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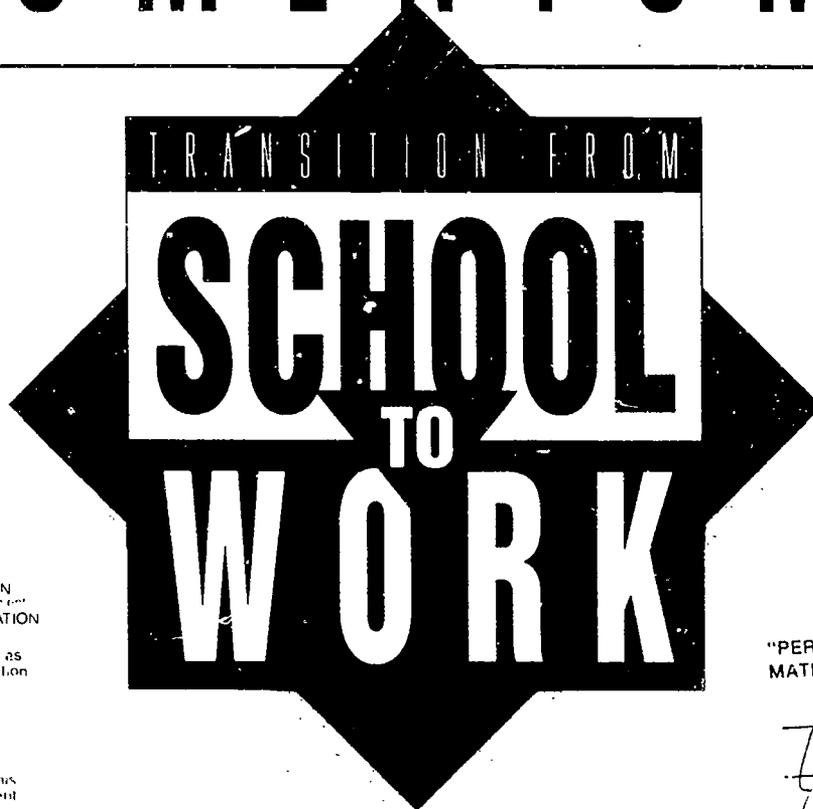
ABSTRACT

This report examines the provisions of the School-to-Work Opportunities Act and describes the steps that have been taken thus far to establish an Ohio system. It discusses the general features that must be included in Ohio's school-to-work system and the strategies around which Ohio's school-to-work plans are being structured. Recommendations are made regarding curriculum and instruction, teachers, students/parents, employers, schools, support, and miscellaneous items. The main focus of the report is a series of profiles of new and existing programs that fall under the school-to-work umbrella. These profiles are presented as models that other school districts, agencies, and employer groups interested in taking the school-to-work approach to high school reform may wish to adopt or adapt. This section begins with the profiles of 11 school-to-work demonstration programs being supported by the State of Ohio through the Ohio Department of Education and the Department of Development. Information regarding the primary contact people for each program is also provided. These profiles are followed by descriptions of the following: existing school-to-work transition opportunities for regular in-school students, regular cooperative education programs, Job Training Partnership Act-eligible in-school youth, and regular and disadvantaged adults. Information regarding the primary contact people for each program is included. Contains 25 references. (YLB)

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# GATHERING MOMENTUM!



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FEATURING PROFILES OF 23 OHIO PROGRAMS

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**TO THE READER:**

In 1992, the Ohio Council on Vocational Education (OCOVE) published a research report on school-to-work transition in Ohio in an effort to create greater awareness about this important topic.

The 1992 report was destined to have a short shelf life. The STW movement gathered momentum so quickly that the Council soon saw fit to authorize a new study. Bev Gifford, of Chagrin Falls, Ohio, was engaged as the researcher for this study.

As soon as the School-to-Work Opportunities Act of 1994 was signed into law, Ms. Gifford launched her study. She began by conferring with state officials in order to identify existing school-to-work programs and demonstration projects in Ohio that could be adapted or adopted by other vocational educators.

The profiles of 23 such programs and projects constitute the heart of this report. They are illustrations only and far from exhaustive. OCOVE hopes that these profiles will encourage vocational educators to intensify, refine, and expand existing school-to-work efforts.

Ms. Gifford and the Council are deeply indebted to state officials and local program/project personnel for their cheerful assistance in providing information and expert counsel throughout the research-and-writing process.

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# Introduction

“The college prep model has failed to cure the ills of the American educational system, including the high probability that a person without a B.A. will wander from one minimum wage job to another for about 10 years before finding a place to begin a career.”

— CHARLES SCOTT BENSON, Director,  
National Center for Research in Vocational Education  
until his death on July 2, 1994

“The possibilities for school-to-work programs are enormous. They can offer new learning opportunities for young people and stimulate the reform of high schools, including their reconnection to the world outside of school. They can raise larger questions, about the responsibilities of employers and programs for out-of-school youths, that usually get ignored. But they might also end up as work-experience programs for a few at-risk students, or as reforms that generate allegiance only as long as federal dollars last—both implying a life expectancy of about five years. The path to true reform is infinitely more attractive—and also much more work.”

— W. NORTON GRUBB, Professor of Education,  
University of California at Berkeley, and  
Site Director for the National Center for Research  
in Vocational Education

Is it possible that the current rush of school-to-work programs can stimulate real reform of America's high schools? Or will the school-to-work bandwagon end up like so many other reform efforts of the last quarter century — dissipating as soon as federal funds are no longer available?

These questions are being raised throughout the country by educators, researchers, business and labor leaders, legislators, and others. In the first few months after President Clinton's signing of the School-to-Work Opportunities Act on May 4, 1994, there seemed to be more questions than answers about who is in charge of bringing about the changes envisioned in the school-to-work movement. As each state began to develop its own system, power struggles emerged among various agencies. People in existing work-experience programs are nervous. And there are plenty of cynics who don't believe that after 70 years of separation, academic and vocational programs can be merged to the extent called for in the new school-to-work goals.

Despite all the questions, Ohio, with a vocational education system that is widely recognized for its strength, has taken a proactive stance to forge ahead. In fact, the process for developing a school-to-work system actually began in Ohio in September, 1993, some eight months before the School-to-Work Opportunities Act was signed into law.

This report examines the provisions of the School-to-Work Opportunities Act and describes the steps that have been taken thus far to establish an Ohio system. The main focus of the report, however, is a series of profiles of new and existing programs that fall under the school-to-work umbrella. These profiles are presented as models that other school districts, agencies, and employer groups interested in taking the school-to-work approach to high school reform may wish to adopt or

adapt. Having said this, however, please understand that this document represents selected school-to-work initiatives administered primarily through the Ohio Department of Education and is not intended to be all-inclusive of Ohio school-to-work activities.

## Background

Changes in the American economy, brought on primarily by increased international competition, continue to have a pronounced impact on the workforce and workplace. The days of low-skill, high-pay factory jobs for unskilled labor no longer exist. Instead, American businesses are restructuring their workplaces, adopting new models that require more collaboration among workers. Rapid advances in technology are requiring workers with more education and more technical training.

At the same time, America's public education system — the country's primary source of new workers to keep the economy's wheels in motion — has been under heavy stress. Dropout rates continue to be unacceptably high. Achievement levels of American high school students rank well behind those of students in most other industrial nations.

A dramatic alarm was sounded in 1983's "Nation At Risk" report: "Even though American high schools direct most of their resources toward preparing students for college, only about 15 percent actually get a four-year degree within six years of high school graduation." Current figures, cited by the U.S. Departments of Education and Labor, tell us that 75 percent of America's young people do not achieve a college degree. We are told that there is a surplus of college graduates that will continue at least through this century. Still, the college prep model continues to monopolize the organization of most high schools and to loom large in the hopes and dreams of most parents.

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II) addressed many of these concerns, calling upon the states to adopt tougher performance standards while integrating academic and vocational courses, and promoting tech-prep and work-experience programs for all students.

The "Education 2000" goals, developed by President George Bush and the nation's 50 governors in 1989, evolved into the Goals 2000: Educate America Act, signed into law by President Clinton in April, 1994. The legislation establishes a national council to coordinate the development of national job skill standards, and, for the first time ever, includes some important waivers of regulations for six federal programs, including Perkins II. Passage of the School-to-Work Opportunities Act of 1994 completed the second step in the Clinton administration's education agenda. This legislation, originally intended to be the vehicle for a national apprenticeship program, became instead a plan to build on existing programs — including vocational education — on a state-by-state basis.

## **What exists now in Ohio's secondary schools?**

Vocational education has traditionally been the vehicle for preparing high school students to enter the workforce. In FY93, 72,952 students, or 30.8 percent of Ohio's 234,723 students in the eleventh and twelfth grades, were enrolled in occupationally specific programs and/or Occupational Work Experience Programs (OWE). Specific developments worthy of note are as follows:

The Ohio Department of Education has developed Ohio Competency Analysis Profiles (OCAPs), which have been verified by industry as appropriate competencies to be taught in specified vocational programs.

