



Learning as an Experience

Innovative Training for the Future of Work

AT A GLANCE

To be prepared for the work of today and tomorrow, we need more than just the right skills. We need an infrastructure that supports continuous and transformative learning throughout a lifetime.

Developed by



JUNE 2021

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Introduction

Even with all the buzz surrounding automation and advanced technologies these days, employers know that talent is still their greatest asset. To stay competitive in an ever-evolving economy, companies must help workers keep their skills up to date. Training and education benefits are no longer amenities provided by only the largest corporations. Employers of all sizes are investing in employee talent development and continuous learning, just as they invest in research and development.

Across all industries, employers are offering sophisticated education and training solutions to meet the needs of workers who must continually strive to acquire the most in-demand skills. And these investments extend far beyond traditional executive leadership programs; helping all employees improve their existing skills or build new ones is now the focus of most corporate [learning and development](#) departments.

Importantly, high-quality nondegree training programs are creating new career pathways for adult learners. As employers begin to recognize that there are training and development options beyond four-year college degree programs, a growing number of adult learners now have opportunities to enter rewarding careers and prepare for the future through lifelong learning. Moreover, innovative new education financing models, wraparound support services, and cutting-edge technologies are making learning more accessible to people who historically haven't had these kinds of opportunities.



Why High-Quality Workforce Training?

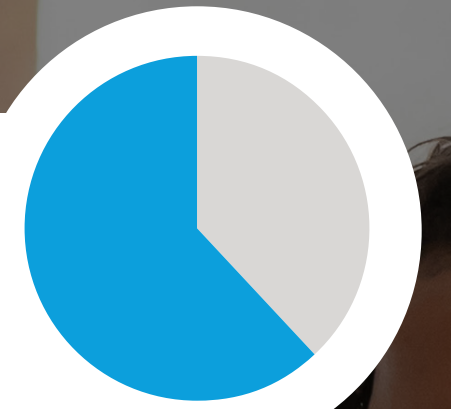
Across the country, hiring managers and executives are taking a new look at the question of what makes a person “qualified” for a particular position. But when the pressure is on to build a capable workforce, they fall back on a college degree as the de facto standard. Unfortunately, that approach eliminates candidates who may be qualified but either didn’t have access to postsecondary education or chose to build skills via other avenues, including nondegree training programs.

Our country’s economy needs workers who are ready for today’s jobs but can also prepare for the future by acquiring the skills employers will be seeking in the coming decade. And when it comes to fulfilling that need, nondegree training and education programs represent an effective alternative to four-year colleges. Providers of alternative education and training programs have an opportunity to help employers access new pipelines of untapped talent and offer workers new pathways to rewarding careers in fields like tech, health care, manufacturing, telecommunications, cybersecurity, and green energy.

With the generous support of The Workday Foundation, JFF Labs took a deep dive into the complex and evolving alternative education and training market, focusing on high-quality solutions that have a measurable impact on workers’ wage and employment prospects. The providers of these programs and platforms are crucial

62% of Americans

prefer nondegree skills training options over two- or four-year degree programs.



94% of employees

say they would stay at a company longer if it invested in their learning and development.



66% of employers

say that addressing potential skills gaps related to automation or digitization is a top 10 priority.




resources for employers, helping them to recruit, develop, and retain workers from diverse talent pools. They also make up an ecosystem of opportunity that workers can turn to throughout their careers as they navigate new pathways in an ever-evolving economy.

But how is the workforce training market responding to the era of YouTube tutorials and free online content? Although some information may be easier to access than ever before, learning involves more than just consuming facts and completing exercises to earn a credential. **Innovative workforce training providers differentiate themselves by treating learning as a personalized experience that meets adult learners both where they are and where employers need their workers to be, creating the conditions for deeply internalized learning, durable skill development, and economic mobility.** Supporting that shift are innovations in the way people pay for education and training, with new financing models emerging to increase accessibility, and in the way providers deliver their coursework and engage learners, with many using new technologies and offering wraparound supports.

We are aware that providers of alternative training programs have faced valid criticism of their methods and practices, and

therefore we have set high standards for our definition of high-quality programs. While there is a lot of work to do to improve offerings throughout the ecosystem, the dynamic and growing workforce education and training market is becoming increasingly **transparent**, with some leading providers sharing their employer satisfaction scores and providing data about the impact their programs have on participants' wages. That information is essential, because it helps learners and employers alike determine whether particular offerings meet their needs. The market is also growing increasingly **integrated**: Employers are being more proactive about developing their workforces, and training providers are partnering with employers to shape curricula.

By enabling workers to build employability skills, acquire specialized expertise needed in emerging industries, and engage in lifelong learning, the new training infrastructure creates pathways fulfilling family- and community-sustaining careers. Given the number of workers displaced and businesses disrupted by the pandemic, we think a reliable network of providers of high-quality nondegree education and training options will play an instrumental role in the country's economic recovery.



“Training that prepares individuals to enter the workforce is crucial, but we also know that learning doesn’t stop when someone signs an offer letter. At Workday, our employees are our number one core value, and we are deeply invested in their development and offer continuous opportunities to gain new skills. That’s why we’re thrilled to partner with JFF on this market scan of workforce education and training providers, with a spotlight on the innovators that can really make an impact on economic mobility through in-demand skills development.”

—Carrie Varoquiers, Chief Philanthropy Officer, Workday

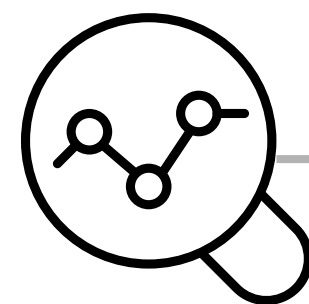


About This Market Scan

We believe technology can revolutionize the way we live and work. It can help people be more efficient and productive; open access to new information, opportunities, and human connections; and allow us to solve bigger problems than we ever dreamed possible.

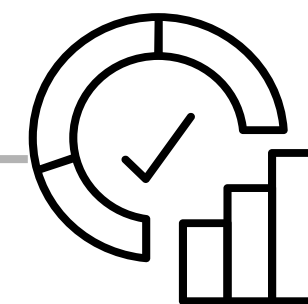
JFFLabs market scans dive deeply into technology landscapes filled with solutions that are transforming work and learning in America today, uncovering impact opportunities, technology trends, market dynamics, and impact investment insights. Our market scans feature mission-aligned companies and nonprofit organizations of all sizes, from seed-stage startups founded by inspiring innovators and entrepreneurs to growth-stage organizations that are already creating significant social impact and business value.

Through our proprietary evaluation process, we review hundreds if not thousands of companies to assess their approach to and concern for social impact, and the traction their efforts have gained. We identify the most innovative and advanced technologies connecting people to rewarding jobs and careers, valuable education and training opportunities, effective workforce and education systems, and equitable, resilient opportunities for economic security and mobility—at scale.



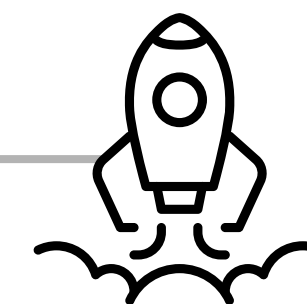
Scan

Audit // Discover // Examine Explore // Review // Scour Search // Study // Survey



Deep Dives

Analyze // Assess // Evaluate Interview // Learn // Understand



Select

Invite // Organize Publish // Vet



Understanding the Landscape

The Complex Challenges Facing Learners and Employers

Between 2012 and 2019, use of the word upskilling grew by 200 percent across digitized media, from books to blog posts. Why did this term suddenly saturate workforce training conversations? Perhaps it was a reaction to a collective economic anxiety that had been building for decades—a desire for an easy antidote to our fears about not having the right skills to compete in a changing economy.

Let's examine the trends that may be causing these anxieties.

Limited Acceptance of Alternative Pathways.

College educations—and the college experience—serve many functions: In addition to offering learners an opportunity to study new topics and earn a valuable credential, they help people build networks of peers who will play a key role in their future career navigation efforts. However, pursuing a college degree is costly and even risky. About [45 million adults currently have student debt](#)—and many of them that never finished their programs. Only [63 percent](#) of people who enrolled in college full time in 2011 graduated after six years, and only 39 percent of those attending for-profit colleges did so. Moreover, the traditional full-time postsecondary education is one-size-fits-all, without much consideration for older adults and working learners. Nonetheless, young adults and their parents have been socialized to see a bachelor's degree as the singular pathway to a good career, and they rarely consider alternative options that could provide the same benefits.

Declining Investments in Training.

Facing ever-increasing pressure to compete and justify dollars spent on their workforces, many businesses now try to hire people who are already fully trained. In 2019 [only half of employed adults received any form of training from their employers](#), and workers of color and those with less education received disproportionately less training. Between 2005 and 2015, more than [60 percent of net new job growth](#) was for independent contractors, freelancers, and contract

workers employed by third-party service providers—the types of arrangements where individuals are hired for skills they already have and aren't eligible to participate in employee training programs.

At the same time, federal funding for adult training through the Workforce Innovation and Opportunity Act (WIOA) [has been declining](#)—falling from \$4.68 billion in 2001 to \$2.82 billion in 2019. Despite an increase in demand for talented and experienced workers, we've been spending less on training.

Technological Change and Job Polarization.

Ever since the Industrial Revolution, workers have been wary of losing their jobs to labor-saving technology. In 2013, researchers at the University of Oxford brought that fear to the modern day, predicting that advances in artificial intelligence (AI) and advanced computing would put [47 percent](#) of all U.S. jobs at risk. Then in 2010, MIT economist David Autor added a new layer of complexity to that dynamic with the finding that “middle skill” jobs—roles involving information gathering, calculation, administrative tasks, and the like—were [more at risk of being eliminated](#) than other jobs. When those types of changes occur, college educated workers start to inundate the market for jobs previously held by high school graduates and the number of pathways to rewarding jobs decreases.





The Aging Workforce.

