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Booklet, "Education and Training For America's Future," 44 pages

The Manufacturing Institute
The Growth Papers



Education and Training For America's Future

by Anthony P. Carnevale

Foreword by Jerry J. Jasinowski

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ANALYZING THE MANUFACTURING SECTOR'S NEEDS FOR SKILL

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focusing on various elements of economic growth in the United States.
They are published periodically by The Manufacturing Institute,
the educational and research affiliate of
the National Association of Manufacturers.

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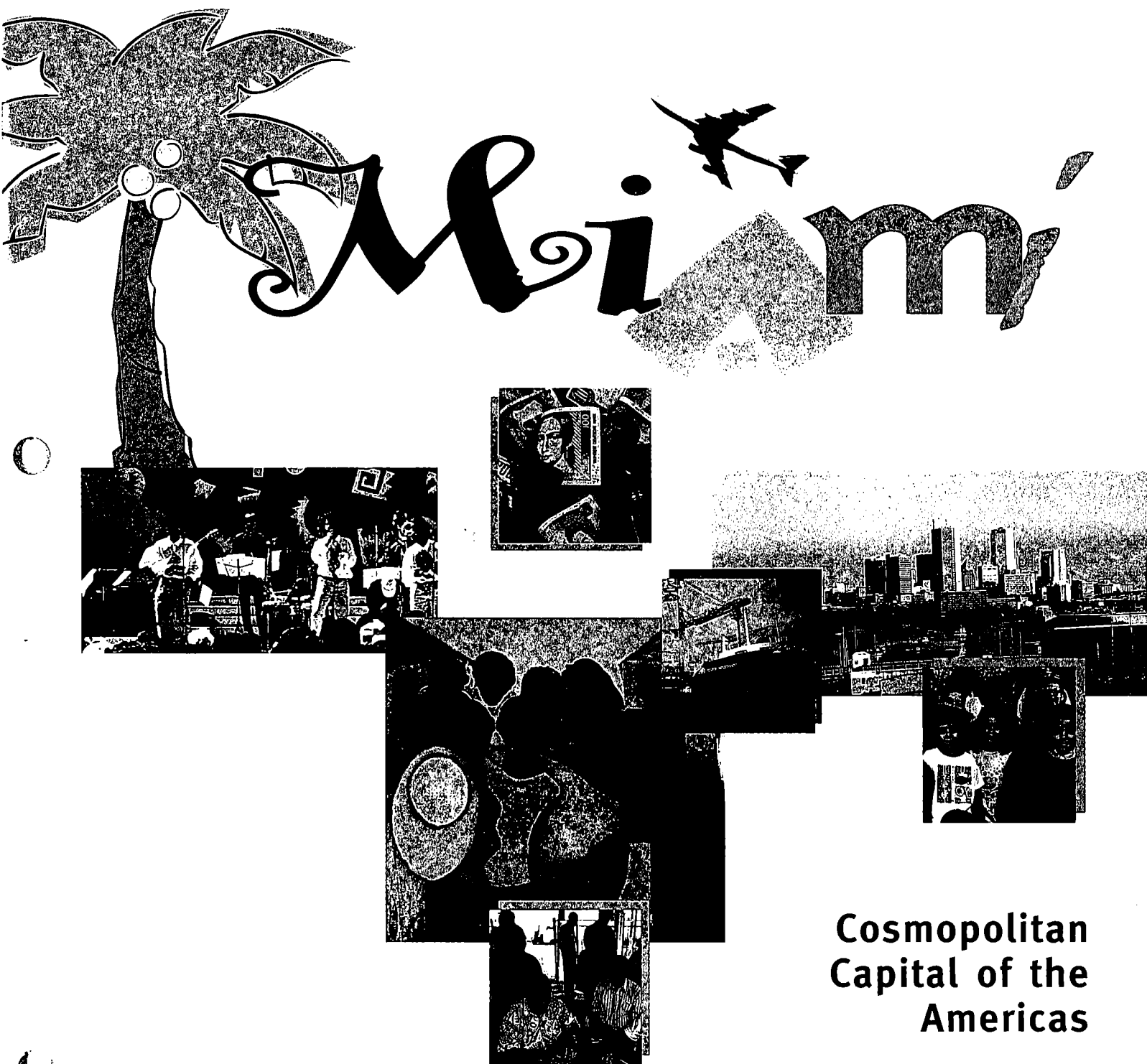
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Fall 1998

