National Institute for Literacy

Partnering with Employers

to Promote Job Advancement for Low-Skill Individuals

Karin Martinson

September 2010

URBAN INSTITUTE

This report was produced under National Institute for Literacy Contract No. ED-04-CO-0121/0002 with MPR Associates, Inc. It was written by Karin Martinson, a Principal Research Associate at Abt Associates, Inc. At the time Ms. Martinson wrote the paper, she was Senior Research Associate at the Urban Institute. Jerry Rubin, President and Chief Executive Officer of the Jewish Vocational Service (JVS), provided useful comments and guidance on earlier drafts of the report. Additional funding was provided by the Annie E. Casey Foundation through the Urban Institute's Low-Income Working Families Project.

Lynn Reddy served as the contracting officer's representative. The views expressed herein do not necessarily represent the positions or policies of the National Institute for Literacy. No official endorsement by the National Institute for Literacy of any product, commodity, or enterprise in this publication is intended or should be inferred.

For quality assurance purposes, drafts of publications commissioned by the National Institute for Literacy are subjected to a rigorous external peer review process by independent experts. This review process seeks to ensure that each report is impartial and objective and that the findings are supported by scientific research.

The National Institute for Literacy, a Federal government agency, is a catalyst for advancing a comprehensive literacy agenda. The Institute bridges policy, research and practice to prompt action and deepen public understanding of literacy as a national asset.

Daniel Miller, Acting Director

Lynn Reddy, Deputy Director

September 2010

The citation for this report should be: National Institute for Literacy, Washington, DC 20006

Table of Contents

Executive Summary 1

Introduction. 1

Why Should Employers Get Involved
in Skill-Development Activities?. 2

What Do Low-Skill Workers
Need to Advance? 2

Promising Strategies for Involving
Employers in Skills Development Efforts 5

Policy Considerations: Building
and Sustaining Employer Partnerships 12

References 15

Executive Summary

The current economic climate in the United States and the difficulty employers face in hiring and maintaining a skilled workforce in an increasingly competitive and global economy have generated interest in developing and promoting policies and programs that can most effectively help low-skill individuals gain job skills and move up the economic ladder, while also enhancing the viability and competitiveness of businesses. Employer involvement is critical to the success of these policies and programs.

This paper explores the reasons why employer partnerships are important for improving economic outcomes for both low-skill workers and businesses. It identifies the factors that have hindered the growth of these partnerships as well as promising approaches—incumbent worker training and sectoral training—to build partnerships. It concludes with a discussion of policy considerations for creating and sustaining partnerships with employers to provide skill development opportunities.

Introduction

Recent decades have witnessed a growing disparity in the earnings of workers with different levels of education. Those with high school diplomas or less education saw their earnings fall throughout much of the 1980s and 1990s compared with those who had more education. Between 1979 and 2005, real hourly wages for college graduates rose by 22 percent, remained stagnant for high school graduates and fell by 16 percent for high school dropouts (Mishel, Bernstein, & Allegretto, 2005). Among low-income workers, fewer than half had more than a high school degree in 2003, and about one-fifth were high school dropouts (Acs and Nichols, 2007).

Even before the recent economic downturn, very few low-skill people were able to land jobs offering any significant or lasting wage increases over time, largely because they lacked the basic skills and education needed to advance. One study found that while low-wage earners experience some earnings gains over time, no more than a quarter of them permanently escape their low-wage status (Andersson, Holzer, & Lane, 2005).[1] Many low-skill workers also lack access to employment opportunities with the potential for career advancement, particularly in higher-wage sectors of the economy, such as health care or manufacturing. The current economic crisis brings new urgency to these labor market challenges, particularly for low-skill individuals competing for a shrinking number of jobs.

The business community is also facing critical challenges in maintaining a skilled workforce in an increasingly competitive and global economy. Several trends, including an aging workforce, declines in educational attainment among American workers and an influx of immigrants who often lack English skills, are affecting workforce skill levels and employers' ability to remain competitive and enhance productivity (Aspen Institute, 2003; Dohm & Shniper, 2007). Employers need to invest in a skilled workforce if they are to meet their financial and productivity goals, particularly in the current economic environment.

These factors have generated interest in developing and promoting policies and programs that can most effectively help low-skill individuals gain job skills and move up the economic ladder, while also enhancing the viability and competitiveness of businesses. In this report, we share lessons about state and local public partnerships with businesses and industry aimed at improving the skills and advancement potential of low-skill individuals. In these efforts, businesses play a significant role in developing training, either at the worksite or in collaboration with educational institutions.

Given the challenges of the current job market, state and local partnerships with employers to advance low-skill workers are critical. While promoting the advancement of low-skill individuals is easier when labor is in high demand, employers are still hiring and retaining low-skill workers. Both employers and workers, therefore, continue to need access to effective training to improve employers' productivity and competitiveness and workers' performance and future job opportunities. Developing and building close working relationships with employers will allow training providers to maintain their relationships

1 In this study, low-wage earners were those consistently earning less than $12,000 a year early in the study period.

with employers through tough times and expand them when the economy recovers.

This paper discusses why employer partnerships for training are important for improving economic outcomes for both low-skill workers and businesses. We identify factors that have hindered the growth of these partnerships as well as promising approaches—incumbent worker training and sectoral training—to building partnerships. We conclude with a discussion of policy considerations for creating and sustaining partnerships with employers to provide skill-development opportunities.

Why Should Employers Get Involved in Skill-Development Activities?

Why is employer involvement so critical to skill-building efforts? Employer involvement is crucial for several reasons, including solid benefits for both businesses and workers.

Businesses can enhance productivity and competitiveness by investing in the human capital of their workforce. New technologies and globalization increase competitive pressures on companies to improve performance or reduce costs or both, but they also generate more options for employers to improve their productivity and competitiveness. To maintain or expand their position within the marketplace, firms can invest not only in capital equipment and facilities but also in the job-specific and basic skills training needed to enhance worker productivity. Even within fairly narrow industries, however, some employers seek to be competitive through a low-wage, low-cost strategy (sometimes called "low-road" employers), while others rely more on improving productivity through higher skills, higher retention rates and more training ("high-road" employers) (Holzer, 2007a). For businesses without serious problems recruiting or retaining skilled workers (or for which the "low road" is demonstrably profitable), offering training to their workforce may not be a priority. However, many businesses must upgrade the skills of current workers and fill deficiencies in high-skill occupations to remain competitive.

Research has shown that, in addition to enhancing competitiveness, investing significantly in the education and training of workers can provide firms with other benefits, such as lower employee turnover, higher customer retention, an improved reputation in the community and higher rates of innovation (Ahlstrand, Bassi, & McMurrer, 2003). Improving the skills of non-native English speakers also offers the potential of expanding the employer's client base to include customers from non-English-speaking countries (Thompson, 2006).