All Ohio eighth graders are now encouraged to have an Individual Career Plan, which is updated annually and serves as the basis for course selections.

About half of the state's high schools are members of tech-prep consortia, which generally combine the last two years of high school with two years of technical training at a postsecondary institution, along with work-site experiences. That represents about 320 secondary school districts, 34 colleges, and hundreds of businesses and industries. Some consortia may include as many as two dozen school districts, but have pilots at only one or two high schools.

About 21 vocational schools have school-to-work apprenticeship agreements that have been approved by the Bureau of Apprenticeship and Training. These programs place qualified students in apprenticeships while they complete high school. Currently, 95 students are enrolled in such programs, 30 percent of whom are at Great Oaks Institute of Technology and Career Development in Cincinnati.

Eight state agencies are collaborating on Project Life at five sites, developing school-to-work models for students with disabilities.

Jobs for Ohio's Graduates (JOG) targets "at risk" twelfth graders to help them stay in school through graduation and obtain jobs that will enable them to be self-sufficient. Last year, JOG served 5,949 students in 159 schools. This year, it will serve about 6,800 in 170 schools.

JTPA Youth Employment Programs, funded through local Private Industry Councils, provide economically disadvantaged youth with both summer and year-round paid work experiences.

Model school-to-work programs and demonstration projects are scattered throughout the state. Many of these projects are described in detail in a later section of this report.

# The School-to-Work Opportunities Act of 1994

According to John F. (Jack) Jennings, who serves the Committee on Education and Labor, U.S. House of Representatives, as general counsel for Education, "The School-to-Work Opportunities Act is not just another federal program, but an effort to create a system for easing the transition from high school into employment or further training." It was designed, he said, to make better sense of the array of programs that now exist at the state and local levels.

The use of the term *system* is key. The School-to-Work Opportunities Act has been generally viewed as a Clinton administration initiative that passed easily because it wasn't controversial and because it contained "seed" money to help states get started on planning and implementing their own systems. The Secretaries of Education and Labor are jointly charged with administering the Act. The federal school-to-work system has three basic program features:

1. **School-based learning** that integrates the academic and vocational curriculum; includes career awareness, exploration, and counseling for all students by the seventh grade; and requires the selection of a career major by the eleventh grade.
2. **Work-based learning** that includes paid work experience wherever possible, which is coordinated with learning in school, relevant to a career major, and leads to a skill certificate.
3. **Connecting activities** that match students with employers and/or mentors who can help students find jobs or pursue additional training.

A background paper prepared by the U.S. Departments of Education and Labor in April, 1993, defined six approaches that could fall under the school-to-work umbrella:

1. **Registered Apprenticeships**—Training programs primarily run by unions and trade associations to prepare adults for specific technical fields. Apprenticeships are registered by the U.S. Labor Department and generally serve older, more experienced workers, largely in the skilled-construction industry and in large-scale manufacturing. Very few programs enroll high school students.
2. **Youth Apprenticeships**—A combination of structured learning in school and at the worksite, certifying that students possess the skills needed to advance within a specific industry. Such programs may or may not be tied to a registered apprenticeship.
3. **Tech Prep**—A program that typically merges the last two years of high school with the first two years of postsecondary education, providing a common core of proficiency in math, science, communications, and technology, and leading to an associate degree or a certificate in a career field. Some tech-prep programs can also lead to a bachelor's degree.
4. **Cooperative Education**—Part-time jobs for vocational students, in their field of study during the school year. Written training agreements specify student and employer expectations, but are usually less structured than other approaches.

5. **Career Academies**—A “school within a school,” where academic and vocational instruction are integrated around a broad career theme. Some districts also have magnet schools or career high schools focused on a single industry.
6. **School-Based Enterprises**—Programs in which students produce and sell goods or services, ranging from in-school restaurants and child-care centers to construction jobs and auto repair shops.

For the past 20 years, the nation’s vocational education system has been moving toward many of the things called for in the School-to-Work Opportunities Act. For example, more than 400,000 high school students, about eight percent of the enrollment in grades 9-12, are involved in cooperative education programs nationwide, while another 100,000 participate in tech-prep programs. About 23 percent of U.S. high schools have some form of school-based enterprise.

So what is different about the School-to-Work Opportunities Act? Perhaps the most significant difference is the federal legislation’s declaration that school-to-work shall include **all** students. When fully implemented, the ultimate goal would be to have every student, including those who are college-bound, select a career major by the eleventh grade and participate in some work-based learning experience prior to graduation. The result would be a reshaping of high schools toward occupationally oriented education.

Another key difference is the active involvement of business and labor. The U.S. Chamber of Commerce supported the creation of a national school-to-work transition system, and issued a statement that said, in part: “Business must be recognized as the primary customer and, therefore, the primary source in developing the national School-to-Work transition system. The business community must also be centrally involved in all phases of the national system’s design, development, operation and evaluation.”

The AFL-CIO also supported the legislation and continues to encourage trade union involvement. After passage of the Act, Dorothy Shields, Director of the AFL-CIO’s Department of Education, said: “Organized labor is in a unique position to offer its expertise in shaping the work-based learning component independently or with union employers; to work with teachers and students in different career sectors; and to serve as facilitators in the connecting activities. This initiative provides a special opportunity for the labor movement to work for improved academic and vocational education and training for young people and to demonstrate organized labor’s experience and commitment.”

The U.S. Departments of Education and Labor, jointly responsible for overseeing the federal school-to-work system, have said from the beginning that this effort ought to build on the promising approaches being developed throughout the country, and that “no single approach to building School-to-Work programs is appropriate for all communities. A successful School-to-Work system will be built locally, not imposed top-down from Washington, D.C. Local partnerships of employers, schools, labor organizations, parents, students, and community leaders together will design and implement the programs which fit their individual circumstances and unique needs.”

# Developing a School-to-Work Opportunity System for Ohio

Long before the federal School-to-Work Opportunities Act became law, three planning groups had been at work in Columbus identifying issues, discussing policy questions, and developing a framework for Ohio's own school-to-work system. Some of the early planning initiatives were underwritten by a \$450,000 STW planning grant from the U.S. Departments of Education and Labor.

- An Inter-Agency Team, composed of senior policy staff from Ohio's Department of Education, Bureau of Employment Services, Department of Development, Board of Regents, Department of Human Services, and Legislative Budget Office, has been serving as Governor George V. Voinovich's working body, charged with the responsibility of actually developing a school-to-work system.
- A broad-based group known as the A-Team (part of a national Investing In People Project) includes four legislators, four labor representatives, four business leaders, and several members of the Inter-Agency Team, and has been helping to identify and address the planning and policy issues inherent in establishing a viable school-to-work option for Ohio's youth. [Note: This group also included four educators.]
- The Governor's Human Resources Investment Council, which advises the Governor on the policies, coordination, and evaluation of all workforce development programs in Ohio, has also been a key player in school-to-work deliberations.

Directing the efforts out of a newly created Ohio School-to-Work Office is Mary A. McCullough, who has worked with the Inter-Agency Team and the other two groups to define the basic shape of the school-to-work system. A vision statement, dated August 29, 1994, describes the state's school-to-work mission as:

To solve the current mismatch between the skills of the labor force and the skill demands of the workplace by:

- creating a comprehensive school-to-work system — one that unites business and industry, labor, community organizations, public sector agencies, higher education and our public schools in an unprecedented partnership to ensure that America's students and workers become continuous learners.
- building a school-to-work system that provides all of Ohio's young people with opportunities to: increase their academic and occupational skills; improve their preparation for high-skill work; and initiate and sustain their occupational careers.

In her August report to Governor Voinovich, McCullough said the planners agree that real reform is needed, particularly in the way education and training programs are operated in Ohio's public schools. "We need to integrate academic and vocational programs. It is not sufficient to build two separate programs — one for academic education, and the other for vocational training — regard-

less of how good either one of them is," the report said. "Ohio's school-to-work system must have an effective work-based component. We need to establish a clear link between school-based and work-based learning. Effective public/private partnerships must be at the core of Ohio's school-to-work system. Employers have a special role to play in the reconstruction of Ohio's school-to-work system. They must play that role in defining occupational skill standards, and in leveraging the investment of public dollars."

The planning team has stated that Ohio's school-to-work system must include these five general features:

1. It must be **seamless**, with all elements of the system working together toward a single purpose.
2. It must be **flexible** and offer numerous pathways to training and employment opportunities.
3. It must be **community-based**, with customized programs designed to fit local needs, and to foster creativity and local ownership within the context of statewide standards.
4. It must be **results oriented** and those who are part of the system must be held accountable for their actions.
5. It must be **client driven**, designed to meet the needs of clients, not to serve interests of those who provide these services.