As the number of baby boomers reaching retirement age increases, employers in a range of industries are experiencing a shortage of skilled workers. For example, the [manufacturing sector](#) is the fifth-largest U.S. employer and manufacturing jobs pay well, with average annual wages of around \$60,000 in 2018. Yet more than [522,000 manufacturing jobs went unfilled in 2019](#); 48 percent of those openings were due to retirements.

The COVID-19 pandemic has accelerated all of those trends. To cite just one example, use of floor-cleaning robots increased 13 percent during the pandemic as companies began investing in [automated systems](#) so they could stay in business with fewer workers in order to adhere to social distancing protocols. These developments have had disproportionate impact on older workers, women, and Black, LatinX, and Indigenous people who depend on low-wage jobs and don't have college degrees. Their jobs are disappearing, while the jobs that remain—and the new jobs that are emerging—are concentrated in sectors such as IT and financial services, which traditionally have been accessible via just one pathway: a college degree.

But the pandemic has also highlighted the value of alternative education and training models: Enrollment in online classes surged—participation in classes on the Coursera platform increased [644 percent](#), for example. And employers have recognized that they need to cultivate workforces that can adapt to and manage change. This moment has given rise to an opportunity to reimagine training and embrace models that more effectively meet the needs of workers, employers, and society.

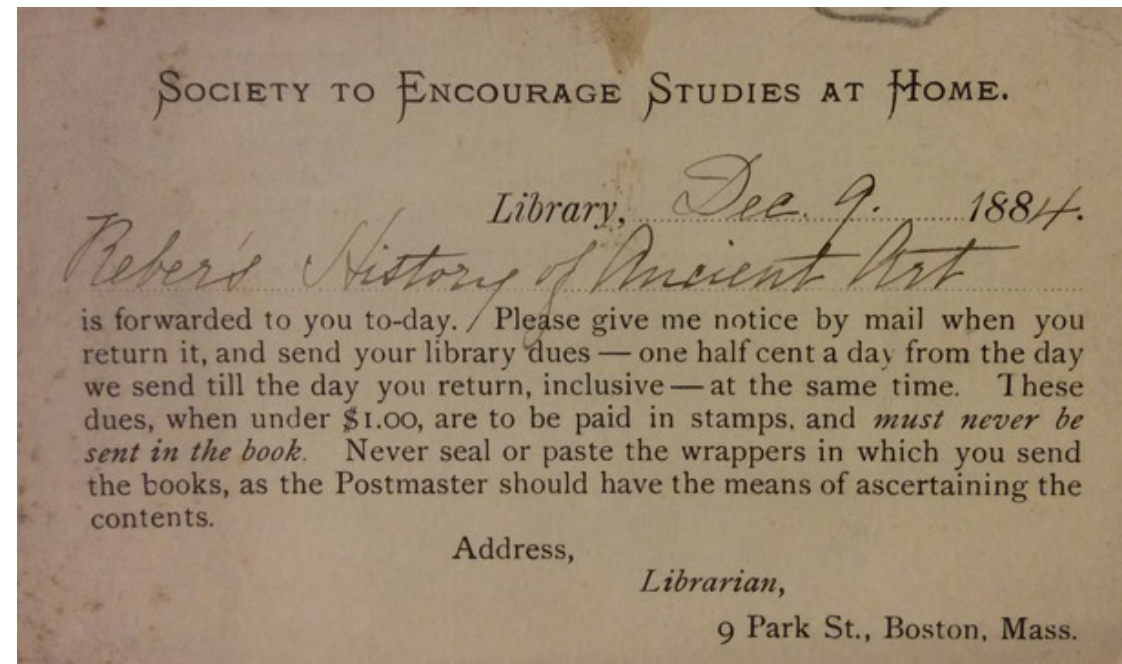
A Brief History

U.S. workers have always had to adapt to economic changes. The Industrial Revolution introduced factory jobs in the late 18th century, though the majority of employed Americans [still worked in agriculture](#) throughout most of the 19th century. The rise of mass production accelerated in the 20th century, and the country shifted from an agrarian economy to one driven by manufacturing. With every new development, displaced workers have had to change their understanding of what skills they need to succeed.

But tech-driven shifts in employment are only part of the picture—technology also changes how we work. Today’s farmers still work in agriculture, but they’ve learned to use heavy machinery, fertilizers, and pesticides. Factory workers have seen assembly line jobs automated and have learned to use new materials and equipment. And although technology may eliminate jobs, it also automates manual tasks and frees people up to focus on higher-level work.

In the 21st century, [71 percent](#) of the U.S. workforce is employed in service industries, with [most new jobs](#) projected in health care, food services, and software development. Once again, technology is changing the way we work: Videoconferencing is enabling a rise in remote work and telehealth, and AI can answer customer inquiries. And once again, some jobs will disappear and the rest will change.

The same pattern emerges as we consider how we should design workforce education and training to meet this economic moment: Technology has changed the way we prepare people for the future of work. The following timeline offers a look at historical highlights in the ways technology has improved and expand workforce development programs.



1873

The First U.S. Correspondence School Established

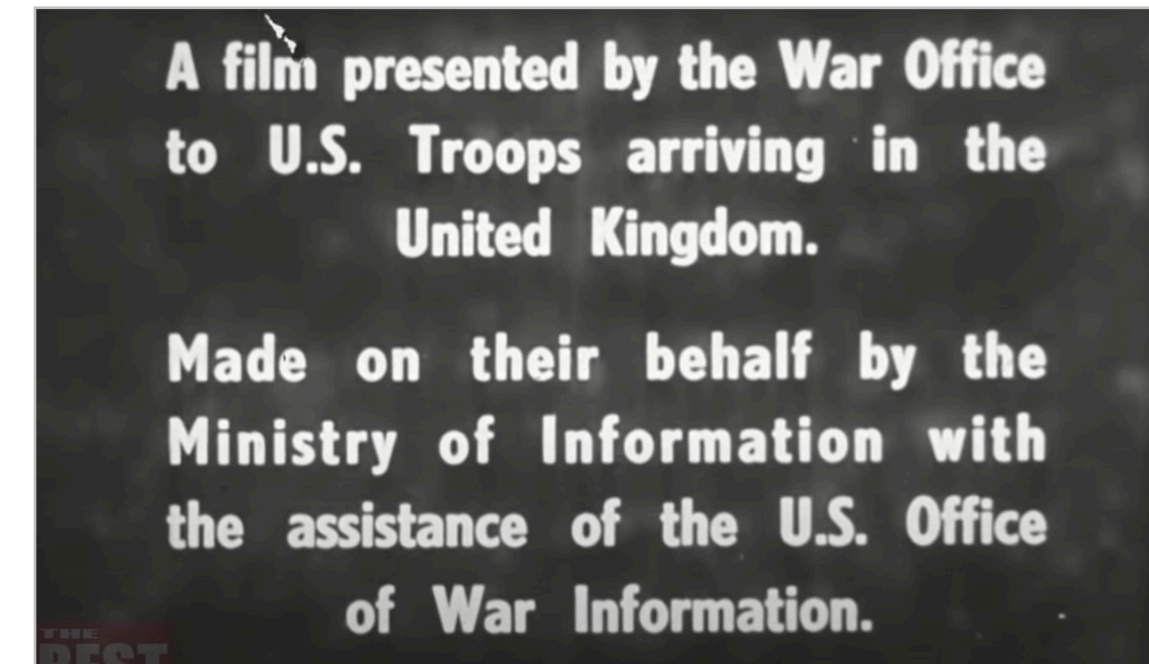
From her home in Boston, Anna Eliot Ticknor founded the country's first correspondence school, the [Society to Encourage Studies at Home](#), in 1873. With a lending library and a network of women teaching women via messages sent through the mail, the Society pioneered distance learning and expanded access to higher education for women.



1931

Wisconsin School of the Air Creates Radio Programs for Adult Learners

Inspired by the vision of educational radio pioneer [Harold McCarty](#), Madison radio station WHA began broadcasting educational content through the Wisconsin School of the Air in 1931. Featuring lessons in music, art, and literature, the broadcasts complemented public school classroom instruction. Later that year, WHA introduced classes for adults through the [Wisconsin College of the Air](#), beginning with a typing class and later expanding into other subjects.



1941

U.S. Army Uses Overhead Projectors in World War II Training Programs

Although film projection technology was introduced in the late 19th century, it remained too expensive for use in classrooms during the first half of the 20th century. A milestone in the use of films as educational tools occurred when the U.S. Army purchased [55,000 film projectors](#) and made movies to train troops during World War II. After the war, use of film strips and movies in schools and corporate training programs became more common.

