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EXPANDING THE MISSION:

COMMUNITY COLLEGES AND THE FUNCTIONS OF
WORKFORCE INTERMEDIARIES

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Jobs for the Future develops, implements, and promotes new education and workforce strategies that help communities, states, and the nation compete in a global economy. In 200 communities in 41 states, JFF improves the pathways leading from high school to college to family-sustaining careers.

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EXECUTIVE SUMMARY

The U.S. labor market has changed dramatically—a situation that is painfully obvious to the millions of people who struggle to find good jobs with family-supporting wages. Global competition, deregulation, and technological developments, all compounded by the current economic crisis, have led many employers to make do with fewer employees, flatten hierarchies, or combine job functions.

Workforce intermediaries are responding to this new terrain, offering strategies to help people enter and attach securely to the labor market. Intermediaries bring together employers, workers, and other partners to develop paths toward career advancement and family-supporting employment for low-skilled workers.

At the same time, community colleges are expanding their roles in workforce development and, in the process, often taking on many of the functions of workforce intermediaries. Rather than simply offering individual programs, community colleges are now more likely to offer an integrated set of services for entry-level and experienced workers.

Jobs for the Future reviewed the growing literature on workforce intermediaries in several settings, including community colleges. This brief summarizes the findings on the key functions and characteristics of effective workforce intermediaries and highlights, examples from the field of the emerging intermediary roles of community colleges.

HIGH-PERFORMING WORKFORCE INTERMEDIARIES

Workforce intermediaries that could be characterized as high-performing address a fundamental problem: traditional second-chance education and training programs have had limited impact on improving wages or job mobility. Intermediaries help steer workers toward jobs and careers that are family-sustaining, while helping employers find and develop skilled, loyal labor forces. In some cases, intermediaries change the “terms of trade” in the labor market, convincing employers to adopt technologies, job definitions, and methods of organizing work that reward higher skills with higher wages and promotions.

Four functions are widely accepted as key to high-performing intermediaries. Individually and in combination, these functions contribute to solving regional labor market problems.

- > **Serving Dual Customers—Employers and Workers:** Perhaps the most fundamental attribute of workforce intermediaries in contrast to traditional job training and placement organizations is that they deliberately address the needs of two customers simultaneously: employers and incumbent workers or jobseekers. The ability to serve both sides of the labor market depends in part on an organization’s structure, and it is also a matter of its culture. Intermediaries that respond to both employer and worker needs, and are valuable to both, are organized to meet these goals.

- > **Organizing Multiple Partners and Funding Streams:** Workforce intermediaries enable employers to share the costs of training and project sponsors to learn about and respond to the shared needs of a number of firms. In addition, intermediaries enable networks of firms with similar needs to better coordinate their workforce and economic development efforts, while aggregating their needs for skilled labor and workforce services. Also, intermediaries typically access multiple funding streams, as opposed to the single-purpose grants that traditionally fund workforce services for disadvantaged people.
- > **Providing or Brokering Labor Market Services:** Intermediaries offer or broker services that include, but go beyond, matching jobseekers with employers offering work. The expanded definition of job matching includes developing ways to advance the careers of lower-skilled workers.
- > **Projecting a Vision to Guide Partnerships and Activities:** Strategic leadership and vision distinguish intermediaries from more conventional providers of education and training. Intermediaries mobilize partners to achieve systemic reforms—in workplaces, among education and training providers, and in the policy arena. They also act as catalysts for change: they pick alliances carefully, lead by example, and advocate for policies that support worker education and advancement.

Beyond these four functions, organizational autonomy is an important attribute of workforce intermediaries. That autonomy distinguishes intermediary organizations from organizations that solely execute or administer workforce programs. Experience suggests that exercising intermediary capacities requires a level of flexibility and independence that transcends particular programs and activities.

HOW COMMUNITY COLLEGES CAN SERVE AS WORKFORCE INTERMEDIARIES

Employer alarm about skill gaps has pushed community colleges to explore strategies for both increasing the supply of skilled job candidates and developing the skills of employed workers. In so doing, colleges have improved their ability to meet the educational needs of working adults, including the lower-income, lower-skilled adults, who comprise a significant segment of their enrollments. At the same time, trends in the economy, labor markets, and student demographics have led community colleges to change the design and delivery of occupational educational and workforce training programs. In the past two decades, three fairly distinct models of workforce development and occupational education have emerged that enable community colleges to take on intermediary roles: dedicated technology education centers; sector programs; and career pathways.

Each model presents unique features, yet the three overlap considerably in their core elements—and they perform several key functions of workforce intermediaries. Many community colleges now serve the needs of employers, workers, communities, and specific populations through an integrated approach to workforce development.

Dedicated Technology Education Centers

The National Science Foundation's Advanced Technological Education program funds the creation of community college-based ATE centers, each with a focus on a particular technology and its applications. These centers are part of a community college's administrative structure, but they are distinctly organized within it around a sector or a technology. They involve multiple partnerships, both internal and external to the college. Also, they integrate academic programs with workforce development services and create a direct relationship with local or regional employers.

The growth of NSF-funded centers, and the more general evolution of technology centers, has helped community colleges to engage with employers in more strategic ways, as partners and as leaders, and to engage in regional economic development efforts. The centers are an important part of economic

development strategies and provide concrete ways to demonstrate how community colleges can target the critical workforce needs of existing and new employers in an important regional sector.

Sector Programs

Sector programs gained significant traction in community colleges through the creation of information technology, biotechnology, and manufacturing technology programs in the 1990s. Their emergence has moved community colleges, through their workforce development and occupational education programs, to adopt many functions of intermediaries:

- > The design of a sector program depends on research and data analysis to define the boundaries of an industry sector and assess its aggregate needs across a number of firms and within a region.
- > A sector program provides opportunities for engaging employers in defining strategies that address workforce needs and develop programs jointly.
- > The design of sector-based programs introduces new forms of educational organization and delivery into community college structures.
- > Focusing on a sector's educational needs leads to a perspective on job structures and skills that emphasizes career advancement.