Further, the planning team has listed the following key strategies around which Ohio's school-to-work plans are being structured:

1. Establish specific, high, statewide **standards** for both school and non-school programs, and assist local programs in meeting these standards. Possible tactics:
  - Improve career guidance throughout Ohio's education system.
  - Improve the assessment of current and future marketplace needs.
  - Develop industry/occupational standards — defined and driven by Ohio's employers.
  - Develop clearer standards for school and non-school instructors.
  - Assist local school-to-work programs in meeting the new standards, through the development of model curricula, the mobilization of technical assistance teams, and expanded professional development for teachers and mentors.
2. **Assess the performance** of students, teachers, and programs to ensure that they meet Ohio's school-to-work standards and objectives. Possible tactics:
  - Support and extend proficiency testing to ensure that all students are competent in basic skill areas.

- Develop an occupational skill assessment/certification process, building on OCAP [Ohio Competency Analysis Profiles] and vocational testing programs.
  - Establish a system of rewards and consequences for school-to-work programs' performance as it is gauged by their objectives.
  - Assess teacher/mentor performance, with intervention and support for teachers who need help and removal for those teachers unwilling or unable to correct their deficiencies.
3. Create effective school-to-work **partnerships** (i.e., public/private and local/state/federal), coordinating the actions of all partners and ensuring shared responsibility for the system's success. Possible tactics:
- Establish clearer links between K-12, adult vocational education, technical education, and baccalaureate programs.
  - Establish inter-agency compacts/agreements at the state level.
  - Use public-sector investments to stimulate private investments in job training and other school-to-work initiatives.
4. Ensure that all young people have **access** to Ohio's school-to-work system and its opportunities for academic and vocational success. Related issues include: school-to-work governance, school-to-work funding, state/local relations and public sector/private sector relations.

## Next Steps

Final recommendations from the STW planning team were submitted to the Governor and the Legislature on October 3. Since the legislature will not be back in session until January, 1995, the STW Office plans to use that time for a comprehensive marketing campaign. By the time the Governor goes to the Legislature, the hope is that support for the proposals will be widespread.

Some items in the legislative package may be volatile. For example, changing the structure of the school day and the school year could produce more controversy than the legislature is willing to tackle. What will really drive STW will be the pilot projects and programs that are not "status quo" — such as Project SMART in Cleveland, where students of 27 different nationalities are clamoring to get in, or the Greater Cincinnati Youth Apprenticeship Program, which is demonstrating that organized labor truly is willing to facilitate the connection between school and work.

In the meantime, the STW staff is preparing to apply for a federal implementation grant, which is to be submitted in late 1994 or early 1995. This grant, if received, would enable the state to activate many of the initiatives contained in the proposed STW system.

# Conclusions

## The Planning Process

An examination of the input gained during school-to-work regional forums held in Akron, Cincinnati, Cleveland, Dayton, Marietta, Toledo, and Wilmington in June, 1994, provides a graphic look at the substantial differences in viewpoint among five stakeholder groups — business representatives, community leaders, educators, labor representatives, and parents. The business community was united in dismay over the basic-skills levels students bring to the workplace. Community leaders also called for better basic skills and better teacher training. Educators were concerned with having a better definition of school-to-work and more parent involvement. Labor groups expressed strong displeasure with the basic-skill levels of many students. Parents saw a need for more communication about their children's options.

Given these disparate views, it is impressive to see the collaborative planning efforts that are occurring at the state level and the progress that has been made in helping stakeholders understand each other's positions. Initially there was a perception that the State Department of Education would have a very limited role in developing an STW system for Ohio. Placing the state's new School-to-Work Office within the Ohio Bureau of Employment Services conveyed the message that STW was an economic-development issue, not an education issue.

Thanks largely to the hard work of STW's director, Mary McCullough, education — one of five agencies represented on the planning team — has become a prominent player. It is generally understood that STW initiatives cannot be accomplished unless education plays a lead role. Drafters of the federal legislation exhibited wisdom in forcing collaboration as the only means of qualifying for funding.

It is a given, based on what we know about human nature, that there will be turf battles. But thus far, there has been committed and centralized leadership from the Governor's Office and some very productive cooperative efforts. Involving the Governor's Human Resources Investment Council and the A-Team's Investing In People Project has provided a real forum for dialog on all of the STW issues and helped people pool their efforts.

Obviously, when STW initiatives reach the local implementation stage, even more cooperation will be called for. There may be educators who want to maintain control over their own areas, rather than share that control with business. There may be employers who see STW as a way to get short-term, low-paid employees. What draws some people to the discussion may be self-serving, but the leadership to this point has been exemplary.

## What is School-to-Work?

Too many people are thinking of school-to-work as a program. This despite the efforts of state and federal officials to insist, repeatedly, that: It is not a program. It is not just for non-college bound students. It is a **system**.

The approach being followed in Ohio is to build and improve upon what is already in place. If a definition of STW is really necessary, it can best be described as multiple programs, leading to a series of expected standards that prepare all young people — whether they are disabled, or average, or bright — with the skills they need to enter either the workforce, or some kind of postsecondary training — or both. The college-bound are no less at risk than other students. There are many college graduates who have wallowed around for years trying to find the right job, at considerable psychological and financial cost.

People in some existing programs, particularly programs that depend upon funding from the Job Training and Partnership Act (JTPA), see STW as a threat. There is speculation that JTPA has about one year left and could be replaced by something, just as CETA was replaced by JTPA. That something could be STW. If that happens, programs such as Jobs for America's Graduates may have to find a way to survive. About 40 percent of its funding comes from JTPA. This program serves 6,800 "at-risk" 12th graders in Ohio and has a 92 percent graduation rate. With a success record like that, it is inconceivable the program would be allowed to die.

## **Addressing the Issues**

Clearly the thorniest challenge for STW is the preference for all students to have a paid worksite learning experience before they graduate. There has been more debate on this issue than any other. While everyone agrees it would be desirable, not everyone agrees that it is practical, economically feasible, or logistically possible.

For one thing, there simply are not enough paid positions in the workforce to place the quarter of a million eleventh and twelfth grade students currently enrolled in Ohio schools. Furthermore, many employers will not or can not absorb the cost. And there are formidable geographic constraints in some rural areas of Ohio.

One Ohio business man who actually helped write the federal legislation said: "In a high performance workplace, we do not have the time. It's impossible. And when you look at the liability question, it's doubly impossible. One of my top welders could go to a school and show a student what he needs to know. They don't need to come here and stand beside a machine."

His sentiments were echoed by this business woman: "We've got health reform, and welfare reform, and then all of a sudden, STW comes along and says, 'while you are trying to be globally competitive, we want you to take these kids, pay them, teach them, give them a mentor, and get organized labor in your shop to agree to it.'"

At the other end of the spectrum, a third businessman said: "I'd like to see no more money spent on vocational equipment in high schools. Let the youngsters come to us in industry and let us teach them. That would be so much cheaper than the millions of dollars spent on equipment. Of course, I want a tax credit."

In the hierarchy of work-based learning experiences, the highest level would be a true youth apprenticeship leading to a credential. Below that would be paid work experience, followed by the con-

cepts of internships and mentorships, and lastly, the concepts of job shadowing and field trips. Paid work experience is the ideal, and there is a lot of room for expansion of this practice; but if it's not achievable for all students, then an experience that allows students to relate to their career interests and provides them application in the work environment is the next best thing.

A second issue is a "gap problem." Many in the business community do not understand education and vice versa. Educators attending the regional forums appeared to be more interested in defending existing programs. They were the only group whose top priority was the need for a clear definition of STW and what would be expected of them.

There appear to be two camps of employers. One group is already into the high performance, global economy mold and is extremely critical of the product coming out of high schools. These are the people who say they have no plans for taking over education, but if educators can't get it together, business will be forced to conduct their own education programs. They cite, for example, ITT's four new office-education factories now being set up around the country. The other group of employers is desperately in need of skilled workers and willing to do whatever it takes to work with the schools.

The liability factor, from industry's standpoint, is a big issue. The whole question of liability and child labor laws in Ohio is being examined by the STW planning team, and there are a number of initiatives being proposed. For example, economic development officials have come up with a tax-credit proposal that, if adopted, could ease a company's liability risks.

There are questions about where organized labor is going to fit into the STW system. Registered apprenticeships have been under the control of trade associations for nearly sixty years and the credentials they traditionally have given are highly protected and valued. While there have been a few unsuccessful attempts at establishing partnerships with schools, there are many more examples of cooperation between unions and schools in setting up youth apprenticeships programs. Labor is not being unreasonable in insisting that workers have to be qualified to get into the trades, and there is ample evidence that students in vocational programs who have met certain standards are gaining special consideration when it comes to getting into apprenticeship programs.

In recent years, high school principals and joint vocational school administrators have had an ongoing turf battle of their own. When the jointures first came on line back in the 60's and early 70's, schools were in a growth mode. High schools had more students than they could handle, and they were short on space.

Sending students to the JVS was viewed as a good way to get relief from overcrowding while keeping 25 percent of the ADM (average daily membership) allowance. Then, as enrollment started to decline and collective bargaining agreements kicked in with regard to job security, what used to be a 25 percent incentive for sending students to a JVS, now became a 75 percent penalty. Many administrators now view this as the primary barrier to full-fledged marketing of vocational education programs.

