

MAKING WORK-BASED LEARNING

WORK



JOBS FOR THE FUTURE

BY CHARLOTTE CAHILL | JULY 2016

INTRODUCTION

Americans seeking employment often face a conundrum: relevant work experience is a prerequisite for many jobs, but it is difficult to gain the required experience without being in the workplace. Work-based learning—activities that occur in workplaces through which youth and adults gain the knowledge, skills, and experience needed for entry or advancement in a particular career field—offers a solution to this problem. But although the benefits of work-based learning are clear, they have accrued primarily to the most highly educated and socially connected segments of the U.S. population. In recent years, educators and leaders in the workforce development field have returned again and again to the problem of providing work-based learning opportunities to the marginalized populations for whom this experience can mean the most: low-income students, jobseekers (including the long-term unemployed), low-skilled incumbent workers, and opportunity youth—young people between the ages of 16 and 24 who are out of school and out of work.

This challenge in ensuring that underserved populations have access to work-based learning persists in spite of renewed interest and investment in work-based learning. Bolstered by public and private sources of funding, supportive federal and state policies, and an embrace by practitioners, a growing number of high schools, community colleges, workforce development agencies, and community-based organizations are teaming up with employers to provide meaningful career exposure, work experience, and hands-on training opportunities. However, employer investments in education and training have often targeted highly skilled professionals and university students; the need to provide similar opportunities to frontline workers and individuals pursuing certificates and other sub-baccalaureate degrees and credentials remains.¹

The recent growth in work-based learning opportunities has been driven in part by employers' recognition of the role work-based learning can play in addressing the skills gap and in developing a more diverse talent pipeline. In 2015, the Manpower Group's Talent Shortage Survey found that a third of employers in the U.S. are having difficulty filling available jobs due to the lack of a strong talent pipeline. The survey also found that, for the sixth straight year, vacancies in the skilled trades were the hardest jobs to fill in

the U.S.² Yet the number of registered apprenticeship programs—a model of work-based learning often used to prepare workers for jobs in the skilled trades—declined by 36 percent from 1998 to 2012.³ Reinvigorated and expanded apprenticeship programs, alongside other proven work-based learning models, can catalyze industry strategies for overcoming the skills gap. Indeed, some industries facing significant skills shortages, such as the energy industry, are championing apprenticeships and other forms of work-based learning that contribute to the development of a pipeline of skilled talent.

Work-based learning has reemerged as millions of Americans are struggling to find opportunities to enter and advance in careers. Youth are facing high rates of unemployment, limiting their early exposure to work and hampering their college and career decisions. Millions of workers, still reeling from bouts of unemployment and declining wages caused by the Great Recession, need retraining, transferable skills, fresh work experiences, and industry-recognized credentials to keep their skills current and advance to better careers. Working either full-time or part-time while enrolled in college has become the new norm due to increasing tuition costs, heightened concerns over future career prospects, and the growing ranks of nontraditional students on campuses.

More than 70 percent of college students work while enrolled, and many must make difficult choices between studying to boost academic performance or working to pay down student debt and cover life expenses.⁴ Work-based learning can help resolve these dilemmas.

Yet challenges related to access threaten to limit the potential of work-based learning to respond to the needs of both employers and underserved populations. A lack of equitable access to work-based learning limits the career prospects and economic mobility of millions of youth and adults. It also prevents them from becoming part of the pipeline of skilled workers employers need to help spur local, state, and national economic growth.

This paper addresses these challenges by presenting seven principles for effective work-based learning models. Jobs for the Future (JFF) identified these principles based on more than three decades of experience in promoting and implementing education and workforce strategies that support youth and adults seeking to launch and advance in careers. Together, these principles encourage the design of work-based learning models that increase access to work-based learning for all, provide participants with key training and work experience, and help employers meet their needs for a skilled workforce.

Although the benefits of work-based learning are clear, they have accrued primarily to the most highly educated and socially connected segments of the U.S. population.

Effective models of work-based learning should:



Support entry and advancement in a career track



Provide meaningful job tasks that build career skills and knowledge



Offer compensation



Identify target skills and how gains will be validated



Reward skill development



Support college entry, persistence, and completion



Provide comprehensive student supports

This paper guides the design and implementation of effective models of work-based learning that expand access for the many people who don't currently benefit from these opportunities. The first part of the paper situates the need for increased access to work-based learning in the context of career pathways strategies designed to increase economic mobility for underserved populations. The next section of the paper defines work-based learning and explains its core purposes. The remainder of the paper expands on each of the seven principles, laying out the benefits of each and providing examples of programs and initiatives that are already incorporating the principles.

CAREER PATHWAYS AND THE NEED FOR IMPROVED ACCESS

Work-based learning is a critical component of many career pathways frameworks, which have gained traction over the past decade as a strategy for increasing postsecondary attainment and employment opportunities in high-growth, high-demand, high-wage fields for youth and adults, especially those from underserved populations. Career pathways models structure education, training, and career advancement in a seamless continuum across secondary and postsecondary education, workforce institutions, and employers. The benefits of career pathways are similar to those of work-based learning. They enable students to build academic, technical, and professional skills; attain postsecondary degrees and credentials; and enter and advance in specific careers, fields, or sectors.