Career Pathways

Career pathway programs represent the newest, most comprehensive model for delivering workforce education in community colleges. Despite a wide variation in how colleges structure career pathways, the general model contains almost all of the functions that define workforce intermediaries.

Pathway programs respond to concerns that traditional academic programs are not well structured to serve a significant proportion of current and potential community college students. To serve these populations and help them complete credentials, some community college programs offer a comprehensive, integrated set of services within a pathway, from remediation and developmental education to student services and social supports. And while the level of employer engagement in career pathway programs varies, the model emphasizes the importance of employer input and leadership to build partnerships and implement educational programs that parallel actual job structures, competency expectations, and career tracks.

THE CAPACITY TO LEAD

There is growing evidence that community colleges can play multiple intermediary roles successfully—engaging employers, workers, service providers, and others in building skills and prosperity. As the examples cited in this brief and the literature demonstrate, community colleges have vastly expanded their roles and capacities in workforce development. From relatively limited (although valuable) roles in occupational education and contract training, they have deepened their capabilities to perform many of the functions of workforce intermediaries.

The programs described here suggest how an institution traditionally focused on its academic mission can evolve in response to challenges and opportunities in regional labor markets. The lesson is not that every college must create career pathways or other strategies for becoming full-fledged workforce intermediaries. Less important than the specific program a community college decides to adopt is the college's capacity to solve problems, connect people and resources, and take leadership in reforming systems touching the labor market—including their own programs and practices.

INTRODUCTION

The U.S. labor market has changed dramatically in recent decades—a situation that is painfully obvious to the millions of people who have struggled to find good jobs with family-supporting wages. Global competition, deregulation, and technological developments, all compounded by the current economic crisis, have led many U.S. employers to make do with fewer employees. Meanwhile, employers are offering less security and fewer advancement opportunities as firms have flattened hierarchies or combined job functions.

At the same time, jobs require increasingly educated workers, capable of more independent judgment and technical skill than ever before. A high school diploma alone rarely makes the grade. New evidence suggests strong demand for “middle skill” jobs, such as health technician or construction worker, requiring some postsecondary education, albeit less than a four-year degree (Holzer & Lerman 2007). Traditional manufacturing jobs and others that pay well but require a high school education or less have disappeared, with many of these jobs moving abroad. For workers and jobseekers, especially those with less education, a lack of information on how to search for a job or locate appropriate training, financial aid, and other supports substantially hinders efforts to find decent entry-level positions or opportunities for advancement.

A new type of institution in the labor market, the “workforce intermediary” is responding to this changed terrain by organizing partnerships and offering strategies to help people enter and attach securely to the labor market. Intermediaries bring together employers, workers, and other partners—along with a variety of public and private funding streams—to develop paths toward career advancement and family-supporting employment for low-skilled workers, while addressing the labor market needs of employers. In contrast to the modest or disappointing results from most public workforce development programs, workforce intermediaries are gaining attention for their successes.

At the same time, community colleges, which are longtime providers of job training, have been expanding their roles in workforce development. Tackling this work in a variety of ways, some community colleges have taken on many of the functions of fully functioning workforce intermediaries. Rather than only offering specific training programs as they did in the past, community colleges are now more likely to offer integrated sets of services to both entry-level and more experienced workers.

Jobs for the Future reviewed the growing literature on workforce intermediaries as they have evolved in several settings, including community colleges. This brief summarizes the findings on the key functions and characteristics of effective workforce intermediaries, and highlights the emerging intermediary roles for community colleges. The goal is to illustrate practical lessons for those in colleges and in workforce development who seek to harness the potential of postsecondary educational institutions in order to advance workers and employers in today's economy.

PART I. HIGH-PERFORMANCE WORKFORCE INTERMEDIARIES

Today's workforce intermediaries do much more than match jobseekers with employers offering work. They are workforce development organizations that bring together multiple partners to help low-skilled adults not only find family-supporting jobs, but also gain access to ongoing opportunities to advance in their careers. They encompass a broad range of models and methods, and they span the public, private, and nonprofit sectors, with sponsors as disparate as labor unions, chambers of commerce, community colleges, and faith-based and community-based organizations.

The wide variety in the types of workforce intermediary in the United States makes it difficult to determine their precise number. Cynthia Marano and Kim Tarr (2004) found 243 such organizations, an estimated 10 percent of the workforce development field.¹ Others offer a much higher estimate—about 1,400—by adding community colleges to the count. However, most workforce organizations offering job-matching and training services rarely perform all of the most important intermediary functions or perform them all equally well (Benner, Leete, & Pastor 2007; Kazis 2004).

As workforce intermediaries have developed over the past two decades, those that could be characterized as high-performing address a fundamental problem: traditional second-chance education and training programs have had limited impact on improving wages or job mobility. The reasons for that failure include: weak connections to employers who offer jobs at good wages; a narrow focus on small geographic areas defined by political boundaries, excluding broader regional employment zones; and a failure to follow up with workers and support their advancement beyond their initial job placements. Federal workforce development legislation and policies exacerbated these challenges; they channeled funds into narrow categories and discouraged longer-term training and educational attainment. In addition, statutorily imposed performance measures created incentives favoring rapid-placement strategies over longer-term advancement strategies.

Richard Kazis (2004) of Jobs for the Future has identified four functions that are widely accepted as key to high-performing intermediaries:

- > Serve dual customers, employers and individual workers or jobseekers;
- > Organize multiple partners and funding streams to pursue common goals;
- > Provide or broker labor market services—to individuals and employers—that include but go beyond job matching; and
- > Project a vision that motivates and guides its partnership and activities.

Other researchers have expanded this framework, adding details on how intermediaries build partnerships, support career progress, foster system reform, and conduct labor market research. Table 1 summarizes the expanded definitions of intermediary functions, based on the four key attributes Kazis highlighted.

