

Models for Regional Business-Education Partnerships

Regional Plan Association

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Executive Summary

Business-education partnerships have assumed a growing importance in the New York-New Jersey-Connecticut metropolitan region over the last two decades. From adapt-a-school to school-to-work, these partnerships have ranged from small-scale programs involving a single school and company to broad coalitions of business, education, government and labor organizations. While their impact on education reform is difficult to evaluate, they have provided leadership and support for a broad range of activities, including student work opportunities, career exploration and development, teacher externships, technology implementation and management reforms. They have also been important voices for the reform of school governance systems and resource allocations.

As in other parts of the United States, business-education partnerships are entering a critical period. An intense focus on raising academic standards has placed increasing emphasis on areas where the role for business is unclear—curriculum content, student assessments and teacher training. In addition, a primary funding source for many partnerships—the Federal School-To-Work Act—will end in 2001. Concurrently, however, the rising profile of education on economic development and political agendas has many businesses and civic organizations looking for constructive ways to increase their level of involvement in school reform and programs.

The purpose of this report is to assess the potential for strengthening and expanding the region's business-education partnerships, particularly region-wide partnerships that cross municipal, county and state boundaries. It is intended to be a resource for existing partnerships and for schools, businesses, government agencies and community organizations that wish to examine different models of successful partnerships. The report's findings are based primarily on an analysis of several partnerships and programs that have had success, both in Tri-State region and in other metropolitan areas, and on how the attributes of these programs could be adopted to the specific characteristics of the region.

Four regional consortiums were selected because each has a characteristic that is particularly relevant to the Tri-State metropolitan area. *High Schools That Work* is a rare example of a multi-state collaboration that has achieved measurable success. *Joint Venture Silicon Valley's 21st Century Education Initiative* shows the potential for a business-led consortium to organize a large, sustained reform effort for a relatively large region. The Sacramento area's *LEED* program illustrates a partnership model organized around industry clusters as well as school districts. The *Potomac Regional Education Partnership*, while still in its infancy, is one of the few examples of a metropolitan partnership that includes large portions of different states.

None of these consortiums operates in a region as large and complex as the Tri-State region. However, both the successes and limitations of these efforts point to some minimum requirements for launching and sustaining a successful business-education partnership for an area as large and diverse as the tri-state region:

- A compelling set of goals or principles that makes the case for regional collaboration;
- High-level sponsorship and a long-term commitment from either the public or private sector;
- Identification and utilization of regional networks, including business networks, civic associations and academic networks;
- A program structure that articulates clear and achievable objectives and includes measurable standards for success; and
- An intermediary or sponsoring organization with the mission, staff and resources to implement and sustain the effort.

In addition to these regional consortiums, four programs were examined to explore ideas for programmatic content that could link businesses to standards-based education reform. These programs specifically emphasize two attributes that business brings to education partnerships—knowledge of rapidly changing career requirements and extensive technological resources and expertise. *Communities and Schools for Career Success* is a Massachusetts-based program that has successfully implemented a comprehensive school-to-career model in six communities. *Virtual Enterprises, International* has integrated technology and workplace experience in several New York City high schools. *Project Explore* integrated technology into a highly successful comprehensive reform of the Union City NJ school system. *Career Academies*, such as Stamford’s Academy of Finance and similar programs in New York and New Jersey, provide a model for linking academic and career preparation.

While these programs represent only a small sample of the innovative and effective programs that have been implemented in the region and elsewhere, they do highlight elements that are common to most successful efforts:

- All four programs have a structure that clearly articulates goals, objectives and expectations, ranging from the limited objectives of the Virtual Enterprise to the systemic change envisioned in Union City.
- All are supported by resources that are commensurate with the objectives. Career Academies and the Virtual Enterprise, while they do not necessarily involve systemic changes, still require substantial financial commitments from sponsoring school districts. The financial commitment for *CS²* varies by the ambitions of the site, and the Union City model clearly implies a very high level of investment.
- The more structured models, Career Academies and Virtual Enterprise, are easier to implement and replicate, while a more flexible model like *CS²* may have greater potential to generate school-wide and district-wide changes.

- The programs with the greatest emphasis on business involvement, Career Academies and Virtual Enterprise, had the most clearly defined roles for employers. This structure assists with maximizing business involvement.
- Some form of hands-on, contextual learning is at the heart of all four models, from running a business venture to whole language to the range of career-oriented activities in CS² and the academies.
- For the three models that are operational in multiple sites, an active intermediary that provides support, technical assistance and evaluation services is an essential part of the success.

The experiences of these partnerships and programs, as well as the current climate for educational reform, suggest a number of opportunities for strengthening the existing partnerships in the region. In many cases, the organizations are already moving in these directions, but require a broader consensus and resources to implement them. In others instances, they are struggling to redefine their priorities. Out of these reassessments, at least five areas of opportunity appear to be warrant additional attention:

1. ***Benchmarking progress in academic achievement and career success:*** The success of initiatives like *High Schools That Work* and *Joint Venture Silicon Valley* is at least partially due to their ability to forge consensus around a number of measurable criteria for education reform. Regional partnerships can fill a void by developing and tracking success indicators for schools, programs, communities and the region as a whole. These benchmarks should include, but not be limited to, the standardized test scores that drive state and local education policies. While not always easy to implement, a benchmarking component can clarify objectives for key constituencies and institute ongoing evaluation of programs and services.
2. ***Improving and replicating the strongest program models:*** Particularly with declining funding levels for school-to-career, partnerships will need to be more discriminating about which programs to support. After several years of national and regional experiments with different approaches, the next several years are a time to shift the emphasis to consolidation, strengthening and replication of models that have demonstrated potential.
3. ***Demonstrating the link between contextual learning and academic standards:*** Nearly all of the cases described in this paper achieved success with some form of contextual learning, whether it was project-based learning in a classroom setting, simulations of a workplace setting, or actual experience in the community. The partnerships in the tri-state region are in a good position to make stronger connections between academic achievement and programs and curriculum that emphasize hands-on applications. Part of this is connected to developing benchmarks, and part to the design of programs that help educators to incorporate contextual learning into standard curriculum.

4. **Clarifying business roles and enhancing employer involvement:** Business-led partnerships like *Joint Venture Silicon Valley* and *LEED Sacramento*, and programs like *Virtual Enterprise* and *Career Academies*, have incorporated a strong element of employer involvement by establishing clear roles and achievable objectives. The lack of stronger business involvement plagues many partnerships in the region, and could be addressed through a reassessment of roles and expectations. Some partnerships in the region are now trying to shift to seeing businesses as clients as opposed to providers, a paradigm change that could enhance employer involvement.
5. **Linking education reform to workforce and youth development:** Implementation of the Workforce Investment Act calls for an integration of workforce development, youth development and school-to-career programs through Workforce Investment Councils. The regional partnerships that have overseen many of these programs need to work with the councils and facilitate this integration.

In addition to strengthening existing business-education partnerships, there are reasons to consider some form of a broader, tri-state collaboration. The metropolitan area is a single labor market, and improving academic and workforce skills throughout the region enhances the entire economy. Still, given the obstacles to forming such a collaborative, there needs to be a clear set of benefits that is commensurate with the level of effort required. Potential benefits from a tri-state partnership include the following:

- Wider dissemination of ideas and best practices,
- Better coordination of employer involvement,
- Economies of scale in providing technical assistance and other services,
- Higher level participation from business and political leaders, and
- Increased opportunities to influence public policy and rally citizen and business support.

Most of these attributes are exhibited in the regional partnerships described here, particularly *Joint Venture Silicon Valley* and the *Potomac Regional Education Partnership*. However, the arguments against a broader partnership also need to be considered before any effort is undertaken. These include the following:

- The region may be too large and complex to garner support and deliver services effectively,
- Regional business and political networks may be too weak to sustain such an effort, and
- The effort could divert attention and resources from existing partnerships.

These are the same issues that the region faces in a number of policy areas, from transportation to the environment. Regional collaborations to address these issues have had varying degrees of success. Education may be seen as an even more localized issue, but a few regions have overcome similar obstacles, albeit on a smaller scale.

There are also different levels of collaboration that could be considered. The simplest effort would focus on expanding informal networking among organizations, educators and businesses in different parts of the region, as Regional Plan Association has already begun to do. This would result in wider dissemination of information and best practices, but none of the other benefits of a tri-state collaboration. A more structured but narrowly focused effort could address a single objective, such as coordinating employer involvement or developing tri-state recognition for certificates of workplace or career competency that are in development in two states and under discussion in the third.

The most ambitious initiative would be a comprehensive effort similar to that undertaken in the Potomac region. To implement this vision, several conditions would have to be met. A set of compelling goals and achievable objectives would need to be specified. It would need the active support of prominent business or political leaders with stature in all three states. It would also need long-term organizational commitments to build the institutional networks to sustain the effort.