In the context of career pathways, work-based learning plays a central role in bridging the classroom and the world of work, leading to improved educational and employment outcomes for participants. Work-based learning helps students contextualize, reinforce, and put into practice their classroom learning while crystalizing their education and career goals and improving their immediate and longer-term employment prospects. When incorporated successfully in an educational program, work-based learning fosters academic success for individuals—including low-skilled workers and opportunity youth, who may have low levels of formal education, limited English proficiency, negative experiences with school, or long gaps in direct educational experiences. Work-based learning can be an effective strategy for reinforcing and applying academic learning in real-world secondary and postsecondary settings while building students' exposure to and excitement about career fields. For students who are working while attending high school or college, work-based learning can also provide a critical source of income that is linked to a student's program of study and supports progress toward career goals. Meanwhile, for incumbent workers, work-based learning opportunities can provide a way to embed learning in their existing jobs, making it easier to balance work, school, and family demands.

Work-based learning can also help accelerate credential attainment. Increasing numbers of educators and employers recognize the advantages in some cases of awarding credentials based on competency and demonstrated skills rather than seat time. Com-

petency-based education can provide a more attainable route to credentials and jobs for candidates with academic, financial, or other barriers; for employers, it ensures the alignment of training with needed skills and competencies.⁵

Achieving these benefits of career pathways and work-based learning for underserved populations, however, requires expanding work-based learning opportunities and removing barriers. Low-income and low-skilled Americans are often unable to access work-based learning through either of two of the main sources or training for American workers: employers and the workforce system. The public workforce system has tended to direct resources to job

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search assistance and classroom training, leaving few resources for work-based learning for its youth and adult clients. Seventy percent of employers offer some type of training to employees, but these opportunities are most often aimed at management and mid-level workers.⁶ In fact, out of the \$177 billion that employers collectively spend each year on formal training, 58 percent of training dollars are spent on employees with a bachelor's degree or higher, compared to just 25 percent on workers with some college and 17 percent on workers with a high school diploma or less.⁷ The health care sector exemplifies this dichotomy. While doctors and nurses are required to complete formal experiential learning through internships, clinical rounds, and residencies, frontline health care workers often learn their jobs through trial and error, quick instruction by peers, and occasional "in service" sessions on required topics such as safety. A notable exception to this overall

trend in employer training priorities is the unionized portion of the construction sector, which has adopted the use of apprenticeship to support the skills development of entry-level workers.

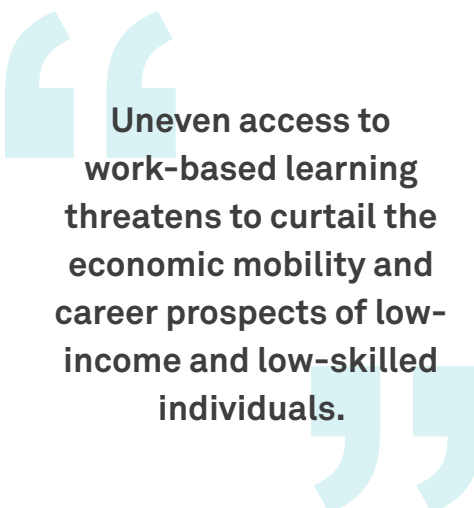
A similar gap exists among postsecondary students who complete internships and co-ops, with students pursuing bachelor's degrees more likely to have opportunities to pursue these types of work-based learning experiences than community college students. Estimates suggest that as many as two-thirds of university graduates participated in an internship or co-op during their academic careers, but far fewer students in two-year degree programs have had internship or co-op experiences. Many community college students work full-time while in school, which constrains their ability to participate in unpaid internships and other work-based learning experiences. Another limiting factor is that many two-year students pursue general education degrees that lack clear relevance to specific occupations or industries.⁸ The growth of applied science degrees, certificates, and competency-based and industry credentials presents untapped potential for engaging greater numbers of community college students in work-based learning.

Accessing work-based learning is a serious challenge for opportunity youth. Few programs and schools that serve opportunity youth, including high school equivalency programs and alternative schools, incorporate formal work-based learning, which limits the ability of young people to gain workplace experience and earn needed income. This population has a critical need to connect to the labor market while pursuing an education, and work-based learning can be a crucial tool for engaging them and keeping them on track to graduation and postsecondary credentials.

