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MDRC Research on Career Pathways

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As postsecondary credentials have become increasingly important to accessing higher-quality employment, a growing number of education and workforce programs are implementing “career pathways” approaches to help both youth and adults prepare for further education and better jobs. In recent years, MDRC has conducted research on a range of career pathways programs and program components. This Issue Brief describes the career pathways approach, highlighting core design elements, and profiles MDRC projects that shed light on the effectiveness of this approach and its potential to improve education and career outcomes.

CAREER PATHWAYS DEFINED

Definitions of career pathways may vary in their particulars, but these strategies, which have evolved organically in communities and states over several decades, tend to share core design elements. As one researcher notes, career pathways approaches are efforts to build more “coherent and easily navigable systems providing skills training, credentials, supports, and employment.”¹

To reduce confusion in the workforce and postsecondary education fields, the U.S. Departments of Education, Health and Human Services, and Labor issued a joint letter in 2012 in which they presented a common definition of career pathways that encompasses initiatives that begin with secondary or postsecondary education and credentials. According to this definition, a career pathways approach is:

...a series of connected education and training strategies and support services that enable individuals to secure industry-relevant certification and obtain employment within an occupational area and to advance to higher levels of future education and employment in that area.²

Career pathways strategies focus on *programmatic* innovation, such as a high school career academy, and *systemic* reform, such as aligning occupational curricula across multiple educational systems in a state.

Core elements include:

- **Aligned, connected programs:** A sequence of educational programs that lead to increasingly advanced credentials (for example, a high school diploma or equivalency certificate, industry-recognized certificates, and postsecondary degrees), and that are coordinated by aligning learning expectations, curricula, and institutional links.
- **Multiple entry and exit points:** Transparent and easy-to-navigate on- and off-ramps to education and work that enable individuals to earn credentials that “stack” or “roll up” to recognized high school and postsecondary credentials.

¹David Fein, *The Struggle for Coherence in Emerging U.S. Career Pathways Initiatives* (Bethesda, MD: Abt Associates, 2014), p. 24.

²U.S. Departments of Education, Health and Human Services, and Labor, “Joint Career Pathways Letter,” April 4, 2012. Website: <http://www2.ed.gov/news/newsletters/ovaeconnection/2012/04122012.html>.

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- **Focus on careers and employer engagement:** Targeting high-growth sectors and occupations, encouraging employers to participate in curriculum and program design and instruction, and providing work-based learning experiences.
- **Support services that promote student progress and completion:** Academic and other supports for underprepared individuals, including curricular attention to mastering “soft skills,” quality instruction that integrates career or technical skills and academic learning, guidance and peer support for educational and career decisions, and financial aid when necessary.

Career pathways models and approaches look different depending on the target population (for example, high school students, out-of-school youth, or working adults), sector focus (for example, the health care field or manufacturing), the type and location of educational and employer institutions (for example, community colleges, technical schools, employer associations, or workforce development intermediaries), and state policies.

MDRC PROJECTS ON CAREER PATHWAYS

There is little rigorous research that assesses the impact of comprehensive career pathways programs that follows individuals from different starting points through a coherent set of educational experiences and “stackable” credentials to the labor market. However, different components of career pathways approaches are being studied, and lessons are emerging that can help policymakers and program designers and managers.

MDRC has studied aspects of career pathways approaches for decades. Research on the [Center for Employment and Training](#) model for low-skill adults and on the [Career Academies](#) model for in-school youth in the 1980s and 1990s helped shape the development of programs that coherently combine employment and education and lead to credentials and higher income.

Today, MDRC’s research in this area focuses on education and employment programs that target high school students, out-of-school and disconnected youth who lack high school credentials, and low-skill and low-wage adults. It includes implementation and random assignment studies of promising programs and program components and reports on past and current research and practice that present lessons for practitioners and policymakers. Findings from other MDRC projects, such as those on how best to structure financial incentives, case management for low-income youth and adults, and effective teaching practices, might also help designers and managers of career pathways programs.

High School Models

One important innovation in the career pathways field has been the redesign of high school curricula. These efforts tend to emphasize certain aspects of the career pathways approach: aligning secondary and postsecondary curricula and learning programs, engaging employers to develop career exploration and work-based learning opportunities, and integrating technical skills and academic learning and credentialing in a single program.

New Pathways to Careers and College: High school career-technical education (CTE) — integrating rigorous technical and academic instruction, career exploration, and planning for further education and career decisions — has become an increasingly important component of career pathways approaches. This 2015 [report](#) describes the most prominent of these CTE “pathway” models, identifies localities where the approach has gained traction, discusses the underlying principles that characterize promising programs, and briefly presents evidence of their potential. The report concludes with recommendations for future research and investment to strengthen and scale up such programs.

