



REVIEW OF LITERATURE: PROMISING PRACTICES IN CONNECTING WORKERS TO MIDDLE SKILL JOBS

THE COMMUNITY FOUNDATION *FOR* GREATER NEW HAVEN AND
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NEED FOR MIDDLE SKILL JOBS

There is an urgent need to match workers without 2- or 4-year degrees with jobs that allow them to support themselves and their families. While achieving a degree is a path to the middle class for many, it's not feasible for all. Furthermore, increasing the number of workers with degrees does not increase the *demand* for workers with degrees. Upskilling benefits the higher education industry but not the workers or the economy. Employers need skilled workers who can work in technical areas but often do not require degrees. A shortage of these workers is limiting the growth of these businesses.

NEED FOR LIVING WAGE JOBS FOR PEOPLE WITHOUT 4-YEAR DEGREES

Our educational system has recently been focused on higher education as the primary pathway to economic mobility. Increasing the number of workers with college degrees, however, does not increase demand for workers with college degrees. As many graduates are learning, outcomes in the job market do not always justify the expense of attaining a degree.

For some people, obtaining a two- or four-year degree is a viable pathway to higher paying opportunities, but there are several barriers that can prevent individuals from obtaining a 4-year degree. One of the most significant barriers is the cost of tuition and related expenses, which can be prohibitive for many people, especially those from low-income families. Additionally, the time commitment required to earn a degree can be a challenge for those who need to work full-time or those who have family obligations. Inadequate academic preparation, lack of access to resources and support services, and systemic inequalities can also limit opportunities for certain groups such as women and people of color.

Furthermore, many adults without degrees have significant educational deficits which make entering higher education a daunting, lengthy, and expensive proposition. Youth who plan to enter the workforce immediately after high school are disproportionately male, from minority backgrounds, and/or exhibiting lower academic performance than their peers (Fuller Hamilton et al., 2015).

Living wage jobs are essential for people without a four-year degree, as they provide a path to financial stability and upward mobility. Creating pathways to living wage jobs for people without four-year degrees can help to reduce income inequality and promote economic growth.

NEED FOR MIDDLE SKILL WORKERS

The demand for middle skill workers is increasing as the economy continues to evolve, with new jobs emerging that require a mix of technical and soft skills. Industries such as health care, manufacturing, and technology require specialized training and hands-on experience but do not require 4-year degrees. Many companies are finding it difficult to fill these positions, hindering their growth. Millions of job postings go unfilled even as millions of people remain unemployed or underemployed (Burrowes et al., n.d.).

AREAS OF INEQUALITY

Even within the middle-skill space, there are disparities by gender and race/ethnicity to address.

Within the middle skills space, there is significant occupational segregation. Occupations with higher concentrations of women and people of color tend to have lower job quality on average. For example, Black women are overrepresented in low-wage jobs, such as nursing assistants, personal care aides, and retail cashiers. Many of these jobs fall in the caring professions, high need and high skill but low wage. Meanwhile, Latino men are overrepresented in low-wage jobs in construction, delivery driving, and food service (Shakesprere et al., 2021).

Male high school graduates earn more than female high school graduates (Fuller Hamilton et al., 2015) largely due to their overrepresentation in the skilled trades and construction fields. Women are more likely to select lower-paying pathways in health sciences and human services rather than skilled trades and construction (Fuller Hamilton et al., 2015). Within a field such as science, technology, engineering, and math (STEM), which includes engineering and environmental science, women are heavily overrepresented among health-related jobs, many of which are low paid direct care jobs, and underrepresented in several other occupational clusters (Rick Fry et al., 2021).