Women and people of color often struggle to access the benefits of work-based learning. The problem is

particularly acute for women, especially those interested in pursuing apprenticeships. Sixty percent of the students who are balancing work and the pursuit of postsecondary credentials are women.⁹ In 2012, women made up only six percent of apprentices in the United States.¹⁰ In addition, women are overrepresented in registered apprenticeships in low-wage social services occupations—primarily child care and nursing aide—and even more underrepresented in skilled trades occupations than the overall figures for women's participation would suggest. Moreover, women's completion rates for apprenticeships in the skilled trades are lower than men's, suggesting a need for additional efforts to ensure that women are able to successfully complete apprenticeships in the skilled trades.¹¹

Uneven access to work-based learning threatens to curtail the economic mobility and career prospects of low-income and low-skilled individuals. A lack of access to work-based learning can have immediate financial consequences. The average hourly wage for bachelor's-level interns in 2015 was \$17.20.¹² A student participating in a six-month co-op program can earn \$11,000 to \$18,000.¹³ Students and workers who do not have opportunities to develop professional and career-track skills offered by work-based learning may struggle to enter and advance in careers. A survey by the National Association of Colleges and Employers found that more than 65 percent of students with paid internships received full-time job offers, as compared with 39 percent of students with no internship experience.¹⁴



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DEFINING WORK-BASED LEARNING

Work-based learning is a term that may be applied to a broad array of learning experiences, from career exploration activities for high school students to specialized training for incumbent workers. Educators often view work-based learning as a continuum of career awareness, exploration, preparation, and training activities, ranging from guest speakers, informational interviews, and workplace tours to special projects and student-run enterprises to internships, co-ops, and apprenticeships.¹⁵ Although all these learning experiences involve interactions with industry and community professionals, they do not necessarily occur at a workplace or during the standard work day. The primary goal of these interactions is to extend and deepen classroom work, while exposing students to future options and developing their interest and skills over time. Workforce development leaders commonly construe work-based learning as hands-on experiences in a work environment that provide training paths to employment or support career advancement, such as on-the-job training, internships, transitional jobs, and apprenticeships. These experiences may or may not integrate classroom learning and lead to academic or industry-recognized credentials.¹⁶ Some practitioners define work-based learning as an intentional restructuring of a job itself to formalize learning objectives that an employee can achieve through the completion of work processes.¹⁷

This paper defines work-based learning as activities that occur in workplaces and that involve an employer assigning a worker or a student meaningful job tasks to develop his or her skills, knowledge, and readiness for work and to support entry or advancement in a particular career field. Work-based learning extends into the workplace through on-the-job training, mentoring, and other supports for a continuum of lifelong learning and skill development. Ideally, these activities should support the attainment of academic or industry-recognized credentials. However, this paper recognizes the effectiveness of work-based learning approaches that are not necessarily tied to or embedded in an academic program of study.

Work-based learning seeks to achieve outcomes that may include readiness for work and careers, entry to an education or training program, completion of a career-related program of study, degree or credential attainment, job entry, career advancement, and self-sufficiency. The outcomes sought vary considerably across different work-based learning models and participant groups. An internship may spark a high school student's interest in a field, encouraging him or her to complete high school and enroll in post-secondary education, while a work-based course may lead to opportunities for career advancement for an incumbent worker.

The successful design and implementation of work-based learning requires collaboration among a range of workforce, industry, and education stakeholders.

Broad-based partnerships to support work-based learning simultaneously reduce the demands on each partner and contribute to the successful development and sustainability of robust work-based learning experiences. Key stakeholders in the design and implementation of effective work-based learning models include employers, educators, the workforce development system and other workforce intermediaries, and community-based organizations engaged in addressing workforce issues.

The most common models of work-based learning include internships, co-ops, transitional jobs, on-the-job-training, and apprenticeships. (See Table 1.) Each of these may be tailored to the needs of specific populations, and each may be designed and implemented so that it incorporates the principles set out in this paper. In addition, new models of work-based learning are emerging that are well-positioned to incorporate those principles and to serve individuals who have not always had access to work-based learning. One such model is work-based courses, which are credit-bearing community college courses that have been redesigned in partnership with employers so that competencies are taught not only in the classroom or lab, but on the job itself. These courses provide incumbent workers in low-skilled jobs with an opportunity both to build their knowledge through academic learning and to develop relevant career-track skills.¹⁸

TABLE 1: KEY WORK-BASED LEARNING MODELS

Program Model	Overview	Population Served	Core Purposes
• Internships	• Provide participants with an opportunity to learn about a career or industry by working for an employer in the field of interest for a limited period of time • A form of experiential learning, often tied to a secondary or postsecondary program of study, that enables participants to gain applied experience, build professional and technical skills, and make connections in a field of interest	• Secondary and postsecondary students • Opportunity youth • Recent college graduates • Working-age adults	• Exposure to a career field and/or the world of work • Development of professional skills • Academic learning • Job (temporary)
• Co-ops	• Link academic programs with structured work experiences through which participants acquire professional and technical skills • Participants earn academic credit for work carried out over a limited period of time under the supervision of a professional mentor • Numerous states have in place policies and guidelines that define co-ops and provide guidelines for them	• Secondary and postsecondary students	• Academic learning • Development of career-track skills • Job (temporary)
• On-the-job training	• Workplace-based opportunity for participants to develop career-track skills needed for entry to a particular industry or advancement along a career track • Can support rapid re-employment of individuals following mass layoffs • Can be used to retrain incumbent workers if technological or other changes within a workplace demand the development of new skills • The Workforce Innovation and Opportunity Act (WIOA) contains provisions for funding OJT programs that meet established federal requirements, but employers and other organizations may also establish independent OJT programs	• Dislocated workers and low-skilled adults • May be incorporated in individual service plans for opportunity youth	• Development of career-track skills • Job (permanent)