Employers need to recruit and retain good entry-level workers, consistently upgrade the skills of current workers and fill deficiencies in high-skill occupations to avoid skills deficits. When skilled workers are in short supply, employers will have to pay higher wages and benefits to recruit and retain such workers or invest more of their own resources in training (Holzer, 2007a). They may otherwise face high turnover or poor worker performance or both. For example, employers in some sectors continue to report difficulty in attracting and retaining skilled workers, particularly in relatively high-paying "middle skill" positions requiring some education and training beyond high school (such as associate's degrees, vocational certificates or significant on-the-job training) but less than a bachelor's degree (Holzer & Lerman, 2009). In addition, the aging of the workforce means employers must replace retiring workers, many of whom are relatively skilled, with a new generation of workers (Dohm, 2000). Because of these factors, some employers, particularly in industries such as health care, education and energy, which project significant job growth even in difficult economic conditions, will need to invest in maintaining a skilled workforce (Dohm and Shniper, 2007).

What Do Low-Skill Workers Need to Advance?

It is in the interest of both the business sector and the nation to improve economic outcomes for low-income individuals and their families. Low-skill workers, however, can face challenges that call for help with skill development and job advancement from employers and others.

Low-skill individuals need education and job training to obtain better jobs, particularly training that provides credentials valued by employers and skills suited to the demands of the local labor market. A wide range

of research indicates that strong basic skills and postsecondary credentials are linked to higher wages and can improve wage growth over time (see Barrow & Rouse, 2005; Holzer & Martinson, 2005; Jacobson & Mokher, 2009). For example, some experts indicate that the premium paid by businesses for postsecondary education has increased substantially over the past three decades. In 1973, employers were willing to pay $6.21 more an hour for a college graduate than a high school graduate, and by 2003 this figure had grown to $9.87 (Mishel et al., 2005). Strong English skills also are linked to better earnings, with foreign-born workers fluent in English earning about 14 percent more than those who are not fluent (Chiswick & Miller, 2002). Many low-skill workers displaced by the current economic downturn need to enhance their job skills so they can re-enter the workforce, or they may find themselves at the end of a long queue of more experienced jobseekers.

Providing training responsive to employer needs can help low-skill workers move ahead. Research shows that training and credentials directly linked to employer needs can improve economic outcomes for low-skill individuals (Holzer & Martinson, 2005). For example, a recent experimental study of sectoral training programs, designed to provide industry-specific expertise in the design and ongoing operation of training, found earnings increases of about 18 percent (about $4,000) over a two-year period (Macguire, Freely, Clymer, & Conway, 2009). Programs directly involving employers in the development of curricula and the provision of employment during the summers or academic year for secondary students also have shown success (Kemple, 2008). Integrating skills training with basic English and math skills, so that these skills are taught in the context of a particular industry, were a critical element in these efforts. Further, other studies have shown positive effects of job training on earnings for disadvantaged adult women, with on-the-job training linked to a particular job or employer producing larger earnings gains than standard classroom training (Orr et al., 1996).

Workers often juggle work, family and training, so connecting skill-building activities directly to work may help them attend and complete programs and ultimately improve their earnings. Workers who pursue postsecondary education have much lower completion rates than traditional students (usually nonworking, full-time students), and they are much more likely to leave school within the first year (Bosworth, 2007). This is not surprising, since low-skill individuals, particularly those who are parents, have limited time for training. They are more likely to attend part-time and stop and start courses of study without completing them (Comings, 2007). The characteristics of low-wage jobs (including a lack of paid leave, inflexible work hours and unpredictable hours or shift work), academic underpreparedness and family obligations all contribute to low enrollment and completion rates for low-wage workers (Matus-Grossman & Gooden, 2001). In addition, the limited financial aid available to these nontraditional students, particularly those attending part-time, combined with their low earnings, creates financial barriers to attending school (McSwain & Davis, 2007)

Job training connected to employment, occurring either at the workplace or as part of the workday, can make it easier for low-skill individuals to obtain the skills needed to advance. There is strong evidence that workplace learning is an effective strategy for improving earnings (Ahlstrand et al., 2003), in part because it is easier for workers to attend classes (Lerman, McKernan, & Riegg, 2004). For example, the wage-rate benefit of 40 hours of workplace education is estimated to be 8 percent, as large as the return from an entire year of schooling (Frazis & Loewenstein, 1999). A nonexperimental study of the impact on earnings of California's workplace training program found that participants' earnings growth exceeded that of nonparticipants by 3 to 20 percent, depending on the year (Moore, Blake, Phillips, & McConaughy, 2003). Training at the workplace also provides a familiar setting, which may be especially important for workers who are intimidated by the formal education system or have been away from school for several years (Duke, Martinson, & Strawn, 2006). Workplace training also can help increase access to training for low-skill workers who may lack reliable transportation and who must juggle work and training with family responsibilities.

The Challenges of Getting Employers Involved

Efforts to engage employers in skill development are not new, with both private and public sectors playing important roles. There are, however, several reasons why these efforts could be more effective in engaging employers in skill-building activities for low-skill individuals. The challenges faced by private and public sectors in moving forward in this area should be taken into account in implementing promising strategies or developing new approaches.

The employer perspective: limited incentives to serve low-skill individuals. Businesses are a major provider of training in the United States, spending considerably more on this activity than federal and state governments combined (Mikelson & Nightingale, 2004). But low-skill workers are the least likely to reap the potential benefits of this privately provided training: Workers with the highest wages and the most formal education receive the most training in the workplace, while those with the lowest levels of education receive the least (Ahlstrand et al., 2003; Oldmixon, 2006).

Some employers do not have adequate incentives to provide training to low-skill workers. Businesses are more likely to invest in workers expected to contribute to the long-term profitability of the company—that is, those with longer tenure. Low-skill workers and those at the low end of the earnings scale generally have higher turnover (Lane, 2000). Training workers who may leave could transfer the returns on their training investment to a different business (Dohm & Shniper, 2007). Businesses also may be unable to attract employees if they help finance on-the-job training by reducing wages (Holzer, 2007a). More so than with other types of workers, the opportunity cost of devoting time to training for low-income workers is high because the type of work involved in many low-wage jobs is difficult to postpone or reschedule (Ahlstrand et al., 2003).

Training provided by employers is more prevalent at larger firms and those offering more benefits. This trend also works against low-skill workers' access to workplace training, since low-income workers are disproportionately employed at small businesses (Acs & Nichols, 2007). Small firms may face cost constraints that limit their ability to invest in training, or they may be unable to benefit from economies of scale. Smaller firms are more likely to be low-margin businesses with less time for and economic interest in long-term investment in staff. They are also less likely to have career ladders conducive to training, with limited opportunities and substantial training needed to move up to a better job (Bosworth, 2003).

The public sector: a fragmented and underfunded job-training system. The factors discussed above affect employers' decisions to invest in training for low-skill individuals and make the appropriate (or "optimal") decisions about training approaches (Holzer, 2007a). To address this problem, a public training system is needed that encourages the provision of employer-focused training for businesses that have difficulty doing it on their own. However, as discussed below, education and training programs in the United States are scattered across multiple systems, and some face significant funding constraints. Until the infusion of additional resources into the federal Workforce Investment Act of 1998 (WIA) system under the American Recovery and Reinvestment Act (ARRA), dramatic declines in funding for local workforce investment boards severely limited the ability to provide training (Rubinstein & Mayo, 2007). These structural and funding challenges make it difficult for the job-training system to respond to the needs of business and for employers to navigate the system (Mazzeo. Roberts, Spence, & Strawn, 2006).