**TABLE 1.
INTERMEDIARY FUNCTIONS WITH EXPANDED
DEFINITIONS**

KEY FUNCTIONS	INTERMEDIARY FUNCTIONS WITH EXPANDED DEFINITIONS	
Serve dual customers	Dual-customer services	Serve dual customers (individual workers or jobseekers, as well as employers)
Organize multiple partners and funding streams to address common goals	Multiple partners	Organize multiple partners (e.g., funders, employers, stakeholders, service providers) to address common goals
	Multiple funding streams	Align or pool multiple public and private funding streams to assist in meeting common goals
Provide or broker labor market services that include but go beyond job matching to individuals and employers	Labor market services, career advancement	Provide or broker labor market services (e.g., design career advancement opportunities) that include but go beyond job matching to individuals and employers
	Supportive services	Provide or broker employment and/or human services (e.g., work supports) that enable individuals to attain and retain jobs, as well as advance
	Multiple service providers	Organize and negotiate with multiple service providers
	Employer inputs, research	Undertake labor market research and analyses of individual employers and broader economic trends
	Industry sector focus	Target specific occupations and/or industries to improve access to or the quality of jobs

Project a vision that motivates and guides partnerships and activities	Leadership, strategic vision	Provide strategic leadership and vision to partnerships and activities beyond program execution
	Systems change	Seek systems change or reform within and among organizations in the labor market
	Organizational autonomy	Provide the capacity to chart strategies, establish goals, allocate resources, and change directions to respond to new priorities or opportunities

When institutions undertake these functions and make them a regular way of doing business, they are well-positioned to contribute to solving regional labor market problems. They help steer workers toward jobs and careers that are family-sustaining, while helping employers find and develop skilled, loyal labor forces. In some cases, they actually change the “terms of trade” in the labor market: they convince employers to adopt technologies, job definitions, and methods of organizing work that reward higher skills with higher wages and promotions.

SERVING DUAL CUSTOMERS

The “dual customer” approach is perhaps the most fundamental attribute of workforce intermediaries. In contrast to traditional job training and placement organizations, intermediaries deliberately address the needs of two types of customer simultaneously: employers and incumbent workers or jobseekers.

The ability to serve both sides of the labor market well depends in part on an organization’s culture. In the words of a staff member at Common Ground Community, a New York City intermediary that helps hard-to-serve homeless individuals enter and succeed in the job market, dual-customer organizations take an entrepreneurial approach that “speaks business, not social services” (Kazis & Evans 1999; Wilson 1999). This culture shift, in turn, requires a strategy for staff development and recruitment that emphasizes norms for serving both employers and workers, and that seeks staff with marketing experience and other private-sector skills (Kazis & Seltzer 2000).

Serving both sides of the labor market is also a matter of structure. Intermediaries that research both employer and worker needs well, and are valuable to both, are organized to meet these goals. One model is the three-decades-old District 1199C Training & Upgrading Fund, a labor/management partnership in Philadelphia. The fund, the product of collective bargaining agreements of the Hospital and Health Care Workers Union 1199C with various health care employers in southeast Pennsylvania, is dual customer by its nature: its governing board includes union and employer representatives, as well as community and government leaders. This institutional arrangement has helped the fund become the region’s largest provider of health care education and training services, including the nation’s only union-based, accredited school of practical nursing (Goldberger 2005; Takahashi & Meléndez 2004). The training fund has won the trust of union and non-union employers by being a dependable source of training and contributing to employee productivity and well-being (Kazis 2004).

ORGANIZING MULTIPLE PARTNERS AND FUNDING STREAMS

Effective workforce intermediaries organize partnerships that provide a variety of benefits. First, employers operate as groups, which helps individual members achieve economies of scale: employers can share the costs of training, particularly for general skills (e.g., literacy, numeracy) in which businesses are often reluctant to invest. Second, partnerships can achieve economies of scope: project sponsors can learn about and respond to the shared needs of a number of firms. This can foster program diversity and reduce a project's vulnerability to economic shifts or problems rooted in one firm. Third, networks of firms with similar needs can better coordinate workforce and economic development efforts. By aggregating the needs of individual employers and enabling them to speak with one voice, this also helps mobilize advocacy for improving regional education and training services.

Carrying out the complicated work of intermediaries requires access to multiple funding streams, as opposed to the single-purpose or "categorical" grants that traditionally fund workforce services for disadvantaged people. While this poses management and accountability challenges—due to different rules and conditions for each source of funding—it is also more sustainable than relying on a few sources, whose priorities or resource levels could change abruptly.

PROVIDING OR BROKERING LABOR MARKET SERVICES

Effective intermediaries organize a variety of training and support services to help lower-skilled individuals enter, remain in, and progress in the labor market. Most of these services are fragmented across multiple government agencies, nonprofit organizations, and funding sources. While some intermediaries directly provide a range of such services, they also commonly broker the services of employment and human service organizations. This saves employers the time and expense of determining the competence and trustworthiness of service providers. It also gives intermediaries leverage as they advocate for improvements that would better meet the needs of their dual customers.

The Seattle Jobs Initiative, which focuses on office occupations, health care, and manufacturing, is an example of how intermediaries perform this function. One of six regional consortia funded by the Annie E. Casey Foundation in 1995, SJI began as a program of the city's Office of Economic Development, with partners among local employers, community colleges, and nonprofit organizations. To improve access to the workforce system and living-wage jobs, SJI convened 13 community-based service agencies that could provide job training and wraparound services to low-income individuals. When SJI had difficulty assisting job candidates who faced serious barriers to entering the labor market, such as homelessness or drug problems, the agency developed a curriculum to train its staff to be effective case managers for these challenging populations.

Another critical function of intermediaries is offering or brokering workforce development services that include but go beyond matching jobseekers with employers offering work. The expanded definition of job matching includes developing means for advancing the careers of lower-skilled workers, who may work in dead-end jobs or lack access to or knowledge of higher-skill jobs. Similarly, employers of such workers may lack good career advancement models or the capacity to map potential routes from one job to another in their own organization or industry. In response, effective intermediaries conduct or commission research on employer needs and requirements; such knowledge can help workers to move up. It also enables employers to meet their own skill and staffing needs—whether by "growing their own" candidates for promotion or "backfilling" from entry-level workers to fill subsequent vacancies (Griffen 2008; Kazis 2004). Intermediaries also work with community colleges and other educational institutions to make certificates and degrees more accessible to lower-skilled adults.