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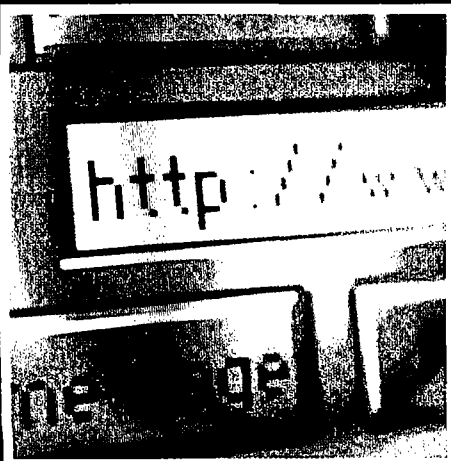
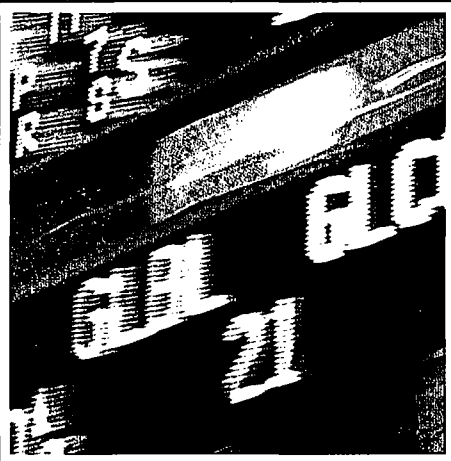
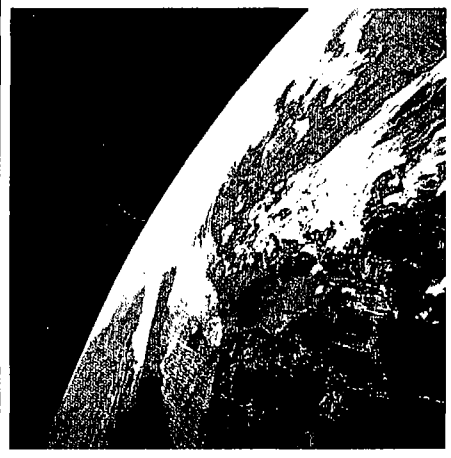
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THE NEW ECONOMY INDEX

UNDERSTANDING
AMERICA'S
ECONOMIC
TRANSFORMATION

"It is not the strongest of the species that survive,
nor the most intelligent,
but the one most responsive to change."

– Charles Darwin

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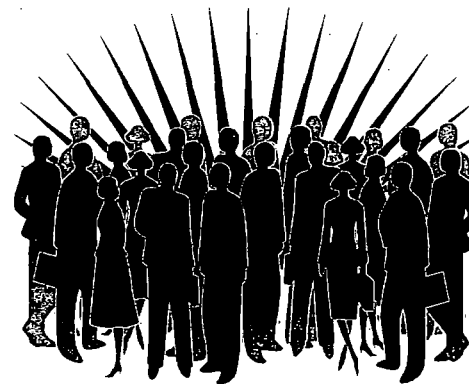
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Booklet, "Workforce Development
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Workforce Development for Poverty Reduction

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National League of Cities



November 20, 1998

Johnathan Schnur
Office of the Vice President
Old Executive Office Building
Room 286
Washington, DC 20501

Jonathan,

Doug Ross suggested that I send you the enclosed PPI policy brief on Regional Skills Alliances. There has been some legislation introduced on this as well (see our project home page; http://www.dlcppi.org/ppi/tech/tech_leg.htm).

Should you have any comments or wish to discuss this proposal further, please feel free to contact me.

Best,

Rob Atkinson
Director, Technology and New Economy Project

Enclosure

Building New Skills for the New Economy

Regional Skills Alliances

Robert D. Atkinson

The Problem

There is an increasing realization across the nation that firms in a wide range of industries face serious difficulties in hiring workers with needed skills, and that we need to do a better job of training and educating new entrants to the workforce and workers dislocated by economic change.