Job-training programs in this country are generally coordinated by the workforce development system, usually through One-Stop Centers established by the WIA. This system emphasizes a "work-first" approach of moving unemployed, low-income people into work by providing access to job-search services and employment opportunities and has only a marginal focus on skill building and job advancement (Visher & Fowler, 2006; Wallace, 2007).

While WIA has resulted in greater business involvement in the policies set by regional workforce investment boards (Dunham, Salzman, & Koller, 2004; Wallace, 2007), at the programmatic level, employer involvement has been limited. Participation generally consists of job posting services, downsizing assistance and labor market information, with limited access to training (United States Government Accountability Office [GAO], 2006). Many employers are still unaware of the services provided under WIA, or they

may have negative perceptions based on past experiences that discourage current involvement (GAO, 2006).

The public sector also provides resources for "incumbent worker" or customized training programs. These are typically state-administered programs providing grants to businesses to partner with training providers to offer job-specific training for current workers and new hires. Most incumbent worker training programs are funded through employer taxes, including unemployment insurance (UI) tax offsets, UI penalty and interest funds, and separate employer taxes (GAO, 2004), while others use WIA discretionary funds (Fisher, 2008). However, as noted earlier, low-skill workers are the least likely to reap the potential benefits of this training. For example, in one study, 22 percent of workers at the bottom of the earnings distribution received education at work, compared with 40 percent of those at the top (Mikelson & Nightingale, 2004).

The public sector has become increasingly involved in sectoral training programs that focus on providing training to a cluster of employers in one or more segments of the local economy. In these efforts, intermediaries help training providers generate curricula that meet businesses' needs and work with employers to ensure that jobs are available to those who complete the training. However, the financing of sectoral initiatives, including the intermediaries, is particularly underdeveloped. There is no dedicated funding stream for these efforts, and programs must patch together funds from several sources, including WIA, Temporary Assistance for Needy Families (TANF) and philanthropic organizations (Martinson & Holcomb, 2007). Without adequate funding and support, these efforts have been scattered, and it has been difficult to improve, expand and replicate them. While the U.S. Department of Labor has funded several initiatives that award a limited number of grants to states and localities to support employer-oriented skills training, the grants are not necessarily targeted at those with low skills.[2]

Across these different efforts, training is provided by a range of institutions, including community colleges, public education agencies and nonprofit organizations. Some of these organizations, particularly community-based organizations, have limited experience working with businesses to develop training or to understand workforce needs. Anecdotal evidence suggests that many of these community-based organizations do not have sufficient resources to develop the expertise or capacity needed to reach out effectively to the business community. Moreover, employers have expressed concern about the lack of "professionalism" and commitment to workforce issues by nonprofit organizations, as well as their general sustainability (Laufer & Winship, 2004).

Community colleges, on the other hand, are a major source of training for working adults, increasingly recognized as an important system for providing postsecondary education at low cost (Osterman, 2007). Because their focus is local, community colleges can have an advantage in maintaining contacts with employers, but the quality of this connection varies widely (Grubb, 2001). Many community colleges provide remedial, or "developmental," education to those with low skills, but these programs often have a limited connection with the colleges' occupationally oriented programs. Moreover, dropout rates for low-skill students are high; many leave without making a transition to occupational programs (Bailey, Jeong, & Cho, 2008: Blair, Bransberger, & Conway, 2007).

Overall, employers face a range of disincentives to providing training to low-skill individuals. Although the public sector has made some efforts to address this shortfall, more needs to be done to encourage employer involvement in such training.

Promising Strategies for Involving Employers in Skills Development Efforts

Despite these challenges, employer involvement in skill development has been a growing area of interest and innovation in recent years. Involving employers in skill development for low-skill workers requires strategies that address the challenges discussed above, particularly economic reasons for businesses to participate, resources for training, links between employers and training providers, and a focus on the specific needs of low-skill workers. This section outlines two promising skill development efforts that include a significant role for employers: incumbent worker training and sectoral training.

2 These include the High-Growth Job Training Initiative and the Community-Based Job Training Initiative.

Incumbent Worker Training

One important strategy for strengthening employer involvement in training for low-skill workers is to improve the design of incumbent worker training programs to reach this population more effectively. This approach generally provides public funds (usually from employer taxes) to individual employers or a consortium of employers to upgrade the skills of current employees or train new hires. As noted earlier, there is strong evidence that training provided by employers at the workplace has important benefits for workers. But these programs commonly lack significant training opportunities for low-skill workers.

Building upon the incumbent worker training system is important because, although individual efforts vary widely in size and scope, the system provides significant resources for involving employers in skill building. Because of their reliance on employer taxes, these efforts face fewer funding constraints than other discretionary programs subject to budget cutbacks (Crosley & Roberts, 2007). To meet the needs of low-skill workers more effectively, specific program features can help target the training to low-skill workers. These features have been implemented in some states and localities, as illustrated by programs operating in New Jersey and Pennsylvania (see example below).[3]

Some incumbent worker training programs provide financial incentives to employers for training low-skill workers. To ensure that employers address the needs of this population, state agencies can set aside funds or give preference to training focused on low-skill or low-income workers. It can be risky to employ strategies specifically targeting low-skill workers, however, because such a training partnership might be stigmatized as a program only for low-income or low-skill individuals and diminish support for the program among the public and employers. Some programs have addressed this issue by broadly targeting entry-level positions, providing or setting aside funds for basic skills training (see the New Jersey Workforce Development program example) and conducting outreach to businesses in low-income areas (Duke et al., 2006). To encourage paid release time allowing workers to attend training as part of the workday, some states require an employer financial contribution for this purpose (see the New Jersey Workforce Development program), but public resources could be used as well (Martinson & Holcomb, 2007).

Promoting multi-employer partnerships that bring together businesses with similar training needs can reduce costs and overcome the competitive risks of investing in training. Joining forces with other employers that could benefit from similar training for their employees can be effective, especially for small or medium-sized businesses. This strategy also can reduce the competitive risks of investing in training if companies and their competitors make similar investments (Duke et al., 2006). Allowing and encouraging the use of funds to support training projects benefiting more than one employer also helps workers gain portable skills they can take to other jobs (Martinson & Holcomb, 2007). These partnerships can be similar to the sectoral programs discussed in the next section, but they are likely to operate on a smaller scale. The Pennsylvania Incumbent Worker Training Program is an example of this approach.

Finally, specific provisions can be made to encourage small businesses to participate. Small businesses are where many low-skill individuals work, and they may feel that they are less likely to be considered for and benefit from incumbent worker programs than their larger counterparts. Some states, including New Jersey, as described the example, have separate incumbent worker training initiatives for small businesses (such as those with fewer than 50 employees), which provide funds to individual workers to purchase "off-the-shelf" (not customized) training available in the community (Duke et al., 2006).