Career Pathways in the Great Lakes: An Environmental Scan: In early 2015, the Joyce Foundation asked MDRC for assistance in planning an initiative to advance career pathways programs in the Great Lakes states that begin in high school and lead to postsecondary programs and credentials. In collaboration with Jobs for the Future, MDRC located a number of communities where high school-based career pathways programs had gained traction, visited districts with reputations for innovative programs, and advised the foundation on how to encourage quality career pathways systems in Great Lakes states. Research identified several priority needs: building capacity to offer and manage a continuum of high-quality work-based learning experiences, extending pathways from early high school to postsecondary school and through postsecondary credentials, and developing achievable performance metrics and a method for measuring and reporting them.

Career Academies: A study of Career Academies — small learning communities within larger high schools that combine academic and vocational curricula around a career theme, such as the health care field or business and finance — provides the strongest evidence that effective career pathways programs combining education and work experience can produce long-term employment impacts for in-school youth. Academy students take classes together, keep the same teachers, and participate in work-based learning, such as job shadowing and internships, with employer partners. A rigorous 12-year [evaluation](#) completed in 2008 found that participation in Career Academies produced statistically significant increases in earnings over an eight-year follow-up period, with impacts concentrated mostly among young men, even though they were no more likely to graduate from high school or go to college. Impacts were particularly large for students deemed most at risk of dropping out. The large long-term impacts provide solid evidence that increased investments in career-related experiences during high school can improve postsecondary labor market prospects. Research on career academies also demonstrates the value of engaging employers in work-based learning, mentoring, career awareness supports, and advisement on curriculum development and labor market trends.

Exploring Career and College Options (ECCO): With a grant from the Institute of Education Sciences in the U.S. Department of Education, MDRC and its project partner Bloom Associates piloted a program to help Career Academies develop college and career exploration programs. Exploring Career and College Options (ECCO) consists of a series of one-hour in-class lessons, visits to local work sites and college campuses, and a six-week paid internship and concurrent weekly seminar that are offered in the summer before or during senior year. Students who graduate from a Career Academy implementing the full ECCO curriculum will have received up to 44 lessons and participated in at least two visits to work sites and two visits to college campuses, in addition to completing the six-week paid internship. MDRC evaluated the implementation of ECCO in 18 academies across three states from 2009 to 2012. The [study](#) found that the ECCO curriculum added significantly to the academies' capacity to deliver college and career exploration activities. Participating academies were also better able to provide internships.

YouthForce NOLA: A career-readiness initiative launched in summer 2015, YouthForce NOLA is a collaborative effort involving about a dozen New Orleans high schools over the next five years to support career pathways and work-based learning programs. A partnership between the city's business alliance and the nonprofit EducateNow!, YouthForce NOLA combines work-readiness and soft skills training with a paid internship aligned to student-selected pathways and credentials in high-wage, high-demand biotech, skilled crafts, and digital industries. As the external evaluator, MDRC will conduct an implementation study of this initiative and provide early feedback to the initiative's developer and participating schools.

P-TECH: IBM launched the P-TECH 9-14 School Model in Brooklyn, New York, in 2011. The model — a collaboration of a school district, a higher education institution, and a company — has been replicated in 40 schools in the United States, with 70 industry partners. P-TECH is open to all stu-

dents, with no tests or grades for admission. Each P-TECH student is paired with an industry mentor and participates in work-site visits, projects, and skills-based, paid internships. Graduates receive an industry-recognized, two-year postsecondary degree in a science and technology field, along with a high school diploma, at no cost to the students or their families. Successful graduates are first in line for jobs with their industry partners. MDRC recently conducted research on the choices of education and employment available to the first cohort of P-TECH seniors (the first students at the Brooklyn P-TECH finishing their fourth year in the program) after receiving their diplomas, how they decided among those choices, and how the P-TECH model supported them in that decision making. This research was part of a preliminary investigation of the potential for additional implementation and impact research.

Out-of-School and Disconnected Youth

Career pathways initiatives that target out-of-school and disconnected youth are noteworthy for certain important design elements: effective “on-ramps” for those without high school credentials, “bridge programs” that accelerate academic and work readiness, combining paid work with accelerated academic preparation, and industry-specific vocational training as a vehicle for opening options in postsecondary education and employment.

Toward a Better Future: Evidence on Improving Outcomes for Disadvantaged Youth in the United States: This [paper](#) draws from an MDRC review of literature on labor market trends and employment-related programs for youth over the past 30 years. Most efforts to improve labor market outcomes for disadvantaged youth pay inadequate attention to the needs and concerns of private-sector employers, who are a direct source of jobs and who can provide training and networking opportunities that can improve career mobility for youth in the long run. The paper informs the search for demand-side solutions by providing a better understanding of (1) factors that potentially drive high rates of unemployment among young adults, (2) the current state of evidence on employment-related interventions for youth, especially economically disadvantaged youth, and (3) future directions for change that involve greater employer engagement.