IMMIGRANTS AND MIDDLE SKILL JOBS

Connecting immigrants and refugees with middle skill jobs is essential for both the economy and the immigrants themselves. Immigrants often possess valuable skills and experiences that can contribute to the workforce, yet they may face barriers to accessing middle skill jobs, such as language barriers and a lack of familiarity with the job market. Many immigrants have degrees but hold positions that do not require degrees in the United States. Most service providers offer alternative training and career paths to immigrants and try to place them in entry level jobs rather than attempting to match them with the jobs similar to the ones they held in their home countries (Bernstein & Vilter, 2018). Economic pressure leads immigrants to take “survival jobs” (Bernstein & Vilter, 2018) in which their education and talents are largely wasted.

EFFECT OF THE PANDEMIC

WOMEN, ESPECIALLY WOMEN OF COLOR, DISPROPORTIONATELY AFFECTED BY COVID

The Covid-19 pandemic has had a disproportionate impact on women, particularly women of color. Women tend to bear a disproportionate amount of caring responsibility in their families. Women of color are more likely to work in jobs that require physical attendance, such as healthcare, retail, and hospitality. Meanwhile, white women, who are more likely to be highly educated and able to work from home, were able to manage their caring responsibilities more easily.

Women of color are also more likely to hold low-paid jobs in the hospitality sector. These jobs simply disappeared during the pandemic (Goldin, 2022). The hospitality industry and other sectors that are overrepresented by women were severely impacted by the pandemic. Many workers experienced reduced hours and job losses. Furthermore, low-wage and low-hours workers have been the hardest hit by Covid-19, with many unable to work from home and therefore more vulnerable to job loss and exposure to the virus. Addressing these issues will require a comprehensive approach that includes targeted policies and investment in sectors that support women and low-wage workers. It will also require measures to address the childcare staffing crisis and other systemic issues that perpetuate gender and racial inequalities.

Government intervention has focused on traditionally male-dominated employment sectors such as infrastructure, which do not benefit women as much. The National Partnership for Women and Families predicts that of the 800,000 new jobs created by the Infrastructure Investment and Jobs Act, women would account for less than 29% of the jobs; Black women will account for less than 4% of the jobs, and Latinas less than 5%. Investing in care infrastructure, such as early childhood education and home health services, would both yield more jobs and allow many more workers to reenter the workforce (Kashen et al., 2022).

NEW HAVEN AND VALLEY REGION

Connecticut is home to a diverse range of industries, with a particular emphasis on middle skill jobs. In fact, the state has more middle skill jobs than high- or low-skill jobs, making it an ideal location for those seeking employment in this sector. 2009 projections anticipated that 4 out of 10 (40%) job openings in Connecticut would require middle skills, highlighting the importance of this sector for the state's economy (CT-Department of Labor, 2009). By 2020, 48% of jobs in Connecticut were middle skill jobs (*Skills Mismatch: Lack of Access to Skills Training Hurts Connecticut's Workers and Businesses*, n.d.). This is on track with national trends. Nationally, 52% of jobs require some training beyond high school and do not require a 4-year degree (Olugbemiga, 2020).

Many middle skill jobs in Connecticut are found in the healthcare and construction industries. Healthcare is a particularly important sector for the state, as the aging population has increased the demand for healthcare services. Middle skill jobs in healthcare include positions such as nursing assistants, medical assistants, and licensed practical nurses. The construction industry is another important sector, with middle skill jobs in construction including carpenters, electricians, and plumbers.

In order to support the growth of middle skill jobs in Connecticut, it is important to invest in education and training programs that prepare workers for these careers. This includes vocational training programs, apprenticeships, and other hands-on training opportunities that provide workers with the skills they need to succeed in middle skill jobs. Additionally, policies that promote economic growth and job creation in these sectors can help to create a more robust middle class in Connecticut and contribute to the overall health of the state's economy.

PROMISING PRACTICES AND PILOTS

Structured non-credit programs that provide certifications such as commercial drivers' license, nursing assistant or teacher's aide are more accessible and practical for adults who need to access employment quickly in order to support their families. Typically, these programs are funded through local workforce boards (Van Horn et al., 2015).

TECHNOLOGY: AMAZON TECHNICAL APPRENTICESHIP

(Work-and-Learn Models for Today's Economy, n.d.)