1873

1880

1890

1900

1910

1920

1931

1941



1956

AMA Introduces Computer-Based Management Training Tool

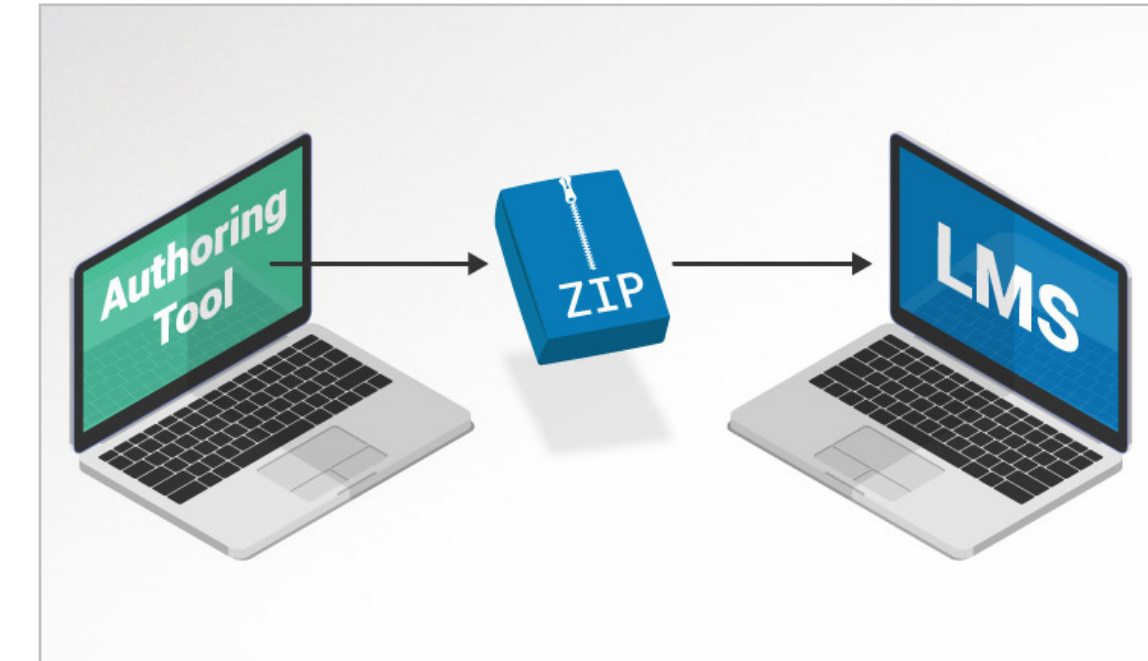
The American Management Association (AMA) developed a game called [Top Management Decision Simulation](#) for the IBM 650 computer in 1955 and started using it in training workshops a year later. Players worked in teams to make decisions about product pricing, production rates, and operating capacity and received rankings at the end of each simulated quarter.



1961

PLATO Pioneers E-Learning

Developed by a team at the University of Illinois, [PLATO](#) (short for Programmed Logic for Automatic Teaching Operations) was the first computer-assisted instruction system. PLATO originally supported only a single classroom, but as processing power improved, it could display interactive education materials to hundreds of simultaneous users. Later features included PLATO Notes, the world's first online message board.



2000

SCORM Sets Standards for E-Learning

Aiming to create universal standards for browser-based e-learning content, the U.S. Department of Defense's Advanced Distributed Learning Initiative (ADL) developed the [Shareable Content Object Reference Model](#) (SCORM) in 2000. The ADL added support for instructional sequencing to SCORM in 2004, making it possible for users to follow learning pathways as they complete modules sequentially.

1956

1961

1970

1980

1990

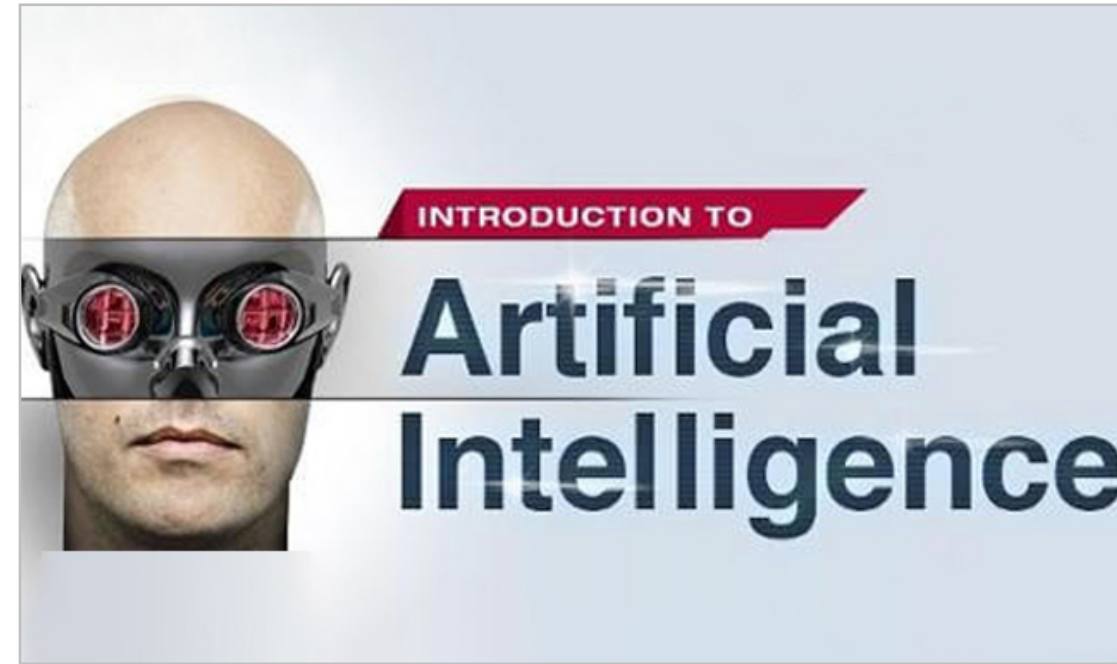
2000



2003

Second Life Inspires Immersive Training Applications

Developed by Linden Lab, Second Life is an online virtual world that has been used to train health care professionals. As Second Life grew in popularity in the decade following its 2003 introduction, some users who worked in health care built hospitals and long-term care facilities in the online ecosystem as a way to [simulate patient care](#). Some universities, including [Idaho State](#) and [Imperial College London](#), used Second Life simulations as teaching tools.



2011

MOOCs Gain Worldwide Traction

The term massive open online course (MOOC) was coined in 2008 to describe a University of Manitoba class whose professors hoped to create a learning environment far richer than that of a single classroom. That class drew 25 in-person attendees and 2,300 online participants. In 2011, [more than 160,000 people](#) from around the world initially enrolled in a Stanford class offered by Peter Norvig and Sebastien Thrun. In 2012, Thrun founded Udacity to offer MOOCs for free.



2020

The Great Zoom Pivot

As U.S. colleges and universities [largely abandoned in-person learning](#) during the COVID-19 pandemic, educators scrambled to adopt video communications platforms and hybrid teaching models. While many students experienced “[Zoom fatigue](#)” and others faced barriers to participation, distance learning did prove to have many upsides. For example, with online classes, providers can reach more learners and they need less office and classroom space.

2003

2010

2011

2020

The Market Today

Learning and development professionals say one of the biggest challenges they face is convincing management that the work they do is important. During downturns, L&D budgets are often among the first to get cut. But that may be changing: In a March 2021 survey, only **19 percent** of L&D professionals said they believed their budgets were at risk of being cut, and 63 percent said they believed L&D was an executive-level priority—up from 24 percent in March 2020.

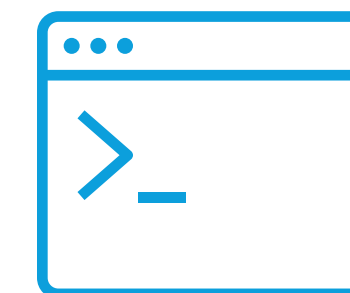
This change may be due in part to the fact that employers now realize that training current workers can be more cost-effective than recruiting, hiring, and onboarding new employees. The median cost of turnover is estimated to be around **21 percent** of the departing employee’s annual salary.

Workforce Training Market Snapshot

In 2018, U.S. employers spent an estimated **\$87.6 billion** on training expenditures—including external products and services.



Less than 20% of skills training programs qualify for federal student financial aid.



The market for coding boot camps **grew by 30%** in 2020.

There are more than **more than 967,700** unique credentials in the United States, about half of which are from non-academic providers.

UNDERSTANDING THE LANDSCAPE

That figure includes everything from the cost of training a new hire to loss of productivity during the transition and the negative impact of the employee's departure on staff morale. HR expert Josh Bersin notes that the cost of recruiting and onboarding people for technical roles can be **up to six times higher** than the cost of building that talent from within.

Employers differ in how they plan to incorporate training providers into their education initiatives. In its 2020 **The Future of Jobs Report**, the World Economic Forum reports that 43 percent of survey respondents representing U.S. companies said they planned to use internal L&D departments to deliver training services while 22 percent said they planned to use external online training. The top three focus areas for training initiatives were analytical thinking and innovation, leadership and social influence, and active learning and learning strategies.

The explosion of activity is creating demand for innovation. As **L&D programs shift** to helping current employees learn new or more advanced skills, they are increasingly moving from instructor-led training to online and blended learning models.





High-Quality Workforce Training Providers

Quantifying the Impact of High-Quality Workforce Training

As we scanned the alternative training and education ecosystem, we focused on the three key stakeholders and systems:

Adult Learners

In 2018, people with only high school diplomas [earned half as much](#) as people with master's degrees, and they were twice as likely to be unemployed. Nondegree training can help people with lower levels of education advance economically. Moreover, completing a training program can make a worker feel more confident about seeking positions with added responsibility, and lifelong learning can help all workers adapt to changes in the job market.

The U.S. Labor Force by the Numbers

Around **75 million** U.S. adults hold a high school degree or less.

An additional **36 million** attended some college but have no degree. And 10% of people with some college were halfway through their credit requirements before leaving their programs.

At the beginning of the pandemic, people with only a high school diploma were **three times as likely** to lose their jobs as people with a bachelor's degree.

In March 2018, Burning Glass Technologies reported that **demand for workers exceeded supply** by significant margins in several major career sectors. Notably, demand for health care practitioners outpaced supply by 44% and there was a 17% gap between supply and demand for computer and mathematical professionals.



Employers

In early 2020, business leaders reported that [recruiting and retaining people with in-demand skills](#) were two of their top three challenges. Nondegree training programs help employers strengthen talent pipelines, reduce their reliance on a college degree as a job qualification, and improve the performance and productivity of existing employees—which, in turn, improves retention rates.

Local Economies

After peaking at [67 percent in 2000](#), the proportion of working-age individuals who are working or looking for work has steadily declined, particularly among men with a high school education or less and Black men. Targeted training can increase labor force participation by opening pathways into middle-income careers for those without a college degree. It can also reduce structural unemployment (which is caused by a mismatch between demand for specific skills and the supply of workers with those skills), reduce underemployment, and increase overall economic productivity.