Program Model	Overview	Population Served	Core Purposes
• Transitional jobs	• Designed to address challenges faced by individuals with barriers to employment • Time-limited employment, through which participants gain professional skills and establish a successful work history, is combined with a range of supportive services, including employment services • WIOA contains provisions for funding transitional jobs programs that meet established federal requirements, but workforce and community-based organizations may also establish independent transitional jobs programs • Temporary Assistance to Needy Families (TANF) funds may be used to implement transitional jobs programs and to subsidize wages, and local workforce development boards can use WIOA formula funds for transitional jobs.	• Opportunity youth • Individuals with barriers to employment	• Exposure to the world of work • Development of professional skills • Job (temporary)
• Apprenticeships	• Intensive work-based learning experiences that generally last from one to six years and provide a combination of on-the-job training and formal classroom instruction • Intended to support progressive skill acquisition and lead to postsecondary credentials and, in some cases, degrees • The U.S. Department of Labor and some states administer registered apprenticeship programs, though unregistered apprenticeships that incorporate the key features of the model are also operated successfully by a range of organizations, including employers, industry associations, labor-management organizations, and workforce agencies	• Individuals seeking to enter a new career field • Opportunity youth interested in an industry Incumbent workers seeking advancement	• Academic learning • Development of career-track skills • Job (permanent)

CORE PURPOSES OF WORK-BASED LEARNING

Work-based learning serves a set of interconnected core purposes that support and prepare participants as they gain the skills, knowledge, and experience needed to enter and advance in careers. The structures of work-based learning models reflect their core purposes. Approaches to work-based learning vary: one model may place greater emphasis on applying classroom learning, another on strengthening job-related skills, and yet another on building exposure to work or entering employment. In general, successful models of work-based learning serve more than one of the following core purposes:

Expose participants to the world of work

Work-based learning provides an opportunity to gain a better understanding of a particular career and of workplace norms and typical employer expectations for their employees. This is an especially important purpose of internships for high school students, re-engagement programs for opportunity youth, and transitional jobs programs.

Expose participants to a career field

Work-based learning is an opportunity for immersion in the field of interest and interaction with professionals who are already working in it. These opportunities are especially relevant for participants in internships, who are often students or recent graduates exploring possible careers, and can spur interest in a student who lacks career direction and motivation to move forward.

Strengthen and practice academic learning

Students apply classroom learning in real-world situations through work-based learning, which reinforces knowledge gained in the classroom and enables students to build their skills. This process of reinforcing classroom learning and demonstrating its relevance to the world of work is especially important because it bolsters student persistence in, and successful completion of, education and training. Co-ops, work-based courses, and apprenticeships all deliberately integrate work-based learning with classroom learning. Contact with employees and mentors in the workplace can provide students with much-needed encouragement and support.

Enhance professional and/or career-track skills

Participants in work-based learning gain skills that are valued by employers but may be challenging to teach in classroom settings. These include professional skills such as working as part of a team, being proactive, and understanding workplace expectations. Participants in work-based learning also have

the opportunity to learn and apply specific technical and career-track skills and work with industry-standard equipment and technology, ensuring that they are well-prepared for careers. Development of professional and career-track skills is an important purpose of most work-based learning models. For participants in internships and transitional jobs programs seeking to gain exposure to the world of work, development of professional skills is likely to be an immediate goal, while participants in co-ops, work-based courses, OJT, and apprenticeships are likely to focus on career-track skills that will enable them to enter or advance in specific careers in the near term.

Provide a temporary or permanent job

Many participants in work-based learning experiences—including short-term opportunities such as internships, co-ops, and transitional jobs—require an income in order to support themselves and their families. In some cases, employers view work-based learning as a trial period for potential employees and ultimately choose to hire from the pool of work-based learning participants. In other cases, work-based learning experiences are designed explicitly to help equip participants with the skills they need to obtain specific permanent jobs or advance in their careers.

These core purposes of work-based learning benefit both participants and employers. Effective work-based learning models lead to the development of a workforce made up of individuals with the professional and career-track skills, experience, and post-secondary degrees and credentials that match employer expectations and needs. Employers have some assurance that employees have the information and skills needed to make informed job and long-term career choices, leading to reduced turnover, greater productivity, and lower costs for employers.