The Amazon Technology Apprenticeship program is a workforce development initiative designed to provide individuals from diverse backgrounds with the training and experience needed to pursue a career in the technology industry. The program was originally designed to serve veterans and military spouses and has expanded to include other participants. The program is open to individuals with little or no prior experience in technology and provides a pathway into a career as a software engineer, data analyst, or other technology role within Amazon. The program is provided online.

The program is structured as a paid, 12-month apprenticeship, during which participants receive on-the-job training and mentorship from experienced professionals within the company. Apprentices also receive classroom instruction and certification training to build the technical skills needed to succeed in a technology career. In addition to technical training, apprentices receive training in professional skills such as communication, teamwork, and project management.

The program is competency-based – individuals can progress as they demonstrate mastery of the target skills -- meaning that individuals can complete the program faster than 12 months if they are able.

The Amazon Technology Apprenticeship program is designed to be accessible to individuals from diverse backgrounds, including those who may not have had the opportunity to pursue a traditional four-year college degree. The program is open to individuals who are 18 years of age or older and have a high school diploma or equivalent. Amazon also seeks to recruit individuals from underrepresented communities, including women, people of color, and military veterans.

Overall, the Amazon Technology Apprenticeship program is an innovative workforce development initiative that provides individuals from diverse backgrounds with the opportunity to pursue a career in the growing field of technology. By providing on-the-job training, mentorship, and certification training, the program prepares participants for a successful career in the technology industry, while also helping to address the growing demand for skilled technology professionals.

MANUFACTURING: WORKSHOP FOR WARRIORS

(Albert, 23 C.E.)

Workshops for Warriors is a nonprofit organization located in San Diego, California, that provides training in advanced manufacturing for veterans and transitioning service members. Founded in 2008, Workshops for Warriors aims to equip veterans and service members with the skills needed to pursue careers in the growing field of advanced manufacturing, while also addressing the skills gap in the industry.

The training programs offered by Workshops for Warriors are designed to be accessible to individuals from a wide range of backgrounds, including those with little or no prior experience in manufacturing. Programs range in length from 16 weeks to 52 weeks, and include instruction in areas such as welding, machining, and 3D printing. In addition to technical training, Workshops for Warriors also provides instruction in professional skills such as resume writing, interviewing, and job search strategies.

Workshops for Warriors offers stackable credentials as part of its training programs. Students who complete a program in a specific skill, such as welding or machining, can earn industry-recognized credentials that demonstrate their proficiency in that particular area. These credentials can be "stacked" on top of each other as the student progresses through additional training programs and develops new skills.

For example, a student who completes a welding program at Workshops for Warriors may earn a welding certification from the American Welding Society. This certification can be used to demonstrate the student's welding skills to potential employers. If the student then goes on to complete a machining program, they can earn a separate credential, such as a Computer Numerical Control (CNC) programming certificate, which can be added to their welding certification to demonstrate a broader range of skills.

By offering stackable credentials, Workshops for Warriors provides students a flexible pathway to build their skills and advance their careers. The organization partners with a wide range of industry associations and certifying bodies to ensure that its training programs are aligned with industry standards, and that its students have the skills and credentials needed to succeed in the workforce.

Overall, Workshops for Warriors' approach to stackable credentials helps to address the skills gap in the advanced manufacturing industry. They provide students with industry-recognized credentials that demonstrate their proficiency in specific areas of expertise, while also offering a flexible pathway to building their skills and advancing their careers.

Workshops for Warriors has been widely recognized for its innovative approach to workforce development. The organization has been awarded numerous grants and accolades, including recognition from the U.S. Department of Labor as a model program for workforce development. In addition, Workshops for Warriors has a strong track record of success, with a 93% job placement rate for graduates of its programs.

Overall, Workshops for Warriors is an important resource for veterans and service members looking to transition into careers in advanced manufacturing. By providing accessible and comprehensive training programs, the organization is helping to address the skills gap in the industry, while also creating a valuable pathway to employment for those who have served our country.