Many industries point to the lack of skilled workers as a critical factor limiting their competitiveness and growth. For example, the Information Technology Association of America recently concluded that there are approximately 190,000 unfilled information technology jobs in the United States today due to a shortage of qualified workers.¹ But it is not just high-tech firms. When asked "what are the main barriers firms face to expanding and becoming more competitive," companies across the country in different industries point to the difficulty in getting skilled workers. These shortages not only slow regional and national economic growth, they mean that hundreds of thousands of workers are not increasing their skills and standards of living.

While the current low unemployment rate contributes to this problem, its roots are more fundamental. In the New Economy, skill requirements are going up in many industries, even so-called low-tech industries. More than half of the new jobs created between 1984 and 2005 will require some education beyond high school.² The percentage of workers who use computers at work has risen from 25 percent to 46 percent between 1984 and 1993.³ These changes are being felt around the nation. States such as Colorado, Maryland, Rhode Island, and Washington have all recently released reports highlighting the pressing need of employers for skilled workers. Today, to be competitive, firms are not only using more technology but are also reorganizing production processes in new ways, such as cellular production, use of teams, and other high performance work organization methods that require higher levels and new kinds of skills. For example, a recent survey of U.S. manufacturers found that in 81 percent of plants, production workers participate in empowered or self-directed teams. Marty Cohen, President of the Work in America Institute, states: "Thanks to e-mail, statistical process control, Just-In-Time, [...] and so forth, the need for production workers to master new technology is almost universal, whether they work on loading docks or in silicon clean rooms." And much of the needed knowledge is not firm-specific, but rather generic (related to math, communication, writing, and computing) and industry-specific (such as manufacturing methods).

There is increasing interest in addressing skills shortages. Several high-tech trade

associations, in conjunction with the U.S. Department of Labor (DOL) and Department of Commerce (DOC), hosted a skills "summit" earlier this month in Berkeley, CA. President Clinton recently announced several proposals, including creation of a nationwide job bank and modest increases in funding for training programs.⁴ The awareness of the problem and the interest in finding effective solutions is growing.

The Administration's proposal, while a useful start, is not enough. The problem cannot be solved at the federal level: solutions need to be regional, diverse, and industry-led. However, the federal government can and should play a catalytic role in bringing together the firms and other institutions that are critical to crafting effective solutions.

The Progressive Policy Institute (PPI) proposes that the federal government invest \$40 to \$60 million annually to support industry-led, regional skills alliances (RSAs). RSAs—-independent, staffed collaborations among firms in an industry, and including educational institutions such as community colleges, formed to identify common areas of skills shortages and develop and implement effective training solutions—would be supported in part for the first three years by federal funds. Funds would be allocated through a competitive grant process administered by the DOC's Manufacturing Extension Partnership (MEP), with consortia of firms as applicants.

Why Existing Institutions Cannot Solve the Problem

According to the American Society for Training and Development, company spending on training has not kept up with the need. In 1995, American businesses spent \$55 billion per year upgrading the skills of their employees, 20 percent more than a dozen years ago.⁵ But the number of workers has risen 24 percent, meaning that private-sector spending hasn't kept pace. Considering that skills upgrading is far more important now than in the early 1980s, this shortfall is troubling.

Most firms, but particularly small and medium-sized enterprises (SMEs), have limited capacity (financial, institutional, and informational) to engage in significant and sustained workforce development efforts. There are several reasons why. Managers and owners of most firms are simply too busy running their business to develop training systems, especially for new or dislocated workers. SMEs often lack information on what kind of training their firms need and where to get it. And finding this information is very time consuming. As a result, when confronted with a shortage of skilled workers, most firms try to hire workers from other companies.

Moreover, because workers are so mobile, it is difficult for individual employers to bear all the burden of training employees, whether new or incumbent workers, especially since the employee is likely to leave at some time and go to work for a competitor. In this case, not only does the firm "not realize an adequate return on the investment," it is actually at a disadvantage since it has spent money other firms have not, and has made its competitors stronger in the meantime. This serves as a disincentive for individual firms to provide training without a concerted effort on the part of the entire industry regionally. This factor, coupled with increasingly competitive markets, is one reason why many larger

companies that supported in-house, dedicated training programs in the 1960s and 1970s have eliminated these efforts.

The skills shortage is also a problem for workers. Millions of American workers would like to upgrade their skills, but it is often difficult for government-run training programs to provide the kinds of skills that employees need. Dislocated workers (even a low unemployment economy has dislocated workers—approximately 1.4 million per year between 1993 and 1995⁶), young people coming out of high school, and workers making the transition from welfare to work may especially need the types of skills demanded by growing industries.