KEY PRINCIPLES FOR WORK-BASED LEARNING

If work-based learning programs are to achieve their core purposes for all participants, including those from underserved populations, they must adhere to a set of principles that provide all participants with a robust set of opportunities and the supports they need to succeed. These key principles for effective work-based learning models ensure that work-based learning can fulfill its promise as a critical component of career pathways strategies designed to bolster education and employment outcomes for underserved populations.¹⁹

The overall goal of these principles is to strengthen the talent pipeline by increasing the number of individuals who successfully access and complete work-based learning experiences, acquire skills and knowledge valued by employers, and enter and advance in careers. Given the varying purposes served, a single work-based learning model may not incorporate all seven principles. However, these principles provide a framework to design and benchmark successful work-based learning models and programs that create opportunities for more individuals to enter and advance in careers.

Embedding work-based learning in programs of study helps promote equitable access for all students enrolled in the program, not just those with the personal relationships and social capital needed to access existing opportunities on their own.

SUPPORT ENTRY AND ADVANCEMENT IN A CAREER TRACK



Effective models of work-based learning provide participants with opportunities to build knowledge, develop skills, and advance in specific career paths. Work-based learning supports the development of both industry-specific technical skills and professional skills, such as communications, teamwork, and problem solving, valued by nearly all employers.

Students' aspirations regarding entry to a particular career track are likely to vary depending on their educational backgrounds and employment histories. For example, while low-income and unemployed jobseekers may focus on finding employment or advancing in a specific career, in-school youth are likely to seek out work-based learning experiences that enable them to explore broad occupational tracks, although the skills they acquire will also help them advance in particular careers. Similarly, for students who have not had much work experience, effective work-based learning opportunities may emphasize foundational professional skills over technical ones.

Principle in Action: WorkSource Spokane

WorkSource Spokane's Career Pathway Navigators help youth, college students, and job-seeking adults make well-informed decisions about career tracks and acquire the skills needed to enter and advance in careers. WorkSource is a partnership of state, local, and nonprofit agencies, including Career Path Services, the Washington State Employment Security Department, the Northeast Washington Educational Service District 101, and Goodwill Industries of the Inland Northwest. Career Pathway Navigators advise clients about labor market information and salary data, then identify the technical and professional skills clients will need to succeed in the occupations and industries they have chosen. Community college students who participate in WorkSource's Employer-Student Engagement Program also have opportunities to learn more about the skills required in fields that interest them through workplace career exploration experiences such as job shadowing, mentoring, and internships.

WorkSource matches clients with training opportunities to ensure that clients are equipped with the skills needed by area employers. WorkSource also matches clients with internship opportunities that enable them to learn about career fields and gain workplace experience by performing typical entry-level

job tasks. For each client, WorkSource collaborates with the client and with employer partners to develop a customized training plan that incorporates the technical skills needed to enter and advance in specific career tracks. Employer involvement in the training plans helps ensure that internships provide participants with an opportunity to develop technical skills aligned with both broad industry needs and the needs of area employers. Many WorkSource clients go on to complete on-the-job training following their internships, which provides an additional opportunity to build skills that can help lead to career advancement.

Seventy percent of employers offer some type of training to employees, but these opportunities are most often aimed at management and mid-level workers.⁶

PROVIDE MEANINGFUL JOB TASKS THAT BUILD CAREER SKILLS AND KNOWLEDGE



Participants in work-based learning must have opportunities to engage in appropriately complex and relevant tasks (i.e., those that are representative of work in a particular industry, rather than general support roles) aligned with participants' career goals. Work-based learning should take place in work environments that support learning by providing appropriate mentoring and supervision. Participants should have opportunities to engage in work-based learning over a sustained period of time in order to ensure that they have adequate opportunity to perform meaningful job tasks.²⁰ Such tasks are important because they provide learners with opportunities to develop skills and gain experience relevant to a specific industry, positioning them for successful career entry and advancement.

Ensuring that work-based learning is meaningful requires substantial preparation on the part of participants, educational institutions, and employers. Educational institutions should help ensure that participants have sufficient preparation to take on complex tasks. In the case of work-based learning for youth, educators and intermediaries may also need to help employers understand and appreciate the abilities of young people under the age of 18. Employers should create a workplace infrastructure that supports meaningful work-based learning experiences. This includes taking an active role in preparing and engaging mentors and supervisors so they are prepared to encourage continued growth in participants' skills and knowledge. In addition, employers should develop job descriptions for work-based learning participants that reflect the goal of engaging participants in job tasks in which they will have opportunities to build knowledge, professional skills, and technical competencies.

Principle in Action: 12 For Life

The 12 For Life program operated by Southwire, a leading manufacturer of electrical cable and wiring headquartered in Carrollton, GA, demonstrates the value to both students and employers of designing work-based learning experiences that incorporate meaningful job tasks. High school students enrolled in the program spend half their day in school, in both core academic and career and technical education classes. The high school is co-located in a manufacturing facility that was built specifically for the 12 For Life program. It is staffed—with the exception of some supervisory roles—entirely by high school students who work for half of the day in paid positions. The program is designed to support the high school students at greatest risk of not graduating.