WorkSource Partners, a Boston-based intermediary whose primary customers are employers of lower-skilled individuals, offers a good example of the provision of career advancement services. Several Massachusetts nursing homes participating in a statewide career ladder initiative hired WorkSource to add rungs to the limited career ladder then available to certified nursing assistants. WorkSource staff, in cooperation with several community colleges and long-term care employers, designed a “campus on a campus” program that enables working CNAs to prepare for and enter a program to prepare licensed practical nurses, with the training taking place where they work (Goldberger 2005). WorkSource staff also provide career coaching to workers and assist the state initiative with replicating this model in other nursing home partnerships.

The capacity to collect and use labor market information is also essential to effective intermediary work. This extends to collecting primary data, through close relationships with employers and others knowledgeable about skill requirements and advancement opportunities, and to using secondary data, such as those compiled by the U.S. Bureau of Labor Statistics or state governments. Because labor market data lend credibility to intermediary work and ground it in real labor market demand, they aid in mobilizing support from employers and public officials by documenting labor shortages and pressing needs.

Many workforce intermediaries provide or broker these services with an intensive focus on one or more industry sectors, such as health care, manufacturing, or construction, or occupations common to an industry, such as nursing assistant or metalworker. Adopting a sectoral lens for their work enables intermediaries to build relationships among specific groups of employers, understand their needs in depth, and become recognized as valued actors in the industry. At the same time, a sectoral focus aims to improve access to family-sustaining jobs and career advancement for disadvantaged workers in the industry (Griffin 2008; Clark & Dawson 1995).

PROJECTING A VISION TO GUIDE PARTNERSHIPS AND ACTIVITIES

A critical function of intermediary organizations is providing strategic leadership and vision. These attributes distinguish workforce intermediaries from more conventional providers of education and training, even those that run excellent programs. To effect change in the broader environment, intermediaries mobilize partners to achieve systemic reforms—in workplaces, among education and training providers, and in the policy arena. Lacking direct authority, they act as catalysts for change—picking alliances carefully, leading by example, and advocating for policies that support worker education and advancement.

The Wisconsin Regional Training Partnership, a joint labor/management intermediary that pursues a system-reform agenda, exemplifies this function. WRTP’s work in this realm has included helping to establish a state fund to promote career advancement and improving in the delivery of technical-college and career-center services (Fung & Zdrazil 2004; Giloth 2004).

With broad ambitions and multiple functions, intermediaries require exemplary leaders and staff who are entrepreneurial, strategic, and visionary (Griffen 2008; Kazis 2004). Such leaders need to build “learning organizations” that can adapt to rapidly changing environments. Adaptive organizations know which programs to run—or broker or spin off—as well as how to run programs effectively (Ryan 2004).

Projecting a vision often requires organizational autonomy. This important attribute of workforce intermediaries distinguishes intermediary organizations from those that solely execute or administer workforce programs. Experience suggests that exercising intermediary capacities requires a level of flexibility and independence that transcends particular programs and activities.

PART II.

HOW COMMUNITY COLLEGES CAN SERVE AS WORKFORCE INTERMEDIARIES

Since their expansion in the 1960s, community colleges have maintained three formal educational missions. They provide: academic programs designed for transfer to four-year baccalaureate colleges; occupational credential programs; and workforce development training. However, only for the past two decades have many community colleges paid significant attention to the third mission. Employer alarm about skill gaps and labor shortages have pushed colleges to develop strategies for improving the supply of entry-level workers and developing the skills of employed workers. These strategies include offering integrated programs in basic skills, workplace skills, vocational skills, and English as a second language, all incorporated with diverse supportive services.

In expanding their attention to workforce development, community colleges have increased their ability to meet the educational needs of working adults, including lower-income, lower-skilled adults, who comprise a significant segment of their enrollments (Bailey, Jenkins, & Leinbach 2005). At the same time, trends in the economy, labor markets, and student demographics have led community colleges to change the design and delivery of occupational education and workforce training programs. This has resulted in three models of workforce development and occupational education:

- Dedicated technology education centers are formally organized programs within a college that develop training and education for specific technologies or families of technologies. Many technology centers have their own facilities and staffing and are often separately funded and independent from the operations of academic departments.
- Sector programs organize education and training around the needs of specific industries and associated occupations in a local or regional economy or for a set of closely related industries (a cluster). Sector programs are often located within a college's workforce development office or in an academic department.
- Career pathways establish the educational steps required to enter and pursue a career within a general field. Their focus is on students and skills, including both academic and technical skills. They organize or align the services needed to enter both a job and an educational program based on career steps and career advancement. While such programs have been organized by noncredit workforce offices or for-credit academic departments, they often require integration across these divisions to succeed (Liebowitz & Taylor 2004).

These models represent different ways to organize technical and occupationally based educational programs. While they formed a progression of sorts over time, they now exist in parallel, and lessons learned from one set of practices have informed subsequent directions and the evolution of new practices. Each model presents uniquely defining features, yet the three overlap considerably in their core elements—and they parallel several key functions of workforce intermediaries (see *Table 2*). Many community colleges now serve the needs of employers, workers, communities, and specific populations within a unified framework. This is most clearly illustrated in career pathways programs, which tend to incorporate relatively complex workforce-related functions. To an increasing degree, career pathways programs integrate the multiple missions of community colleges (Jacobs et al. 2007).