HEALTHCARE: PATHWAYS TO HEALTHCARE, VCU HEALTH

The Pathways to Healthcare program at Virginia Commonwealth University (VCU) Health is a workforce development initiative designed to provide individuals with the skills and training needed to pursue careers in the healthcare industry. The program is a collaboration between VCU Health and several community partners. The Pathways to Healthcare program recruits high school graduates into entry level positions at VCU Health. The program offers a range of training programs and services, including classroom instruction, hands-on skills training, and job placement assistance.

One of the unique features of the Pathways to Healthcare program is its emphasis on providing students with the support and resources needed to overcome barriers to success. Their staff work with new hires and their managers to ensure that workers can retain their employment for the first year. After one year, workers are actively encouraged to take advantage of VCU Health's tuition reimbursement program in order to advance in their careers.

Overall, the VCU Pathways to Healthcare program is an important resource for individuals looking to pursue careers in the healthcare industry. By providing comprehensive training programs, academic support services, and job placement assistance, the program helps both employers and employees. It addresses the workforce needs of the healthcare industry, while also providing valuable career opportunities for individuals in the community.

LEE HEALTH CNA PATHWAY (*WORK-AND-LEARN MODELS FOR TODAY'S ECONOMY, N.D.*)

The Lee Health CNA (Certified Nursing Assistant) Pathway is a program designed to provide individuals with the skills and training needed to become certified nursing assistants in the healthcare industry. The program is offered by Lee Health, a leading healthcare provider in Southwest Florida, and is open to individuals with little or no healthcare experience.

The CNA Pathway program is a six-week course that includes both classroom instruction and hands-on clinical training. Participants in the program spend 30 hours per week in the classroom and are on the job in their apprenticeships for the rest of the week. Participants in the program learn the basic skills and knowledge needed to provide direct patient care. This includes assisting with daily living activities, taking vital signs, and monitoring patients' health status. Enrollees report that they feel more engaged with the field because they are already on the job while they are training.

One of the unique features of the CNA Pathway program is its focus on career advancement and professional development. Participants who successfully complete the program are eligible to take the Florida Certified Nursing Assistant exam, and those who pass the exam are offered employment opportunities with Lee Health.

In addition to providing job opportunities, the CNA Pathway program also offers a roadmap for participants to continue their education and pursue careers in other healthcare fields. Participants who complete the program are eligible to apply for Lee Health's tuition reimbursement program, which can be used to pursue further education and training in fields such as nursing or healthcare management.

Overall, the Lee Health CNA Pathway program is a valuable resource for individuals looking to start a career in the healthcare industry. By providing comprehensive training, career advancement

opportunities, and support for continuing education, the program helps to address the workforce needs of the healthcare industry, while also providing valuable career opportunities for individuals in the community.

INSURANCE: AON

("Case Study: Next Generation Apprenticeships at Aon," n.d.)

Aon is a leading global professional services firm that provides a range of insurance and risk management solutions to clients around the world. The company operates in over 120 countries and has more than 50,000 employees, making it one of the largest and most influential companies in the industry. Aon offers a wide range of services, including risk consulting, insurance brokerage, and employee benefits consulting, among others. The company works with a diverse range of clients, including individuals, small businesses, and large multinational corporations, and is committed to helping them manage risk, protect assets, and achieve their financial goals. The Next Generation Apprenticeship program at Aon is designed to create an alternative pathway to careers at Aon in IT, Human Resources, and Insurance.

The program is a Federal Department of Labor registered apprenticeship model. Participants receive pay while they train and their pay progresses as they advance through the program and into full time positions. The training combines academic learning and on-the-job training. Participants spend 40 hours per week divided between coursework and on-site at Aon. They partner with community colleges to provide the appropriate coursework and Aon pays off the participants' school expenses.

The program also includes supervisors as a cohort. They work together to develop and share best practices in supporting traditionally underserved workers and supporting apprentices through the program.