Students in the program build professional and career-track skills in a variety of manufacturing occupations. Students rotate through a variety of positions on the shop floor that are focused on packing and shipping processes, including spool assembly and reel assembly, and then choose one in which to further develop their skills. Students also operate the plant's quality assurance lab and have opportunities to build other relevant career-track skills such as data entry and record-keeping. The program also encourages the development of professional skills; for example, financial incentives are available to students with good attendance records. The company earns a substantial profit from the plant's operations, illustrating that providing work-based learning participants with meaningful job tasks can have an immediate positive effect on an employer's bottom line and long-term benefits for both employers and participants.²¹



Compensating work-based learning participants honors individuals' contributions and helps them remain focused and motivated. In many cases, paying a wage or salary is the most appropriate form of compensation. In some instances, particularly work-based learning opportunities for youth, an honorarium, stipend, or tuition reimbursement may be appropriate. Federal laws and policies, including the Fair Labor Standards Act, also indicate that, with a few narrow exceptions, most work-based learning activities, including internships, must be compensated.²² The Workforce Innovation and Opportunity Act (WIOA) recognizes the need for compensation and allows the use of WIOA funds to compensate certain participants in employment and training programs.²³

Compensation is critical to an equitable approach to education and training. Many individuals, especially opportunity youth, simply do not have the economic resources required to participate in unpaid internships. If work-based learning programs do not offer compensation, these students will be unable to participate because they need paid employment. These students are then blocked from an educational opportunity that would enable them to move into careers in which they can expect to earn family-supporting wages.

Principle in Action: Apprenticeship 2000

Apprenticeship 2000, an employer-led initiative based in North Carolina, utilizes a clear compensation structure that supports participants' progression through and completion of both secondary and post-secondary programs of study. Companies, including Ameritech Die and Mold, Blum, Chiron, Daetwyler, Pfaff Molds, Sarstedt, Siemens, and Timken, recruit students from local high schools for the apprenticeship program, which trains participants for a variety of careers in manufacturing. In their first year of the program, students spend half the day in school and half working as apprentices. In the second through fourth years of the program, students spend one day a week in classes at Piedmont Community College and four days engaged in hands-on training at participating companies. Program participants earn a journeyman certificate and an associate's degree in mechatronics, a field that brings together mechanical engineering and electronics, and are guaranteed jobs with a minimum annual starting salary of \$36,000 on completion of the apprenticeship.

Apprentices are paid hourly wages for their work with participating companies. The rate of pay increases regularly over the course of the four-year program as apprentices gain experience and build their skills and knowledge, growing to \$13.50 an hour by the fourth year. An unusual feature—and clear strength—of the Apprenticeship 2000 compensation structure is that it incentivizes both academic achievement and skills development. Participants have the opportunity to earn a performance bonus, a third of which is based on course grades.²⁴ Partnering companies also pay participants' college tuition and compensate apprentices for hours spent in the classroom as well as those spent in the workplace, ensuring that participants are able to remain entirely focused on successful completion of the apprenticeship.²⁵

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IDENTIFY TARGET SKILLS AND HOW GAINS WILL BE VALIDATED



Mutual understanding of the skills to be attained through work-based learning increases its value to both students and employers. Effective approaches to articulating and validating skills include reflective practices that lead to continuous learning and ensure integration with larger learning goals and formal assessments through which participants can demonstrate mastery of job competencies. Individual learning plans that are co-created by students and their supervisors also provide an opportunity to articulate the skills to be attained and to reflect on progress.

The specific skills to be attained will vary by occupation and industry, and the process for identifying those skills is more straightforward for some occupations than for others. Educators should work with employers to identify their skills needs, clarify what students should learn and accomplish through work-based learning, and develop experiences that meet the needs of all stakeholders.

Principle in Action: District 1199C Training and Upgrading Fund

District 1199C Training and Upgrading Fund, one of 17 sites around the country that participated in JFF's Jobs to Careers work, creates career pathways in health care and serves over 4,000 students in the Philadelphia area each year. They developed a work-based learning curriculum based on a thorough evaluation of the skills to be gained by participants in a behavioral health apprenticeship program serving opportunity youth.

In order to identify the skills to be acquired by participants, a project team mapped the competencies needed for frontline jobs and compiled a list of over 225 job tasks and skills to be used as the basis for a three-module work-based learning curriculum. The curriculum is designed to teach those skills on the job through the completion of everyday tasks such as interviewing patients and reading charts. Supervisors received regular training that prepared them to coach workers in applying concepts from the curriculum in the workplace. Supervisors also validate skill gains by assessing some of the assignments completed by workers. Upon completion of the program, workers were able to advance along career pathways and received wage increases that ranged from 5 to 15 percent.²⁶

REWARD SKILL DEVELOPMENT



Effective work-based learning models reinforce learning by recognizing and rewarding skills development. Participants who succeed in their initial assignments should be given opportunities to continue to grow through taking on greater responsibility and more challenging tasks. Skills development should also be rewarded through mechanisms such as increased wages and benefits, high school or postsecondary credit, opportunities to transition to permanent employment, and promotions for incumbent workers. Competency-based education models provide a promising avenue for recognizing and rewarding skills development by awarding academic credit. Appropriately rewarding skills development is particularly important for underserved populations, including incumbent workers in low-skilled jobs, who may struggle to advance in careers even after finding stable employment.