How We Selected Companies to Include

To sift through the hundreds of thousands of workforce training providers and shape our map of the landscape, we started by defining five **Characteristics of High-Quality Workforce Training** to help identify programs we believe could generate significant impact for learners and employers. We came to these five characteristics through extensive analysis of workforce development research and interviews with experts in adult education.

Here's a list of the five characteristics, with questions employers might ask to determine whether providers exhibit each one:

Relevant

Does the provider develop content in partnership with employers to ensure that its curriculum is relevant to the field? Is the program overly specialized, or does it enable learners to develop transferable technical knowledge and human skills such as resilience, adaptability, and communication capabilities?

Transparent

Does the provider make outcomes data available to learners and employers, so they can understand the benefits of participation? Do they make factors like costs and time commitment readily available to potential learners?

Inclusive

Is the provider's offering affordable? Does it offer learners wraparound supports to ensure that they have access to basic needs, like housing, child care, and wireless internet service? Does it emphasize psychological safety through community and peer support? Is the program flexible enough to accommodate learners who work full time?

Effective

Does the program make a difference in a learner's employment status and earning potential in the short and long term? Are learners and employers satisfied with the program? Can the provider replicate the experience across different regions and for different populations of learners?

Future-Focused

Does the provider take an innovative approach—perhaps using new technologies, business models, or pedagogical methodologies? Is that approach scalable? Does the program focus on subjects that are relevant to employers and tied to emerging economic trends?

After identifying those characteristics, we built an initial list of more than 1,000 companies that offer nondegree workforce development and training services. That list included for-profit and nonprofit organizations and providers of both business-to-business and business-to-consumer services. We looked for offerings that can support high-quality learning experiences at every stage of people’s careers—when they are building foundational skills, mastering sought-after roles, and transitioning to new jobs. Having conducted that research, we divided the market into six segments based on the types of programs providers offer, and then, after more careful analysis, we selected 15 Innovators to Watch.



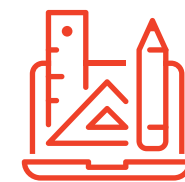
Six Segments of High-Quality Workforce Training

The way we see it, workforce education and training programs aren't meant to prepare participants to reach their final career destinations upon completing just one course or earning one certificate. Instead, they are all parts of an ongoing journey of lifelong learning during which workers continually develop new skills depending on how the economy has evolved and what stage of their careers they've entered. We use the words Navigate, Prepare, Shift, Accelerate, Recharge, and Journey to describe each segment of the market. They reflect the varying needs of adult learners at each stage of the career continuum. This table offers an overview of the types of programs and services available in each segment.



NAVIGATE

Comparison tools to help learners and employers navigate the market by identifying the potential return on investment of specific training or credential programs. The goal is to provide an overview of the landscape and transparency into individual offerings.



PREPARE

Foundational and core training programs to help learners acquire basic skills. The goal is to increase labor force participation.



SHIFT

Intensive experiences that allow workers to build the skills needed for jobs that offer opportunities for economic advancement. The goal is to increase the supply of workers with in-demand skills.



ACCELERATE

Specialized internal training programs to, for example, streamline onboarding or facilitate and accelerate employee skills development. The goal is to improve performance and increase productivity.



RECHARGE

Flexible and ongoing skills development opportunities to promote lifelong learning. The goal is to improve performance and ensure that workers have relevant skills.



JOURNEY

End-to-end service providers that offer training and job placement services to workers who are disconnected from the job market. The goal is to reduce unemployment and underemployment.

A Note on What is Not Included

The workforce education and training market is large and constantly changing, so we narrowed the scope of this report for maximum impact, focusing on organizations that serve learners from populations that may be underrepresented in sectors of the economy with jobs that pay good wages offer opportunities for career advancement.

With that priority in mind, we chose not to include the following types of programs and services:

- ▶ **Degree programs.** We did not cover degree-granting programs, even though we recognize that this category includes many outstanding training initiatives at community colleges. We do, however, highlight some apprenticeships and other nondegree programs offered by institutions of higher education.
- ▶ **Entrepreneurship programs.** Although entrepreneurship training can equip people with skills that lead to fulfilling careers, we focused on workforce training programs designed to help adult learners develop the skills they need to find jobs at existing companies, instead of starting their own companies. However, we do believe entrepreneurship training is an important area that merits further exploration.
- ▶ **Skills assessment services.** Tools designed to evaluate the knowledge and skills people acquire on the job or through training and education are important, in part because they can help build employer acceptance of nondegree credentials, but they are not the explicit focus of this market scan.
- ▶ **Programs that foster “learning for the love of learning.”** Although we firmly believe learning for its own sake can inspire intellectual curiosity that leads to the development meaningful skills and expertise, we focused on providers that marketed their programs and services as being directly or indirectly tied to career growth.



Prepare | Foundational and Core Training

The primary goal of providers in the Prepare segment is to help the people in their target population—including military veterans, formerly incarcerated individuals, and refugees—successfully enter or re-enter the workforce.

Programs in this segment prepare participants for the labor market by helping them build foundational skills, offering learning opportunities in reading, writing, digital literacy, and more. However, although these providers might all share the same objective, they take a variety of approaches to supporting learners and employers.

We believe these providers play an important role in opening up opportunities for adults who might be willing to learn but wouldn't otherwise have pathways into stable careers. These programs also create a talent pool to fill entry-level and midcareer vacancies in a variety of sectors.

Providers that focus on foundational workforce readiness should do the following:

- ▶ Ensure that learners have access to supports that help them meet basic needs such as the technology required for training, food and shelter, mental health services, and transportation.
- ▶ Work with their employer partners to ensure that they understand how to engage members of the target population and how to create a supportive environment for them in the workplace.
- ▶ Provide ongoing rewards and recognition to learners to help them build confidence in their capabilities.
- ▶ Foster an environment where learners feel safe to express their fears and frustrations—mentorships and peer coaching programs can help create these communication channels.



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Prepare | Foundational and Core Training





Shift | Intensive Experiences

Designed for learners who are interested in switching gears and moving into careers that offer more opportunities for economic mobility, programs in the Shift segment are very popular. They are generally short-term standardized skill-building experiences that award certificates to help learners signal their qualifications to potential employers. Frequently, Shift programs take the form of boot camps that offer a combination of classroom instruction and hands-on activities. Employers can partner with providers of Shift programs to help build relevant content.

Shift programs can be an effective first step for workers transitioning into new career paths. They also offer employers access to pools of motivated jobseekers. However, employers should have some skepticism about the Shift model: Some providers run their programs like assembly lines, accepting large cohorts of participants with a variety of proficiency levels, charging high upfront fees, and setting inflexible schedules. Employers should also make an effort to determine whether workers who have completed these programs have full mastery of the discipline or just superficial exposure.

The most effective Shift providers do the following:

- ▶ Partner with employers to create relevant content and potential job opportunities for participants.
- ▶ Ensure that learners have mastery of the fundamentals and encourage them to continue challenging themselves after completing their coursework. Leading providers make their content and resources available to learners on an ongoing basis.
- ▶ Offer flexible financing options, like income-share agreements.
- ▶ Create a strong community that gives learners a network they can tap for job opportunities and ongoing support.
- ▶ Make the following information readily available: the full cost of tuition, the average amount of time it takes to pay back tuition costs, the average employment rates for past participants between one and five years after completing the program, and the types of roles in which graduates have been successful.



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Shift | Intensive Experiences





Accelerate | Specialized Internal Training

Programs in the Accelerate segment speed up on-the-job learning. Employers work with providers in this segment to design internal training programs that help their employees master their current jobs. Employee onboarding is a key focus. Integrating new technologies into onboarding activities ensures that new hires become productive employees quickly in a safe and engaging environment.

These providers' offerings can help increase retention and reduce mistakes by creating an environment in which new employees have the tools they need to succeed. Providers have been experimenting with technology-based solutions to improve the onboarding process. Examples include using virtual reality platforms to simulate potentially dangerous activities that it might not be safe to practice in real life, or deploying "geofenced" microlearning systems that send workers reminders about how to do certain tasks when they arrive in a specific location.

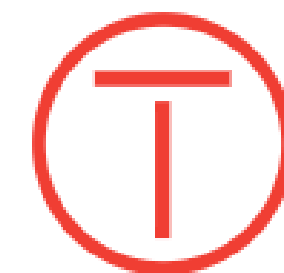
Accelerate providers can do the following to create effective on-the-job learning experiences:

- ▶ Ensure that employers know how to deploy the technologies that support the training program.
- ▶ Ensure that all users, from executives to frontline managers, understand the purpose of the program.
- ▶ Create a channel through which users and employers can provide feedback that can be used to improve the program and enhance learning outcomes.
- ▶ Provide insights into learning outcomes and performance to track trends and identify opportunities for improvement.



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Accelerate | Specialized Internal Training





Recharge | Flexible and Continuous Skill Development

Programs in the Recharge segment fulfill the traditional role of learning and development initiatives: providing ongoing learning opportunities so workers and their employers can prepare for the future. The learning experiences that providers in this segment create help companies adapt to changes in technology, government policies, and the competitive landscape, and they help learners grow professionally and build the skills that are in demand in the labor market. Employers are increasingly offering Recharge programs as employee benefits to boost retention and worker satisfaction.

Unfortunately, employee utilization of Recharge programs is low. In its 2020 [The Future of Jobs Report](#), the World Economic Forum reports that 55 percent of employers surveyed said 50 percent of their employees would need to learn new skills, but only 42 percent of employees enrolled in retraining courses made available through their employers.

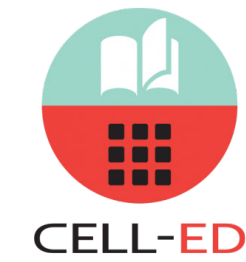
To ensure that Recharge training programs are relevant, providers and employers must do the following:

- ▶ Allow workers to use paid time to participate in training programs.
- ▶ Provide incentives that encourage participants to complete programs, including career advancement opportunities and pay raises.
- ▶ Take the time to understand market trends and employees' career goals to ensure that the content covered in training programs is relevant to workers' learning journeys and the organization's competitive needs.
- ▶ Track trends in utilization rates to determine whether there are racial or gender disparities in access and usage—and if there are, identify the cause and take steps to correct the problem.