## How long will it take?

Anyone who believes Ohio can have an STW system in place, with all of the components up and running within the next four or five years, is naive. STW planners are dealing with a system that is very entrenched — a system that has isolated academics for 70 years. There were good reasons for it at the time, but the whole system needs reform. There is strong recognition of this, and many people are working hard at it, but it is not something that is going to be resolved by flipping a switch.

People are going to have to develop a sense of patience. There are a lot of reasons why this country may never get to a system like the Germans have. We can have models of that, in some areas, but it is more likely that we will end up with a variety of models that together will form a comprehensive STW system, serving the needs of a variety of students and employers.

Real reform can happen, but it's going to take more than time, and it's going to take more than a law. It will require a major change in attitude on the part of regular teachers, counselors, and parents. It will require non-educators to gain a better understanding of the problems society has dumped on the schools. Many concessions will have to be made around the STW table.

If the progress that has been made to this point is any indication of what is to come, school-to-work could well be the wave on which Ohio's education reform and economic development can ride together into the 21st century.

# Recommendations

## Curriculum and Instruction

- Continue the reform of education, K-12, to assure that every student who graduates will be prepared to go to work or to pursue further education, or both.
- Enforce the banishment of the general track in all Ohio high schools.
- Erase the separation between college prep and vocational curricula to facilitate student transfers in and out of the programs.
- Require that all academic courses be client-driven and include real life applications.
- Require every school district to develop and implement comprehensive career development activities for all elementary and middle school students.

## Teachers

- Correlate teacher education programs with education reforms.
- Include student career planning as a strong component of every teacher preparation program, K-12.
- Require annual staff development programs on student career-awareness and career-development for all existing teachers, K-12.
- Include specific language in teacher certification standards regarding development of the Individual Career Plan for students.
- Adopt a teacher certification standard that requires prospective teachers and counselors to have non-educational work experience.
- Mount a major campaign to "educate the educators" about the world of work and school-work connections.
- Require vocational education instructors to show evidence that advisory committee members are true partners.
- Encourage teacher externships, allowing teachers to spend time at the worksite developing internships for students.

## Students/Parents

- Conduct a comprehensive assessment of each student's goals, abilities, and aptitudes, tied to the Individual Career Plan process, and help parents and students understand the assessment and make wise decisions.
- Identify students who are having serious difficulties in college-prep programs and inform parents about appropriate options. Also inform parents that only 15 to 20% of the jobs in the work force require a college degree.
- Provide all special-needs and at-risk students with occupationally specific training and transition services. In view of the fact that food programs and horticulture include high-tech and high-management skills, guard against emphasizing the placement of disadvantaged students in these programs.
- Assign a job coach, advocate, or mentor to every student, beginning in the eighth grade.
- Make substantive changes in the OWA (Occupational Work Adjustment) and OWE (Occupational Work Experience) programs that would allow students to succeed in the main stream and to participate in school-to-work transition initiatives.

## Employers

- Guarantee prospective employers that all graduates will possess entry-level basic skills, or the school will provide remedial instruction at no cost.
- Maintain as a goal opportunities for paid work experience for all students prior to graduation.
- Look beyond the private sector for worksite placement opportunities, i.e., non-profit organizations, schools, state/local/federal government operations, and the military.
- Grant waivers in child labor laws and define reasonable liability limits for employers who participate in school-to-work partnerships.
- Encourage day-long teacher-employer job exchanges.

## Schools

- Remove all barriers to enrollment in school-to-work programs, such as scheduling problems, transportation, and conflicts in school day/year configurations.
- Encourage experimentation with non-traditional scheduling, such as split shifts, year-round school, or Saturday classes, to accommodate worksite experiences for all students.

## Support

- Provide both program support and financial backing for school-to-work pilot and demonstration projects and widely publicize program results.
- Explore incentives to compensate high schools for funds lost when students transfer to vocational programs at other schools.
- Provide tax credits, grants, or other subsidies to businesses that provide paid worksite experiences for students.
- Continue financial support for the Jobs for Ohio Graduates program in the event that JTPA funds are redirected.

## Miscellaneous

- Include instructional components that address the work ethic and the capacity of individuals to relate effectively to each other.
- Insofar as possible, combine programs such as those listed on pages 5 and 6 of this publication, in order to eliminate (or at least reduce ) duplication.
- Give number-one priority to the client-driven aspect of program development and establish a means of measurement to ensure that this goal is being accomplished.
- Strengthen communication between and among secondary schools, postsecondary institutions, and four-year colleges and universities in order to reduce duplication of programs and improve the articulation of curricula.
- Encourage and involve producers of instructional material, including publishers, in the process of educational change, so that such materials may reflect the content of Ohio's Competency Analyses Profiles (OCAPs).

# School-to-Work Demonstration Projects

Eleven school-to-work demonstration projects are being supported by the State of Ohio through the Ohio Department of Education and the Department of Development. These projects and their current status are:

SPONSOR	PROGRAM/STATUS
Cleveland Public Schools Youth Opportunities Unlimited Project SMART	Manufacturing & Automotive Related Technologies (I)*
Cuyahoga Community College North Coast Tech Prep Consortium	Health Occupations Program (UD)**
Eastland Vocational Schools Columbus State Community College	Administrative Technology Mentorship/Apprenticeship Program (I)
Lorain County School-to-Work Learning Lab	Metalworking, Building Trades, Environmental Studies, & International Business (I)
Marion Technical College Tri-Rivers Career Center Tech Prep Partners Consortium	World Class Production/ Business Technologies, Computer Technologies, & Engineering Technologies (UD)
Owens Technical College Grob Systems, Inc.	Mechanical Technician & Electrical Technician Apprenticeships (I) (UD)
Shawnee State University Ohio South Tech Prep Consortium	Automotive Apprenticeships Electronics/Electromechanical Pre-Apprenticeships (UD)
Stow-Munroe Falls City Schools Akron Tech Prep Consortium	Polymer Science Program (I)
Toledo Area Private Industry Council	Youth Apprenticeship Program (I)

\* (I) denotes the program has been implemented.  
\*\* (UD) denotes the program is under development.

A profile of each of these demonstration projects is included in this report, along with information regarding the primary contact people for each program.

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## **Cleveland Public Schools Youth Opportunities Unlimited Project SMART**

**(A youth apprenticeship program beginning in the ninth grade, uniting vocational and academic coursework)**

Project SMART (School of Manufacturing and Automotive-Related Technologies) is a multi-disciplinary program that begins in the ninth grade. It is one of 21 innovative school-to-work transition programs throughout the United States featured in "New Century Workers," a 1994 report published by the Center for Workforce Preparation, an affiliate of the U.S. Chamber of Commerce.

Started in 1992 at Cleveland's West Technical High School, the program is a collaborative effort of the Cleveland business and education communities, through Youth Opportunities Unlimited (Y.O.U.), an operating partner of the Cleveland Initiative for Education. Recently, the program has expanded to other Cleveland area high schools.

Much of Project SMART's course work takes place outside the schoolhouse by involving ninth graders in field trips, tenth graders in shadowing experiences, eleventh graders in worksite learning experiences, and seniors in a summer skills academy and part-time paid employment in a manufacturing company in Greater Cleveland.

Curriculum standards are higher for SMART students. While regular students need 18 credits to graduate, SMART students must have 21.5 credits, including four units of math and three units of science. After the first two years, students qualify for Certificates of Initial Mastery, and graduating seniors receive Certificates of Mastery.

Two yearly grants of \$70,000 from the Ohio Department of Education will cover school district costs for curriculum development and teacher training. The Ohio Department of Development is providing two yearly grants of \$75,000 to cover industry mentor expenses for on-the-job training and work-based instruction for 50 youth apprentices in the field of manufacturing.

**For more information, contact:**



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**Craig Dorn**  
Program Supervisor  
West Technical High School  
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Cleveland, Ohio 44102  
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## **Cuyahoga Community College North Coast Tech Prep Consortium Health Occupations Program**

**(Creating articulation models for joint vocational schools, magnet schools, and comprehensive high schools)**

Cuyahoga Community College and the North Coast Tech Prep Consortium are in the process of developing a Tech Prep Health Occupations Program that will provide a number of worksite learning experiences at health care facilities throughout Greater Cleveland. The program will be piloted during the 1995-96 school year at four sites: Cleveland Public Schools' Health Careers Center, Polaris Joint Vocational School, Cleveland Heights/University Heights High School, and Mayfield High School. Applied courses in biology and chemistry will be added to English, math, and physics, using a cluster approach to create articulation models for joint vocational schools, magnet schools, and comprehensive high schools.

Partnerships have been established with the Greater Cleveland Hospital Association and the Greater Cleveland Growth Association.

The Ohio Departments of Education and Development have awarded two-year grants totaling \$224,000. Investments by schools and businesses bring the total to \$309,786. This money will be used, in part, to cover industry mentor expenses for on-the-job training and work-based instruction for 15 student trainees during the pilot year of the project.