Stakeholders from across educational institutions, the workforce system, and industry should work together to create a framework for rewarding skills development. This framework should include specific metrics or benchmarks by which skills development will be rewarded, and specify both the mechanisms for doing so and how these mechanisms are linked to career entry and advancement.

Principle in Action: Industrial Manufacturing Technician Apprenticeship

The Industrial Manufacturing Technician (IMT) registered apprenticeship program, which is operated by a cross-sector group of stakeholders that includes manufacturing companies, unions, local workforce intermediaries, and Jobs for the Future, trains entry-level workers as industrial manufacturing technicians. Upon completion of the apprenticeship program, IMT apprentices are more productive in production jobs and may enter career pathways in industrial skilled trades, leading to occupations such as machinists and industrial electricians.

The IMT program rewards skills development and enables workers to demonstrate mastery of both educational content and competencies acquired on the job. Supervisors verify that apprentices have demonstrated mastery of competencies, rather than time spent on task, allowing flexibility in completing the apprenticeship. Workers who pass the Manufacturing Skill Standards Council Certified Production Technician tests may receive credit for 40 hours of related instruction for each of the four modules in lieu of two semesters of Manufacturing Technology courses.

For some students, work-based learning provides a route to postsecondary credentials that might otherwise have been inaccessible.



By enhancing and contextualizing students' classroom learning, work-based learning plays an important role in (re)engaging students and equipping them with postsecondary degrees and credentials with value in the labor market. Work-based learning should be embedded in or clearly linked to secondary and postsecondary programs of study. It should accelerate learning by satisfying postsecondary requirements and articulating to academic credits. For some students, work-based learning provides a route to postsecondary credentials that might otherwise have been inaccessible. Work-based learning supports entry to postsecondary programs both by sparking interest in particular fields and by demonstrating the real-world value of classroom learning. This relevance, coupled with work-based learning's role in reinforcing classroom learning and its potential to provide students with needed financial support, also supports persistence and completion. This support for postsecondary attainment is particularly important given the growing number of jobs that require postsecondary degrees and credentials; estimates indicate that by 2020 65 percent of all jobs will require postsecondary education.²⁷

Supporting postsecondary attainment through work-based learning requires educators and employers to partner to ensure that academic and work-based learning objectives align. Educators should also develop curricula that provide students with opportunities to reflect on their experiences with work-based learning and the knowledge and skills they acquired.²⁸ Closely aligning the curriculum with skills valued by employers is a key factor in the overall success of education and training programs.

Principle in Action: Jobs to Manufacturing Careers

Jobs to Manufacturing Careers bolsters the college and career success of incumbent workers while meeting the needs of local manufacturing companies through the development of work-based courses at Owensboro Community and Technical College (OCTC) in Kentucky. The program was developed by Jobs for the Future with support from the National Science Foundation and builds on JFF's previous Jobs to Careers initiative. Work-based courses embed on-the-job training in credit-bearing courses to give workers the opportunity at work and in class to learn the technical skills and academic knowledge they need to progress toward two-year degrees and higher-skilled, higher-wage jobs with their employers.

The model is new, but early results show that it is highly effective at increasing postsecondary attainment among low-skilled incumbent workers. Workers enrolled in the courses have earned an average of six to twelve academic credits toward an associate's degree in advanced manufacturing. The work-based courses have tended to draw older, more experienced employees who have been unable to advance beyond entry-level, lower-wage production jobs and who are not already enrolled in community college. Most participants have noted that they plan to continue their educations after the work-based courses. Approximately 40 percent plan to complete an associate's degree at OCTC or to pursue a degree at another (usually four-year) institution.

Work-based learning supports entry to postsecondary programs both by sparking interest in particular fields and by demonstrating the real-world value of classroom learning.

PROVIDE COMPREHENSIVE STUDENT SUPPORTS



Effective work-based learning incorporates career navigation structures that equip students with the information they need to make informed choices about their careers. These structures might include individualized advising and coaching by industry mentors, career navigators, academic and career advisors, guidance counselors, and school staff. Students can draw on these career navigation structures to learn about in-demand occupations, required skills and credentials, and wages. Students can also use these structures to develop educational plans that align their career goals with the skills and credentials they attain. In addition to traditional in-person advising models, a growing number of online, interactive career navigation tools have been designed to help students better understand the labor market and the skills and knowledge needed to enter and advance in careers.