Incumbent Worker Training Program Examples:

New Jersey Workforce Development Program and Pennsylvania Incumbent Worker Training Fund

New Jersey Workforce Development Program. The New Jersey Workforce Development program makes grants to partnerships of employers and training providers for technical training for incumbent workers at businesses across the state.

3 The New Jersey and Pennsylvania incumbent worker training programs are notable for their scale (they train several thousand people annually, although a smaller number are low-income) and maturity (they have been in operation for several years). However, neither has been rigorously evaluated.

The program addresses the challenges of involving businesses in training by providing incentives for employers to participate and flexibility that meets the needs of both large and small businesses.

The state covers the cost of the training (through employer UI taxes), and employers are required to contribute an equal match, paying employees' wages while they attend training, usually at the workplace. This program is complemented by the Supplemental Workforce Fund for Basic Skills, which provides similar grants for literacy training (basic reading, math and English as a Second Language [ESL]).

Employers apply to receive grants for customized or literacy training or a combination of the two. Because of its basic skills component, the program reaches a range of low-skill workers, including immigrants and TANF recipients. The program also provides grants directly to community-based organizations and community colleges to offer basic skills training to unemployed and underemployed people in the community. This feature is designed to meet the needs of small businesses unable to supply the employer match because of their small workforce. Workers in these firms can attend basic skills courses offered in the community.

Pennsylvania Incumbent Worker Training Fund. The Incumbent Worker Training Fund is a large-scale, statewide initiative to enhance the skills and earnings of incumbent workers in targeted industries. The fund addresses the challenges of involving businesses in training by being responsive to specific employment needs in the state, offering resources to employers to provide training, taking account of the needs of small and medium-sized businesses, and encouraging partnerships among businesses with similar training needs to reduce cost and overcome the competitive risks of investing in training.

Part of a broader initiative called Job-Ready Pennsylvania, the Incumbent Worker Training Fund provides grants to regional partnerships of multiple employers, workforce development systems and educational institutions. Funded by state revenues, the program requires employers to provide an equal match in the form of paid release time. Partnerships are required to focus on one of Pennsylvania's seven critical manufacturing clusters (biomedical, pharmaceutical and medical equipment; chemical, rubber and plastics; electronics; metal and metal fabrication; printing; food processing; and lumber, wood and paper). The emphasis is on aligning training with career steps and creating career ladders offering advancement opportunities.

Partnerships market the initiative and recruit participants through employers or public agencies. Training is provided by local institutions, as selected by the partnerships. Up to 25 percent of the funds can be used for training new hires rather than incumbent workers. The program is complemented by the Workforce and Economic Development Network of Pennsylvania, which provides grants to 33 community colleges and other educational institutions to offer basic skills or information technology instruction to workers at their workplaces, with more than half of the funds going to small and medium-sized businesses.

Sectoral Training Programs

Sectoral training programs are another important strategy for involving employers in skill development. Interest in the sectoral approach is growing across the country, and several new initiatives have emerged in recent years. This strategy focuses on an industry or a small set of industries and develops industry-specific expertise that supports the design and operation of training programs. To address the shortcomings of past efforts to provide employer-oriented training, sectoral initiatives use intermediaries who focus on understanding business needs and constraints to

encourage employers to participate and generally involve a broad range of private- and public-sector partners, including employers, workforce investment boards, community or technical colleges, and unions. As discussed earlier, studies of sectoral initiatives show consistent improvement in employment rates, wages and job quality.

A key element of this approach is an organization, usually a nonprofit organization or government agency, serving as an intermediary connecting low-skill workers, training providers and employers (Giloth, 2004). Intermediaries act as the central organizers and coordinators of the services provided. They seek to develop industry knowledge and understand employer training needs when creating programs. They also can improve access to jobs for low-skill workers by providing solid labor market information and contacts and by addressing location disadvantages and discrimination or both. Intermediaries help training providers generate curricula leading to appropriate credentials, work with employers to ensure that jobs are available for those who complete training, provide financial or support services; and market the program to employers (Holzer, 2007b). Studies have found that employers value the services that intermediaries can provide, such as screening job applicants and developing pipelines for the full range of workers regional employers need (Taylor & Rubin, 2005).

By design, the vast majority of sectoral initiatives target low-skill workers and seek to address their specific needs. Many sectoral programs offer a range of support services and career counseling needed by low-skill workers to participate in training (Conway & Rademacher, 2004). Some sectoral programs also seek to improve access to high-quality jobs by making changes within industry hiring, training, promotion and compensation practices, particularly for low-skill workers. Many initiatives provide training only for jobs offering certain pay levels, employee benefits and access for low-income people to training through better local recruitment and partnerships with employers. Some initiatives also have taken steps to help industries make structural changes to improve wages and benefits associated with specific jobs in ways that benefit both businesses and workers (Roder, 2008).

Employers typically play a major role in these initiatives by helping to design training programs, working across the industry to develop skill standards for specific jobs or hiring graduates. In some programs, employers contribute financially to the initiative, while in others the effort is financed entirely by public and private resources, as discussed above. Employer financial contributions take various forms, including fees paid to hire trained program participants, payments to cover training costs, paid release time and funding for staff positions (Dworak-Munoz, 2004).

Another benefit of the sectoral approach is that focusing on a cluster of employers is appealing to the small and medium-sized companies where many low-skill workers are employed. As previously noted, because their competitors share the investment in training, the economies of scale can make training more affordable and less risky for any given employer (Martinson & Holcomb, 2007).

While funding sectoral initiatives has been challenging in the past, new efforts have focused on identifying alternative funding sources for workforce intermediaries beyond WIA, such as bond financing, UI, Food Stamp Employment and Training funds, tuition strategies and private foundation investments (Prince, 2007). In addition, ARRA provides significant new resources for industry-oriented training, particularly for "green" jobs and in health care, with some provisions for targeting low-skill workers (for example, see Fox, Walsh, & Fremstad, 2009).

Sectoral training programs can vary significantly in terms of design, scale and scope, including the number of industries and employers involved. Sectoral programs generally have been considered a local or regional strategy, but some states have developed a more systematic approach. They also vary in terms of their target group and approach, including whether they focus on entry-level or incumbent workers (or both), whether they are designed to accommodate workers or demand a full-time commitment, and whether they focus on pre-employment services, a multi-step career ladder or credentials. Pennsylvania (example above) is an example of a statewide sectoral approach, operated through its incumbent worker training program. The following sections describe examples illustrating the diversity of these initiatives: pre-employment and bridge programs, career ladders and industry-based certification.