**For more information, contact:**



**Mike Boyko, Tech Prep Coordinator  
North Coast Tech Prep Consortium  
Cuyahoga Community College  
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Cleveland, Ohio 44115  
Phone: (216) 987-3303  
Fax: (216) 987-3335**

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## **Eastland Vocational Schools Columbus State Community College Administrative Technology Mentorship Apprenticeship Program**

**(Featuring a business/instructor exchange program and heavy involvement of parents)**

Eastland Vocational Schools, serving 16 Columbus area high schools, is providing classroom training, on-the-job training, and work-based instruction for students preparing for careers in insurance, banking, or health services. The course of study was developed by combining three already tested models: Eastland's Administrative Technology Management Program, a mentoring model, and an apprenticeship model.

In the eleventh grade, students are involved in broad-based career exploration activities. One-on-one mentoring and job-specific apprenticeship experiences occur during the twelfth grade and are limited to those students who have passed the Ohio Proficiency Tests. Two unique components of this pilot are a business/instructor exchange program and activities that keep parents involved.

The Eastland staff worked with Columbus State Community College and industry representatives to develop tech-prep curricula that extend the learning experience through the postsecondary level. Student standards are based on the appropriate OCAPs (Ohio Competency Analysis Profiles) and tech-prep competencies. A model evaluation instrument and process have also been developed. Columbus State and Eastland JVS are developing handbooks and materials for mentors, employer supervisors, CEO's, students, teachers, counselors, and parents.

Grants by the Ohio Departments of Education and Development — totaling \$289,171 over a two-year period — are covering the educational institutions' expenses as well as industry mentor expenses and on-the-job training at 16 worksites.

**For more information, contact:**



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**Debra Coleman, Tech Prep Director  
Columbus State Community College  
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Columbus, Ohio 43215  
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## **Lorain County School-to-Work Learning Lab**

**(Expanding a summer youth internship into a high performance, year-round youth apprenticeship program)**

Lorain County's School-to-Work Learning Lab is being piloted in two traditional vocational areas (metalworking and building trades) and two non-traditional areas (environmental studies and international business).

The Center for Leadership in Education, located in Amherst, Ohio, is the fiscal agent for expansion of an existing summer youth internship project into a full-blown year-round program, which includes a 50-hour youth apprenticeship experience during the summer before Grade 11 and a paid youth apprenticeship experience during the summer before Grade 12. This effort brings together Lorain County's business and labor leaders, interdisciplinary teams of vocational and academic instructors at both the secondary and postsecondary levels, career development professionals, parents, and students.

Developed during the summer of 1993, the program replicates many successful apprenticeship practices used in Germany, France, and England. One aspect that makes it unique from other school-to-work transition efforts is the fact that teachers and work-site mentors jointly develop school and work competencies based on students' individual career goals and needs. The teachers then integrate a rigorous academic curriculum with technical lab experiences, reinforced by the worksite mentors.

Other unique elements of the program include teacher internships at local worksites, mentor training, and development of industry-recognized entry level criteria and completion outcomes that link the students to job placement, tech-prep programs, associate degree programs, certification programs, or four-year colleges.

Students from Lorain County Joint Vocational School, and Elyria and Oberlin City Schools are enrolled in this county-wide program. In addition to school district and local business investments, the Ohio Departments of Development and Education are providing two-year grants totaling \$290,000.

**For more information, contact:**



**Jan Rybarczyk, School-to-Work Coordinator**  
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**2240 Kresge Drive**  
**Amherst, Ohio 44001**  
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**Fax: (216) 960-1285**

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**Marion Technical College  
Tri-Rivers Career Center  
Tech Prep Partners Consortium**

**Business, Computer, and Engineering Technologies**

(Linking the isolated worlds of "work" and "school")

Marion Technical College and the Tri-Rivers Vocational Education Planning District in Marion are in the process of incorporating school-to-work elements into three tech-prep programs currently being offered: World Class Production/Business Technologies, Computer Technologies, and Engineering Technologies. An internship model is the vehicle being used to link the isolated worlds of "work" and "school" for tech-prep students.

As currently planned, the internship activities will actually begin with counseling as early as Grade 8 and continue with a step-by-step system until Grade 12 and beyond. The model includes a detailed evaluation of the programs' and students' progress compared with expected outcomes at each stage. A feedback loop will help program coordinators make necessary changes based on evaluation results.

The Ohio Department of Development has awarded a one-year grant of \$42,000 to help this school-to-work project get started. During the 1994-95 school year, mentors are being trained and guidelines for the "work-shadow" program are being developed. Paid summer work experience for graduating seniors will begin in 1995. Students will then have the option of entering the job market and/or pursuing an associate degree at Marion Technical College. Following that, students have the further option of continuing at a four-year college and obtaining a bachelor's degree.

**For more information, contact:**



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Tech Prep Partners Consortium  
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## **Owens Technical College Grob Systems, Inc.**

### **Mechanical Technician and Electrical Technician Apprenticeships**

**(A true, German-style apprenticeship program with major financial investment by industry)**

This program, now in its second year, differs from the other demonstration projects in that it provides actual apprenticeship training for recent high school graduates through a two-year course conducted by Owens Technical College. Grob Systems, Inc., a machining and automated assembly plant in Bluffton, Ohio, invests about \$70,000 for each trainee and requires them to stay with the company for at least two years after the training is completed.

This year, a total of 12 students are enrolled in two apprenticeship programs—mechanical technician and electrical technician. They attend core courses together. Technical training during the first year consists of eight hours of instruction one day per week for 36 weeks. The second year includes 280 hours of hands-on training. Owens Technical College teachers come to the Grob plant to conduct the training. Apprentices receive full company fringe benefits and earn \$6 per hour during the first year, \$7 per hour the second year. When they have completed the program, the pay jumps to more than \$13 per hour, based on their grade-point average. Within five years, employees' annual wages, not counting overtime, will exceed \$30,000.

To recruit students, Grob representatives visit area high schools and invite interested seniors to take a three-hour aptitude test that measures knowledge of mathematics, mechanical aptitude, drawing skills, and ability to solve story problems. The company then screens the applicants, looking at their high school transcripts, attendance records, SAT scores, and performance on the aptitude test. Only the highest ranking students are interviewed.

The Grob system differs from other registered apprenticeships in the U.S. in that the standards and course outlines were designed to fit the needs of one particular company rather than an entire occupational field. An effort was made, however, to keep these apprenticeships within state guidelines so that completers will be state certified.

#### **For more information, contact:**



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## **Shawnee State University**

### **Ohio South Tech Prep**

Receipt of a \$42,000 grant from the Ohio Department of Development in July, 1994, is enabling this consortium to work with three vocational schools, their feeder schools, and Portsmouth area businesses and industry to develop a school-to-work transition program. Collaborating industrial firms include Dow Chemical, Aristech, and Martin Marietta.

Currently, a coordinating team representing business, organized labor, secondary, and post-secondary education is meeting biweekly to lay the framework for the plan. In September, sixteen team members were scheduled to receive hands-on training at South Carolina's B.J. Skelton Career Center, a national model site for school-to-work programs.

The goal is to have up to 12 students involved in a work-based learning situation before the end of the 1994-95 academic year.

**For more information, contact:**



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**Portsmouth, Ohio 45662**  
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**Sinclair Community College**  
**Miami Valley Tech Prep Consortium**  
**Automotive Apprenticeships**  
**Electronics/Electromechanical Pre-Apprenticeships**

(Offering a seamless course of study linking secondary and postsecondary education in a school-to-work road map)

These two pilot projects are in the final stages of development and expect to begin enrolling students sometime during the 1994-95 school year. Department of Development grants of \$75,000 for the automotive program and \$42,000 for electronics/electromechanical are enabling the College to add worksite learning experiences to existing tech-prep programs. Planners have designed a seamless course of study that spans the final two years of high school and two years at Sinclair Community College, along with the worksite experiences. Industry has been heavily involved as partners in the development of these two projects from the beginning. Their strong interest and willingness to participate reflects industry's critical need for skilled workers.

The automotive program links area high schools and career centers with Sinclair Community College's associate degree program and also corporate programs based at the college (i.e. General Motors, Chrysler, and Nissan). In addition, the automotive program has contracted with the Dayton Area Automobile Dealers Association, so that high school students who come into the tech-prep program can have two years of work-based experiences followed by two years in the related corporate program at the college. At the end of the four years, program officials anticipate an extremely high employment rate.

The electronics/electromechanical program will work with students at Dayton's John H. Patterson Career Center and a variety of employers in the area.

**For more information, contact:**



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## **Stow-Munroe Falls City Schools Akron Tech Prep Consortium Polymer Science and Testing Program**

**(A vocational program for college-bound youth)**

In the last 20 years, the polymer industry has become the largest industry in both volume and number of employees in the United States. Northeastern Ohio now bills itself as the polymer capital of the world, which makes the Polymer Science and Testing program at Stow-Munroe Falls High School a perfect match between job training and industry needs.