The educational system has not proven up to the task of providing technical training for workers. Many community colleges, and even four-year colleges and universities, lack the resources to purchase up-to-date equipment (machines, computers, software) on which to train workers in relevant knowledge and skills. In addition, while some post-secondary training institutions (especially private ones) have reached out to industry and become more customer-focused, many more have not adequately responded to the changing skills needs of employers. The lack of partnerships with industry means that many educational institutions continue to train students for old economy jobs with old economy methods and equipment.

In some cases this may reflect a lack of entrepreneurial and innovative spirit in bureaucratic institutions. But there is a more fundamental issue: While colleges and universities, especially community colleges, may be able to establish partnerships with larger firms that have human resource departments, building partnerships and a two-way dialogue with small- and medium-sized firms has proven more difficult.

Finally, it has been difficult to use federally funded training programs for these kinds of industry-driven, innovative programs. Most federal training funds go to displaced and disadvantaged workers, not to incumbent workers. Yet, because of rigid and bureaucratic rules, it is difficult to use these federal funds to support effective industry-driven efforts, including some of the most successful and creative industry-community alliances training disadvantaged youth.⁷ Moreover, even if the much-needed reforms of federal employment and training efforts are implemented, these efforts are largely focused on making it easier for workers to access training and reemployment services. To really address the skills issues in the New Economy, we need both—a more user-friendly employment and training system and an industry-driven skills effort based on firm alliances. Each complements the other.

The Solution: RSAs

It is becoming clear to many firms and training experts working in the trenches of the New American Economy that if we are going to begin to meaningfully address the skills problem, we have to motivate and assist companies in the same or similar industries to work collaboratively at the regional level to lead this process. As training expert Bill Nothdurft argues, "creating the workforce of the future requires partnerships and private industry leadership."⁸

Employers are most qualified to do this for several reasons. First, employers are the best positioned—often in partnership with others, such as community colleges—to identify the skills and knowledge needed for emerging jobs. Second, by letting employers lead, it is much easier to tie training directly to employment. And third, employers and industries facing skills shortages will be the ones to participate.

While employers need to take the lead, crafting effective solutions requires collaboration among firms. Because a skilled workforce benefits all firms in a region, a small handful of skills alliances have already been established, often with large firms and their employee unions. It has been more difficult for small- and medium-sized firms to band together to tackle educational and training needs. As a result, a critical task is helping firms build ongoing capacities to collaboratively address their own industries' workforce development issues.

Collaborative solutions are more effective than going it alone. First, by working together, firms in the same or similar industries can pool resources (information, on-the-job training opportunities, equipment, curricula) that lower costs of training. Moreover, by supporting sector-based alliances (e.g., metal working, tourism, information technology), firms focus on building a regional training pool, rather than on "poaching" other firms in the industry to get workers.

Second, collaboration allows firms to develop joint solutions and communicate these to educational institutions. Without this ongoing collaboration, it is often very difficult for educational institutions to communicate effectively with industry and develop needed curricula. Moreover, alliances could serve as the intermediary between firms in an industry and the complex array of training programs and initiatives in any particular region.

Finally, solutions need to be regional. Too often Washington forgets that the economy runs through firms, institutions, and workers operating in locales and regions which are very diverse in their industrial structure, growth patterns, and institutional resources. At any one time, some regions may be booming and have the need for new workers, while others may not be growing and are struggling to address the needs of displaced workers. Some regions may be characterized by large firms that can address "infrastructure" needs related to skills, while many others may be populated by smaller firms. In addition, regions differ profoundly in terms of industrial mix. Many industries cluster regionally. In fact, regional industrial clusters are becoming more, not less, a feature of the New Economy—e.g., high-tech electronics and software in places like Silicon Valley, Boston, and Northern Virginia; plastics in Western Massachusetts; rubber in Akron; metal working in Pennsylvania; aerospace in Wichita; and financial services in Wilmington. All of these places have different needs and different problems.

The few collaborative training programs in place today act as powerful and innovative models of industry working together to address common skills shortages. Collaborative training is one reason why German firms invest more in training than U.S. firms do. There, a dense network of industry associations makes it much easier for firms, most of which are small, to jointly address training, with the German federal government

contributing half the cost.⁹ In the last several years, a small number of regional and industry-based training alliances in the United States have emerged, usually in partnership with state and local governments and technical colleges.