It would appear that the most important step at this juncture is to continue building the institutional infrastructure needed to support a larger effort. This can be accomplished through a number of actions, such as the collaboration of RPA and the Westchester Education Coalition to develop and disseminate a project-based learning model throughout the region, or RPA's proposal to develop a bi-county workforce development strategy for the Bronx and Westchester. Exploiting the potential of the Workforce Investment Act to develop inter-jurisdictional strategies is another action that could help build regional networks. Finally, site visits or a colloquium that bring the progress of other regional partnerships to the attention of business, political and civic leaders could provide a spark for a higher profile effort.

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I. Background and Objectives

As in the rest of the United States, education reform is one of the leading political and economic issues facing the New York-New Jersey-Connecticut metropolitan region.¹ A convergence of national trends in the 1980s and 1990s has resulted in heightened concern over the quality of education at all levels, but particularly in public elementary and high schools. At its core, this concern is driven by an economy that requires ever-higher literacy, math, technical, communication and problem-solving abilities. Globalization, with its intense international competition and changing immigration patterns, has added an element of fear that the United States could fall behind other industrialized countries. Large and widening income disparities between college-educated workers and everyone else have raised the personal stakes in education outcomes. Finally, the long expansion of the 1990s has resulted in the most widespread shortage of qualified workers in thirty years. The tri-state region, with its reliance on knowledge-based service industries and the nation's largest concentration of urban poor, is experiencing many of these pressures more acutely than other parts of the United States.

Among the many responses to this concern is a growing involvement from business in education reform. Beginning with *A Nation At Risk* in 1983 and continuing through the 1999 Education Summit of CEOs, governors and the President, corporate America has taken a much higher profile in the debate over how to improve education. At the state and local level, this has led to an increasing number and variety of partnerships between businesses and schools. From adapt-a-school to school-to-work, business education partnerships have ranged from small-scale programs involving a single school and company to broad multi-state coalitions of business, education, government and labor organizations. It has been difficult to evaluate the effectiveness of these partnerships, in part because few collect assessment data and in part because many do not have a long enough track record.

The purpose of this report is to assess the potential for strengthening and expanding business-education partnerships in the tri-state area, particularly region-wide partnerships that cross municipal, county and state boundaries. It is intended to be a resource for existing partnerships and for schools, businesses, government agencies and community organizations that wish to examine different models of successful partnerships. School-to-work partnerships, which are at a critical juncture, receive particular emphasis.

The report will also guide the next phase of the Regional Technology Careers (RTC) initiative. A joint venture by Regional Plan Association and the Westchester Education Coalition, RTC seeks to develop and support partnerships that prepare at-risk students for success in the information economy. The initiative has completed planning activities that included education, business and community leaders from New York City, Westchester County, Newark and Stamford; and it is currently sponsoring a pilot program to implement project-based learning curriculum in five high schools. This report completes

¹ This tri-state region is defined as a 31 county area that includes New York City, Long Island and the Hudson Valley in New York State, northern and central New Jersey and southwestern Connecticut.

the planning activities funded by an initial grant from the DeWitt Wallace-Reader's Digest Fund.

The program models cited in this document were identified through a survey of national and state clearinghouses, including the Educational Research and Improvement Clearinghouse, the National Alliance for Business and the school-to-work offices of the U.S., New York, New Jersey and Connecticut Departments of Labor. Some models were also identified through leads provided by practitioners and researchers who have advised RPA and WEC during the first two years of the initiative. Even though these sources cover a wide-ranging universe of programs and approaches, none of these constitute a comprehensive source of partnership descriptions and evaluations. The programs highlighted here are illustrations of successful approaches that we identified. Many other useful efforts proceed with little attention, and new programs are always emerging. This document should therefore be considered one of many sources for information for partnerships in the region.

II. The Current State of Regional Business-Education Partnerships in the United States

Through corporate giving, vocational apprenticeships and programs such as Junior Achievement, corporate America has a long history of involvement in K-12 education. However, a few watershed events in the last 20 years have greatly expanded that involvement. The publication of *A Nation At Risk*, funded by the U.S. Department of Education and issued by the National Commission on Excellence in Education in 1983, galvanized public attention with alarmist language warning of “a rising tide of mediocrity that threatens our very future as a nation and a people.” While directed primarily at educators and government, the report received a great deal of attention from business organizations that translated into an expansion of programs and partnerships at the local level. Seven years later, the U.S. Department of Labor created the Secretary’s Commission on Achieving Necessary Skills (SCANS) to better define the skills needed throughout the workforce and identify actions required of schools and training providers at all levels. The commission drew business into a discussion of skills standards and defined education requirements far more broadly than the basic skills that were the focus of *A Nation At Risk*.

Business-education partnerships received their first large infusion of government funding with the School-To-Work Act of 1994. This legislation provided state funding to support local partnerships of schools, businesses, labor, youth development agencies and other community partners to support systemic education reforms and improve the transition from school to the workplace. A large number of school-to-work partnerships were formed, although many are not likely to survive the phase out of Federal funding, which will end entirely in 2001. In addition, both public and private sector attention is now absorbed with the issue of how to instill higher academic standards and tougher accountability in elementary and secondary schools. With major corporations taking a leading role, a 1996 National Education Summit called for every state to adapt specific and rigorous standards for academic achievement and accountability. By 1999, all but one state had adopted some version of new, more specific learning standards. Business has shifted much of its education support to the implementation of higher standards. Since state-level policies are the focus of much of the standards-based reform movement, it is unclear how the role of local business-education partnerships will be affected.

Regional collaborations are a subset of business-education partnerships that encompass several municipalities and school districts. Occasionally, these can be multi-state coalitions with strong government support and broad education reform agendas. More often, they encompass a single metropolitan area, a county, or a set of adjacent towns or school districts. Some focus exclusively on education or school-to-work programs, while others include education as part of a broader agenda of workforce or economic development. As with business-education partnerships generally, regional partnerships have grown in number during the last two decades. Particularly since the mid-1990s, a

new interest in regional policy on the part of foundations and the Federal government have given additional impetus to all types of multi-jurisdiction collaborations.²

Generally, the impetus for region-wide partnerships comes from either the public or private sector. Often, the business community will take the lead role in forming a coalition to improve perceived workforce deficiencies in a metropolitan labor market. For private companies, the geographic area from which they draw their workforce matters far more than the boundaries of political jurisdictions. These business-led coalitions are not usually formed without a pre-existing regional organization, such as a county Chamber of Commerce or a metropolitan business organization. Usually, these coalitions are concerned with a broad range of workforce development issues and are not limited to K-12 education. Sometimes, they concentrate solely on the needs of a particular economic sector, such as technology or manufacturing. These sector-based coalitions tend to be less concerned with general education issues than with vocational education and job training.

Government can also be the catalyst for regional partnerships, and strong coalitions generally have significant participation from the public sector. Strong leadership at the state level is often required to overcome local resistance to compromising home rule. County leaders can also provide leadership and motivation for collaboration among municipalities and school districts. Funding authority, such as state disbursement of school-to-work grants, is a primary tool used to encourage cooperation. Unlike business-initiated coalitions, these partnerships are nearly always defined by fixed political boundaries.

As with all types of regional organizations, the obstacles to building effective business-education partnerships are deeply rooted and complex. There are almost no government regulations that can be called on to implement regulations. Even the concept of a region rarely commands much civic allegiance. Residents of New York City and Newark, or Washington and Baltimore, or San Francisco and Oakland are more apt to see themselves as rivals for business and funding than as partners with common problems. Also, strong traditions of home rule exist in most states, and there is generally little history of sharing resources between municipalities and school districts. Education, in particular, is closely associated with local control. Therefore, many partnerships have very thin organization structures and limited objectives.

² For example, the U.S. Department of Housing and Urban Development is putting increased attention on regional anti-poverty strategies, and an increasing number of states have adopted “smart growth” policies that require regional land use and development plans. Foundations such as Ford, Rockefeller and Annie Casey have shown stronger interest in regional approaches. The rationale for these strategies has been outlined by a number of scholars, most recently by David Rusk in *Inside Game, Outside Game* (The Century Fund, 1999). Regional solutions for education reform receive less attention than metropolitan strategies for community development or adult workforce strategies, but the growing interest in regionalism provides greater acceptance for multi-jurisdiction cooperation.

The Growing Size and Scope of Business-Education Partnerships

Very little comprehensive data exists for business-education partnerships, much less for regional partnerships. Except for organizations funded under a particular government program, any information comes from occasional voluntary surveys. There is also no standard definition of what constitutes a business-education partnership. Any tallies are likely to undercount the total number for any given category, and it is difficult to compare data from different surveys.

By any measure, however, the number of business-education partnerships in the United States has risen substantially in recent years. By one count, the number of partnerships grew from 42,000 to 141,000 between 1983-84 and 1987-88.³ As noted earlier, the 1994 School-to-Work Act provided additional incentives for coalitions to form. In the last five years, the Federal government has committed \$1.6 billion in support of state and local consortiums. As a result, at least 1,000 School-to-Work partnerships were in existence by 1997, and over 90% of high school students now live in districts that are covered by a partnership.⁴ Some of these existed prior to the Act, and others were consolidated from smaller partnerships, but the funding spurred an increase in both the coverage and level of activity of business-education partnerships.