Pre-employment and bridge programs. Several sectoral initiatives focus on providing skill-building activities to the

unemployed. Some are known as bridge programs because they attempt to connect basic skills development with entry-level training or postsecondary education or both. These programs are designed to bring students' academic skills up to the level needed for training provided by a range of institutions and, possibly, for regular postsecondary degree programs. They generally include contextualized learning, incorporating materials from specific occupational fields; instruction in job-specific competencies; paid internships; and links to credit-bearing or certification programs (Martinson & Holcomb, 2007). The example below highlights a short-term multioccupational bridge program at Denver Community College, which focuses primarily on linking TANF recipients with entry-level training. Other sectoral pre-employment programs provide both basic skills and more advanced college-level training. Another example, Capital Idea, is a three- to four-year program with a strong focus on job quality and the unemployed. While these programs are notable for their design and services, neither has been rigorously evaluated.

Pre-employment and Bridge Program Examples:

The Essential Skills Program (Denver, CO) and Capital Idea (Austin, TX)

The Essential Skills Program (ESP). Operated by Denver Community College, ESP is a multioccupational certificate bridge program that prepares people with low skills for entry-level jobs and more advanced training. ESP responds to the challenges of involving businesses by seeking employers' input on the specific skills they need in the workplace, meeting the needs of small and medium-sized companies by focusing on a cluster of employers, and promoting retention by offering substantial supportive services to trainees while in the program and for a year after placement in unsubsidized employment.

Employers offer expertise on workplace competencies, consult on curriculum design and provide internships and job opportunities. Training is available in five areas: information technology, early childhood education, financial services and accounting, community health and medical clerical work. Serving TANF recipients, ESP provides work-readiness preparation, short-term basic skills instruction and occupation-specific training combined with job experience in a career pathway. The program takes five months to complete and results in approximately 16 community college credits and an essential skills certificate in the chosen field. The program enrolls approximately 200 students yearly.

In the first month, students are required to take a full-time course combining work-readiness activities and vocational training specific to one career track. This is followed by a three-month internship that counts toward a degree if the student stays in the same vocational area (students are paid the employer's entry-level wage). During these three months, students are simultaneously taking about 15 hours of contextualized classroom instruction that also teaches competencies for the intended job. Staff members provide academic and career counseling, referrals to financial resources and job-placement services throughout the program. Retention services, job coaching and referral to support services continue for a year after placement in unsubsidized employment.

Capital Idea. Begun in 1999, Capital Idea, a nonprofit community-based organization in Austin, Texas, operates several training programs offering precollege and college-level training in high-growth occupations to low-income people who traditionally have lacked access to college-level careers. Capital Idea responds to the challenges of involving employers by developing programs and training according to employer specifications, meeting the needs of small and medium-sized companies by focusing on a cluster of employers and covering the cost of training and supportive services for trainees to encourage employer participation in a program designed for low-skill workers.

Capital Idea works with about 100 businesses, including 40 core employer partners across various industries. Programs and training are designed to meet employer specifications, and Capital Idea then contracts with or refers people to community colleges and private vendors for training. The program emphasizes training for jobs paying at least $13 an hour and offering benefits and advancement opportunities in the fields of health care, technology and accounting. Unemployed and underemployed adults with incomes of up to 200 percent of the federal poverty level are the target groups.

Programs generally require a full-time commitment, with at least 20 hours a week of class time. Most training programs are long term, and most students complete the requirements in three to four years. The program pays all training costs, including tuition and fees, and provides child care, transportation and emergency assistance. The program offers several on-site programs, including a College Prep Academy providing intensive (25 hours a week for 12 weeks) preparation in reading, writing and math to pass the Texas Higher Education Assessment (required for college-level courses); a General Education Development (GED) program (20 hours a week); and an evening ESL program. Services provided by career counselors, including career advice, counseling and peer group meetings, are another key element. Placement coordinators help connect students to jobs during the classroom phase and after they finish the program.

Career pathways. A subset of sectoral initiatives focuses on developing career pathways leading to higher-paying jobs for low-skill workers. Although job responsibilities and earnings tend to correlate roughly with skill sets and levels, this strategy responds to the reality that moving up from entry-level jobs can take more than education and training. Often there is no pathway for low-skill workers to advance through a progression of jobs with more responsibility and better pay as they gain skills and experience. Career pathways programs explicitly address this issue by providing connected courses and programs, with extensive support for students and information to track their progress (Fitzgerald, 2006; Jenkins, 2006; Mazzeo et al., 2006).

Examples of approaches for sectoral career pathways are shown below. Some sectoral initiatives have an explicit focus on developing career pathways, with training designed primarily for incumbent workers (although some also include pre-employment training). Boston SkillWorks is a local program that offers both entry-level training and career ladders in four industries (health care, automotive services, hospitality and building management). The District 1199C Training Fund focuses on the health care industry and is designed for both unemployed and incumbent workers, with funding from employers and the union acting as intermediary. An example of a large-scale effort, the Kentucky Community and Technical College system provides grants to partnerships of community colleges and businesses across the state to develop career pathways. Again, although these programs are notable for their program structure, services and focus on low-skill workers, they have not been rigorously evaluated.

Career Pathways Examples:

Boston SkillWorks, 1199C Training Fund and Kentucky Career Ladder Initiative

Boston SkillWorks. SkillWorks is a five-year initiative that funds partnerships in Boston bringing together employers and community-based organizations to provide career advancement opportunities to low-income workers. SkillWorks responds to the challenges of involving employers by more closely aligning employers' workforce needs with education and training options, meeting the needs of small and medium-sized companies by focusing on a cluster of employers and providing a range of supports to help workers attend and complete training.

SkillWorks collaborates with employers to map career ladders and implement policies and practices to promote career advancement for low-skill

individuals. The focus is on systemic change, institutionalization and bringing to scale various approaches that expand education, training and career coaching for low-income workers. The partnerships themselves develop service provider networks to offer pre-employment and incumbent worker training, career coaching and career ladder programs designed for this population.

As of 2006, there are six partnerships: two in health care, one in automotive services, one in hospitality, one in custodial services and one in community health care. Services vary across the partnerships, but can include assessment, basic education combined with vocational skills training for the selected jobs or industries, career ladders for incumbent workers, career coaching and financial literacy training.

The 1199C Training Fund. District 1199C, Philadelphia's largest health care workers union, founded its Training and Upgrading Fund in 1974 with the goal of promoting entry into the health care field and offering employees the training necessary to move up a career ladder. The fund responds to the challenges of involving businesses by providing training for specific health care jobs in high demand locally and encouraging partnerships among businesses with similar training needs to reduce cost and overcome the competitive risks of investing in training.

Fifty-five employer members support the fund through a contribution of 1.5 percent of gross payroll. The fund operates a learning center with courses ranging from basic skills for entry-level jobs to college degree programs in the health care field. Basic skills courses are available free to all students, and some employers cover tuition costs for upper-level classes. After enrollment, students are placed based on an academic assessment and a career counseling session that outlines an educational plan. Four levels of remedial programs (including ESL]) and a high school diploma program are available, with instruction contextualized for the health care field.