THE PROVIDERS

Recharge | Flexible and Continuous Skill Development





Journey

End-to-End Service Providers

Offerings in the Journey segment take elements of programs in other segments and combine them into full-service on-the-job training experiences. Learners participate in apprenticeships or other work-based learning opportunities in which they sometimes earn money while getting trained and may even be guaranteed employment after they complete the program. Providers tend to maintain long-term relationships with their learners.

There are two main types of Journey programs: those based on the “employer as trainer” model, and those based on the “trainer as employer” model. In the former, organizations integrate workforce development into their core business operations, embracing the task of building the talent they need to support their strategic visions. In the latter, companies that provide clients with skilled workers for specialized projects recruit learners and then hire them after they complete their training.

Journey programs treat learners as assets worthy of investment. That’s an admirable model, but in order to fulfill their potential as high-quality training providers, organizations that offer Journey programs must do the following:

- ▶ Build relationships within communities to identify sources of untapped talent and create environments in which participants feel safe and supported.
- ▶ Ensure that the skills they teach are transferable and are not overly tailored to the needs of one organization.
- ▶ Provide information about the criteria they use to select participants and the earning potential of people who complete their programs.
- ▶ Ensure that participants in “earn and learn” programs are paid a living wage.
- ▶ Provide participants with support and growth opportunities after they complete their training.



THE PROVIDERS

Journey | End-to-End Service Providers





Navigate | Comparison Tools

Tools in the Navigate segment are designed to help learners and employers understand the potential return on investment of the various training programs providers offer. For example, they help participants get information about the cost of programs, the earning potential and employment prospects they will have after completing a program, and the careers they might be embarking on. Likewise, they help employers gather information about programs' learning outcomes, curricula, and teaching methods, as well as the skills they can expect workers to have after completing a particular program.

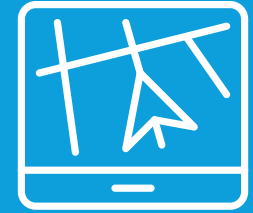
We believe that Navigation tools are essential to helping workers understand how they can harness the resources available in the workforce training market to build viable pathways to high-wage careers. For one thing, they give them a way to make sense of the nearly 1 million credential programs they have to choose from. These tools can also help employers reduce their reliance on a

college degree as the standard job qualification by giving them a way to assess the rigor of nondegree training programs.

The problem is that there aren't very many navigation tools, and only a small number of them are designed for learners.

To provide the maximum benefit to employers and workers, providers of Navigation tools must do the following:

- ▶ Provide transparency into metrics relevant to workers, including, but not limited to, wage outcomes, completion rates, average time it takes to complete a program, learner satisfaction, short- and long-term employment outcomes, and the availability of jobs in the field the provider focuses on.
- ▶ Provide transparency into metrics relevant to employers, including, but not limited to, curricula, the experience levels of instructors, learner and employer satisfaction with the program, and short- and long-term employment outcomes.



THE PROVIDERS

Navigate | Comparison Tools



freeCodeCamp (🔥)



Spotlight On UVA Edge: A Conversation with Dean Alex Hernandez

JFF: *Tell us how you ended up in higher education and came to work for the University of Virginia?*



Alex Hernandez
Dean of the School
of Continuing
and Professional
Studies, UVA

AH: I have a bit of a nontraditional background for work in higher education. I spent most of my career in K-12 schools and have done a lot of work thinking about how to create opportunity for first-generation college students. A lot of my passion grew from thinking beyond how to get more students of color to college—I wanted to find ways to get them into great jobs after graduation.

JFF: *Tell me more about the genesis of the UVA Edge program and how you launched it—from scratch if I’m not mistaken.*

AH: In the summer of 2020, the dean of the College of Arts and Sciences and I were looking at the world around us and trying to figure out what contribution we could make at this moment in time.

After the 2008 recession, the people who were hurt the most in the labor market were adults without college degrees. And we believed that the same thing was going to play out during the downturn from the pandemic.

If you don’t have a degree, you can often get short-term skills training, but not really that investment in those long-term skills, like communication and analysis, that we know help set you up for success and excel in your career.

So we created UVA Edge as a program that teaches advanced skills that employers value, while also investing in long-term skills from a traditional liberal arts curriculum. The genesis was really to make a difference at a point in time where we thought something like this was really necessary.

JFF: *What are students looking for when they apply to UVA Edge? What are employers looking for in your graduates?*

AH: Students have been really intrigued by having a new pathway that is different than community college and different from a four-year degree. Our program allows them to earn 20 credits in a way that's convenient for them and lets them learn skills that will be useful right now.

Employers have been excited about Edge for a few reasons. First is finding a way to invest in the careers of their employees who don't have degrees. Second, individuals without degrees tend to make up a diverse population, and employers are looking for ways to support diversity, equity, and inclusion and find diverse talent

pipelines. Third is keeping up with the rapid pace of change in the skills we need to do our work. We are helping employers invest in these deeper skills—things that are hard to train, like becoming a better writer and communicator or thinking about data in a new way—that they can't do on their own.

JFF: *It feels like the tie to the liberal arts curriculum is a key design principle for you. How does the tie to the liberal arts ethos generate an added value that a different approach might not?*

AH: There's been this false dichotomy in education that you're either teaching skills or you're teaching liberal arts, with no overlap between the two. UVA Edge is about bringing those things together. We think that the best way to become a critical

thinker or better communicator is in a liberal arts environment.

I was really fortunate to go to a tremendous liberal arts college—the type of school my parents never had an opportunity to go to—and it taught me incredible skills that I have drawn on throughout my career. But when I started working, the only thing that mattered to my employer was whether or not I could use Excel without a mouse. We are thinking about how to create experiences for students that meet both of those needs: the immediate need to have the skills to break into well-paying jobs that have opportunities and upside, but also those fundamentals that set people up for long-term success. It's not an either-or.

Students are getting core educations from our writing department and our statistics department, but they're also getting

coursework in digital essentials like cloud computing and streaming media. And we're trying to bring these together in a one-year experience in a way that's meaningful at different levels.

JFF: *What are your hopes for how the UVA Edge program will grow?*

AH: We've designed UVA Edge for employers with education benefits programs. And we think that's important because adults without college degrees typically have low to moderate incomes, so we are looking for ways to make sure the program is affordable.

We dream that the Biden administration might be rethinking college affordability,

and even make funds from the the Pell Grant system available to programs like ours.

There is no one perfect pathway. We need all of them, and we need more of them. The more we can do to make valuable pathways affordable, the better off we'll be.

JFF: *That's a great segue, because I'd love to know, from your perspective, how you think education and training is changing. What's different today? What developments do you see coming around the corner in the next few years?*

AH: I just think there's so much more openness to different ideas and different solutions around education training than even just a year ago. We went from skepticism about online learning

to everyone becoming an online learner and everyone becoming an online teacher. Of course, there's good and bad online learning. But now everyone has had firsthand experience with it, so we can see the possibilities in a new way.

Going forward, I think the things I'm really excited about are the more explicit focus on outcomes—how we design programs that provide concrete credentials that lead to great jobs. I'm also excited about the new types of technologies to train people—like augmented reality and virtual reality. Last, the growth of social entrepreneurship has been exciting to watch, with a really healthy, vibrant marketplace of ideas and experiences.

JFF: *What practical advice do you have for employers or training providers who are looking to offer their employees and students transformative learning opportunities?*

AH: One is to think broadly across your employee base, not just top executives and managers. How can you provide meaningful career development opportunities for everyone—from the people who are just coming into the company all the way to the CEO?

Second is to think about concrete development, not just standalone programs. The more you can lay out the opportunity pathways for your employees, the easier it is for them to understand them and use them.

Third, set aside some portion of your budget for innovation and experimentation. You'll be able to bring in new ideas and see how they work and collect data, and you'll see the opportunity that gets created.

JFF: *Like you said, we're all online learners now. What other key lessons and takeaways have you internalized about education and training that come as a result of the pandemic?*

AH: A lot of times we focus on the new, and what exciting new things are going on. But the pandemic has also reminded us about what has always mattered. And what's going to continue to matter is a science around learning.

If I want to learn a new recipe, I can watch a five-minute video on YouTube. But I can only do that because I already know a fair amount about cooking. Without that foundation, I actually can't learn that much—I would need deeper support. We need to figure out how to match the right experiences to the right learning outcomes.

Not everything can be condensed down to a two-minute video. Good teachers matter. Really well-designed curriculums matter. The experience you create for people—how you engineer and architect it—has always mattered. But the pandemic helped remind us just how crucial they are.

JFF: *Part of what you're trying to do with UVA Edge is to move from "faster and cheaper" to "faster and deeper." If you could pick one component of the learning experience that you wish every learner could have access to, what would you want that one thing to be?*

AH: My hope is that people can experience the joy of learning something really deeply and be really excited about learning. There is no one learning experience that provides that for all people.

I was invited to attend a seminar Edge lecture where UVA President Jim Ryan was teaching our Knowledge in the Digital Age class. Students were talking about disinformation and trust, and you could

just hear the electricity in the room as people were having this conversation. The points that were being made back and forth were so profound.

There is not a huge percentage of our population that have felt that type of electricity in learning. How do you create experiences like that, where people just feel engaged and connected? And we don't often create those experiences for individuals without degrees.

I think that's the most exciting part about UVA Edge. It's the most exciting part about being an educator. It's the most exciting thing about creating learning experiences. ■



Trends to Watch

Innovative Payment Models Are Expanding

High tuition costs make postsecondary education inaccessible for many people, but [innovative financing](#) options that have expanded in recent years promise to break down some of the barriers.