Although there is no data on the number of metropolitan, statewide or multi-state partnerships, the growing number of business-education collaborations has been accompanied by an expansion in their average size and complexity. In the early 1980s, the typical partnership was a one-to-one agreement between a school and a company. Now, multi-organization collaborative arrangements involving a city, region or state are far more common.⁵ Comprehensive efforts such as the Boston Compact and the Partnership for Kentucky Schools provided models for broader coalitions throughout the country. In addition to schools and businesses, these collaborations frequently include a diverse array of public, for-profit and not-for-profit partners, including youth service organizations, labor unions, colleges, state and local agencies and a variety of civic groups. While it probably represents only a small subset of these broader efforts, the Business Coalition for Education Reform counts 600 state and local business-education organizations as members. Most of these are city or statewide coalitions, but a substantial number also represent metropolitan regions.

More important than the number and size of partnerships is the evolution of their missions and range of activities. In 1987, the National Alliance of Business (NAB) identified six levels of activities that were appropriate for education-business-community partnerships:

³ Grobe, T., et al, *Synthesis of Existing Knowledge and Practice in the field of Educational Partnerships*, Washington, DC, Office of Educational Research and Improvement, 1993, p. 4.

⁴ Kazis, Richard and Hilary Pennington, *What's Next for School-to-Career?*, Jobs for the Future, Boston, MA, October 1999, p. 21.

⁵ Lankard, Bettina A., *Business/Education Partnerships*, ERIC Clearinghouse Digest #156, Education Resource and Information Clearinghouse, 1995.

- *Policy*, such as national and state task forces, political action committees and private industry councils;
- *Systemic Educational Efforts*, including community compacts and participation in broadly-focused alliances;
- *Management*, such as providing business expertise, information systems and technical assistance;
- *Professional Development*, such as outside training, orientations, internships and other services for teachers and administrators;
- *Classroom*, including mentors, tutors, curricula assistance and career-specific materials; and
- *Special Services*, including donations, special projects, awards and recognitions, equipment, etc.

As the size and scope of partnerships have expanded, their missions have also become more far-reaching and complex. Where agreements to undertake specific activities for professional development, classroom enhancements or special services were previously the norm, partnerships are now more likely to pursue a mission of systemic education reform and engage in a broad range of activities. The language of the School-to-Work Act embraced this higher goal even as it sought to define the mission of consortiums as the successful transition from the classroom to the workplace. Education policy is also higher on the agenda, as evidenced by the business's leading role in the 1996 and 1999 Education Summits, and the role of local business organizations in reforming school governance in cities such as Chicago and New York. And as the number and diversity of players in consortiums have grown, relationships have become more complex with numerous organizations having varied, and sometimes competing, objectives. Regional collaborations are likely to be among the most complex of these partnerships, with more participating organizations and a more diffuse mission than local partnerships.⁶

The National Infrastructure for Regional and Local Partnerships

Along with burgeoning numbers and more expansive missions, a national infrastructure has grown to service business-education partnerships. In both public and private spheres, new organizations have formed and existing organizations have added services to support education partnerships. Forms of support include funding, technical assistance, clearinghouse services, networking, policy research and advocacy. The primary types of service organizations include the following:

- Federal agencies, particularly those in the Departments of Education and Labor;
- national business organizations;
- private foundations; and
- for-profit and not-for-profit intermediaries and policy organizations.

⁶ Ibid.

The role of national business organizations has been particularly important in defining priorities and encouraging business involvement at the local level. The most important of these are included in the Business Coalition for Education Reform (BCER), which includes 13 national organizations as well as state and local members. Within this coalition, key organizations include:

- National Alliance of Business, the administrative organization for BCER and the primary business service and advocacy organization on issues of workforce and education policy;
- National Employer Leadership Council, a coalition of CEOs whose main function is to enhance employer involvement in business-education partnerships.
- Committee for Economic Development, which produces research and education materials;
- Council on Competitiveness, a forum of 140 CEOs focusing on constraints to U.S. competitiveness in the global economy; and
- The Conference Board, a research and professional development arm of the business community.

Increasing Uncertainty Over Roles and Objectives

Partly as a result of growth and complexity, participants in business-education partnerships are often uncertain as to how they can effectively contribute to the difficult challenges of education reform. This is particularly true for employers who often have little interest in becoming involved in the content of education services. In the last few years, a shifting national agenda has added to this confusion. The emphasis on academic standards has sharpened the focus to classroom activities and curriculum content, where the role for business is less clear than it is in addressing the transition from school to work. The new Federal legislation governing school-to-work, youth development and workforce development funding, the Workforce Investment Act, leaves considerable discretion to the states in defining the role for business, and many states have been slow in defining this role.

Regional consortiums, many of which receive considerable School-to-Work funding, must also adapt to changing Federal and state education priorities, as well as shifting emphases in the private funding community. The need to put education in the context of a broader workforce agenda is more imperative than ever for these partnerships. Standards-based education emphasizes state-level policies and implementation by individual school districts. However, there is also a growing emphasis in both Federal legislation and the foundation community to link education, youth development and workforce development programs. By linking diverse programs and assets within a metropolitan area, regional consortiums may be able to serve a function that local organizations cannot.

III. Lessons Learned from Regional Partnerships and Program Models

What makes regional consortiums successful? Which programs provide models for effectiveness or innovation? What lessons are most important for the Tri-State region at this juncture? The following discussion provides a review of selected partnerships and programs, both within the region and in other parts of the United States, that provide insights needed to answer these questions. Most represent some form of multi-jurisdiction collaboration, but some single-city programs that offer unique insights are also highlighted.

Of the eight cases that are profiled, four represent broad-based regional consortiums. One is a multi-state collaboration for education reform, while the other three are metropolitan area partnerships. The remaining four are replicable program models, all but one from the Tri-State region, that could be promoted and enhanced by a regional consortium. The latter were chosen for demonstrating one or more of the characteristics promoted by the Regional Technology Career initiative: cooperation among different municipalities, an emphasis on integrating academic and career preparation, and an innovative use of technology.

Regional Consortiums for Education Reform

The four case studies described below were selected because each has a characteristic that is particularly relevant to the Tri-State metropolitan area. *High Schools That Work* is a rare example of a multi-state collaboration that has achieved measurable success. *Joint Venture Silicon Valley's 21st Century Education Initiative* shows the potential for a business-led consortium to organize a large, sustained reform effort for a relatively large region. The Sacramento area's *LEED* program illustrates a partnership model organized around industry clusters as well as school districts. The *Potomac Regional Education Partnership*, while still in its infancy, is one of the few examples of a metropolitan partnership that includes large portions of different states.

1. *High Schools That Work: A Proven Track Record of Systemic Education Reform*

There are very few examples of education or workforce development efforts that encompass several states, much less ones with substantial accomplishments over an extended period of time. Geographically, these areas are usually too large to sustain a cohesive business or civic network. Politically, education is the province of state capitals and there is seldom enough incentive to form long-lasting partnerships. Perhaps the most important contribution of the following initiative is that it shows that these obstacles are not insurmountable. Of all the partnerships described in this paper, the *High Schools That Work (HSTW)* has one of the longest histories and arguably the most impressive accomplishments.

HSTW's parent organization, the Southern Regional Education Board, was formed in 1948 and represents the nation's oldest interstate education compacts. The board, which now includes 16 states, was created to help close the alarming gap in education outcomes that existed between the southern states and the rest of the nation at the end of World War II. Over the last half century, much of this gap has been eliminated. While the South's growing affluence and industrialization underlie much of the improvement in academic achievement, the influence of this unique effort cannot be discounted. The impetus for the compact came from the highest levels of state government. While the business community has only been a secondary player in the formation and governance of the board, it is still important to the success of many individual programs, including *HSTW*.

High Schools That Work, a flagship initiative of the Board, began in 1987 in 28 schools in 13 states. It is now operating at 970 sites in 22 states, including Massachusetts, Pennsylvania and several other states that are not part of the Southern Regional Education Board. None of the three states in the Tri-State area are participants. The initiative has two major goals:

- To increase the mathematics, science, communication, problem-solving and technical achievement and the application of learning for career-bound students to the national average for all students.
- To blend the essential content of traditional college preparatory studies with quality vocational and technical studies.

At the core of *HSTW's* approach is a comprehensive "whole school" revitalization that involves administrators, teachers, parents and community partners in a focused effort to improve academic achievement for the 60-70% of students who are not preparing for attendance at a four-year college.⁷ Participating school districts make a five-year commitment to carry out *HSTW's* prescribed program. Key elements of this program include the following:

- Elimination of the general education track;
- A revised curriculum with an upgraded academic core for all students and increased access to vocational studies that emphasize higher-level mathematics, science, language arts and problem-solving skills;
- Integrated planning and instruction time for academic and vocational teachers;
- A structured program of work-based learning with the potential for an industry-recognized credential and employment in a career pathway;
- An individualized career guidance system with strong parental involvement;
- A structured system of extra academic help for career-bound students; and
- Regular evaluations using student assessments and program data.