GED Bridge: A Career Approach to GED Instruction: Policymakers and practitioners in the adult education field are searching for ways to improve the quality of General Educational Development (GED) preparation programs and create paths from those programs to postsecondary education or training, and ultimately to careers. MDRC is [currently evaluating](#) a career-focused GED program model that includes basic career pathways design elements aimed at improving high school credential attainment and college entry rates. The GED Bridge to Health and Business at LaGuardia Community College in New York City offers a contextualized, career-focused GED curriculum while supporting students in their understanding of, application to, and persistence in specific college-level programs aligned with targeted career paths. In its [evaluation](#) of the program, MDRC found that participating students were much more likely to pass the GED exam, enroll in college, and persist into the second semester. MDRC is also evaluating a similar program at Northeast Wisconsin Technical College, the results of which will be available in 2016.

Project Rise: Project Rise serves low-income young adults, ages 18 to 24, who have been out of school and unemployed for at least six months. It offers participants a sequence of activities, including high school equivalency education, part-time paid internships, and intensive case management, over a 12-month period, with the aim of improving their future educational and economic prospects. While the internship is not tied to a specific career pathway, it is intended to serve as an incentive for persistence: students must stay in the educational program to keep the internship. After the program’s end, participants are helped to enter unsubsidized employment, postsecondary education, or both. The Mayor’s Fund to Advance New York City and the Center for Economic

Opportunity (CEO) implemented the program based on findings from CEO's [Young Adult Internship Program](#) and [Young Adult Literacy Program](#); MDRC conducted an implementation [study](#).

YouthBuild: YouthBuild serves high school dropouts, ages 16 to 24, who face an array of impediments to educational and employment success. From a single program focusing on the construction industry launched in the 1970s, YouthBuild has expanded to over 270 programs nationwide. Over a 6-to-12-month period, participants spend roughly half of their time working toward their high school diploma or equivalency certificate. The other half of the time, they spend in on-the-job training and earning the industry-recognized certifications they need to succeed in high-demand careers. Many YouthBuild sites are expanding services to help more participants enroll and succeed in postsecondary institutions. Follow-up services are available to participants for at least nine months after graduation. Participants typically receive modest stipends. MDRC launched a national [evaluation](#) of YouthBuild in 2010, partnering with Social Policy Research Associates and Mathematica Policy Research. The study uses a random assignment design to evaluate impacts across 75 organizations operating the YouthBuild program nationwide. An implementation [report](#) is available and an impact report is scheduled for release in 2017.

Center for Employment Training: Established some 30 years ago in San Jose, California, this employment and education program served 17-to-21-year-old disconnected youth. Over the decades, it significantly increased low-income youths' and single mothers' chances of finding employment, as well as raised their earnings. Center for Employment Training (CET) enrolled participants with little prescreening, required their full-time commitment, provided them with training in a work-like setting, involved employers in the design and delivery of training for high-demand jobs, integrated basic skills instruction into the training, and allowed participants to progress as they mastered competencies. CET also offered job placement assistance toward the end of the training period, as well as transportation assistance and small, need-based financial incentives. An MDRC [study](#) that included CET found large impacts for CET on the rate at which young dropouts earned high school equivalency certificates, but negligible impacts on labor market outcomes during a four-year follow-up period. Another [study](#) a few years later did not replicate these results at any of the 12 new sites.

Low-Income Adults

Sector-based career pathways initiatives for low-income adults seeking employment or job advancement have emerged as the preferred model among workforce development practitioners and state and federal policymakers. Among key design elements that are being tested and refined in these models are the integration of work-readiness and academic skills development into employment training programs and the provision of certifications with value in the labor market and that stack to further credentials, career coaching, and postemployment supports.

WorkAdvance: A sector-based program for low-income adults, WorkAdvance combines lessons from previous sector-based initiatives and postemployment support efforts. The program, which MDRC is [currently piloting and studying](#) in Tulsa, Oklahoma, New York City, and northeast Ohio, is designed to help participants prepare for, enter, and succeed in quality jobs in high-demand fields by aligning training, job preparation, job placement, and postemployment guidance with employer needs. WorkAdvance focuses on both preparing participants for and supporting them in quality employment opportunities and providing learning programs that lead to industry-recognized credentials. [Early implementation findings](#) were released in late 2014, and impact findings will be available in summer 2016.