Financing models like paid apprenticeships and other earn-and-learn arrangements, income-share agreements, and social impact bonds have opened up postsecondary education and training opportunities to new populations of learners. And to increase participation in internal workforce development programs, some employers have introduced “pay for skills” incentives, offering pay raises and promotions to employees who complete skills training courses.

Here are two examples of innovative approaches to financing training and education.

[Social Finance](#), an impact investing nonprofit, created a financing tool called the [career impact bond](#), which is based on the income share agreement model. Impact investors reduce barriers to

entry by covering the upfront costs of training and the costs of wraparound supports program participants may need. Students who complete their coursework and find jobs that pay more than a certain amount repay the program costs as a set portion of their income over a specific period of time. The repayment plan has student-friendly terms, including payment caps.

The [Industrial Manufacturing Technician](#) (IMT) Registered Apprenticeship is an advanced manufacturing program in which entry-level production workers are paid an average of \$18.50 per hour over 18 months to acquire the knowledge, skills, and abilities required for a career in manufacturing. A recent [JFF study](#) found that employers who implemented the IMT program earned \$1.48 for every \$1.00 spent.

Providers Are Offering Wraparound Services

High-quality training requires learners to engage in dialogues with themselves—dialogues that can compel and inspire them to challenge their assumptions, break old habits, and overcome self-doubt. Those dialogues require a level of deep attention and effort that learners may not be able to achieve if they have basic unmet needs.

Many providers of training programs offer learners wraparound supports to help people overcome barriers that make it difficult to participate in training. Providers may offer these services themselves, or they might partner with community organizations that offer them. Here's a look at some of the basic needs learners face, with examples of the types of services and supports that can help address them.

A stable environment

Learners may need food vouchers or access to housing and transportation assistance programs.

Child care

During the pandemic, [Bitwise Industries](#) launched [PodUp](#), an online service that helps workers connect with networks of nearby families who can help one another with child care responsibilities.

Technology

[CareerKarma](#), a provider of online service that helps people find job training options, launched an initiative called [Reskill America](#) to provide laptops at no charge to people who need them for training but can't afford them.

Community support

A provider of Salesforce training to working adults, [Climb Hire](#) helps its participants build networks of peers, coaches, and mentors that they can tap for advice, support, and job leads.

Employer Initiatives Are Changing the Landscape

The line between education and work is blurring. Employers are playing increasingly active roles in training, and they're adopting innovative new approaches to talent development. Some— notably tech leaders Apple, Salesforce, IBM, and Oracle—have developed credentialing programs for workers who use their products. Others are forging partnerships and joining coalitions to build talent pipelines or setting up in-house, branded learning organizations.

Training Coalitions and Partnerships Building Talent Pipelines

Various coalitions of employers have been advocating for changes in our country's workforce training and education infrastructure, calling for new pathways to careers and increased investments in communities whose members are underrepresented in careers that pay good wages and offer opportunities for economic advancement. Here's a look at three such efforts.

Launched in 2020, the [OneTen](#) coalition is made up of a group of executives from major companies who have made a commitment

to hire, promote, and train 1 million Black workers in the next decade. They aim to achieve that goal by connecting employers with talent development partners.

Also launched in 2020, the [SkillUp](#) coalition, whose operating partners include JFF, connects frontline workers, particularly those that have been displaced by the COVID-19 crisis, with opportunities to build in-demand skills. At the SkillUp website, workers can take a personalized career assessment, enroll in courses, , and learn about job opportunities at SkillUp partner organizations.

An effort driven by Prologis, the global leader in logistics real estate, in partnership with JFF, the [Prologis Community Workforce Initiative](#) is committed to training 25,000 people to work in the fields of transportation, distribution, and logistics by the end of 2025.

3 **Employers Developing Internal Learning Organizations**

There's a new generation of executives who are ready to devote more resources to developing homegrown talent and position their companies as learning organizations. In the next few years, it's likely that some large employers will bypass traditional education channels altogether with internal programs such as corporate universities and in-house certification programs.

Efforts such as those make it easier for workers to advance in their careers without switching employers, and can therefore help companies improve retention rates and strengthen employee engagement. However, because such programs may be designed to meet the specific needs of one company, participants may not gain many transferable skills and could find that have few employment options outside of their current employers. That can hurt not only workers, but also the companies, which end up with static workforces and don't benefit from the fresh perspectives that newcomers can bring.

Here are examples of major employers that are building large-scale internal training and education programs:

- ▶ Amazon has launched two new training programs—[Amazon Technical Academy](#) and [Associate2Tech](#)—to help employees with no IT experience earn certifications that enable them to move into technical roles.
- ▶ Accenture has set up a professional development initiative called [Accenture Connected Learning](#) that offers training through a mix of classroom instruction, online courses, and activities at regional learning centers. In 2015, Accenture employees received an average of 40 hours of training each through Accenture Connected Learning.
- ▶ Intel offers employees a resource called the [Exponential Learning](#) portal, where they can access personalized, curated content for self-paced learning.

Some companies are making their internal training programs available to the public through third-party channels, such as the new [LinkedIn Learning Hub](#), or via business-to-consumer networks like [Microsoft Learn](#).

4 Technology Is Driving New Models

When MOOCs—massive open online courses—debuted in 2008, many predicted that they would immediately disrupt traditional education. In reality, it took another decade of IT advances and a widespread pivot to remote instruction driven by a global pandemic for online learning to achieve mainstream acceptance. Now innovators are actively working to develop a new generation of technologies that will scale and enhance the digital learning experience.

Here are some exciting emerging technologies:

Immersive learning

Recognizing that augmented reality (AR) and virtual reality (VR) technologies have the potential to revolutionize training, [Walmart has distributed millions of VR headsets](#) to its stores for use in training programs. The retailer reports that immersive learning experiences have helped increase employee test scores and knowledge retention.

Blockchain technology

Distributed ledger systems enabled by blockchain platforms can give learners a way to maintain readily accessible records of the training programs they've completed and the credentials they've earned. These systems also give employers a reliable way to verify that workers have completed the programs they say they've completed.

AI-enabled personalization

[IBM developed a platform called Your Learning](#) that uses AI to give employees personalized recommendations of courses to take and training programs to consider. The recommendations are based on analysis of data about users, including role specialization and learning preferences.

Mobile-first applications

SMS text tools and geofencing technology, which delivers content based on a user's current location, are providing just-in-time training to the deskless workforce.

Human and Social Elements Are Still Essential

While technology is no doubt advancing the way people learn, training providers recognize that social and human elements also play key roles in the process.

For example, if people participating in an online class are able to meet via videoconference, they can identify areas of shared confusion and help one another out. And although growth of in-person learning has been disrupted by the pandemic, some providers have tried to build community with “learning gyms”—digital or physical spaces where learners can come together and support one another. Programs that foster supportive communities give learners safe environments where they can express their frustrations and ask questions. And the thoughts participants share can help providers modify and improve their offerings. However, when users don’t feel comfortable sharing their thoughts, providers miss out on valuable feedback.

Here are two examples of training providers that are successful community builders.

- ▶ [NuCamp](#), a provider of affordable coding boot camps that feature strong community support, had to transition its Saturday coding workshops to a hybrid model when the pandemic began. But even though learners and instructors were no longer able to get to know each other in person, NuCamp was able to keep participants engaged with collaborative projects and direct support from instructors.
- ▶ [COOP Careers](#) harnesses the power of peer networks to reduce unemployment and underemployment among recent college graduates. To build those networks, the organization recruits first-generation college graduates from low-income backgrounds to participate in small groups called Peer Cohorts. Led by COOP Careers alumni, the cohorts meet regularly, offering participants a chance to help one another build digital and technical skills.

Other Trends to Keep an Eye On

Employers Are Turning to Aggregators for Help With Training Options

The number of external training providers is growing rapidly, opening up a new market for aggregators that can help employers manage their training options. [Guild Education](#) helps employers develop education benefits plans, sets up analytics dashboards, and provides access to coaching services. [InStride](#) helps employers design flexible education pathways using content from its academic network.

Workers Need More Than Just Technical Skills

Because technology is always evolving, employers will always focus on building workforces with the latest digital skills. But that doesn't mean they will just be hiring engineers and data analysts. The jobs of the future will require creative people who can engage in unstructured problem solving, communicate compellingly, and deliver service with empathy. Immersive learning companies like [Mursion](#) and [Talespin](#) offer platforms that use virtual reality to build that workforce. Lessons about

topics such as customer service, giving feedback, and diversity, equity, and inclusion put participants in simulated environments where they encounter realistic workplace scenarios and engage in challenging conversations.

Providers Are Embracing Competency-Based Education

Recently, there has been a push toward [skills- and competency-based approaches to education and training](#). This involves evaluating learners based on the skills they've acquired and the tasks they're capable of doing, not just on the credentials they've earned or the degrees they hold. This approach often goes hand in hand with a modular style of instruction, which breaks long lessons into short, digestible components. Providers that embrace this pedagogy may also include "desirable difficulties" in their courses—meaning they occasionally present learners with challenges that require them to work a little harder. That might temporarily slow down learning, but it makes the training more effective in the long run.

Innovation and Investment Opportunities

Providers of nondegree workforce education and training programs fill a real need for both adult learners and employers, and we have been inspired to see innovative new approaches to training gain traction during the pandemic. But many offerings are still tied to traditional models of education, in which people spend a lot of time learning in preparation for entering a career, instead of engaging in a highly integrated lifelong process of working and learning.

We encourage technologists, entrepreneurs, and investors to continue innovating in an effort to meet the education and training ecosystem's need for the following:

Providers that help people learn how to learn.

People who lack confidence in their academic abilities may have trouble mastering the subject matter in any training program, no matter how well designed it is. Programs that help people develop strategies for studying and retaining content will pay off

in many ways, notably by giving participants skills that will help them navigate future career transitions.

Providers that offer lifelong support.

