in postsecondary education.

11. A widespread set of local partnerships has been created. Schools and employers have so far played active roles in STW matters at state and local levels, but with the exception of places building on tech-prep consortium, postsecondary institutions are less active and their role is often not clearly defined. The long-term role of local partnerships as important institutions is likely to depend on developing functions that schools and employers value enough to support as federal funding expires.

Future Issues to Examine

These initial findings indicate that there is considerable activity underway in the name and spirit of STW, but the long-term significance of STW is still uncertain. It remains to be seen whether current efforts can evolve into a coherent, sustainable system capable of providing large numbers of students with high quality learning within a career framework. As this evaluation proceeds, key questions to address include:

- Can STW fit within a coherent set of state and local policies directed at school improvement and reform? Can STW tied to workforce development and training related policies also be viable as an educational reform?
- Can workplace learning be made intellectually challenging for large numbers of students? Can existing barriers to creation of intensive work-based learning be overcome?
- By offering students an opportunity to master challenging material, can school curriculum built around career themes demonstrate broad appeal to students, parents and teachers?

V. Sources of Information

1. Partners in Progress: Early Steps in Creating School-to-Work Systems (Princeton, NJ: Mathematica Policy Research, 1997).
2. Implementation of the School-to-Work Opportunities Act of 1994: Report to Congress, September 1996.
3. National Employer Survey, National Center on Educational Quality of the Workforce, 1996.
4. National Longitudinal Survey of Youth (Washington, DC: Bureau of Labor Statistics, 1997).
5. School-to-Work Progress Measures Report (Washington, DC: National School-to-Work Office, 1997).
6. Shapiro, Daniel, and Zemsky, Robert Education and the Workplace: From School-to-Work and Schooling-at-Work (Washington, DC: National Center on Educational Quality of the Workforce, July 1996).

VI. Contacts for Further Information

Program Operations: Gail Schwartz, (202) 401-6222

Program Studies: David Goodwin, (202) 401-0263