**TABLE 2.
HOW COMMUNITY COLLEGES SERVE AS WORKFORCE
INTERMEDIARIES**

	DEDICATED TECHNOLOGY EDUCATION CENTERS	SECTOR PROGRAMS	CAREER PATHWAYS
	Training and education through a center devoted to a specific technology or process or group of technologies common to an industry sector	Training and education based on the characteristics of an industry sector and occupations within a sector	A mix of training, education, and supportive services to help individuals gain credentials, access to employment, and career advancement
Dual-customer services	✓	✓	✓
Multiple partnerships	✓	✓	✓
Multiple funding streams	✓		✓
Labor market services, career advancement		✓	✓
Supportive services			✓
Multiple service providers	✓		✓
Employer inputs, research	✓	✓	✓
Leadership and strategic vision	✓	✓	✓
Systems change		✓	✓
Organizational autonomy			

DEDICATED TECHNOLOGY EDUCATION CENTERS

Technology-based education centers grew in number during the 1990s, stimulated through National Science Foundation programs. The centers resemble workforce intermediaries in that they carry out multiple tasks related to workforce education in collaboration with industry and government partners.

In the 1990s, Congress charged the National Science Foundation with improving technology education to meet the growing need for skilled technicians. NSF organized the Advanced Technological Education program, targeting two-year colleges and the expansion of applied and advanced technology education. Part of the program funds the creation of community college-based ATE centers or regional consortia, each with a focus on a particular technology and its applications. Unlike technology centers at research universities, ATE centers focus on curricula and technical education. Thus, the centers are part of a community college's administrative structure, but they are distinctly organized within it around a sector or a technology, and they have a relatively specific mission.

An evaluation of ATE centers notes the similarities between their structure and activities to the functions of workforce intermediaries (Reid et al. 2007). Although each NSF-funded center is administered and "owned" by a community college or a consortium of colleges, the concept represents a different way of organizing educational programs. ATE centers involve multiple partnerships, both internal and external to the colleges. They cross traditional boundaries within colleges to integrate academic programs with workforce development services. And they create direct relationships with local or regional employers.

Three characteristics of ATE centers are particularly relevant in connection with workforce intermediary functions, and these characteristics are built into many non-NSF-funded technology centers in community colleges (Reid et al. 2007; RTS 2006):

- > The centers tend to focus on a sector based on the regional importance or the application of science, technology, and engineering.
- > The centers engage local or regional employers in the oversight and operations of the centers.
- > The centers focus on preparing and educating a workforce through integrating academic programs and workforce development services.

The growth of NSF-funded centers, and the more general creation of technology centers or institutes, has helped community colleges to engage with employers in a strategic way—as partners and as leaders—and to engage in regional economic development. Some of the centers, particularly those that are supported by states (e.g., Georgia, Virginia), play the role of economic development resources to attract and retain employers. They are an important part of economic development efforts and provide concrete ways to demonstrate that local educational institutions target the critical workforce needs of existing and new employers in an important regional sector.

SECTOR PROGRAMS

Sector programs develop education and workforce solutions geared to an industry sector and its workforce.² Rather than focus on a specific technology, sector programs and cluster programs address the organization and relationships of firms within an industry (or sector) or in a set of closely interrelated industries (a cluster) (Conway et al. 2007; Conway, Dworak-Muñoz, & Blair 2004; Rosenfeld, Jacobs, & Liston 2003; Rosenfeld 2002). Sector designs emphasize the aggregate characteristics of a group of firms or an industry, and they use that information to define a set of services for the whole sector or parts of it (Sheets & Morgan 2007).

Several features of sector programs resemble those of workforce intermediaries, such as employer engagement and leadership, dual-customer approaches, career advancement, and a reliance on research to define targets and educational strategies. In fact, Roberta Sheets and Preston Morgan (2007) suggest that sector-based workforce programs *are* workforce intermediaries. Sector programs are now widespread in community colleges, having gained significant application through the creation of information technology, biotechnology, and manufacturing technology programs in the 1990s. Community colleges have embraced workforce development strategies across a wide range of industry and economic sectors.³

State governments have adopted sector-based strategies as a way to define workforce development needs and respond with training and education programs (National Governors Association 2006). Moreover, sector-based models in education have received significant impetus from initiatives supported by the U.S. Department of Labor. Its Community-Based Job Training Grants, the High Growth Job Training Initiative, and the WIRED (Workforce Innovation in Regional Economic Development) initiative all engage community colleges as key partners or lead organizations in sector-based workforce education programs. These initiatives now involve about one-third of the nation's community colleges.⁴

More recently, community colleges received additional support for sectoral initiatives through the federal stimulus bill (the American Reinvestment and Recovery Act of 2009). ARRA legislation directed U.S. Department of Labor funding toward workforce programs in health care and other high-growth sectors, including green jobs, biotechnology, and advanced manufacturing. Community colleges were also targeted by the U.S. Department of Health and Human Services to support the use of electronic medical records through adoption of health information technology. Additional resources for college-led sector projects are expected in 2010, through the Department of Labor's Community College and Career Training Program.

The emergence of sector programs has had an important impact on community colleges' workforce development services and occupational education, moving them to adopt many of the major functions of intermediaries.

- > A sector program design relies on research and data analysis to define the boundaries of a sector and to assess the sector's aggregate needs across a number of firms and within a region. Choosing a sector wisely—based on needs and opportunities for disadvantaged workers as well as on growth trends in the regional economy—requires a capacity to conduct research on the labor market.
- > A sector program provides opportunities to engage employers in defining strategies to address workforce needs and develop programs jointly. Many community colleges have created sector programs that require industry participation in defining services, ranging from specific training to degree programs, job placement for graduates, and supports for developing funding and resources. Sustained contact with employers and workers in the sectors benefits college faculty and administrators.
- > The designs of sector-based programs introduce new forms of educational organization and delivery into community college structures. Many community colleges have created sector-based institutes, technology centers, or centers of excellence that integrate workforce development programs, academic programs, and credit/noncredit courses within a single organizational unit—such integration may include multiple partnerships. For example, the Hospitality, Culinary Arts and Tourism Institute at Anne Arundel Community College in Maryland integrates continuing education, customized training, and degree-granting programs in a freestanding organization that is off the main campus and has strong industry leadership. Washington's State Board for Community and Technical Colleges supports about a dozen centers of excellence focusing on regionally important sectors. Some of these—like those focused on the manufacturing technology and culinary/hospitality sectors—tend to be equipment intensive, while others are “virtual centers” that integrate educational services across traditional workforce and academic departments.⁵

States have also embraced sector approaches, offering research and support for sector programs that create opportunities for community colleges. Illinois was among the first to carry out a statewide sector analysis directly tied to workforce education: its Critical Skills Shortage Initiative assessed industry needs, workforce skill gaps, and programmatic responses.