States also make a commitment to provide a support structure for participating schools that includes a state council to review progress and coordinate technical assistance, help in creating school-based action plans, technical assistance visits and participation in school assessments. *HSTW* provides the program framework, initial staff development

⁷ *HSTW* defines these "career-bound" students as those who plan to work, enter the military, attend a two-year college or technical school or a four-year college with an open admissions policy.

activities, assistance in curriculum design, team-building and other functions, networking opportunities and a variety of meetings, workshops and conferences to address common problems and highlight best practices. Businesses participate largely by helping to shape work-based learning programs and providing opportunities for students to participate in these activities.

One of the strengths of the program is its emphasis on on-going school and student assessments. Over the years, this tracking system has posted some impressive results and has allowed outside monitors to confirm the program's achievements. Schools that have participated in the program for at least five years have more students taking challenging courses of study, improve attendance, graduation and college-entrance rates, and significantly improve test scores. Career-bound students score higher than the national average for vocational students on reading and math assessments.

What makes the program successful? First, many of the attributes that are sought in the recent wave of standards-based reform—high expectations for all students, benchmarking progress, and accountability for students, teachers and administrators alike—have been strong and consistent themes in the philosophy underlying *HSTW*. However, the program also stresses several values that are not always part of recent reform efforts. One is a commitment to a process that can take several years to achieve significant results. The reason for the five-year commitment from participating schools is recognition that it can take several years for results to be clear. There is also a high level of commitment, in terms of time, money and support, from the state, the school district and from a well-funded national intermediary. And although there are high academic expectations for all students, the value of work-based learning and vocational studies is maximized for

What Can the Tri-State Region Learn From High Schools That Work?

HSTW is a program model that emerged from an organization devoted to multi-state solutions in a region with the common goal of catching up to national norms. Still, the model has proven successful in other parts of the country and there is every reason to believe that it would have value for many schools in the Tri-State area. Beyond the particular merits of the program, however, its experience points to some insights that can help improve existing partnerships and evaluate the potential for broader regional initiatives:

- Both the success of the Southern Regional Education Board and the dearth of comparable collaborations indicate the importance of an early commitment by Governors and other high-level state officials to the success of a multi-state consortium.
- High-quality academic and vocational curricula are not merely compatible. When delivered in an integrated structure, they can compliment each other and provide a challenging course of study for students motivated by career programs.
- A distinguishing characteristic of *HSTW*, and one that appears to be essential to any effort directed at systemic reform, is its insistence on a long-term commitment to common objectives and strategy by administrators, teachers, state agencies and community partners.
- A common system of program evaluation and benchmarking has differentiated this program from other efforts, and could provide a model for regional consortiums.
- The stability of the Southern Regional Education Board and the depth of its technical assistance resources speak to the importance of having a strong intermediary to support efforts to achieve comprehensive change.

students who are motivated by career preparation. Finally, the large scale of the program and its relatively long tenure provide it with ample opportunity to test, replicate and institutionalize successful practices.

2. *Joint Venture Silicon Valley's 21st Century Education Initiative*

Business-education partnerships that cover entire metropolitan areas can emerge from a number of venues—a regional chamber of commerce, an active county government, state legislation that encourages education or workforce consortiums, informal networks of civic or business leaders. Regardless of the initial energy source, all face a difficult task of maintaining a cohesive organization with a focused mission. Besides the absence or weakness of regional governance structures, the inherent tension between urban and suburban areas is nearly always an issue, even when there is a concerted effort to stay focused on common objectives.

Silicon Valley is clearly one part of the country that has built a sustained, multi-faceted collaboration in spite of these impediments. With the nation's 11th largest city (San Jose) and a population of two million people, it cannot be discounted as a small-scale example with little relevance to large metropolitan areas. It does, however, have a number of advantages that are often cited as the foundations for its renowned success in developing a business-led movement for economic and civic renewal. These include a *strong regional identity* emanating from its image as the nation's leading high technology area, a *collaborative business culture* in which both entrepreneurship and strong personal networks are valued, and *widespread affluence* that provides ample resources for civic endeavors and helps to diffuse urban-suburban tensions. Although few regions share all of these features, some of the approaches applied here could be adapted to other locales.

The 21st Century Education Initiative is one of the earliest efforts of *Joint Venture Silicon Valley (JVSV)*, a business-led civic partnership that emerged in the early 1990's as the region was undergoing a downturn following defense cutbacks and weakness in the computer industry. Its mission is to “spark a local educational renaissance, a new community commitment to building a world-class educational system that enables all students in Silicon Valley to be the most sought after for their skills, knowledge and good citizenship.” There are four program components, including a Multimedia Project to design technology-rich curriculum, a Professional Development and Dissemination Network to fund and replicate innovative teacher preparation models, and a Public Engagement Policy to build stakeholder support. The original and most central component, however, is Challenge 2000, a program intended to foster continuous improvement in student achievement.

Launched in 1994, Challenge 2000 now has 9 teams of businessmen, educators and community partners that support education reform efforts in 14 school districts with 63 schools and 42,000 students. Each team focuses on particular area of competency—literacy, math or science—for clusters of schools that include a high school with its

elementary and middle feeder schools. The theoretical construct for the effort is called the Venture Capital Model, and its provisions clearly reflect the dominant influence of the businesses, predominantly technology firms, that fund the effort:

- Investment, in terms of money, equipment and staff time, is justified in terms of both the potential and demonstrated ability to meet student achievement goals.
- Each team establishes quantifiable goals and enters into a three-year memorandum of understanding with Challenge 2000 on what is to be achieved in return for the investment.
- Multiple success measures, including standardized tests, parent surveys and other instruments, are strongly emphasized, both to benchmark progress and focus the process.
- Collaboration between “investors” (Challenge 2000 staff) and team members is built into the program designs.

The 1999 Annual Report for Challenge 2000 describes significant improvements in standardized test scores for most of the eight teams that had been in place at least a year, attributing these results to the team efforts and program’s investments. While these results cannot be taken at face value without an independent assessment, it is reasonable to assume that the program is a strong contributor to higher test scores and other indicators of educational improvement. At a minimum, the level of effort is impressive. From 1994-1998, a total of \$133 million in private resources was invested in the efforts of these eight business-education teams.

The report also cited some lessons learned from the first years of the program:

- Strong support from superintendents and boards of education were critical to successful efforts.
- Assessments needed to be meaningful to a variety of stakeholders (students, parents, employers, citizens), and standardized tests were not always sufficient.
- Schools benefited from the perspective of outside partners.
- Success required a commitment to continuous improvement.
- Systemic change takes time, energy, focus and persistence. In most cases, the original 3-year time frame for team efforts is being extended to 5 years.

What Can the Tri-State Region Learn From Joint Venture Silicon Valley?

JVSV capitalized on an active network of business leaders to energize and sustain a broad-based education reform effort. The Tri-State region has a number of characteristics that stand in the way of duplicating this effort—a larger and more diverse population, a more fragmented industry structure and wider urban-suburban disparities. However, the model could be adaptable to areas within the region, such as Long Island or Northern New Jersey. There are also attributes of the initiative that are worth considering in any attempt to launch or enhance a broad-based partnership:

- Ambitious program goals were matched by generous commitments of time, money and civic capital, an essential condition for insuring that early excitement was matched by concrete achievements and a well-organized institutional structure.
- The effort was structured around clear organizing principles that were consistent with the business and civic culture of Silicon Valley.
- Measurable objectives and benchmarks appear to have focused team efforts and permitted periodic re-evaluation of strategies and methods.
- Attention to the needs of different stakeholders appears to have been successful in broadening participation to include non-business partners.

3. LEED-Sacramento: A Regional School-To-Career Consortium

As mentioned previously, the 1994 School-To-Work Act led to the development and expansion of many business-education partnerships. One regional partnership that was able to strengthen its mission and broaden its scope of services is *LEED-Sacramento*. The organization's title (*Linking Education and Economic Development*) demonstrates the degree to which it embraces a dual mission of reforming education and strengthening the economy, a connection stressed by many (but by no means all) school-to-career partnerships. This focus is reflected in the initiative's program structure, making it a potentially enlightening case for how to strengthen business involvement in regional partnerships.

Formed in 1992, *LEED* undertook a three-year planning and consensus-building process before any programs were initiated. The metropolitan Sacramento Chamber of Commerce shepherded the process, which included industry executives, labor leaders, school administrators and community-based organizations. *LEED* is concerned with all four counties in the Greater Sacramento Region, but most program activities are concentrated in Sacramento County. The program really came to fruition when it formed the Greater Sacramento School-To-Career Alliance in 1995 and received a multi-year grant from the Federal School-To-Work office. Although the largest part of *LEED*'s activities are administered as part of the STC Alliance, other programs include an initiative to improve the use of technology in the classroom and an advocacy program to improve support for systemic change in education.