Training programs include prenursing bridge programs, nursing assistant programs, an 18-month part-time practical nursing program and a program to help practical nurses earn credits toward and link with a registered nurse degree program. The center also offers career counseling and placement services. Each student has a case manager to provide ongoing career and personal counseling. Members of 1199C are eligible for up to $5,000 a year in tuition reimbursement. The Learning Center has 40 full-time staff and 70 part-time faculty and is open 14 hours a day, seven days a week.

Kentucky Career Pathways Initiative. Overseen by the Kentucky Community and Technical College System, the program gives grants to local partnerships of community colleges and businesses to develop and implement career ladders for low-income people while also responding to business needs. The Pathways Initiative responds to the challenges of involving businesses by seeking employer advice in designing career pathways and meeting the workforce needs of a cluster of employers in high-growth industries.

Each college received a grant to design a career pathway in partnership with employers and other stakeholders. Created with employer input, the career pathways are sequences of connected skill upgrading and job opportunities, with each education step on the ladder leading to a job or further training. Colleges are encouraged to develop bridge programs to teach basic skills in the context of job training.

All 16 colleges are developing health care pathways, with a few also including pathways for manufacturing, construction and transportation. The career pathways are primarily credit-based training that can be augmented with noncredit customized training as necessary. Pathways

at the two-year institutions articulate with programs offering certificates, diplomas and associate's and bachelor's degrees. Community colleges are encouraged to offer curricula in modular formats, at convenient times (such as evenings and weekends) and at alternative sites, such as the workplace. The colleges also provide access to child care and transportation, financial aid, tutoring, academic advising, career coaching and job placement.

Industry-based certification. Another sectoral approach with a significant role for employers is occupational skills certification programs that award a credential applicable to several employers. Occupational skills certificates allow workers to document their mastery of a specific set of job skills and have them recognized by the industry. If businesses identify the competencies required for the certificate, then the certificate programs can provide a uniform way for businesses to communicate the skills required for specific jobs and for community colleges and other providers to standardize their training. States have sought to incorporate industry-based or state-developed occupational certification into their public workforce and community and technical college offerings (National Skills Standards Board Institute, 2003). A good example of this approach is a statewide certification program in Georgia.

Industry-Based Certification Program Example:

The Georgia Certified Specialist Program

Developed by the Georgia Department of Technical and Adult Education in partnership with groups of businesses, this program is designed to help businesses find skilled workers by developing standardized, statewide, credit-bearing curricula and credentials provided by the state's technical colleges in key occupational sectors. The Certified Specialist Program (CSP) addresses the challenges of involving businesses in training by providing training and a credential reflecting workers' attainment of specific skills that meet employers' needs. Occupational sectors include manufacturing, warehousing and distribution, construction, customer service, and life and health insurance. Although more than 500 credit-bearing technical certificate programs are offered in the state, only five are part of the CSP.

Students can enroll each quarter, and colleges can offer classes more often if businesses have enough workers to create a class. The CSPs are 15 to 16 credit hours (about 160 hours of class time), with tuition costs usually covered by a state grant program (Hope Grants). Efforts are made to schedule classes at times convenient for workers. The CSPs, as well as the other technical certificate programs offered by the technical colleges, are credit-bearing, so that students can build toward diplomas or degrees. CSPs are branded with the logos of businesses that helped to create the credential, and they are marketed to potential students as a way to advance in their careers. As of 2005, more than 20,000 certificates have been issued.

In sum, both incumbent worker training programs and sectoral training programs offer opportunities for businesses to become directly involved in skills development for current and potential low-skill employees. These efforts take strong, sustained commitments by both private and public sectors to form and maintain effective partnerships. The next section discusses some policy considerations for engaging the business community in the creation of skills development programs.

Policy Considerations: Building and Sustaining Employer Partnerships

Substantial progress has been made toward creating a significant role for employers in providing job-related training for low-skill workers. States and localities have adopted innovative incumbent worker and sectoral training strategies that directly involve the business community in skills development. Although limited information is available about program effectiveness, these efforts

provide a rich source of information about approaches that successfully involve employers in skills development (see Clymer, 2007; Conway, Blair, Dawson, & Dworak-Munoz, 2007; Duke et al., 2006; Dworak-Munoz, 2004; Roder, 2008; Taylor & Rubin, 2005).

This paper's examination of initiatives that successfully secure and sustain employer involvement in skills development finds a number of commonly used strategies, such as the following:

Developing an understanding of employers' workforce needs. A common lesson from many employer-oriented skill-building initiatives is the need for an in-depth knowledge of the business or industry sector involved in the effort (Clymer, 2007; Dworak-Munoz, 2004). This must include up-to-date labor market data about jobs, businesses and industry trends.

Getting a comprehensive understanding of business needs directly from employers is critical. Training providers have noted that employers themselves often do not have a clear understanding of their own workforce needs, but training partnerships can help businesses identify them. Creating and using a system for contacting employers, assessing their needs and understanding their specific skill requirements also is essential (Clymer, 2007). Intermediaries have been instrumental in operating sectoral partnerships precisely because a key element of their mission is developing a thorough understanding of employer needs. Hiring knowledgeable staff with relevant experience who work primarily to engage employers and address their concerns also is very important (Roder, 2008).

Emphasizing issues important to businesses. Involving employers requires talking to them in their own language and focusing on the payoff from training. It includes discussing the effects of training on the bottom line, return on investment and reduced employee turnover, as well as the opportunity to be a leader in the business community (Conway, 2004). Training services should be marketed in a professional way (Clymer, 2007) and emphasize services that employers want, such as recruitment, screening and soft-skills training. Some experts recommend that employer organizations serve as intermediaries because they understand and can aggregate information about workforce needs, use employer terminology and enjoy employers' trust (Workforce Innovations Network, 2008). Studies of employer training partnerships have found that businesses are seeking partners that can understand their perspective, provide expertise they lack, be flexible and responsive to changes in the labor market, and offer recognition for employer accomplishments (Dworak-Munoz, 2004).

Considering carefully which industries and employers to include in the partnership. A wide range of businesses should be considered for involvement in training partnerships, but it is important to be selective in identifying both industries and individual employers with which to work. Some industries and employers, especially those facing a worker or skill shortage, will be more amenable to investing in the skills of their workforce than others. Studies of current initiatives recommend considering businesses facing a skill shortage the training can address; selecting companies with a competitive advantage rather than those that are struggling; and seeking employers that will dedicate resources, particularly paid release time (Dworak-Munoz, 2004). It is also worthwhile to consider "captive" employers, such as health care providers, whose business is largely local and not easily moved. These employers are more reliant on a good local labor force and also may be involved in civic improvement or community activities, thus having a secondary motivation for participating in skill-building activities.

Obtaining employer contributions to the project, at least in the long run. Employers' willingness to contribute to skills development initiatives indicates that they value the services and understand that they meet a business need. A key indicator of effective, sustainable relationships with employers is the level of resources the employer dedicates to the training effort (Dworak-Munoz, 2004). Outside funding is critical for training collaboratives, especially during initial planning and design phases. But once a training program is operating, revenue becomes important to program survival, and

employers almost always will have to pay for services if the effort is to be sustained. Employers should see their contribution as an investment leading to an improved bottom line, rather than a contribution toward community service (Dworak-Munoz, 2004). The experiences of current initiatives suggest that the financial commitment required from employers should be made explicit from the start. Some employers, however, will want to see tangible evidence of the program's value before they will invest (Bosworth, 2003). It should be noted, however, that some industries (such as long-term care) have limited profit margins and may require public or philanthropic support even over the long term.