Other states have emulated this effort. For example, Indiana's Strategic Skills Initiative is supported by the state Department of Workforce Development. Michigan, Pennsylvania, Kentucky, and Ohio have used economic development resources to identify not only key industry sectors as potential growth areas, but also the workforce development services needed to support the potential sector growth.

Finally, focusing on a sector's educational needs leads to a new perspective on job structures and skills, one that emphasizes career advancement and the work and human resources practices of employers within a sector. Sector-based programs encourage educators to think about their students' careers, their need for credentials, and how employees and employers conceive of career advancement within either their own firms or the broader regional economy (Conway et al. 2007).

CAREER PATHWAYS

Career pathways programs represent the newest model for delivering workforce education in community colleges—and the most comprehensive. While there is wide variation in how colleges structure career pathways, the general model contains almost all of the functions that define workforce intermediaries.

The career pathway model consists of a series of interconnected education and training programs and support services. Aligning these resources assists individuals in pursuing careers in specific industries, and to progress over time to higher-skilled positions and educational credentials (Alssid et al. 2002). While technology centers and sector programs tend to be defined by the parameters of technologies and business organization, career pathways are defined by the occupational organization of a field and by the educational steps required for mobility within a field. The ultimate goal of career pathway initiatives, however, is to strengthen regional systems for advancing both students and workers, promoting economic growth and better living standards (ECS 2007).

Although based on sector approaches and analyses of employer needs, most career pathways programs also focus strongly on student populations: they identify the specific needs of student groups entering and moving through education and into jobs. Many career pathways programs target adults and focus on lower-income and lower-skilled people who may need developmental education, or language and literacy skills before entering a postsecondary program. These students also may need social supports and services in order to earn a credential (Alssid et al. 2002; Fitzgerald & Carlson 2000).

The most significant emphasis of career pathways is on the educational steps for access into entry-level positions in a field; most community colleges begin their career pathways with precollege steps that may include occupational certificates of less than one year and some type of preparatory work for college-level classes that can include assessments and developmental education. Career pathways programs often integrate the development of occupational and academic skills through contextualized program curricula or work-related experiences. Students then progress to college-level programming that is itself aligned with career building in a field or the technical skills of an occupational arena. Colleges may also make use of academic or industry-based certifications that stack up or accumulate credits toward an Associate's degree.

Colleges create career pathways programs as a way to offer the education, skills training, and supports people need to enter jobs and advance within specific occupational or employment sectors that offer opportunities in local labor markets.

Pathways programs respond to concerns that the structures of traditional academic programs poorly serve a significant proportion of current and potential community college students. Too few students complete traditional postsecondary programs. The reasons reflect the complex lives of students who juggle home, work, and school, as well as institutional factors, such as mismatched scheduling or a lack of effective academic advising (Rosenbaum 2006). Moreover, large numbers of adults who need additional education and skills have significant precollege educational deficits and social barriers to success in higher education and the labor market.

To serve these populations and help them complete credentials, some community college pathways programs offer a comprehensive, integrated set of services, from developmental education to student services and social supports (Rosenbaum 2006; Bailey, Jenkins, & Linebach 2005). Career pathways have been designed to make postsecondary education more accessible to low-income, low-skill populations, and to increase the likelihood of completion of a credential—and of securing employment that provides significant increases to incomes (Prince & Jenkins 2005; Liebowitz & Taylor 2004). Services include secondary-school-to-college links (e.g., fast track, dual-credit, and dual-enrollment approaches) and include occupational training designed around integrating occupational skills, basic skills, and structured preparation toward entry into postsecondary education (Workforce Strategy Center 2002).

In practice, the emergence of multiple entry points to education and training has greatly increased coordination and partnerships among colleges, high schools, community organizations, and government. This has been especially the case with programs designed to increase access for low-skilled and low-income adults as community colleges join with community-based organizations, referral sources, providers of support services, and government programs (e.g., TANF, WIA). Analyses of colleges conducted for *Breaking Through*, a multiyear partnership of Jobs for the Future and the National Council for Workforce Education to promote access to postsecondary education among low-income people, note the importance of labor market payoffs (e.g., access to jobs with career tracks), comprehensive supports, and institutional reforms to bridge different parts of the college (Liebowitz & Taylor 2004).

While the level of employer engagement in career pathways varies considerably, the model emphasizes the importance of employer input and leadership to build partnerships and implement educational programs that parallel actual job structures, competency expectations, and career tracks. For traditional academic departments, pathways models represent a significant shift in approaches to workforce education: the academic structures are deeply involved in labor markets and employer requirements. Specification of educational pathways involves a planning process that relies on industry analyses, occupational research, employer involvement, curricula design, and new delivery methods to meet the needs of nontraditional students and reflect real employment and career characteristics as defined in the labor market. Wraparound support services provided by a college or its partners (e.g., for case management and coaching) promote completion and retention (Jenkins 2006). Support services can extend as far as helping employers design and implement career and educational development tracks within companies. Such practices extend and deepen the engagement of community colleges with industry in the areas of human resources and organizational culture.

The momentum behind pathways programs continues across the country. Statewide initiatives in California, Oregon, Washington (to name a few) support the design and implementation of such programs in community colleges. Major philanthropic foundations and community college initiatives promote career pathways to improve the access of low-income and low-skilled adults to postsecondary education and opportunities for good jobs. These institutions also support efforts to improve the effectiveness and relevance of community colleges regarding their role in preparing a skilled, competitive workforce.

THE CAPACITY TO LEAD

As the examples cited in this report demonstrate, community colleges have vastly expanded their roles and capacities in workforce development. From relatively limited, if valuable, roles in occupational education and contract training for employers, they have evolved deeper capabilities as workforce intermediaries. And while the programs described here do not exhaust the ways that community colleges can potentially play intermediary roles, they suggest how an institution with a traditional academic mission can respond to challenges and opportunities in regional labor markets.