Four components of the program appear to be important for encouraging a regional identify and collaboration. Industry consortiums are organized at the regional level to develop industry skills standards and coordinate employer involvement. Portable skills certificates, which are being developed to recognize evidence of student competency in the industry standards, are intended for acceptance throughout, and even beyond, the region. For school-based activities, participating schools adopt common models, usually the career academy model, that facilitate industry involvement. Finally, the advocacy program seeks to create broad acceptance for the *LEED* concepts and initiatives.

At the core of *LEED*'s approach is an effort to bridge academic and industry skills standards. The goal is for students, through school-based, work-based and connecting activities, to develop competencies in five levels of standards:

- Core academic standards;
- Generic workplace readiness standards;
- Core industry standards;
- Occupational family standards; and
- Job-specific standards.

Program activities are intended to integrate academic and workplace skills in both school and work settings and encourage collaboration between educators and employers.

The most ambitious aspect of the initiative is to develop the skills standards and certificates through the organization of 12 industry consortiums. By design, the consortiums are to be phased in over time and to draw on skill standards being developed at the national and state level, such as those being developed by the National Skills Standards Board. Three industry clusters—Banking/Financial Services, Health and High Technology—were the first to organize. The latter includes information technology, telecommunications, bioscience and engineering. As in other skills standards projects, the process can be difficult and produce uneven results across industries. Developing the skills certificate is a multi-year process that involves organization of the consortiums, development of skills standards, and design and testing of assessment instruments. The program is currently field testing a portfolio assessment to be used for the certificate.

Skills standards are conveyed to educators primarily through summer conferences and can be reinforced through teacher internships. Trainers assist teachers to integrate the standards, particularly cross-cutting foundation skills, into the curriculum. There is an emphasis on creating action-based projects in which employers provide consultation and feedback. Participating schools also adapt a structure that allows for integration of academic and workplace skills. Most incorporate career academies, in which student choose a focus and receive classroom instruction, counseling, internships and other work-based experiences to master the requirements for an industry or occupation. Careers are defined broadly and students can generally transfer between academies, which require similar sets of core skills.

What Can the Tri-State Region Learn From LEED Sacramento?

LEED is an intriguing model because it is attempting to implement a large-scale school-to-career initiative by giving equal weight to academic and industry skill standards. Although the Sacramento area is much smaller than the tri-state region, and is contained within the boundaries of a single state, it still faces many of the same issues as school-to-career consortiums here—parental resistance to “career tracking,” multiple jurisdictions, and the difficulty of bridging the different objectives and expectations of employers and educators. Both its success in obtaining broad participation and its persistence in overcoming these hurdles offer some practical insights:

Strong and consistent advocacy by a regional business organization was essential to obtaining buy-in and participation from the business community and in developing a program structure that clarified the links between business and education.

- Both a well-articulated program and a large, multi-year anchor grant were essential to establishing credibility and maintaining momentum through the initial phase of the initiative.
- Integrating academic and workplace standards is both conceptually appealing and difficult to implement. Success requires early attention to building broad-based support and commitment to a long-term process.
- Organizing employers and programs by industry can be useful for improving employer involvement and student motivation, but industry-specific standards are generally far less important than the core workplace skills, which cut across industries and are generally captured by SCANS skills.

It is still early to evaluate *LEED*'s success in improving academic achievement, and the program's signature instrument—the portable skills certificate—has yet to be implemented. However, the initiative has had considerable success in obtaining broad employer and school participation in a clearly articulated, ambitious reform effort. Its continued progress should provide additional lessons in how to integrate academic and workplace skills on a broad scale.

4. *The Potomac Regional Education Partnership: A Multi-State Metropolitan Collaboration*

Although it was founded less than two years ago, the *Potomac Regional Educational Partnership (PREP)* is in some ways the most relevant model for a tri-state business education partnership. Like the NY-NJ-CT region, *PREP*'s region is a large metropolitan area covering large parts of different states—in this case, northern Virginia and the Maryland suburbs in addition to the District of Columbia. The scale and level of complexity are therefore not that different from the issues that a tri-state consortium would face. The D.C. area also has parallels to Silicon Valley in that it has one of the nation's largest clusters of information technology companies, a sector that now rivals government as the leading driver of the region's economy. A shortage of information technology workers appears to be one of the driving forces behind the initiative.

One unique characteristic of the greater Washington region is that it is the seat of the national government, an attribute that was important to the founding and development of the program. The effort was conceived and spearheaded by Senator James Jeffords (R-VT) and it has been able to draw on the support of Federal officials as well as local leaders. *PREP* was officially launched in August 1998 and has been supported in large measure through the voluntary contributions of an extensive network of business, civic and government leaders. In its first year Annual Report, *PREP* highlighted the contributions of over 200 volunteers, most of them in senior government, business or academic positions, and estimated the value of their in-kind contributions at \$312,000.

The stated mission of the consortium is to improve educational opportunities in the Washington, D.C. metropolitan area and to help meet workforce needs. To implement this mission, its Board of Advisors has organized five voluntary subcommittees and task forces to address priority issues. As reported in their September 1999 Annual Report, these committees are developing the following program agendas:

- The *Access to College Task Force* is creating programs to improve college orientation for underserved, academically inclined high school sophomores and a “virtual academy” to expand access to two-year postsecondary degrees using distance learning.
- The *Access to Technology Subcommittee* is developing a regional community technology resource center to encourage the creation and linking of community centers that provide wider access to the Internet and up-to-date hardware and software.

- The *Professional Development Subcommittee* is administering a survey to identify ongoing professional development activities for educators and developing a strategy to improve the recruitment of exemplary teachers.
- The *Safe Learning Environments Subcommittee* is creating a training institute to teach best practices in violence prevention and intervention, and a Police-School Relations Council to design cross-jurisdictional solutions to school crime and youth violence.
- The *School-To-Career Transitions Subcommittee* surveyed businesses and labor organizations to determine current and potential involvement in school-to-career activities and is developing a tele-mentoring initiative through which business people assist students by telephone or home computers.

What Can the Tri-State Region Learn From the Potomac Regional Educational Partnership?

PREP is still in its formative stage but it does provide a model of how to organize a regional partnership in a multi-state metropolitan area. The Potomac region has some distinct differences with the NY-NJ-CT region—it is less than half the size of the tri-state region and it is the seat of the national government. However, it is clearly a large, dense metropolitan area with similar jurisdictional issues. The partnership's early experiences offer some guidance for the potential of broad regional initiatives here:

- A powerful champion, in this case a U.S. Senator, was able to obtain early support from a wide network of regional leaders.
- Good organization of in-kind support was able to generate considerable momentum for the initiative without a great deal of initial funding.
- Universities, particularly George Washington University, played a critical role in hosting and shepherding the fledgling staff functions of the consortium.

Given that the initiative is still in the early stages of implementing an ambitious agenda, it will be interesting to see how the program takes shape over the next few years. Two issues in particular warrant close observation. Most obviously, will the initiative be able to translate considerable initial enthusiasm and in-kind support into well-funded programs that address its leading priorities? This is often a difficult transition for largely voluntary efforts that do not have extensive staff resources or a track record in program implementation. Second, will the coalition be able to maintain strong participation from all parts of the region—particularly since there is such a striking contrast in educational needs, affluence, race and ethnicity between the city of Washington and the district's suburbs, and because the suburbs are split between two different states? A good test may be in the area of teacher recruitment, where different jurisdictions are likely to face an increasingly competitive situation in the face of a worsening teacher shortage.

Cross-Cutting Issues for the Region

These four examples show how different approaches can achieve success in different contexts. All require a combination of public and private support, but two, *HSTW* and *PREP*, were initiated by high-level public officials while the other two, *JVSV* and *LEED*, were the product of private sector leadership. The link between education reform and economic development covers a broad range, from the conceptual association of *HSTW*

to the structural link built into *LEED*'s mission and program. All rely a well-articulated organizational framework to give structure to an otherwise complex and diffuse agenda—an emphasis on standards in the case of *HSTW* and *LEED*, benchmarking in the case of both *HSTW* and *JVSV*, and a business planning framework in the case of *JVSV* and *PREP*. Both the successes and limitations of these efforts point to some minimum requirements for launching and sustaining a successful business-education partnership for an area as large and diverse as the tri-state region:

- A compelling set of goals or principles that makes the case for regional collaboration;
- High-level sponsorship and a long-term commitment from either the public or private sector;
- Identification and utilization of regional networks, including business networks, civic associations and academic networks;
- A program structure that articulates clear and achievable objectives and includes measurable standards for success; and
- An intermediary or sponsoring organization with the mission, staff and resources to implement and sustain the effort.