Created in 1987, this two-year vocational program incorporates college preparatory studies along with training for entry-level placement in nearby polymer industries. The course was designed by school personnel in collaboration with the Society of Plastics Engineers and the American Chemical Society Rubber Division. The program maintains active partnerships with about 30 local companies.

During the first year, students learn to complete polymer testing in areas of hardness, impact, stiffness, tear resistance, effects of heat, weathering, chemical and physical properties, as well as identification analysis. For their work, juniors can earn one credit in technical theory and two credits in laboratory, plus one college-prep chemistry credit in Applied Polymer Chemistry.

During the senior year of the program, students' testing techniques are refined with applied research and quality assurance, using Statistical Process Control procedures. Students who qualify may participate in early job placement during the last half of the senior year, working as lab technicians for a minimum of three hours per day, earning lab credit as well as an hourly wage. Seniors earn one credit in technical theory, two lab credits, and a college prep physics credit in Applied Polymer Physics.

One of 16 career programs offered by the Six District Educational Compact in northern Summit and Portage county high schools, this school-to-work project is part of the Akron Tech Prep Consortium (Akron University). A one-year grant of \$36,050 from the Ohio Department of Development is now being used to train 15 industry mentors who will be providing on-the-job training and work-based instruction for 15 youth apprentices.

**For more information, contact:**



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Stow, Ohio 44224  
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Fax: (216) 688-1629**

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## **Toledo Area Private Industry Council Youth Apprenticeship Program**

**(A highly structured mentors' training program sharpens communications skills)**

The Toledo Area Private Industry Council (PIC), in partnership with the Toledo Public Schools, is currently a National Youth Apprenticeship Demonstration. The goal of this program has been to take existing cooperative education programs in the Toledo Public Schools and expand them into youth apprenticeships. The project has received grants from the U.S. Department of Labor and the Ohio Departments of Education and Development. Elements of the program include paid work experience, applied academics, close coordination between academics and the job site using mentors, and occupational competencies based on the OCAP (Ohio Competency Analysis Profile) system.

PIC serves as an intermediary, bringing the schools and businesses together and keeping information flowing among all parties through weekly meetings with students and employers. A unique aspect of this project is the highly structured training program for mentors. To ensure that mentors have well developed communications and teaching skills, as well as some sensitivity training, PIC worked with the University of Toledo to develop a mentor-training curriculum. Supervisory personnel from industry were recruited to serve as mentor trainers and these individuals then became the "trainers of trainers." Mentor training took place at the PIC offices after the normal working day, extending over a three-week period. Course content dealt with such topics as techniques for conveying messages, listening skills, sexual harrassment issues, evaluation techniques, and teaching employability skills.

Students work the summer after their junior year and part-time during their senior year. Following graduation, employers have the option of offering the student full-time employment. Students can also choose to pursue postsecondary education or apply for acceptance into a registered apprenticeship program. PIC is currently negotiating an articulation agreement with the Northwest Ohio Carpenters' Union to determine what, if any, consideration the carpentry students can receive in being accepted for apprenticeship training.

**For more information, contact:**



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## Existing Vocational Education Models

In addition to the 11 school-to-work demonstration projects being co-sponsored by the Ohio Department of Development and the Ohio Department of Education, thousands of students are participating in job-training programs that meet all or most of the school-to-work provisions. For example:

- Department of Education figures show that in FY93, 69,317 students participated in laboratory activities that directly reflect the workplace.
- Also in FY93, 24,251 students were involved in cooperative education programs with paid worksite learning experiences.
- An additional 10,857 were enrolled in Occupational Work Adjustment (OWA) programs that serve disadvantaged 14 and 15 year-old students through activities that combine classroom and worksite opportunities.
- A total of 7,000 students are also enrolled in the Jobs for Ohio's Graduates Program (JOG), which provides school-to-work transition services for at-risk 12th graders.

The following profiles represent examples of existing school-to-work transition opportunities for regular in-school students, regular cooperative education programs, JTPA-eligible in-school youth, and regular and disadvantaged adults.

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**SPONSOR****PROGRAM**

Columbus Public Schools  
North Education Center

Building Maintenance  
& Trades Program

Coshocton County Joint Vocational School

Cooperative Business  
Education Program

Dayton Public Schools  
John H. Patterson Career Center

Year-long Cooperative  
Education

Glen Oak High School

Cooperative Marketing  
Education Program

Great Oaks Institute of Technology and Career Development

Greater Cincinnati Youth  
Apprenticeship Program

JOG, Inc. of Miami Valley (Dayton area)

Jobs for Ohio's Graduates

Medina County Career Center

Horticulture Program

Portage Lakes Career Center

Ford ASSET Program/  
Ford Outreach

Springfield-Clark Joint Vocational School

Employment Resource  
Center

Tri-Rivers Career Center

Business Education Mentor  
Program

Warren County Career Center

Construction Technology  
Apprenticeship Program

Wayne County Schools Career Center

Industrial Work &  
Training Program

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## **Columbus Public Schools North Education Center Building Maintenance and Trades Program**

As the systems built into high-rise office buildings, apartment and industrial complexes, and hospitals grow increasingly complex, the demand for trained men and women to maintain them continues to grow. The Building Maintenance and Trades Program (BMTP) at Columbus' North Education Center addresses this demand and, at the same time, creates career opportunities for unemployed, underemployed, or displaced workers.

Since the program began in 1986, 100 percent of the graduates have been placed, earning starting salaries from \$18,000 to \$23,000 in their first year. The year-long program includes classes at one of the district's career centers, training in a "retention lab" at North, and worksite learning — all tied to the student's selection of either industrial, high-rise, apartment, or health care maintenance.

BMTP students attend a career center two evenings each week, working with state-of-the-art equipment under the tutelage of experienced staff. They can choose from a variety of classes, including electrical; commercial electricity; electrical motors, control, and circuits; national electrical code; heating, ventilation, and air conditioning; painting; carpentry; boiler operations; plumbing; program logic controls; and refrigeration.

One night each week, students apply what they have learned in the classroom to an actual building — the North Education Center, a former Columbus high school. The "retention lab" instructor simulates mechanical worksite problems, creating an opportunity for students to find solutions, track and evaluate results, learn team work skills, discuss problem causes and symptoms, and learn about job safety.

For 30 hours each week, BMTP students receive on-the-job training, working as interns side-by-side with men and women already in the field. The 100 percent placement record, high starting salaries, and promotional possibilities have created strong interest by applicants, but enrollment is limited to ensure students' success. Applicants must be 18 or over, with a high school diploma or GED, and must demonstrate a prescribed level of mechanical aptitude plus reading, math, and communication skills.

### **For more information, contact:**



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North Education Center  
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Columbus, Ohio 43202  
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## **Coshocton County Joint Vocational School Cooperative Business Education Program**

This is an example of a small program with a long history of success. In fact, the Coshocton County Joint Vocational School is the smallest JVS in Ohio, drawing from three high schools and having only one community, Coshocton, in which to place students for worksite learning experiences.

Nevertheless, the Cooperative Business Education Program has enjoyed strong support from Coshocton businesses. For the past 26 years, 106 employers — including Roscoe Village, hospitals, dentists, doctors, Ansell Edmont, Shaw-Barton, the Chamber of Commerce, and local law firms — have competed for the top students from this class. Between 15 and 18 students work for pay during the summer between the eleventh and twelfth grades and in the afternoons throughout their senior year.

A key element to the success of the program over the years has been home visits. Although no longer required, the instructor has continued to make home visits, believing it is the best way to establish rapport with the parents and keep their support throughout the year. Another unique practice sometimes used by the instructor is to have co-op senior students train the students who will be replacing them the following year.

The school now has an articulation agreement with Central Ohio Technical College and a tech-prep agreement with Kent State University. Student success in the program, according to the instructor, is based on strict enforcement of the Four A's of Success: Attitude, Attendance, Ability, and Appearance.

**For more information, contact:**



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Coshocton County Joint Vocational School  
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Coshocton, Ohio 43812  
Phone: (614) 622-0211  
Fax: (614) 623-4651**

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## **Dayton Public Schools John H. Patterson Career Center Year-long Cooperative Education**

Established in 1913 as one of the nation's first cooperative education centers, Patterson Career Center is a comprehensive high school in the Dayton Public Schools. The Center offers 14 vocational programs in both 9- and 11-month cycles. All students, 82 percent of whom are disadvantaged, have been organized into vocation-driven clusters. Pre-vocational students are also clustered, and at-risk 9th graders are identified, supported, and closely monitored. Juniors and seniors who opt for the year-long program alternate two weeks of classroom instruction with two weeks of paid full-time employment.

Key features of Patterson's operation are administrative flexibility, participatory management, and strong, long-term ties with local employers and the community. School-to-work connections with employers have been tightened through revitalized advisory committees, jointly developed expectations for students calling for basic academic and lab competencies, good attendance and citizenship, passage of the Ohio Proficiency Tests, and four successful employment readiness evaluations.