- ▶ As part of the Wisconsin Regional Training Partnership, a number of metal-working firms, in conjunction with the AFL-CIO, used an abandoned mill building to set up a teaching factory to train workers with needed skills. The workers learn directly on state-of-the-art manufacturing equipment.
- ▶ In Rhode Island, with help from the state's Human Resource Investment Council, plastics firms developed a skills alliance. Funds supported a part-time alliance coordinator who worked with firms to assess skills needs and develop curricula. In addition, a share of the funds went to establish a state-of-the-art polymer training laboratory at the local community college which trains workers in an apprenticeship program that guarantees jobs for graduates.
- ▶ In Wichita, a small federal grant, coupled with state and industry funds, helped 33 small aerospace supplier firms develop joint training curricula for new workers in partnership with the local community college.
- ▶ In Washington, D.C., regional telecommunications firms donated computers and helped set up a program to train public high school students to be computer network administrators. The companies hire students who pass a standard certification exam for \$25,000 to \$30,000 a year.¹⁰

While successful, these kinds of alliances are by far the exception rather than the rule.

Why a Federal Role?

There are several reasons why a limited but strategic federal role would be highly effective:

- ▶ The federal government already spends millions on training, but not as effectively as it could.
- ▶ Federal, state, and local governments have created a wide array of complicated and disjointed bureaucratic training programs. New initiatives are needed that empower customers and serve as models for service delivery integration.

- ▶ While a small handful of these kinds of partnerships have emerged around the nation, there are documented difficulties in fostering this kind of collective action without some federal "glue" money. Widespread and timely deployment of these kinds of partnerships is simply not likely to happen without the incentives established by a federal initiative. This can help create successful models and templates that others can replicate across the nation.
- ▶ Because workers are mobile across regions and state borders, the federal government has an incentive to help new workers get an adequate education and skills to be employed in well-paid and rewarding jobs.
- ▶ Without some kind of support to create alliances, small firms just don't have the time or resources to collaborate with anybody on training, and over 99 percent of all businesses in the United States are small. In fact, almost all existing RSAs report that they would not have been able to get off the ground without an independent, staffed entity to operate the alliance.

How Regional Skills Alliances Would Work

PPI proposes that the federal government invest \$40 to \$60 million annually to support industry-led RSAs. Funds would be allocated through a competitive grant process, with consortia of firms as applicants. Federal support would be limited to three years, after which the efforts would be required to be self-supporting.

Successful applicants would be:

- ▶ **Consortia:** Alliances would have to have meaningful participation with a large number of firms, ideally at least 10 firms and/or employing at least 50 percent of the workers in that industry in the region.
- ▶ **Industry-led** (e.g., board of directors predominantly made up of industry, with state and local officials, educational leaders, and union officials also eligible as participants): Regional chapters of industry trade associations would be eligible to apply.
- ▶ **Sector-based:** The efforts would have to be organized around one or more industry sectors.
- ▶ **Alliances providing a 2-to-1 match for federal funds:** For every \$1 in federal funds, state and/or local government would need to provide at least \$1, and industry \$1. Industry equipment donations to shared, off-site facilities (e.g., community colleges) would count as matching, while "in-kind" donations would not, but would be considered in ranking proposals.

How Many Alliances and What Level of Support?

Funds could be used to support alliance coordinator staff to work with firms to develop joint standards, curricula, apprenticeships, and other joint efforts. In addition, funds could be used to market the program, to purchase equipment on which to train workers, and to develop curricula. Alliances could also focus on other areas of joint concern, such as technology transfer or industrial modernization. Estimated costs for each alliance would be between \$350,000 and \$1 million per year, depending on the size of the area, the need, and the extent of effort by firms. Assuming that the federal government provides, at a maximum, one-third of the funds, \$50 million would allow approximately 200 alliances to be established.

What Activities Would Qualify for Support?

Virtually all activities directly related to improving the skills of a region's workforce would qualify for support, including:

- ▶ Salaries and expenses to support a skills alliance manager;
- ▶ Joint assessment of industry training and skills needs;
- ▶ Development of skills standards benchmarked to advanced industry practices;
- ▶ Development of joint curriculum and training methods;
- ▶ Purchases or donations of equipment on which to train workers;
- ▶ Identification and development of training providers, and establishment of training programs;
- ▶ Development of apprenticeship and school-to-work programs;
- ▶ Development of training programs for dislocated workers;
- ▶ Initiatives to link technology and business modernization to skills upgrades; and
- ▶ Development of performance outcome measures.