As community colleges have developed initiatives such as sectoral programs or career pathways, they have necessarily deepened their engagement with employers, their ability to serve nontraditional populations such as lower-skilled adults, and their relationships with other key labor market entities, such as providers of human services and adult education. Just as important as reaching out to new constituencies, community colleges are “reaching in”—changing the ways they operate and are organized to serve all customers in the labor market.

The lesson here is not that every college must create career pathways programs or other strategies for becoming high-performing workforce intermediaries. Many colleges around the nation have taken on intermediary roles outside the scope of career pathways or other programs. Less important than the specific programs adopted by community colleges is their capacity to solve problems, connect people and resources, and take leadership on reforming systems touching the labor market—including their own systems. Community colleges that adopt intermediary functions do not only develop or operate programs. Rather, they use programs like those presented here as opportunities to build their capacity for serving their communities and enlisting new partners in addressing labor market challenges.

This is not a simple task. While community colleges are taking on many of the functions of workforce intermediaries, they do so in a very different context than the community-based intermediary organizations whose sole mission is to serve specific groups or populations. By contrast, colleges are complex institutions with multiple missions, including general education, transfer to four-year institutions, career and vocational education, and economic development. Moreover, community colleges operate in a regulated environment that demands accountability to governing bodies and state and federal mandates. And unlike most community-based organizations, they can grant degrees—accompanied by the constraints of entrance requirements and accrediting standards. Colleges can receive funding reserved for public higher education, but they must observe public rules as well. Navigating in this environment presents both challenges and significant opportunities—for those working within the college on workforce issues and for those who would enlist the college as a workforce intermediary.

A related challenge, and one shared by each of three programmatic models, is their limited organizational autonomy. In contrast to a free-standing intermediary, technology centers, sectoral programs, and career pathways all must answer to a larger organization. Residency in a community college can confer status, connections, and other resources essential for intermediary work, but those benefits necessarily come with less flexibility than independent organizations usually can exercise. Even so, some workforce practitioners in community colleges have been highly entrepreneurial. It would be valuable to understand what makes this possible, and what institutional arrangements or structures affect the level of autonomy, or “wiggle room,” within community colleges.

A final lesson is that reaping opportunities—and avoiding pitfalls—requires a strategic approach: “know your college” as an organization and understand the larger environment in which it operates. Depending on how a community college is organized, some intermediary functions (e.g., convening partners, providing labor market services) may be more or less suitable for a college to assume. Those researching an expanded intermediary role for community colleges, as well those who champion it, should consider a number of issues raised by this study:

- > Where are workforce and occupation education located in the college? Are they the business of the credit or the noncredit divisions? Is the existing structure a good fit for intermediary functions, or is there a need for realignment or reorganization?
- > What college personnel are or could be engaged in intermediary functions? Do they have the capacity to play such roles?
- > How much autonomy or independence do workforce personnel or functions have within the college? To whom are they accountable? How are they funded? Do they have the support of deans, department heads, and more senior leadership in the college?
- > What is the college’s experience in working with employers and their associations? How do employers assess the college’s past performance of workforce functions?
- > What is the college’s relationship to other workforce and educational entities in the region, including Workforce Investment Boards, One-Stop Career Centers, K-12 education, and vocational and four-year institutions? Who are the “go-to” organizations for workforce services? Who are the conveners and brokers? What significant gaps is the college well positioned to fill?
- > What are the state or region’s governance structures for community colleges? Is there a statewide system for setting policies and providing resources for workforce development and occupational education?

This list is not exhaustive; rather, it suggests some of the guideposts for those seeking to engage community colleges as workforce intermediaries, from within or from without, and those who would research the intermediary roles of colleges. And given the great variety among the nation’s 1,200-odd community colleges, there is no “one size fits all” model or structure for the intermediary role. There is, however, growing evidence that this institution can play multiple intermediary roles successfully—engaging employers, workers, service providers, and others in building skills and prosperity.

ENDNOTES

¹ Marano and Tarr used four criteria to identify groups to survey:

- > Focuses on two primary customers (trainees and the employers/industries in which they work);
- > Addresses needs of low-income individuals and low-wage workers (need not be exclusively);
- > Provides a menu of services (not just placement) and manages a mix of funding types to support these services; and
- > Invests in longer-term career advancement of those served (extending beyond placement).

² Aspen Institute's Workforce Strategies Initiative has studied the sector approach to workforce development extensively. Most recently, it has documented lessons from the field through interviews with 60 leaders of sectoral initiatives and survey responses from over 200 practitioners (Conway et al. 2007).

³ Closely related to sectoral programs are "cluster" programs. A sector generally refers to a specific industry. According to Stuart Rosenfeld (2007), "A cluster is a group of firms, related economic actors, and institutions that are located near one another and that draw productive advantage from their mutual proximity and connections." In this report, the term "sector program" refers to both sector and cluster programs, as they are essentially the same in terms of their operation as workforce intermediaries.

⁴ For descriptions of the initiatives and lists of recipients, see: www.doleta.gov/business.

⁵ For a description of Washington State's Centers of Excellence, see: www.sbctc.ctc.edu/College/_e-wkforcecentersofexcellence.aspx. For a description of Anne Arundel's Health, Culinary Arts and Tourism Institute, see: www.aacc.edu/hcat.

REFERENCES

Allsied, Julian L., David Gruber, Davis Jenkins, Christopher Mazzeo, Brandon Roberts, & Regina Stanback-Stroud. 2002. *Building a Career Pathways System: Promising Practices in Community College-Centered Workforce Development*. San Francisco: Workforce Strategy Center.

Bailey, Thomas, Davis Jenkins, & Timothy Leinbach. 2005. *What We Know About Community College Low-Income and Minority Student Outcomes: Descriptive Statistics from National Surveys*. New York: Community College Research Center, Teachers College, Columbia University.

Becker, Gary. 1975. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Chicago: University of Chicago Press.