Teams of academic and vocational instructors meet several times weekly to ensure academic and vocational integration. An extensive commitment has been made to staff development. Last year, for example, a total of 3,088 hours of staff development were tallied, including 1,956 hours outside of the school day.

**For more information, contact:**



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Patterson Career Center  
118 E. First Street  
Dayton, Ohio 45402  
Phone: (513) 222-6301  
Fax: (513) 461-2056**

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## **Glen Oak High School Cooperative Marketing Education Program**

Students in the Cooperative Marketing Education Program at Glen Oak High School earned more than \$90,000 last school year while learning about the world of work. This program, started in 1969, is typical of the hundreds of cooperative education programs operating in high schools throughout the state of Ohio.

At Glen Oak, eleventh and twelfth grade students are prepared to pursue a business, marketing, or management major in college and/or go directly to work with a goal of advancing in marketing occupations, management, or entrepreneurship. About 80 percent of the students do go on to college, most as marketing majors.

Students are heavily involved in Distributive Education Clubs of America (DECA) activities and have had first place winners in DECA district competitions for seven consecutive years, as well as several Ohio DECA scholarship winners. In six of the last eight years, Glen Oak marketing students have qualified for national DECA competition, bringing home three national championships.

For the past 17 years, marketing students have conducted anti-shoplifting seminars as a community service. Other civic projects have included fundraisers for the Muscular Dystrophy Association and nursing home visits.

**For more information, contact:**



**Donald F. Hillyer, Teacher/Coordinator  
Marketing Education Program  
Glen Oak East High School  
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North Canton, Ohio 44721  
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Fax: (216) 493-6358**

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## **Great Oaks Institute of Technology and Career Development Greater Cincinnati Youth Apprenticeship Program**

Great Oaks is the largest vocational school district in the United States, covering 2,200 square miles in all or parts of 12 southwestern Ohio counties and serving students from 36 high schools. Accustomed to doing things in a big way, Great Oaks persuaded seven other vocational education planning districts (VEPDs) to join in sponsoring the Greater Cincinnati Youth Apprenticeship Program. This program includes the entire southwestern region of Ohio, with the exception of the City of Cincinnati, drawing students from 70 high schools.

Five occupational areas were selected—construction trades, banking, electrical, manufacturing/metalworking, and restaurants/foods. Industry was approached from an association base, except for the banks, which had no association and had to be dealt with individually. Agreements were reached with the Association of Building Contractors, the Electrical Contractors Association, the Greater Cincinnati Tool and Machining Association, and the Greater Cincinnati Restaurant Association. In most instances, the Ohio Competency Analysis Profile (OCAP) lists were found to exceed competency expectations of business and industry. The OCAPs were meshed with each industry's own curriculum for adult apprenticeships, plus the school's educational competencies, to design the courses of study.

This regional approach gave the school a strong selling point for securing business and labor cooperation. There would be a common work syllabus and a common school syllabus, all under one delivery system, one certification system, and one credentialing system. Other selling points were:

- Each association has a seat on the governing board of the regional consortium, plus the right to interview and refuse any candidate.
- To be eligible for the program, students must have a 2.5 GPA, a 95 percent attendance rate for Grades 9 and 10, and must have passed all four parts of the Ohio Proficiency Tests.
- It is a 3,500-hour program each year with no spring breaks, no Christmas breaks, no summer vacation; 2200 of those hours are at the worksite and 1,300 are in school.

During the summer before the eleventh grade, students proceed through a 120-hour program of job exploration, employability skill development, and selection of an apprenticeship training site. The junior year is 50 percent school-based instruction and 50 percent paid work-based training with a mentor. The summer before twelfth grade, students are in paid, full-time employment. The senior

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year is 20 percent school-based and 80 percent work-based learning with a master craftsman, proceeding toward journeyman status in the student's chosen field. The wage component has incentives built in for pay increases as the student completes certain steps and achieves various competencies.

The Great Oaks staff spent considerable time studying the German apprenticeship system and has incorporated about 75 percent of the elements of that system into this venture. While the program is only in its first year, vocational instructors are saying that students are motivated and excited, they see the benefits, and they learned more in one week than the regular class does in nine weeks.

**For more information, contact:**



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Great Oaks Institute of Technology and Career Development  
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## **JOG, Inc. of Miami Valley (Dayton Area)**

### **Jobs for Ohio's Graduates**

Started in 1986 as one of 15 Ohio sites of the national Jobs For America's Graduates (JAG) program, Jobs for Ohio's Graduates (JOG), Inc. of Miami Valley currently serves about 1500 students in 19 high schools in a multi-county area. Clients are "at-risk" 12th graders. They may have discipline problems, poor grades, poor attendance, or be parenting or pregnant teen. JOG's goal is to help these students graduate and find a job that will make them self sufficient.

JOG is a comprehensive 18-month program. Class work begins in the fall of the senior year, using small group training and non-traditional, interactive discussions. Students work on developing competencies, career goals, and employability skills identified by JAG as things an employee needs in order to be successful on the job. At the same time, students get help with study skills and remedial instruction to ensure that they graduate. JOG students have their own club and are involved in social activities, fundraisers, and civic projects. Students get extensive individual guidance to help them address personal problems that might hinder their ability to succeed in the work world. JOG's non-traditional curriculum includes job shadowing, company tours, guest speakers, and entrepreneurial models that students operate. JOG attempts to expose and connect students with the business community before they graduate, thereby easing an ordinarily difficult transition to the world of work. The staff assists in finding jobs and follows each student for ten months after graduation.

With national estimates that a student who drops out of school can cost a community as much as \$100,000, JOG has had a positive impact on the Dayton community. The program has served about 4,000 young people since it began eight years ago. The state standard calls for at least 80 percent of the JOG students to be employed, in the military, or in college within ten months of high school graduation. Overall, the placement of graduates for this JOG program has averaged 82 percent. Recent studies have shown that in Dayton alone, JOG graduates earn millions of dollars annually and generate about \$25,000 each year in city income tax revenue. While most JOG programs throughout Ohio get 60 percent funding from the state and most of the rest through JTPA, this site raises about \$80,000 annually from the private sector. In the Dayton area, there are many jobs that go unfilled and businesses, particularly small and medium sized companies, are eager to support efforts to get students ready for work.

**For more information, contact:**



**Jacqueline Gitman, President and Program Manager**  
**JOG, Inc. of Miami Valley**  
**2013 West Third Street**  
**Dayton, Ohio 45417**  
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## **Medina County Career Center Horticulture Program**

This program, the only one of its kind in Ohio, provides school-to-work transition services for adults with special needs. The goal is to provide clients with work skills so that they can leave sheltered employment and be integrated into the general workforce.

The program, which began in 1983, links the joint vocational school with programs for the mentally retarded and developmentally disabled and the Ohio Department of Transportation. It is supervised by an employee of the Medina County Achievement Center. The instructor is a staff member from the Medina County Career Center, which opens the door for vocational funding for the program.

The horticulture curriculum, plus some basic custodial career training, is structured to fit the individual wants and special needs of the clients. Students, all over 22, progress at their own rate to complete the program. They gain on-the-job experience by working at state-highway rest stops near Medina.

Currently, there are about 40 individuals in various levels of the program, ranging from beginning training to independent placement.

### **For more information, contact:**



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## **Portage Lakes Career Center**

### **Ford ASSET Program/Ford Outreach**

This program for adults is a joint venture of Ford Motor Company, Portage Lakes Career Center, the University of Akron's Community and Technical College, and Ford and Lincoln-Mercury dealers. It was the first of its kind in Ohio six years ago. Similar programs have since been set up in Toledo, Columbus, and Cincinnati.

The Ford ASSET Program combines Ford and Lincoln-Mercury technical training at Portage Lakes Career Center with academic instruction at the University of Akron. It also includes one full year of paid, co-op, hands-on training in a Ford or Lincoln-Mercury dealership. This two-year program leads to an associate degree in Automotive Technology. Students who complete the program are ASE Master Technicians and have certification in 10 Ford technical skill areas.

Students in the Ford ASSET program may be unemployed, veterans, displaced workers, or degreed personnel seeking advanced training. All applicants must have a high school diploma or GED, pass a basic academics test, and take a mechanical aptitude test. Area Ford or Lincoln-Mercury dealers interview the applicants and make final selection of up to 24 Ford ASSET students each year. Cost of the technical training is \$2,700 per year, while the University courses total about \$1,850 per year. In addition, students may have to purchase a \$2,100 tool set if they don't already own the proper tools. Federal financial aid is available to those who qualify. The program runs 52 weeks a year, Monday through Friday from 8:00 a.m. to 5:00 p.m. Instructors at the career center are certified master technicians who are continuously trained and updated at Ford training centers in Detroit.

Portage Lakes Career Center and Ford have also joined forces to provide advanced training to experienced Ford and Lincoln-Mercury technicians. Through the Ford Outreach program, technicians receive both classroom and lab training in a variety of Ford-sponsored courses covering all facets of automotive technology. The Outreach program, the only one of its kind in Ohio, is another way the Career Center is working with business to expand and upgrade its automotive programs and meet industry needs.