In addition to advising support, a permanent infrastructure is needed to support work-based learning and ensure that students' progress is not slowed or stopped by challenges such as a lack of transportation or child care. Linking students with case management and counseling services helps them overcome hurdles to successful completion of work-based learning. Other supports needed may include peer cohorts who provide access to mentors in academic and workplace settings; flexible schedules to accommodate individual needs; and access to financial aid and other benefits and resources, such as transportation, child care, and emergency assistance. These services may be provided by educational institutions, employers, community-based organizations, independent coaches, or navigators. Multiple entities could also partner, with each providing a defined set of supports, to ensure that all students' needs are met. Whether wraparound supports are provided by one organization or by several, it is critical to institutionalize these supports in the design of work-based learning programs in order to resolve issues related to access and to contribute to the success of all participants.

Principle in Action: Taller San Jose Medical Careers Academy

Through an integrated approach to providing wrap-around support for participants in its Medical Careers Academy, Taller San Jose Hope Builders (Hope Builders) is helping opportunity youth who seek to enter careers in health care. Hope Builders, located in Orange County, CA, serves area residents between the ages of 18 and 28 who are low-income, under- or unemployed, or have basic skills that fall between a fifth- to eighth-grade level, giving preference to youth who are parenting and/or who have been impacted by violence. Students in the Medical Careers Academy choose between clinical and administrative career pathways in health care. The 20-week program incorporates contextualized academic instruction and life skills in the first 16 weeks of training, which are followed by a 4-week externship. This training period sits within a 28-month program model and is the primary component of the first part of a youth's involvement in the program. Services provided in the second phase focus on employment and education placement, retention, and progression.

An infrastructure for providing the wraparound supports needed to ensure participants' success is an essential component of the program's structure. Hope

Builders employs case managers, called support service specialists, who meet weekly with students in the program and focus on social and emotional skills. Case managers develop relationships with participants that last for the duration of the program and for two years after students complete it, for a total of 28 months of case management. These long-term relationships provide program participants with support as they pursue further educational options or launch careers. In addition, the Hope Builders program includes a life-skills course that meets for two hours per week and covers topics like communication, resilience, substance abuse, the criminal justice system, voting rights, financial literacy, and higher education. Students also participate in a job readiness course, during which they prepare resumes and participate in mock interviews, for two hours per week. Postsecondary bridging activities, such as information about financial aid and career selection, are also part of the Hope Builders curriculum, and students attend "college knowledge" courses offered by postsecondary partners. Hope Builders provides financial supports: participants receive a weekly stipend, and those who qualify also receive bus passes, child care, and emergency assistance.²⁹

CONCLUSION

Incorporating these principles in work-based learning programs will both contribute to the effectiveness of existing approaches and help make work-based learning available to all. The principles provide a structure that can guide multiple stakeholders, including employers, educators, and training providers, in the creation of a system or continuum of experiences that works well for both employers and individuals seeking to enter and advance in careers. For example, ensuring that participants in work-based learning activities are compensated for their work will enable more community college students to pursue internships linked to their career goals, rather than prioritizing jobs that only meet immediate financial needs. Similarly, embedding work-based learning in programs of study helps promote equitable access for all students enrolled in the program, not just those with the personal relationships and social capital needed to access existing opportunities on their own. Recognizing and rewarding skills development opens up opportunities for advancement to workers who may have found stable employment, but still lack access to career ladders and advancement in their fields. Providing wraparound support also expands access to work-based learning for underserved populations by ensuring that individuals have the supports they need to enter and persist in their education and training programs.

Employers, too, stand to benefit from broader access to work-based learning. Work-based learning is a key component of efforts to build a diverse talent pipeline that ensures a steady supply of qualified workers at varying skill levels. Employer participation in work-based learning also benefits industry partners by positioning them to ensure that education and training programs accurately reflect the knowledge, skills, and competencies needed in an industry. A focus on training already highly educated and skilled employees has led to a skills mismatch. Entry-level workers cannot identify avenues for advancement, while employers face a breakdown in their talent pipeline because they cannot identify workers with the skills they need.

The principles for effective models of work-based learning laid out in this paper are a response to the opportunity created by the current climate of renewed enthusiasm about and investment in work-based learning on the part of employers and the education and workforce development systems. These principles can serve to sharpen strategies that close the skills gap and help build the workforce of the future while providing new pathways to career advancement and economic opportunity for millions of Americans.

A lack of access to work-based learning limits the career prospects and economic mobility of millions of youth and adults.

It also prevents them from becoming part of the pipeline of skilled workers employers need to help spur local, state, and national economic growth.

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JOBS FOR THE FUTURE

Jobs for the Future (JFF) is a national nonprofit that builds educational and economic opportunity for underserved populations in the United States. We develop innovative career and educational programs and public policies that increase college readiness and career success, and build a more highly skilled workforce. With over 30 years of experience, JFF is the national leader in bridging education and work to increase economic mobility and strengthen our economy.

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