Our research indicates that few providers maintain long-term relationships with participants in their programs. We would like to see training providers do two things: offer adult learners active support and ongoing retraining opportunities throughout their careers, and build networks of graduates who support one another.

A dynamic and transparent marketplace.

An increasing number of providers are sharing data about the outcomes of their programs, but there's no standard approach throughout the market. Therefore, employers and learners face uncertainty when assessing the value of programs they are considering. Transparent access to information is key for a healthy market connecting learners, providers, and employers.

Higher education programs that meet the evolving needs of employers and adult learners.

Nondegree workforce education and training programs are gaining traction because many learners and employers question whether college curricula sufficiently prepare people for careers. However, we believe community colleges can play an important role in our country's economic future. Institutions of higher education should expand their offerings to be more inclusive of working adults, and they should forge partnerships with employers to develop curricula that prepare learners of all ages for the future of work.

Employer-focused business models.

Nondegree training providers should encourage employers to take a skills- and competency-based approach to assessing talent instead of strictly adhering to policies requiring four-year degrees. They should also help employers see the business case for increasing wages to attract and retain people who have put time and effort into developing the skills required for a position.

And finally, providers can partner with employers to help them improve [job quality](#) and design continuous learning opportunities for workers.

Innovative and sustainable funding models

Some countries and some U.S. states have adopted [innovative ways to fund lifelong education](#) and training. For example, the states of Maine and Washington have enacted policies giving residents access to [lifelong learning accounts](#), which are savings accounts people can draw on to pay for education and training. Other steps officials can take to support innovative financing options include expanding access to Title IX federal loans for skills training programs, creating clear regulatory standards for the use of Income Share Agreements (ISAs), establishing tax credits for companies that invest in workforce training, authorizing the use of Pell Grants for high-quality short-term credentialing courses, and creating incentives to encourage investment in training of frontline workers.

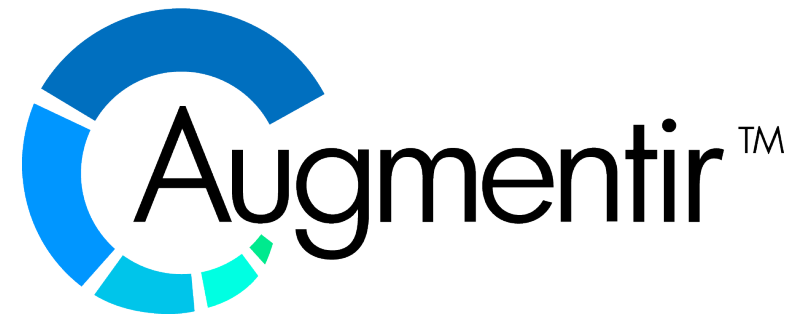
“Last summer we saw a tremendous number of employers announce their ambitions to make diversity and inclusion an organizational priority, and there are more opportunities than ever before to put those words into action by investing in Black workers’ learning, career development, and growth. This landscape research from JFF will provide important context for employers committed to diversity efforts and aiming to build stronger organizations and communities along the way.”

—Maurice Jones, OneTen





Innovators to Watch



Horsham, Pennsylvania
 Founded in 2018
augmentir.com

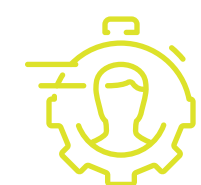
MEASURES OF IMPACT

80%
 Reduction in new-hire training time

50%
 Decrease in startup, shutdown,
 and changeover times

18%
 Improvement in initial productivity

SEGMENT



What does Augmentir do?

Augmentir brings cutting-edge technologies like augmented reality and artificial intelligence to industrial workplaces. The company’s platform and technology support on-the-job training in sectors like manufacturing and construction. Its systems can also deliver guidance to frontline workers to enhance learning, safety, and productivity. Augmentir partners with employers to digitize existing training materials and processes and adapt them to create lessons that feature immersive AR experiences that help employees master complex processes.

Augmentir’s systems can significantly reduce the time that it takes to onboard new employees. Additionally, the company’s platform reveals granular insights that help employers identify skill gaps in their workforces and provide just-in-time support to workers on the job. The system also makes it possible to deliver training tailored to the needs of individuals, which is helpful because each worker at a plant or construction site has a unique blend of skills, experience, and knowledge.

Augmentir also enables employers to continually update and improve their training materials and information about worksite policies and procedures. The Augmentir platform uses AI bots to aggregate the collective knowledge of an organization’s subject matter experts, who can use the system to submit more detailed instructions, correct or update training materials, or add videos that supplement lessons.

Why did JFF select Augmentir?

Innovative workplace technologies are often designed for people who work in office environments. Augmentir stands out because it develops solutions with frontline workers and industrial settings in mind. At a time of heightened concern about automation eliminating industrial jobs, Augmentir presents employers with an opportunity to use technology to help workers develop the skills they need to adapt to changes. The company frames its work around the key idea of skills variability rather than skills gaps, using technology to holistically understand every worker’s competencies and offering employers tools that help workers acquire new or more advanced skills.

Augmentir’s products give every worker direct access to knowledge and information in user-friendly digital formats. The company’s tools embed training into workers’ day-to-day routines, and employers can use the platform to continually update training content to support workers’ evolving learning needs. And Augmentir’s approach of collectively sourcing knowledge from individuals in the workforce makes learning a social experience and increases learner engagement by giving workers agency to shape training content.

MEASURES OF IMPACT

5,000

Learners

80%

Percentage of graduates who are working in technical roles

\$41,200

Average earnings gain for a Bitwise graduate who lands an IT job

SEGMENTS



What does Bitwise Industries do?

A multifaceted organization, Bitwise Industries connects people from communities impacted by systemic poverty to careers in technology. The cornerstone of Bitwise’s work is a tech apprenticeship program in which students are paid a living wage to work on projects that enable them to develop skills that are in demand in the tech industry. Bitwise training prioritizes individualized learning and real-world tasks. Working alongside experts in a given discipline, Bitwise apprentices develop solutions for real customers. Bitwise also provides apprentices with a direct path to employment, offering them full-time jobs in its IT consulting business.

In addition to offering workforce training programs, Bitwise establishes tech hubs in what it calls “underestimated” cities. The goal is to spur business activity by providing Bitwise graduates with places where they can work together, connect with peers in the tech industry, engage in research, and perhaps launch startups. To get the hubs off the ground, Bitwise forges public-private partnerships and works with leaders of workforce boards, local government agencies, community organizations, and philanthropic organizations. Thus far, Bitwise has opened four hubs in California—in Fresno, Bakersfield, Merced, and Oakland—and one in Toledo, Ohio.

Why did JFF select Bitwise Industries?

Bitwise stands out for its holistic approach to supporting learners and removing barriers to opportunity that they may face. The company offers its apprentices health insurance in addition to paying them a fair wage. It also hosts networking events for apprentices and offers them wraparound supports like resume prep help and access to child care, transportation, and mental and emotional health services.

In a clear sign that it is committed to long-term outcomes, Bitwise plans to hire 1,000 of its graduates through 2022, primarily in its tech consultancy. It adopted that policy partly in acknowledgment of the fact that there is still a gap between aspiration and reality when it comes to employers embracing skills-based hiring practices: Bitwise had to offer its graduates jobs because other employers are still seeking people with college degrees.

We appreciate the boldness of Bitwise’s vision of transforming regional economies by training individuals and creating an ecosystem of support that enables them to continue networking, learning, and accessing employment opportunities throughout their careers. By focusing on “underestimated” people and places, Bitwise can unlock untapped talent and meaningfully expand access to opportunities in tech.



San Francisco, California

Founded in 2018

careerkarma.com

MEASURES OF IMPACT

300,000+

Number of people who have used Career Karma.

800,000+

Number of visitors to the Career Karma website each month.

400+

Number of boot camp providers listed on Career Karma's platform.

SEGMENT



What does Career Karma do?

Career Karma matches users with boot camps and other training programs. The recommendations are personalized to individual users, based on factors like career goals, location, schedule, and financing preferences. The company's platform goes beyond simply providing information about training options and connects individuals directly to programs.

Users are guided through a multistep process that starts with a 30-minute call with a peer coach who pursued a similar path and can help them better understand career and training options aligned with their goals. From there, the Career Karma platform guides users through the process of applying to programs, securing financial aid, and completing free preparatory classes. Career Karma also hosts a vibrant and growing online network where learners can connect with peers, mentors, and coaches. When they finish their training, Career Karma invites them to serve as mentors themselves.

Why did JFF select Career Karma?

In a workforce training market filled with thousands of providers, platforms and services like those that Career Karma offers are essential to helping people understand their choices and find training programs that meet their needs. Career Karma recognizes that simply compiling data about programs has limited value for users, and therefore emphasizes social and human elements—such as connections with peers and coaches—that help people confidently navigate the career and education ecosystem.

While Career Karma has historically focused on IT career pathways, the company is increasing its range of offerings to include fields like health care and skilled trades. The company plans to harness the power of its robust community to become a resource that people can turn to throughout their careers, regardless of whether or not they are in the market for a training program. For example, people who are considering career moves can use Career Karma to connect with professionals in different industries, and people who are currently employed can use it to find affinity groups where they can meet like-minded peers.

JFF also featured Career Karma in our [Career Navigation](#) market scan.



ChargerHelp!

Los Angeles, California

Founded in 2020

chargerhelp.com

MEASURES OF IMPACT

100+

The number of full-time technicians ChargerHelp aims to train and hire by 2023.

500k

Expected number of EV charging stations by 2030

40k

The average salary of a full-time EV charging station technician.

SEGMENTS



What does ChargerHelp do?

ChargerHelp trains and hires electric vehicle supply equipment technicians—the people who maintain public electric vehicle (EV) charging stations. The company partners with workforce development centers to recruit local talent, then trains participants, awards certifications to those who complete the two-week program, and hires graduates as full-time technicians who earn a living wage and receive benefits.