Benner, Chris, Laura Leete, & Manuel Pastor. 2007. *Staircases or Treadmills: Labor Market Intermediaries and Economic Opportunities in a Volatile Economy*. New York: Russell Sage Foundation.

Conway, Maureen, Amy Blair, Steven Dawson, & Linda Dworak-Muñoz. 2007. *Sectoral Strategies for Low-Income Workers: Lessons from the Field. Workforce Strategies Initiative*. Washington, DC: Aspen Institute.

Conway, Maureen, Linda Dworak-Muñoz, & Amy Blair. 2004. "Sectoral Workforce Development: Research Review and Future Directions." A Meeting Proceedings Report, April 21-22, and May 21. Washington, DC: Aspen Institute.

Council for Adult Experiential Learning (CAEL). 2005. *How Career Lattices Help Solve Nursing and Other Workforce Shortages in Healthcare: A Guide for Workforce Investment Boards, One-Stop Career Centers, Healthcare Employers, Industry Alliances, and Higher Education Providers*. Chicago: CAEL.

Education Commission of the States (ECS). 2007. "Career Pathways: A Strategy for Transforming America's Workforce Education Systems to Support Economic Growth." *The Progress of Education Reform 2007: Economic and Workforce Development*. Vol. 8, No. 2, August.

Fitzgerald, Joan & Virginia Carlson. 2000. "Ladders to a Better Life." *American Prospect*. November 30.

Fung, Archon & Scott Zdrzil. 2004. "Ecologies of Workforce Development In Milwaukee." In Robert P. Giloth, ed., *Workforce Development Politics: Civic Capacity and Performance*. Philadelphia: Temple University Press.

Giloth, Robert P. 2004. "The 'Local' in Workforce Development Politics: An Introduction." In Robert P. Giloth, ed., *Workforce Development Politics: Civic Capacity and Performance*. Philadelphia: Temple University Press.

Goldberger, Susan. 2005. *From Entry-Level to Licensed Practical Nurse*. Boston: Jobs for the Future.

Griffen, Sarah. 2008. *Sustaining the Promise: Realizing the Potential of Workforce Intermediaries and Sector Projects*. Boston: National Fund for Workforce Solutions.

Jacobs, James, et al. 2007. *Career Pathways as a Systemic Framework: Rethinking Education for Student Success in College and Careers*. Phoenix: League for Innovation in the Community College.

- Jenkins, Davis. 2006. *Career Pathways: Aligning Public Resources to Support Individual and Regional Economic Advancement in the Knowledge Economy*. Brooklyn, NY: Workforce Strategy Center.
- Kazis, Richard. 2004. "What Do Workforce Intermediaries Do?" In Robert P. Giloth, ed., *Workforce Intermediaries for the Twenty-First Century*. Published in Association with the American Assembly, Columbia University. Philadelphia: Temple University Press.
- Kazis, Richard & Chris Evans. 1999. *Improving the Employment Prospects of Low-Income Job Seekers: The Role of Labor Market Intermediaries*. A Background Paper prepared for the US/UK Project on Labor Market Intermediaries. Sponsored by the New Deal Task Force and the Rockefeller Foundation. Boston: Jobs for the Future.
- Kazis, Richard & Marlene Seltzer. 2000. *Overview: Toward a "Demand-Led" Workforce Development System*. A Background Paper prepared for the US/UK Project on Labor Market Intermediaries. Sponsored by the New Deal Task Force and the Rockefeller Foundation. Boston: Jobs for the Future.
- Liebowitz, Marty & Judith Combes Taylor. 2004. *Breaking Through: Helping Low-Skilled Adults Enter and Succeed in College and Careers*. Columbus, OH: National Council for Workforce Education and Boston: Jobs for the Future.
- Marano, Cynthia & Kim Tarr. 2004. "The Workforce Intermediary: Profiling the Field of Practice and Its Challenges." In Robert P. Giloth, ed., *Workforce Intermediaries for the Twenty-first Century*. Published in Association with the American Assembly, Columbia University. Philadelphia: Temple University Press.
- National Governors Association. 2006. *State Sector Strategies: Regional Solutions to Worker and Employer Needs*. White Paper. Washington, DC: NGA Center for Best Practices.
- Prince, David & Davis, Jenkins. 2005. *Building Pathways to Success for Low-Skills Adult Students: Lessons for Community College Policy and Practice from a Statewide Longitudinal Study*. New York: Community College Research Center, Teachers College, Columbia University.
- Regional Technology Strategies, Inc. (RTS). 2006. *Final Evaluation Report for the South Carolina Advanced Technology Education National Resource Center*. Carrboro, NC: Author.
- Reid, Monica, James Jacobs, Analia Ivanier, & Vanessa Smith Morest. 2007. "ATE Regional Centers: CCRC Final Report." Manuscript. New York: Community College Research Center, Teachers College, Columbia University.
- Rosenbaum, James E., Regina Deil-Amen, & Ann E. Person. 2006. *After Admission: From College Access to College Success*. New York: Russell Sage Foundation.
- Rosenfeld, Stuart. 2002. *Just Clusters: Economic Development Strategies that Reach More People and Places*. Carrboro, NC: Regional Technology Strategies.
- Rosenfeld, Stuart. 2002. 2007. *Cluster-Based Strategies for Growing State Economies*. Washington, DC: National Governors Association.
- Rosenfeld, Stuart, James Jacobs, & Cynthia Liston. 2003. *Targeting Clusters, Achieving Excellence*. Carrboro, NC: Regional Technology Strategies.
- Sheets, Robert & Preston Morgan. 2007. "State Industry Sector Programs." February 2. Presentation. San Francisco: AACC Workforce Development Institute.
- Takahashi, Beverly & Edwin Meléndez. 2004. "Union-Sponsored Workforce Development Initiatives." In Edwin Meléndez, ed., *Communities and Workforce Development*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Workforce Strategy Center. 2002. *Building a Career Pathways System: Promising Practices in Community College-Centered Workforce Development*. Boston: Workforce Strategy Center.



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