Program Models Emphasizing Career Preparation and Technology

The above examples focus on the structural aspects of regional partnerships. However, the content of the programs has as much to do with the effectiveness of partnerships as organization structure. One benefit of the expansion of business-education partnership has been the development and testing of a wide range of program models. While the data to undertake comparative evaluations of programs is often sparse, some programs have been judged to have impressive results, and some of the most successful have been replicated throughout the country. In addition to the programs described below, descriptions of effective models can be gleaned from a number of compilations and assessments that have been developed in the last several years, including the following:

- A compendium of evaluation studies of education and youth development programs by the American Youth Policy Council: *Some Things Do Make a Difference*, 1997
- Descriptions of model school-to-career programs on the website of the U.S. Department of Education: www.stw.ed.gov/expsrch as well as the school-to-career sites for Connecticut (www.state.ct.us/sde/learn/regions), New Jersey (www.state.nj.us/njded/voc/examples) and New York (www.nysed.gov/workforce/stw/program)
- A in-depth study of the design and early implementation of model school-to-career programs by Jobs for the Future: Hilary Koop and Richard Kazis, *Promising Practices: A Study of Ten School-to-Career Programs*
- Descriptions of school-to-career programs with a focus on technology by IBM: *School-to-Career Programs and Technology*, 1999

- Descriptions of 92 business-education partnerships on the website of the Business Coalition for Education Reform: www.bcer.org/coalition
- An analysis of school-to-career partnerships and programs in New York City, conducted by the Graduate Center of the City University of New York for the New York Citywide School to Work Alliance: Deborah Bloch and Leo Goldman, *An Initial Mapping of the School-to-Work System in New York City: Findings and Issues, Third Edition, 1997*

The four cases highlighted below were selected based on the following criteria: demonstrated impact, relevance to the tri-state region, and emphasis on two attributes that business brings to educational partnerships—knowledge of rapidly changing career requirements and extensive technological resources and expertise. Not surprisingly, the programs administered by business-education partnerships frequently place a strong emphasis on career preparation and the utilization of new technology. All but the first are approaches with roots in the tri-state region. Three are being implemented in several locations, while one represents a partnership between a single employer and school district. These examples represent a small sample of innovations, both within the region and nationwide. They do, however, illustrate the variety of approaches that could be utilized to enhance the scope of existing partnerships or provide the programmatic content for new partnerships.

1. *Communities and Schools for Career Success (CS²): A Comprehensive School-To-Career Model*

A school-to-work model that predates the Federal legislation, CS² began in 1993 and now operates in six Massachusetts communities. The program's stated mission is to involve entire communities in developing and carrying out plans to help students progress successfully from middle school to high school and on to adulthood. It has three primary objectives:

- develop a coherent sequence of career development opportunities for students moving through the K-12 system;
- infuse work-related skills into the curriculum;
- and develop a coordinated array of support services for students and their families.

The central feature of CS² is the deployment of a team of change agents, known as "school-community entrepreneurs," in each community. The entrepreneurs organize, facilitate and support education reform initiatives at the school and school district level. There are generally 2-3 entrepreneurs at the middle and high school levels and one at the district or community level. The team works with the local governing board and community partners to mobilize resources for a comprehensive youth development system. The Corporation for Business, Work and Learning, which administers the program, provides strategic and technical assistance on an as-needed basis. Priorities and strategies vary, but each community system has the following elements:

- 1) a career development strategy with a sequence of age-appropriate activities;

- 2) curriculum and instruction reform; and
- 3) a network of health, mental health, social work, counseling, after-school activities, tutoring and mentoring programs.

Specific activities range from targeted projects, such as career awareness programs and summer work/learning programs, to school-wide initiatives, including after-school programs, professional development and collaboration on a “total quality education” strategy.

Program evaluations conducted by the Center for Human Resources at Brandeis University have had generally positive findings. The role of the change agent appears to have been particularly effective in mobilizing support for systemic reform and providing a constant presence to maintain momentum. The initiative has spawned a broad range of activities that has greatly expanded the number of students participating in career-related activities and has been a catalyst for creative thinking about the relationship between education and career success. Numerical data are suggestive of positive academic results, but are still insufficient to make definitive conclusions.

The primary insights to be gained from CS² include the following:

- Fundamental change is possible, but it requires time and a major commitment of resources. Most communities began by implementing narrowly focused projects before attempting broader systemic changes. A well-funded program and the support of an established intermediary have also been essential to the program’s success.
- Dedicated on-site staff, in this case the change agent, is generally an important consideration. Otherwise, it is difficult for program activities to maintain their focus and remain a priority.
- The program’s flexibility has allowed it to be adopted in a number of contexts. Beyond the basic program structure, communities select and design the activities that are most appropriate for their student population and resources.

2. *Virtual Enterprises, International: Technology and Workplace Experience in a School Setting*

The *Virtual Enterprise (VE)* is an American adaptation of the European “practice firm,” a concept that can be traced back to the 17th century. In the more than 1,500 practice firms that operate in 20 different European countries, students run simulated office environments, generally in a school setting, to integrate academic and workplace skills, and to learn the requirements of particular industries and occupations. In 1996, this model was the basis for the establishment of virtual enterprises in seven New York City high schools. The program has grown considerably since then with the enthusiastic support of the Board of Education. In the last school year, over 30 VEs were either in

operation or being set up in the five boroughs. The concept has also spread to upstate New York and Florida, and is being examined in other parts of the region and the country.

In some ways, the program can be considered a technologically advanced version of the Junior Achievement model. The “virtual” part of the endeavor reflects both the simulation of real office environments and the cyberspace networks that connect the enterprises. All of the New York City enterprises are provided with the computer hardware and Internet connections to communicate and “trade” with other *VEs*. Operationally, students are assigned positions within the enterprise, such as CEO, Sales Manager, Human Resource Manager or Systems Analyst, based on interest and aptitude. Students generally rotate among positions. The “business” can range from a securities firm to a travel agency to an art gallery. While there is some flexibility in the program structure, the New York City program is built around a number of standard components:

- a physical setting within the high school that simulates an office environment;
- state-of-the-art office technology;
- regular business hours within periods of the school day;
- standard workplace rules and record-keeping practices for the industry;
- a corporate partner that provides advisory services;
- a faculty coordinator that oversees the program and coordinates the involvement of other faculty and staff; and
- support from the Virtual Enterprise Center, a Board-established entity that administers the program and provides business, economic and backoffice operations.

It is still too early to determine the program’s impact on academic achievement, college placement or career decisions. However, its rapid expansion and the enthusiasm that it seems to generate among superintendents, principals, teachers and students demonstrates its appeal and points to its potential as a tool for integrating academic and workplace skills. Some of the early lessons that can be gained from the program include the following:

- Conceptually, the model has a number of features that appeal to both education and business constituencies—educators maintain control by having the activities integrated into the school curriculum, business has a limited but clearly defined role, and both are drawn by the emphasis on technology and a setting in which both academic and SCANS skills can be practiced.
- The tangible products and services produced by the program can provide motivation and recognition for students, schools and business partners.
- Top-down implementation from the Board of Education and support from an active Virtual Enterprise Center are important for the rapid implementation and dissemination of the concept.
- The program requires a significant investment in technology, business planning, curriculum development and supervision to be successful.

- Integration with standard curriculum can be difficult and appears to depend on a number of factors that vary from school to school, including faculty interests, professional development support and the skills of the coordinator.

3. Project Explore: Marrying Technology to Comprehensive Reform

Few projects can match the level of investment and systemic change associated with this partnership between Bell Atlantic and the Union City, NJ school district. Begun in 1992, the project connected a failing school district that was threatened with a state take over with a leading telecommunications company that was starting to implement an advanced network plan. The flagship feature of the project was the implementation of a computer network that linked the homes and classrooms of a cohort of middle-school children, teachers and parents. In subsequent phases, the network was enhanced and extended to other students. Now, every school has PCs wired into a district network so teachers and students can communicate with one another, access the Internet and put their curriculum online.

The technology, however, was only part of a comprehensive overhaul of the district that centered on the implementation of a new curriculum. The curriculum, which emphasized whole language, project-based learning, and longer, interdisciplinary classes, was actually introduced three years prior to the new technology. By adding the computer network capabilities, the school district was able to address a number of issues created by its emphasis on contextual learning. Internet access provided a continual source of new authentic texts for the whole language curriculum. The ability to engage in cooperative and interdisciplinary study was enhanced by the ability to network with other teachers and students. New skills and computer access opened new opportunities to engage the community and the workplace, such as a summer program in which high school students build Web sites for city agencies and programs.

This ambitious reform effort has yielded some impressive results. District-wide, all of the measures that were used to justify a state takeover in 1989—test scores, drop-out rates, attendance rates, staff capabilities, community support—have improved substantially. Where the city was one of the most poorly performing districts in the state ten years ago, it now out-performs comparable urban and special needs districts by approximately 27 percentage points in reading, math and writing scores on the state's Early Warning test.

It is difficult to determine which components—curriculum, technology, management reforms, community participation—were most important to success. Clearly, money was a factor. In addition to Bell Atlantic's investment, revisions in state financing allocations and the district's special needs status increased its budget from \$42 million in 1989-90 to \$100 million in 1997-1998. The logical conclusion is that each of these pieces had a complementary effect on the other. Other districts had large budget increases without comparable results. It is also apparent that educational vision drove the technological applications, rather than the other way around.