Involving employers in key aspects of service design and provision. When employers are involved in designing and delivering training, they have a greater stake in its outcomes and the success of participants. Involving employers in service design and delivery also increases employer confidence in the skills training itself and the workers who receive it (Roder, 2008). Beginning the project with all partners on board helps ensure common goals, better coordination and a shared understanding of expectations, including financial commitments (Duke et al., 2006). Studies of current initiatives recommend involving employers by creating employer advisory boards, offering volunteer opportunities for employers in program activities, developing mechanisms for providing continuous feedback to employers and involving employers in such programmatic decisions as staff selection (Clymer, 2007; Dworak-Munoz, 2004).

Demonstrating effectiveness to employers. Studies of the outcomes of training partnerships can be used to demonstrate their effectiveness and raise awareness of their benefits to the business community, policymakers, program administrators and the public. While it can be challenging to conduct evaluations, it is important to collect data, not only on such participant outcomes as retention and wage advancement, but also on outcomes valued by businesses, such as return on investment and reduction in staff turnover (Duke et al., 2006).

Tracking performance to demonstrate a positive impact on businesses' bottom line can be used to solidify and grow partnerships and attract support from upper management (Dworak-Munoz, 2004). Different businesses will have different reasons for their investment in low-skill employees, and measures used to demonstrate effectiveness should reflect this varied motivation. At the same time, it is important to recognize that addressing labor supply issues and deep education and skills deficits takes time. Sufficient time and a clear focus are needed to establish viable programs and realistic outcome goals. It is essential to strike a balance between providing results-oriented data and allowing adequate time for programs to produce intended outcomes.

Providing high-quality services. Employers that have participated in training partnerships indicate that they prefer programs that are carefully constructed, thoughtfully administered and consistently committed to quality (Clymer, 2007). Particularly in the current economic environment, where the labor supply generally exceeds demand, ensuring that the program is committed to providing well-prepared employees, responding to employer needs efficiently and offering appropriate services is essential to maintaining thriving partnerships.

Developing stable funding sources. Resources for training programs are an important incentive for employers to participate, but adequate long-term funding is necessary to sustain these partnerships. Although employer contributions are important, employers are unlikely to pay the full cost of the services (particularly for pre-employment training, when they are unsure of worker quality), so other resources must be secured. Because the funding streams in this field are complex, understanding the array of funding options, aligning resources and leveraging funds are critical tasks, particularly given new resources for employer-focused training available under ARRA. Intermediaries can play a key role in helping businesses package funds from various sources and avoid having to assemble funding on their own.

In sum, numerous efforts are under way to improve the basic and vocational skills of those at the bottom of the economic ladder to help them move to better jobs and enhance their economic well-being. Developing partnerships with employers to provide training responsive to business needs is a promising strategy for improving the employment prospects for low-skill workers and increasing business productivity. Incumbent worker training and sectoral training programs also can improve the availability of and access to training for those with low skills.

Despite significant progress, however, involving businesses in these training efforts remains a challenge, particularly in the face of poor economic conditions. More evaluation of employer-oriented training and effective strategies for involving employers is needed, as many promising models and programs remain untested. But the strategies for developing business and training partnerships presented here offer a way to move forward.

References

Acs, G., & Nichols, A. (2007). *Low-income workers and their employers: Characteristics and challenges.* Washington, DC: The Urban Institute.

Ahlstrand, A., Bassi, L., & McMurrer, D. (2003). *Workplace education for low-wage workers*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Andersson, F., Holzer, H., & Lane, J. (2005). *Moving up or moving on: Who advances in the low-wage labor market?* New York: Russell Sage Foundation.

Aspen Institute. (2003). *Grow faster together. Or grow slowly apart. How will America work in the 21st century?* Washington, DC: Author.

Bailey, T., Jeong, D. W., & Cho, S-W. (2008). *Referral, enrollment, and completion in developmental education sequences in community colleges*. CCRC Working Paper No. 15. New York: Community College Research Center, Teachers College, Columbia University.

Barrow, L., & Rouse, C.E. (2005). Does college still pay? *The Economists' Voice*, *2*(4): 1-8.

Blair, A., Bransberger, P., & Conway, M. (2007). *Sector initiatives and community colleges: Working together to provide education to low-wage working adults.* Workforce Strategies Initiative. (Update Issue No. 4). Washington, DC: The Aspen Institute.

Bosworth, B. (2003). *Working together on worker training.* Paper prepared for the Workforce Innovation Network. Boston, MA: Jobs for the Future.

Bosworth, B. (2007). *Lifelong learning: New strategies for the education of working adults.* Washington, DC: Center for American Progress.

Chiswick, B. R., & Miller, P. W. (2002). Immigrant earnings: Language skills, linguistic concentrations, and the business cycle. *Journal of Popular Economics*, *15*, 31–57.

Clymer, C. (2007). *By design: Engaging employers in workforce development organizations.* Philadelphia, PA: Public Private Ventures.

Comings, J. P. (2007). Persistence: Helping adult education students reach their goals. In *Review of adult learning and literacy 2007.* (Chapter 2). Cambridge, MA: National Center for the Study of Adult Learning and Literacy. http://www.ncsall.net/fileadmin/resources/ann_rev/comings-02.pdf (accessed January 8, 2009)

Conway, M. (2004). *Building communications capacity: Sector programs share their experience.* Workforce Strategies Initiative. (Update Issue No. 2). Washington, DC: The Aspen Institute.

Conway, M., Blair, A. K., Dawson, S. L., & Dworak-Munoz, L. (2007). *Sector strategies for low-income workers: Lessons from the field.* Washington, DC: The Aspen Institute.

Conway, M., & Rademacher, I. (2004). *Sector strategies: A synthesis of findings from the Aspen Institute's Sectoral Employment Development Learning Project.* Washington, DC: The Aspen Institute.

Crosley, A., & Roberts, B. (2007). *Strengthening state policies to increase the education and skills of low-wage workers*. Washington, DC: The Working Poor Families Project.

Dohm, A. (2000). Gauging the labor force effects of retiring baby boomers. *Monthly Labor Review, 123* (7), 17–25. http://www.bls.gov/opub/mlr/2000/07/art2full.pdf (accessed November 22, 2008).

Dohm, A., & Shniper, L. (2007). Occupational employment projections to 2016. *Monthly Labor Review, 130* (11), 86–125. http://www.bls.gov/opub/mlr/2007/11/art5full.pdf (accessed January 14, 2009)

Duke, A.-E., Martinson, K., & Strawn, J. (2006). *Wising up: How government can partner with business to increase skills and advance low-wage workers*. Washington, DC: Center for Law and Social Policy.