SNAP Employment and Training Program: The Supplemental Nutrition Assistance Program Employment and Training Program (SNAP E&T), formerly the employment and training component of

the Food Stamps Program, is designed to help SNAP recipients gain the work-readiness and other skills, training, or experience they need to obtain regular employment and earn more income. The 2014 farm bill provided \$200 million to the Department of Agriculture's Food and Nutrition Service to fund up to 10 new SNAP E&T pilots and to evaluate their effectiveness. These programs are testing new ways to help more SNAP recipients obtain unsubsidized employment and increase earned income, reducing their reliance on public assistance. From a career pathways perspective, the demonstrations that the department is conducting evaluate models that create on-ramps for individuals with very different levels of basic and work-readiness skills. As part of an evaluation team led by Mathematica Policy Research, MDRC is running the randomized controlled trials at four sites—Georgia, Illinois, Kansas, and Virginia. This [project](#) will provide new research findings on the efficacy of different approaches to integrate work-based learning and skills training into diverse SNAP E&T programs.

New World of Work: Developed through a grant from the Chancellor's Office for California's community colleges, the core component of New World of Work (NWOW) is a curriculum that teaches the "top 10" soft skills required for the workplace. NWOW is among the most robust soft skills programs available, and no rigorous study of such a program has been conducted. NWOW is being piloted in 10 California community colleges where it is integrated in college course curricula, most typically in career and technical education courses. As part of the program, students participate in internships to get hands-on experience honing these skills. The pilot also includes a fairly elaborate assessment system to measure progress in acquiring the 10 skills. MDRC is exploring the feasibility of designing and implementing a rigorous study of NWOW.

Work Advancement and Support Center: The Work Advancement and Support Center [Demonstration](#), implemented between 2005 and 2010, was designed to build the capacity of the workforce and welfare systems to provide employment retention and advancement services and financial work supports to low-wage workers. To promote system integration, the centers were housed in One-Stop Career Centers and staffed by both welfare and workforce agency personnel. Application procedures for financial supports were simplified to make them more easily accessible to working people. One site built linkages with employers in order to develop and deliver career advancement services and work supports directly to the work site. MDRC provided technical assistance to the four sites and conducted a rigorous [evaluation](#) to assess program operations and the impact of the services on job retention, wage increases, career advancement, and family income and poverty. One lesson was that if gains in workers' earnings from training are to persist over time, it is important to clearly define next steps for additional training.

EMERGING LESSONS FROM CAREER PATHWAYS RESEARCH

While there is still little rigorous research on the long-term impacts of career pathways programs that cut across varied educational systems, some early lessons point to the way forward for practitioners, policymakers, and researchers.

- **The demand side matters:** Years of focus on the needs of job seekers in employment and training programs, with limited consideration of the interests and needs of employers or the climate of particular industry sectors and labor markets, has resulted in generally modest effects, even among successful programs. Career pathways models that target high-demand sectors and emphasize employer engagement are promising improvements.
- **Programs that target different populations share common design elements:** Whether targeting high school students, disconnected and out-of-school youth, or adults seeking career advancement, career pathways strategies share a set of common design elements: combining education (academic and technical) with work experience in particular industries

or occupations, aligning curricula and program requirements across different education systems (secondary, postsecondary, and adult education), on-ramps that help underprepared individuals advance quickly and effectively from where they are into a pathway that leads to postsecondary learning and credentials, and counseling that promotes better choices and persistence.

- **Alignment across systems requires new organizational approaches:** Alignment and collaboration across systems, whether K-12 and postsecondary schools or employers, does not occur easily or automatically. Career pathways approaches require institutional solutions to align systems. In many communities, these solutions take the form of new organizations dedicated to advancing career pathways initiatives. These intermediary (or “backbone”) organizations convene key stakeholders, build consensus, and manage and monitor career pathways efforts. Efficient coordination mechanisms are critical to the long-term growth and success of career pathways approaches.
- **Work-based learning offers multiple benefits:** Work-based learning is an effective method for teaching skills that are valued in the labor market and a powerful incentive to keep individuals engaged and to encourage them to advance in their academic or technical program. Work-based learning can help participants of any age build their resumes and gain access to a valuable network of job contacts in an industry. For younger participants, work-based learning experiences are opportunities to explore careers while gaining important work-readiness and other skills. For older individuals who need to earn income, paid internships and jobs can be part of an incentive structure that encourages them to strive, persist, and succeed.

NEW RESEARCH FINDINGS

In the next year or two, new rigorous research will be published on a range of career pathways programs around the country. These studies — including MDRC’s studies on WorkAdvance and YouthBuild, and Abt Associates’ studies on Health Profession Opportunities Grants and Pathways for Advancing Careers and Education — will answer important questions about career pathways and point to areas where additional research is needed. Particularly useful will be findings on outcomes for different populations, the scalability of different models, the relative importance of different program design elements to participant success, and systemic reforms that are needed to accelerate the adoption of effective programs.