Funding would not be allowed to subsidize workers wages (even training wages), could not be used for lobbying or political action, and could not be devoted to senior

management development except possibly for skills development focused on team building or employee involvement.¹¹ Alliances would also be required to report evaluation and outcome measures.

Administration

Because this is a skills and training effort it could be argued that DOL should administer the program nationally. However, because it is also an industry competitiveness effort, it may be more appropriate for DOC to administer it in partnership with DOL. The program could be run out of the Manufacturing Extension Partnership (MEP), an initiative at the National Institute of Standards and Technology (NIST), since NIST is already actively engaged in regional business modernization efforts around the nation. However, because the initiatives could support alliances in non-manufacturing sectors, and because these should be industry-led efforts, NIST should operate this program separate from, but linked to, the MEP.

Advantages of Regional Skills Alliances

Catalyzing the formation of RSAs has several advantages. These include:

- ▶ Engaging firms, particularly small- and medium-sized firms, more deeply in the issue of skills training and constructive interaction with educational institutions;
- ▶ Engaging public-sector educational providers (e.g., community colleges) more actively in on-going working relationships with groups of employers (i.e., encouraging them to be more responsive by creating the kinds of curricula needed by New Economy employers);
- ▶ Significantly increasing the scale of state and local training efforts, by moving away from a one-on-one approach toward engaging whole industries. (Workforce training in states is almost always one-on-one, customized training with individual firms); and
- ▶ Providing flexibility in the system to focus on a wide variety of training issues, including new workers, dislocated workers (e.g., Massachusetts Software Alliance), and welfare-to-work (e.g., Wisconsin Regional Training Partnership).

Conclusion

The transition underway to a more technological and skills-intensive economy has led to skills shortages in many industries and regions of the country. Yet, existing government-run training programs are not up to the task at hand. Effective solutions require collaboration between government and industry, and between firms in similar industries in the same region. Federal matching grants to industry to form skill alliances can be a catalyst to the formation of new, innovative, and flexible solutions.

Robert D. Atkinson is director of the Technology and Innovation Project at the Progressive Policy Institute.

For further information about PPI publications, please call the publications department at 202-544-6172, write: Progressive Policy Institute, 518 C Street, NE, Washington, DC 20002, or visit PPI's site on the World Wide Web at: <http://www.dlcppi.org/>.

Endnotes

1. "Help Wanted: The IT Workforce Gap at the Dawn of a New Century," (Arlington, VA: Information Technology Association of America, 1997). See also "America's New Deficit: The Shortage of Information Technology Workers," (Washington, DC: U.S. Department of Commerce, Office of Technology Policy, 1997).
2. Arnold E. Packer, et al., *Workforce 2000: Work and Workers for the 21st Century* (Indianapolis, Ind.: Hudson Institute, 1987).
3. "Computer Use and Ownership: Level of Access and Use of Computers, 1984, 1989, 1993, Table A," (Washington, DC: U.S. Census Bureau, October 1993).
4. Rajiv Chandrasekaran, "U.S. to Train Workers for Tech Jobs," *Washington Post*, (January 12, 1998), p. A1.
5. Dr. Laurie J. Bassi, "Expenditures on Employer-Provided Training" (Alexandria, VA: American Society for Training and Development, July 1996).
6. DOL defines dislocated workers as workers who lose their jobs due to their plant closing down or moving, insufficient work for them to do, or their position being abolished. Source: U.S. Department of Labor, Employment and Training Administration.
7. Peter Behr, "Job Training Success Story at Risk," *Washington Post*, (January 16, 1998), G1.
8. William E. Nothdurft, "How to Produce Work-Ready Workers," *Across the Board*, (September 1990), pp. 47-52.
9. Margaret Hilton, "Shared Training: Lessons from Germany," *Monthly Labor Review*, (March 1991).
10. *Washington Post*, op. cit.
11. PPI has proposed a similar non-discrimination rule that would treat firm expenses on training as taxable compensation unless the firm extends training to all its workers, just as health care coverage and retirement benefits are not taxable if all workers in a firm are eligible for them.