Dunham, K., Salzman, J., & Koller, V. (2004). *Business as partner and customer under WIA: A study of innovative practices*. Oakland, CA: Social Policy Research Associates.

Dworak-Munoz, L. (2004). *Building effective employer relations*. Workforce Strategies Initiative. (Update Issue No. 1). Washington, DC: The Aspen Institute.

Fisher, D. (2008). *Using the workforce investment act to develop and foster innovative state workforce policies and programs*. Washington, DC: The Working Poor Families Project.

Fitzgerald, J. (2006). *Moving up in the new economy: Career ladders for U.S. workers*. Ithaca, NY: Cornell University Press.

Fox, R, Walsh, J., & Fremstad, S. (2009). *Bringing home the green recovery: A user's guide to the American Recovery and Reinvestment Act*. San Francisco, CA: Green for All.

Frazis, H., & Loewenstein, M.A. (1999). *Reexamining the returns to training: Functional form, magnitude, and interpretation*. Bureau of Labor Statistics Working Paper No. 325. Washington, DC: U.S. Department of Labor.

Giloth, R. P. (2004). *Workforce intermediaries for the twenty-first century*. Philadelphia, PA: Temple University Press.

Grubb, N. (2001). Second chances in changing times: The role of community colleges in advancing low-skill workers. In R. Krazis & M. S. Miller, *Low-wage workers in the new economy*. Washington, DC: The Urban Institute Press.

Holzer, H. (2007a). *Investing in workforce development: Defining the business interest*. Baltimore, MD: Paper prepared for the Workforce Narrative Project, funded by the Annie E. Casey Foundation.

Holzer, H. (2007b). *Better workers for better jobs: Improving worker advancement in the low-wage labor market*. Paper prepared for the Hamilton Project, Discussion Paper 2007-15. Washington, DC: The Brookings Institution.

Holzer, H., & Lerman, R. (2009). *America's forgotten middle-skill jobs: Education and training requirements in the next decade and beyond*. Washington, DC: The Workforce Alliance.

Holzer, H., & Martinson, K. (2005). *Can we improve job retention and advancement among low-income working parents?* Paper prepared for the Working Families Roundtable, Washington, DC, May 9–10.

Jacobson, L., & Mokher, C. (2009). *Pathways to boosting the earnings of low-income students by increasing their educational attainment*. Washington, DC: The Hudson Institute.

Jenkins, D. (2006). *Career pathways: Aligning public resources to support individual and regional economic advancement in the knowledge economy*. New York: Workforce Strategy Center.

Kemple, J. (2008). *Career academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood*. New York: MDRC.

Lane, J. (2000). The role of job turnover in the low-wage labor market. In K. Kaye & D. S. Nightingale, *The low-wage labor market: Challenges and opportunities for self-sufficiency*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.

Laufer, J. K. & Winship, S. (2004). Perception vs. reality: Employer attitudes and the rebranding of workforce intermediaries. In R. P. Giloth, *Workforce intermediaries for the twenty-first century*. Philadelphia, PA: Temple University Press.

Lerman, R., McKernan, S-M., & Riegg, S. (2004). The scope of employer-provided training in the United States: Who, what, where, and how much? In C. J. O'Leary, R. A. Straits, & S. A. Wander, *Job training in the United States*. Kalamazoo, MI: The Upjohn Institute.

Macguire, S., Freely, J., Clymer, C., & Conway, M. (2009). *Job training that works: Findings from the Sectoral Employment Impact Study*. Philadelphia, PA: Public Private Ventures.

Martinson, K., & Holcomb, P. (2007). *Innovative employment approaches and programs for low-income families*. Washington, DC: The Urban Institute.

Matus-Grossman, L., & Gooden, S. T. (2001). *Opening doors to earning credentials: Impressions of community college access and retention from low-wage workers*. New York: MDRC.

Mazzeo, C., Roberts, B., Spence, C., & Strawn, J. (2006). *Working together: Aligning state systems and policies for individual and regional prosperity*. New York: Workforce Strategy Center.

McSwain, C., & Davis, R. (2007). *College access for the working poor: Overcoming burdens to succeed in higher education*. Washington, DC: Institute for Higher Education Policy.

Mikelson, K., & Nightingale, D. S. (2004). *Estimates of public and private expenditures on job training*. Washington, DC: The Urban Institute.

Mishel, L., Bernstein, J., & Allegretto, S. (2005). *The state of working America, 2004/2005*. Ithaca, NY: Cornell University Press.

Moore, R., Blake, D., Phillips, M., & McConaughy, D. (2003). *Training that works: Lessons from California's Employment Training Panel Program*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

National Skills Standards Board Institute. (2003). Proceedings of the 2003 National Skills Standards Conference.

Oldmixon, S. (2006). *State sector strategies: Regional solutions to worker and employer needs*. Washington, DC: National Governors Association Center for Best Practices and Corporation for a Skilled Workforce.

Orr, L., Bloom, H., Bell, S., Doolittle, F., Lin, W., & Cave, G. (1996). *Does training for the disadvantaged work? Evidence from the National JTPA Study*. Washington, DC: Urban Institute Press.

Osterman, P. (2007). Employment and training policies: New directions for less skilled adults. In H. Holzer & D. Nightingale, *Reshaping the American workforce in a changing economy*. Washington, DC: Urban Institute Press.

Prince, H. (2007). *Strategies for financing workforce intermediaries: Working papers*. National Fund for Workforce Solutions. Boston, MA: Jobs for the Future.

Roder, A., with Clymer, C., & Wyckoff, L. (2008). *Targeting industries, training workers, and improving opportunities*. Philadelphia, PA: Public/Private Ventures.

Rubinstein, G., & Mayo, A. (2007). *Training policy in brief: An overview of federal workforce development policies*. Washington, DC: The Workforce Alliance.

Taylor, J. C., & Rubin, J. (2005). *Engaging employers to benefit low-income job seekers: Lessons from the Jobs Initiative*. Prepared for the Annie E. Casey Foundation. Boston, MA: Jobs for the Future.

Thompson, C. (2006). Using a language that's not your own: Experiences of multilingual employees. *The Diversity Factor, 14* (2), 30–36. Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics.

United States Government Accountability Office. (2004). *Almost half of states fund employment placement and training through employer taxes and most coordinate with federally funded programs.* Washington, DC: Author.

United States Government Accountability Office. (2006). *Employers found one-stop centers useful in hiring low-skill workers; Performance information could help gauge employer involvement*. Washington, DC: Author.

Visher, M., & Fowler, D. (2006). *Working it out: Community colleges and the workforce investment system.* Institute for the Study of Family, Work, and Community. Berkeley, CA: MPR Associates.

Wallace, J. (2007). *A vision for the future of the workforce investment system.* New York: MDRC.

Workforce Innovation Networks. (2008). *Organizing and supporting the employer role in workforce development: A guide for employer organizations on how and why to become workforce development intermediaries.* Boston, MA: Jobs for the Future.