The program is managed by a program manager rather than Human Resources in order to be able to bring the resources that the program needs to be successful.

BEST PRACTICES

There are several best practices that can help to support workers in obtaining middle skill jobs.

EMPLOYER PARTNERSHIPS AND ACTIVE ENGAGEMENT

This involves employers working with educational institutions and training providers to develop curricula and training programs that are tailored to the specific needs of their industry. Employers can also provide input on the skills and competencies that are most important for their workforce, which can help to ensure that training programs are relevant and effective.

Employer engagement is crucial for successful workforce development training for several reasons. Firstly, employers are in the best position to understand the specific skills and knowledge that are needed in their industry. By working closely with employers, training providers can develop training programs that are tailored to the specific needs of the industry. This can help to ensure that workers are prepared for the jobs that are available.

Secondly, employer engagement can help to ensure that training programs are aligned with the needs of the local labor market. Employers can provide insights into the current and future demand for certain skills, which can help to guide the development of training programs that will prepare workers for the jobs that are in highest demand.

Thirdly, employer engagement can help to ensure that training programs are of high quality and relevance. Employers can provide feedback on the effectiveness of training programs, which can help to identify areas where improvements can be made. This can help to ensure that training programs are continually evolving to meet the changing needs of the industry.

Finally, employer engagement can help to create a more seamless transition from training to employment. By working closely with employers, training providers can help to identify job openings and connect graduates with employment opportunities. This can help to ensure that workers are able to find employment quickly and that employers are able to fill open positions with well-trained and qualified candidates.

Overall, employer engagement is crucial for successful workforce development training. By working closely with employers, training providers can develop programs that are tailored to the specific needs of the industry, that are aligned with the needs of the local labor market, and that provide graduates with a seamless transition into employment.

PAID TRAINING

Paid training is another best practice that can help to support workers in obtaining middle skill jobs. By providing financial support for training, employers can help to remove financial barriers that may prevent workers from pursuing training opportunities.

Secondly, paid training can increase the overall quality of the workforce. Workers who receive paid training are more likely to be highly motivated and committed to their careers. They are also more likely to have a sense of loyalty and commitment to their employer, as they recognize the investment that the employer has made in their development. Paid training programs also provide the opportunity for trainees to get hands-on experience with the workplace before they complete training. This contributes to a workforce that is better prepared and more committed to the field.

Finally, paid training can address skill gaps in the workforce. Many middle skill jobs require specialized skills and knowledge that may not be readily available in the labor market. By providing paid training opportunities, employers can help to develop a pipeline of workers with the skills and competencies needed to succeed in their industry.

Overall, paid training is an important investment in the workforce. It can help to create a more skilled, motivated, and loyal workforce while also addressing skill gaps and increasing the overall competitiveness of businesses in a rapidly changing economy.

STACKABLE CREDENTIALS

Stackable credentials are another best practice that can help workers to advance in their careers and obtain higher-paying middle skill jobs.

The term stackable credentials refers to the practice of earning multiple certifications or credentials over time, with each credential building on the knowledge and skills acquired in previous training programs. The goal of stackable credentials is to create a pathway for workers to advance in their

careers and obtain higher-paying jobs. For example, a worker might begin by earning a certification in a specific technical skill, such as welding or computer programming. With that certification in hand, they could then pursue additional training to earn a more advanced certification in the same skill, or a related skill that complements their existing knowledge. Over time, they might continue to add new certifications and credentials to their portfolio, allowing them to demonstrate a wide range of skills and competencies.

By stacking credentials in this way, workers can demonstrate to employers that they have the knowledge, skills, and experience needed to succeed in a particular field. This can help them to advance in their careers and take on more challenging roles, while also increasing their earning potential and overall job satisfaction.

Stackable credentials are becoming increasingly important in today's rapidly changing economy, as workers need to be able to adapt to new technologies and job requirements. By continuously building on their existing skills and knowledge, workers can stay competitive in the job market and continue to advance in their careers.

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