While the resource intensity and crisis-driven overhaul of this model are difficult to replicate, the model does provide some useful insights that can be more widely applied:

- A holistic approach to reform can result in dramatic improvements if it is well-conceived and adequately funded. Union City was able to undertake systemic reform because there was a consensus that drastic measures were needed. However, without an appropriate educational vision and substantial financial resources, little progress would have been made.
- Contextual learning and information technology are natural complements, and can be effectively utilized in a system that uses standardized test results to measure success.
- Investments in technology are not likely to be effective unless the applications are consistent with the education philosophy and supported by staff development, maintenance and upgrading.

4. *Career Academies: Linking Academic and Career Preparation*

Career academies emerged in the 1960s as school-within-a-school programs that emphasize specific career themes and foster strong ties to the business community. The number of high schools with career academies has grown rapidly in the last decade. Students enrolled in academies sponsored by the National Academy Foundation, the largest such program in the United States, grew from slightly more than 3,000 in 1990 to nearly 25,000 in 1999. This program began with an Academy of Finance in Brooklyn in 1982, and there are now approximately 36 NAF sites in the tri-state metropolitan region. While career preparation is obviously an explicit goal, many schools implement this approach as a drop-out prevention strategy or as a means of extending college preparation to a larger number of students.

One of the more recent additions, Stamford's Academy of Finance, illustrates the appeal of the program. In its two-year program, juniors and seniors prepare for careers in commodities trading, banking, real estate, insurance, accounting, computer programming and telecommunications—all industries that are well-represented in the Stamford area as well as the tri-state region as a whole. The curriculum is designed to integrate a rigorous academic workload with industry knowledge and work experience. Businesses help design the curriculum, serve on the Advisory Board, and provide access to paid internships, mentoring and information on hiring and career opportunities. In addition, the program receives technical assistance from the national foundation.

The structure and curriculum of career academies can combine features of school-to-work with standards-based education. As schools-within-a-school, they can more readily integrate career-theme curriculum with standard academic courses. They are still often resisted by those who perceive them as more vocational than academic, a perception that advocates try to prevent by stressing rigorous course loads, college preparation and the "high-tech" service sectors that academies tend to adopt as themes.

The relatively long history of career academies has permitted a number of evaluations to be performed. These studies have generally found positive results for attendance, drop-out prevention, graduation rates and college enrollments. Less data is available on performance in standardized tests, but one study of 11 California academies found improvements for Academy students.⁸ Not surprisingly, schools and sponsors are increasingly touting their consistency with standards-based education and their high college placement rates. The NAF tabulates that over 90% of their graduates continue in two and four-year colleges.

Among the lessons provided by this model are the following:

- Many of the benefits of career academies seem to derive from the structured environment that permits closer relationships between students and teachers and the opportunity to interact with business mentors. Some benefits are probably attributable as much to the intimate “school-within-a-school” format as to the program content.
- Even a program that is this explicitly career-oriented can promote college enrollment, indicating that the career focus can motivate students to improve academically.
- Business has a substantial and important role in this model, but involvement is made more appealing by clearly defined tasks and support from a well-established national intermediary.
- Although the concept of a career academy is relatively simple, implementation can require substantial changes in the institutional and even the physical structure of the school.

Common Elements of Successful Programs

What differentiates these and other successful efforts from less effective efforts? Other studies of business-education projects and school-to-career programs generally come up with similar lists of important components.⁹ These include the importance of a strategic vision, adequate financial support, high-quality learning activities, integration of academic learning and occupational knowledge, and special efforts to involve employers. The four examples described here reinforce and expand on these points when we examine their common and disparate elements:

- All four programs have a structure that clearly articulates goals, objectives and expectations, ranging from the limited objectives of the Virtual Enterprise to the systemic change envisioned in Union City.

⁸ For a summary of three evaluation studies, see *Some Things Do Make a Difference for Youth*, American Youth Policy Forum, 1997, pp. 12-15.

⁹ In addition to Kazis and Pennington, see Morgan Lewis, *Characteristics of Successful School-to-Work Initiatives*, ERIC ACVE Information Series No. 370 and Michele Naylor, *Work-Based Learning*, ERIC Digest #187, 1997.

- All are supported by resources that are commensurate with the objectives. Career Academies and the Virtual Enterprise, while they do not necessarily involve systemic changes, still require substantial financial commitments from sponsoring school districts. The financial commitment for *CS*² varies by the ambitions of the site, and the Union City model clearly implies a very high level of investment.
- The more structured models, Career Academies and Virtual Enterprise, are easier to implement and replicate, while a more flexible model like *CS*² may have greater potential to generate school-wide and district-wide changes.
- The programs with the greatest emphasis on business involvement, Career Academies and Virtual Enterprise, had the most clearly defined roles for employers. This structure assists with maximizing business involvement.
- Some form of hands-on, contextual learning is at the heart of all four models, from running a business venture to whole language to the range of career-oriented activities in *CS*² and the academies.
- For the three models that are operational in multiple sites, an active intermediary that provides support, technical assistance and evaluation services is an essential part of the success.

None of these models will be suitable for every community in the region, and there is a range of other approaches with the potential to achieve similar objectives. There is also a need for continuing evaluation of these programs and improved tools to assess and compare results. However, their progress thus far indicates a potential for wider replication and indicates which attributes contribute to their success. A combination of these approaches could also provide the programmatic content for new and expanded regional partnerships.

IV. The Potential for Strengthening and Expanding Partnerships in the Tri-State Region

The initiatives highlighted in the previous section indicate a number of approaches that could be adopted or expanded within the New York-New Jersey-Connecticut metropolitan area. The region already has a number of successful partnerships and exemplary programs. However, results are uneven and even the most successful initiatives face the problem of bringing their efforts to scale. In addition, school-to-career partnerships face a particular set of challenges. As stated in Jobs for the Future's assessment of school-to-career, the national consensus that resulted in a surge of support for the movement has eroded in the following ways¹⁰:

- The political realignment of Congress in 1994 weakened bi-partisan support and is at least partly responsible for Congress's refusal to reauthorize the School-To-Work Act.
- The rapid growth of standards-driven reform and emphasis on standardized assessment can be difficult to integrate with the school-to-career emphasis on contextual learning and a broad range of assessments.
- The ambitious goals and complexity of school-to-career has inhibited the rapid implementation of high-quality models.
- Most initial efforts focused on the necessary first steps of building partnerships and supporting change across K-12 systems, neglecting more concrete programmatic objectives and the establishments of benchmarks that are necessary to maintain political support.

Current Framework for Partnerships and School-to-Career in the Region

All of these issues are at play in the tri-state region. Many partnerships are reassessing their scope and missions as Federal and state support declines. New York, New Jersey and Connecticut are all aggressively implementing curriculum based on rigorous standardized assessments, leaving school districts with limited attention and resources for school-to-career activities. And with only a limited number of concrete accomplishments, the initial enthusiasm for school-to-career and its promise for systemic reform has faded in many, but not all, parts of the region.

Even with this change in climate, there is as a surging interest in education reform throughout the region and several examples of business organizations taking a more active role in education issues. With the appropriate vision, leadership and support, stronger business-education partnerships could emerge. Choosing the most effective mission, agenda and geographic scope of regional partnerships are legitimate issues, as

¹⁰ Kazis and Pennington, pp. 3-4.

are the most effective strategies for building support. To address these questions, it is first necessary to map the institutional framework for partnerships and school-to-career in the tri-state area.

Business-Education Partnerships and School-To-Career Coalitions in the Tri-State Region

As would be expected in a region as large and diverse as the tri-state area, there is considerable overlap of organizations undertaking education reform and school-to-career activities. In several instances, there are multiple organizations for the same geographic area. In others, there are city-wide or area-wide organizations with a layer of county, borough or community-wide organizations underneath. What follows is a broad overview of the organizations that are active in five different parts of the region.

New York City: There are two city-wide organizations, in addition to the Board of Education, that have a major emphasis on business involvement in education. The New York Citiwide School To Work Alliance is the umbrella organization for school-to-career activities in the city, coordinating and supporting the activities of borough and neighborhood coalitions. The New York City Partnership and Chamber of Commerce is the city's leading business organization, and has focused primarily on education policy issues and youth employment programs.

Long Island: The Long Island Association, Nassau-Suffolk's primary business organization, has recently launched a broad education initiative, the Long Island Works Coalition, to forge collaborative relationships between employers and the education community. A number of area-wide and county-wide school-to-career alliances are also active on the island, including the Partnership for Change, the Long Island School to Career Partnership and the Nassau County School to Career Partnership.

Hudson Valley: With no area-wide business-education partnership, most activities are organized on a county basis. In Westchester County, the Westchester Education Coalition and the Westchester/Putnam School-to-Career Partnership both promote business-education partnerships. Two business associations, the Westchester County Association and the Westchester Chamber of Commerce, are both active countywide.