**For more information, contact:**



**David N. Kleinschmidt, Superintendent**  
**David Mikita, Adult Education Director**  
**Portage Lakes Career Center**  
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**Greensburg, Ohio 44232**  
**Phone: (216) 896-3757**  
**Fax: (216) 896-4675**

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## **Springfield - Clark Joint Vocational School Employment Resource Center**

An Employment Resource Center at Springfield-Clark Joint Vocational School serves as a clearing house for people looking for work and employers looking for help.

At the Center, students and adults can receive career counseling, an interest assessment, help with individual career plans, resume preparation, and remedial assistance. Students and adults can take a battery of tests to help them discover jobs for which they are suited and how to find them. This service could cost as much as \$300 if provided by private sources, but all Joint Vocational School full-time adults and high school students receive it free of charge.

Employability classes are offered at the Center, covering such topics as the resume, job search, work ethics, interviewing skills, employment application, and balancing work and family. Job Fairs are another Center activity. Also, the Center is responsible for JTPA Job Placement and Jobs for Ohio's Graduates (JOG).

Plans are in process to computerize a complete data bank of current employment opportunities in the Springfield and Clark County area through the Employment Resource One Stop Service Center.

**For more information, contact:**



**Bonnie Manns, Coordinator  
Employment Resource Center  
Springfield-Clark Joint Vocational School  
1901 Selma Road  
Springfield, Ohio 45505  
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Fax: (513) 325-7399**

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## **Tri-Rivers Career Center**

### **Business Education Mentor Program**

A highly structured mentoring project sets the business education program at Tri-Rivers Career Center apart from many others of its kind. All juniors in the Diversified Business Professional Program have a series of mentor experiences to help them gain knowledge of the work involved in various jobs. The students are exposed to a variety of career areas such as accounting, sales, administrative, travel, and secretarial. Often, these experiences lead to cooperative education placements during the senior year.

Each fall, an orientation breakfast is held to familiarize employers with the mentoring program and to spell out the expectations for students and their mentors. A comprehensive handbook is distributed. Next, a mentor-guided tour of the company is provided for each student. The students come armed with a list of questions that must be answered, and this information is used to compose a report. Later in the year, two all-day visits are scheduled, and students actually perform some work tasks. In the spring, an appreciation luncheon is held, and each mentor receives a certificate and a small gift.

This year, 68 students are being paired with mentors.

#### **For more information, contact:**



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**Fax: (614) 389-2963**

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## **Warren County Career Center Construction Technology Apprenticeship Program**

Seventy students in a new Construction Technology Program at Warren County Career Center are being cross-trained in carpentry, electrical, masonry, and plumbing, working as many as 40 hours every other week, earning an apprentice wage, and meeting specified requirements of employers and their career plans. In-school learning involves a reinforced academic curriculum of mathematics, science, English, social studies, and employability skills.

The program was conceived in response to advisory committee comments indicating that most general contractors were in need of multi-skilled workers. Among those who helped develop the program were the Cincinnati and Dayton Chapters of the Plumbers and Pipe Fitters Union, the Tri-State Masonry Association, and Associated Builders and Contractors.

During the summer between the eleventh and twelfth grades, students who have earned a 3.0 in their area of study and have an attendance rate of 95 percent or better will continue their training with local contractors. For every 275 hours of work, students earn an additional quarter hour of vocational credit. During the senior year, students can choose to continue their cooperative education training or enter one of the four vocational training areas for a comprehensive advanced curriculum. Exemplary students will be considered for a Diversified Cooperative Training Program or a program leading directly to an apprenticeship.

**For more information, contact:**



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## **Wayne County Schools Career Center Industrial Work and Training Program**

The Industrial Work and Training Program, which was developed as a two-year pilot project to serve adults during evening classes at the Wayne County Schools Career Center, consistently has more job sites than candidates. The program receives unit funding from the Ohio Department of Education, Division of Vocational and Career Education.

Adult students receive 20 hours of hands-on technical training and 10 or more hours of work-site training each week, September through June. Classroom and on-the-job training is provided in machining, electricity, hydraulics, pneumatics, mechanical components, welding, blueprint reading, problem solving, applied math, and computer applications. Applicants needing to improve basic academic skills or obtain a GED are enrolled in Applied Academics or Adult Basic and Literacy Education prior to final acceptance into the program. All candidates receive a vocational assessment, and special funding is available to recruit and train women. Many applicants are sent by their current employers to have their skills upgraded or to be retrained.

Although a two-year option is available, most adults are able to achieve the experience and technical skills they need to become more employable in just one school year. Career services include: career evaluation and counseling, financial aid, personal growth classes, job search workshops, and job placement assistance.

**For more information, contact:**



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Wayne County Schools Career Center  
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# References

- Carr, Harold L. (1993, June 17). *Developing a Youth Apprenticeship/School-to-Work System in Ohio*. Great Oaks Institute of Technology and Career Development, Cincinnati, Ohio.
- Center for Workforce Preparation. (1994, June). *New Century Workers: Effective School-to-Work Transition Programs*. Washington, D.C.
- Goff, John. (1994, April 19). Presentation at Ohio School Boards Association-Ohio Council on Vocational Education Seminar for Vocational Educators. Columbus, Ohio.
- Governor's Human Resources Advisory Council. (1993, June, Revised) *Jobs: Ohio's Future - Creating a High Performance Workforce for Ohio*. Columbus, Ohio.
- Green, James E., and Weaver, Roy A. (1994). *Tech-Prep: A Strategy for School Reform*. Phi Delta Kappa Educational Foundation. Fastback #363. Bloomington, Indiana.
- Grubb, W. Norton. (1994, August 3). True Reform or Tired Retread? 7 Questions to Ask About School-to-Work Programs. *Education Week*. Washington, D.C.
- Jennings, John F. (1994, May). Major Education Bills in the Congress. *Phi Delta Kappa Legislative Newsletter*. Phi Delta Kappa, Bloomington, Indiana.
- McCullough, Mary. (1994, August). Update on Ohio's School-to-Work Vision. Ohio School-to-Work Office. Columbus, Ohio.
- National Alliance of Business. (1993). *Real Jobs For Real People: An Employer's Guide to Youth Apprenticeship*. Washington, D. C.
- National Center for Research in Vocational Education. (1994, March). *Research on School-to-Work Transition Programs in the United States*. University of California at Berkeley.
- National Center for Research in Vocational Education. (1994, August). Charles S. Benson, May 20, 1922-July 2, 1994. *CenterWork*. University of California at Berkeley.
- Newman, Frank, and Brown, Rexford. (1993, September 20). Measuring the Progress of Systemic Education Reform. Presentation to the *Fortune* Education Summit. Education Commission of the States. Washington, D.C.
- Ohio Council on Vocational Education. (1992). *Transition from School to Work*. Westerville, Ohio.
- Ohio Department of Education. (1993, July). *Integrating Vocational and Academic Learning: A Demonstration Project*. Submitted to the United States Department of Education in response to RFP CFDA 84.248. Columbus, Ohio.

Ohio School-to-Work Office. (1994, August 2). *Community Response to Ohio's School-to-Work Vision*. Comments and Ideas Received During Seven Regional School-to-Work Forums Held in Ohio in June 1994. Columbus, Ohio.

Parks, Darrell L. (1994, July 1). *Ohio's Future at Work. FY93 Progress Report*. Ohio Department of Education, Division of Vocational and Career Education. Columbus, Ohio.

Parks, Darrell L. (1994, August 14). *The Genie Is Out of the Bottle*. Presentation to the All Ohio Vocational Conference, Assembly of Leaders. Columbus, Ohio.

Pinchak, G. James. (1993, November). *Plain Talk About School-to-Work Transitions*. Ohio Department of Education. Columbus, Ohio.

Rosenbaum, James E. et al. (1992). *Youth Apprenticeship in America: Guidelines for Building an Effective System*. William T. Grant Foundation Commission on Youth and America's Future. Washington, D.C.

Shields, Dorothy. (1994, May). The School-to-Work Opportunities Act Offers an Opportunity for Labor. *AFL-CIO Education Update*. Washington, D.C.

U.S. Chamber of Commerce. (1994). Statement on School-to-Work Transition. Washington, D.C.

U.S. Department of Education. (1994, January). *National Assessment of Vocational Education*. Executive Summary to Congress. Washington, D.C.

U.S. Education and Labor Departments. (1993, April 13). *Building Bridges From School to Work*. Background paper. Washington, D.C.

U.S. General Accounting Office. (1993, September). *Transition From School To Work: States Are Developing New Strategies to Prepare Students for Jobs*. Report to Congressional Requesters. Washington, D.C. GAO/HRD-93-139.

Wisconsin Council on Vocational Education. (1993, January). Public Hearing on School-to-Work Transition. Part I. Summary, Findings, and Recommendations. Madison, Wisconsin.



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