Northern New Jersey: The Regional Business Partnership is the umbrella business organization for a six-county area and is involved in a range of education activities. School-to-work activities are generally overseen by county Workforce Investment Boards, and county chambers of commerce are often active in education issues. Statewide organizations, such as the New Jersey Business and Industry Association and the New Jersey Chamber of Commerce also provide education programs and support school-to-career activities.

Southwestern Connecticut: SACIA, the business council of southwestern Connecticut, is active primarily in western Fairfield County. Other business partnerships are active in different parts of Fairfield and New Haven counties, and most have some involvement in

education issues. The most active business organization in school-to-career issues is the statewide Connecticut Business and Industry Association, CBIA, which partnered with the state education department to design their school-to-career program. School-to-career partnerships are primarily local, since counties have no legal status in Connecticut.

Priorities and Organization of State School-To-Career Programs

The Federal School-to-Work act gave states wide discretion in designing school-to-career programs and distributing grant awards. Not surprisingly, there are substantial differences between the states in how their programs are structured and what they emphasize. With the sunset of Federal funding and renewed emphasis on academic standards, each state is also undergoing somewhat different transitions. A brief synopsis of these programs indicates both how they differ and where they converge.

New York State: The state oversees 50 regional school-to-career partnerships organized into 10 areas of the state. The three in the metropolitan area are New York City, Long Island and the Hudson Valley. School-to-career per se is receiving diminished attention and funding from the state, and connecting school-to-career to new state learning standards is clearly a priority for continued support. New York is undergoing the most ambitious implementation higher graduation standards of any state in the country, an effort that is reverberating throughout all education activities. The flagship initiative that is being promoted to integrate school-to-career activities into this framework is the Career Plan Pilot Initiative. Under this plan, seventeen sites are developing plans to implement Career Development and Occupation Standards that were approved by the state in 1996. The results of the pilot projects will be used to incorporate career planning and related activities into the K-12 curriculum.

New Jersey: The state oversees 38 school-to-career partnerships with additional coordination and oversight from county Workforce Investment Boards. New Jersey has integrated school-to-career activities into its Core Curriculum Content Standards by requiring career planning beginning in 7th grade and a career major beginning in 10th grade. Students are also being required to have a work-based learning experience. These requirements make it likely that school-to-career activities will continue to receive emphasis and funding in the state as school districts begin implementing the career planning and major requirements, and as businesses are called on to provide more work-based learning experiences.

Connecticut: Connecticut's program is organized around eight industry-developed career clusters and is administered through eight regional workforce development boards. In addition to other school-to-career activities, participating students select a career cluster by the end of the 10th grade and are to receive school-based instruction and career guidance and participate in work-based learning activities. The state has also developed a Career Certificate that students receive when they demonstrate academic, employability and technical skills in one of the eight career clusters. Although participation is not mandatory, the integration of career preparation with academic requirements is a strong foundation for continued support of school-to-career activities.

Clearly, the states share an interest in integrating school-to-career activities with standards-based curriculum, and their approaches have many similarities. The curriculum standards of the three states are also broadly similar, although the assessments and the pace of implementing higher graduation standards differ. The main issue separating them on school-to-career is the degree to which career planning and preparation are incorporated into the curriculum. Career majors are mandatory in New Jersey, well defined but still optional in Connecticut, and New York is still designing strategies to integrate career planning with K-12 curriculum.

Opportunities to Strengthen Existing Partnerships

Depending on how one defines a region, the tri-state area has several existing regional business-education partnerships. Long Island, the Hudson Valley, Northern New Jersey and Southwestern Connecticut are large, multi-jurisdictional areas with distinct histories, cultures and issues. Many consider New York City to be a region in and of itself, and counties are also a form of regional governance. In this sense, the coalitions and business organizations for these areas constitute regional business-education partnerships. Strengthening these existing partnerships is a desirable goal regardless of any efforts to forge a broader regional collaboration.

The experiences of the partnerships and programs described in this report, as well as the current climate for educational reform, suggest a number of opportunities for strengthening these partnerships. In many cases, the organizations are already moving in these directions, but require a broader consensus and resources to implement them. In other instances, they are struggling to redefine their priorities. Out of these reassessments, at least five areas of opportunity appear to warrant additional attention:

- 1. *Benchmarking progress in academic achievement and career success:*** The success of initiatives like *High Schools That Work* and *Joint Venture Silicon Valley* is at least partially due to their ability to forge consensus around a number of measurable criteria for education reform. Regional partnerships can fill a void by developing and tracking success indicators for schools, programs, communities and the region as a whole. These benchmarks should include, but not be limited to, the standardized test scores that drive state and local education policies. While not always easy to implement, a benchmarking component can clarify objectives for key constituencies and institute ongoing evaluation of programs and services.
- 2. *Improving and replicating the strongest program models:*** Particularly with declining funding levels for school-to-career, partnerships will need to be more discriminating about which programs to support. After several years of national and regional experiments with different approaches, the next several years are a time to shift the emphasis to consolidation, strengthening and replication of models that have demonstrated potential.
- 3. *Demonstrating the link between contextual learning and academic standards:*** Nearly all of the cases described in this paper achieved success with some form of

contextual learning, whether it was project-based learning in a classroom setting, simulations of a workplace setting, or actual experience in the community. The partnerships in the tri-state region are in a good position to make stronger connections between academic achievement and programs and curriculum that emphasize hands-on applications. Part of this is connected to developing benchmarks, and part to the design of programs that help educators to incorporate contextual learning into standard curriculum.

4. ***Clarifying business roles and enhancing employer involvement:*** Business-led partnerships like *Joint Venture Silicon Valley* and *LEED Sacramento*, and programs like *Virtual Enterprise* and *Career Academies*, have incorporated a strong element of employer involvement by establishing clear roles and achievable objectives. The lack of stronger business involvement plagues many partnerships in the region, and could be addressed through a reassessment of roles and expectations. Some partnerships in the region are now trying to shift to seeing businesses as clients as opposed to providers, a paradigm change that could enhance employer involvement.
5. ***Linking education reform to workforce and youth development:*** Implementation of the Workforce Investment Act calls for an integration of workforce development, youth development and school-to-career programs through Workforce Investment Councils. The regional partnerships that have overseen many of these programs need to work with the councils and facilitate this integration.

Options for a Broader Regional Collaboration

In addition to strengthening existing business-education partnerships, there are reasons to consider some form of a broader, tri-state collaboration. The metropolitan area is a single labor market, and improving academic and workforce skills throughout the region enhances the entire economy. Still, given the obstacles to forming such a collaborative, there needs to be a clear set of benefits that is commensurate with the level of effort required. Potential benefits from a tri-state partnership include the following:

- Wider dissemination of ideas and best practices,
- Better coordination of employer involvement,
- Economies of scale in providing technical assistance and other services,
- Higher level participation from business and political leaders, and
- Increased opportunities to influence public policy and rally citizen and business support.

Most of these attributes are exhibited in the regional partnerships described here, particularly *Joint Venture Silicon Valley* and the *Potomac Regional Education Partnership*. However, the arguments against a broader partnership also need to be considered before any effort is undertaken. These include the following:

- The region may be too large and complex to garner support and deliver services effectively,
- Regional business and political networks may be too weak to sustain such an effort, and
- The effort could divert attention and resources from existing partnerships.

These are the same issues that the region faces in a number of policy areas, from transportation to the environment. Regional collaborations to address these issues have had varying degrees of success. Education may be seen as an even more localized issue, but a few regions have overcome similar obstacles, albeit on a smaller scale.

There are also different levels of collaboration that could be considered. The simplest effort would focus on expanding informal networking among organizations, educators and businesses in different parts of the region, as Regional Plan Association has already begun to do. This would result in wider dissemination of information and best practices, but none of the other benefits of a tri-state collaboration. A more structured but narrowly focused effort could address a single objective, such as coordinating employer involvement or developing tri-state recognition for certificates of workplace or career competency that are in development in two states and under discussion in the third.

The most ambitious initiative would be a comprehensive effort similar to that undertaken in the Potomac region. To implement this vision, several conditions would have to be met. A set of compelling goals and achievable objectives would need to be specified. It would need the active support of prominent business or political leaders with stature in all three states. It would also need long-term organizational commitments to build the institutional networks to sustain the effort.

It would appear that the most important step at this juncture is to continue building the institutional infrastructure needed to support a larger effort. This can be accomplished through a number of actions, such as the collaboration of RPA and the Westchester Education Coalition to develop and disseminate a project-based learning model throughout the region, or RPA's proposal to develop a bi-county workforce development strategy for the Bronx and Westchester. Exploiting the potential of the Workforce Investment Act to develop inter-jurisdictional strategies is another action that could help build regional networks. Finally, site visits or a colloquium that bring the progress of other regional partnerships to the attention of business, political and civic leaders could provide a spark for a higher profile effort.