ChargerHelp partners with operators of EV charging station networks to help them meet the growing demand for technicians and utilizes technology to efficiently deploy its technicians to maintenance and repair jobs that arise. An app sends technicians alerts about EV charging units that are down and guides them through diagnostic steps to help them identify the problem. ChargerHelp’s platform is scalable, putting the company in a position to expand its training and service operations in key states, including California, Colorado, New York, Oregon, Texas, and Washington.

Why did JFF select ChargerHelp?

ChargerHelp has adopted a compelling business model that could serve as a template for training workers to succeed in new jobs in emerging industries that are poised for growth. As both training provider and employer, ChargerHelp must ensure that its training is in line with the needs of the market—after all, its success hinges on the capabilities of its employees. The company also appears to have the ability to adapt its curriculum and help workers keep their skills up to date as the EV industry grows and evolves.

Moreover, ChargerHelp is oriented toward social impact. The company actively recruits talent in communities that are disproportionately impacted by carbon emissions and whose residents are underrepresented in green jobs. And by seeking to create an industry-recognized credential and building a pathway to green jobs, ChargerHelp has also demonstrated a commitment to supporting the continued economic advancement of its workers.



San Francisco, California
Founded in 2017
theforage.com

MEASURES OF IMPACT

1.5M

The number of students who have enrolled in Forage virtual experience programs.

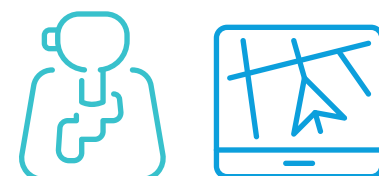
80+

The number of companies that have partnered with Forage.

2x to 4x

People who participate in a company's Forage virtual experience program are two to four times more likely than other applicants to receive and accept a job offer at that company.

SEGMENTS



What does Forage do?

Forage partners with large corporate employers to design free “virtual work experience programs”—short-term learning opportunities that help jobseekers build real-world skills and learn about various roles, industries, and companies. For example, Forage created a virtual investment banking experience with Citigroup, a software engineering experience with Electronic Arts, a tax consulting experience with KPMG, and a startup experience with Y Combinator.

The programs are all self-paced and include independent projects that typically take 10 hours to complete. When they're done, learners review their work and assess it in comparison with models shared by the employer. Those who successfully complete a program earn a certificate endorsed by the employer. Learners can also reflect on what they've learned and how they've grown by comparing the results of pre- and post-experience surveys. The survey results are also shared with the employers to help them improve the experiences.

Forage's mission is to give millions of learners a no-cost and readily accessible way to explore career paths. In addition to getting a basic understanding of the skills they need and what it's like to work at a particular company, learners also gain confidence in their ability to succeed in a particular role. The company also helps employers reach more prospective employees than they would with traditional campus-based recruiting.

Why did JFF select Forage?

Forage offers a unique approach to career navigation. Its model goes beyond asking learners to assess their goals, interests, and skills and instead invites them to try as many experiences as they can to identify careers that might be good fits.

Forage's program design process includes input from employees of the corporate partners to ensure that the experiences reflect life on the job for entry-level staffers. The documentation accompanying each program maps out the skills learners will build as they work on their projects. Forage also offers participants guidance about how they could describe their new skills and showcase their completion certificates on their resumes and via social media. By offering certificates that encourage employers to focus on a candidate's skills and interests and disregard traditional criteria like degrees, Forage has the potential to further advance skills-based hiring.



Oakland, California
 Founded in 2017
nanaacademy.org

MEASURES OF IMPACT

15 hours

The time it takes to complete Nana’s online self-study course for appliance repair technicians.

25+

The number of partnerships Nana has with appliance manufacturers—including GE, Miele, and Samsung—and warranty and property management companies.

\$80k to \$100k

Estimated salary range of full-time appliance repair technicians who take on 21 to 35 jobs per week.

SEGMENTS



What does Nana Academy do?

Nana Academy provides tech-enabled training for careers in appliance repair. Its offerings include a free introductory program that can be completed in as few as 30 days. The program consists of two self-paced online classes covering basics like how to use appliance repair tools and the soft skills required to work with customers, as well as content tailored to a specialization in a particular appliance. After completing online classes, learners enter a mentorship program in which they shadow and work alongside experienced technicians through at least 50 repair jobs.

Nana also offers an on-demand labor platform and has an app that graduates can use to sign up to take on repair jobs in their areas. According to the company, technicians can earn \$5,000 a month in the places where Nana is most active; those locations currently include cities in Arizona, California, Oklahoma, Texas, and Utah. Nana compiles the job opportunities listed in the app through partnerships with appliance manufacturers and warranty and property management companies.

Nana’s plans include to expanding to new parts of the country and offering more specialized, paid training courses in which graduates of its introductory programs tackle more complex—and higher-paying—jobs.

Why did JFF select Nana Academy?

Nana’s goal is to help millions of people enter careers in appliance repair, and by doing that, it can help close the gap between the supply of and demand for skilled technicians. The company’s free, short-term path into a skilled trade could be attractive to people who are looking to learn new skills and change careers. And its flexible hybrid model of online and in-person instruction can accommodate the schedules of working adults.

Nana also stands out for its emphasis on the social component of training. The mentorship program enables learners to get the practice they need to master their specialties while also building professional networks. And with its app, the organization offers a bridge between learning and employment by connecting graduates with job opportunities in which they can apply their new skills.



Seattle, Washington
 Founded in 2018
nextstep.com

MEASURES OF IMPACT

15%

The estimated boost in earnings that uncertified care workers can achieve if they acquire the CNA certification.

180+

The number of NextStep graduates to date.

2

The number of states—Colorado and Washington—in which NextStep currently does business.

SEGMENTS



What does NextStep do?

NextStep offers free tech-enabled training and job placement services for individuals interested in Certified Nursing Assistant (CNA) roles. The CNA certification can boost the earning potential of people who already work in uncertified personal care roles, such as home health aides. It also opens up other opportunities in health care. NextStep is able to offer the training at no charge because demand for CNAs is high; fees employers pay NextStep for successful CNA placements effectively cover the cost of training.

In addition to being completely free, NextStep’s training can accommodate the schedules of working learners because it is delivered on mobile devices in the form of interactive modules that can be completed asynchronously in as little as five weeks. To boost retention and engagement, NextStep provides learners with peer CNA mentors to guide them through training and into their first three months of employment as CNAs.

Why did JFF select NextStep?

Tuition-free training opportunities are rare, and the ones that do exist often have limited enrollment and require prospective students to undergo an extensive vetting process. In contrast, NextStep—thanks to its employer-paid, technology-enabled model—can reach large numbers of people and its program doesn’t present the barriers to access that many adult learners encounter when they try to pursue training. Participants don’t have to pay out of pocket or leave their current jobs, and they know that they will be guaranteed employment if they successfully complete the program.

While CNA jobs are entry-level positions, the certification can put workers on pathways to higher-paying specialties, including nursing. NextStep’s training represents a viable first step for people who are looking to enter health care, where the demand for workers is anticipated to remain high.



Bellevue, Washington
 Founded in 2017
nucamp.co

MEASURES OF IMPACT

79%
 Percentage of Nucamp grads who land tech jobs within six months.

74%
 Percentage of participants who successfully complete Nucamp programs.

58%
 Percentage of people enrolled in Nucamp boot camps do not have a degree.

SEGMENT



What does Nucamp do?

Nucamp runs coding boot camps in more than 180 locations nationwide. Designed for people who want to learn web development skills in preparation for a career change, its programs are short-term, flexible, and affordable. Introductory, intermediate, and full-stack development courses last four, 17, and 22 weeks, respectively. Nucamp offers several financing options, and the total cost to students comes to roughly \$2,000. In comparison, the average cost of a full-time coding boot camp is [\\$13,000](#).

The boot camps feature a hybrid model: Students work on self-paced online modules during the week and meet in person with an instructor and a small group of peers on Saturdays. That flexible model can make it possible for learners who have jobs to continue working while learning new skills. Nucamp also has a flexible cancellation and refund policy and, for a small fee, it allows learners to put their training on hold and pick up where they left off at a later date with a different cohort.

Nucamp posts real-time outcomes data on its website, which also features hundreds of positive student reviews.

Why did JFF select Nucamp?

Nucamp stands out for its commitment to offering effective and affordable training. The company keeps tuition low by taking steps to curb its own costs. For example, Nucamp uses technology that automates administrative processes like scheduling, rents space for in-person learning only on weekends, and hires instructors on a part-time basis. Financing options available through the company’s “Fair Student Agreements” program include arrangements under which students pay as little as \$8 per month while they are in the program and then a fixed amount for 12 or 18 months after graduation.

Nucamp’s model is scalable, but the company takes steps to ensure that growth doesn’t dilute the quality of its programs. Among other things, Nucamp uses its own curriculum, monitors students’ experiences on a week-to-week basis, provides coaching to instructors, and holds itself accountable with a real-time dashboard reflecting the results of surveys completed by graduates. JFF appreciates the creative ways in which Nucamp is lowering financial barriers to access, committing to transparency, and pursuing a sustainable path to growth.



New York, New York

Founded in 2019

opus.so

MEASURES OF IMPACT

1 in 5

Share of Opus users who opted to use training content in a language other than English.

78%

Percentage of Opus users who stayed in their jobs from April 2020 to April 2021.

300

The number of businesses that used Opus to provide COVID-19 training to essential workers.

SEGMENTS



What does Opus do?

Opus offers a platform that employers can use to build interactive micro-courses for their employees and deliver them via text message. Workers can access these courses via any mobile device and in any language. Originally envisioned as a way to offer training to foodservice workers, the Opus platform is for any company with a “deskless” workforce. Opus customers include hospitality companies and manufacturers.

The text messages used for Opus lessons invite users to actively engage with content by participating in chats—an approach that differs from that of conventional training platforms like knowledge hubs or learning management systems, which generally offer passive experiences. Employers have used the Opus platform to deliver training on topics ranging from the steps involved in a routine job to corporate anti-harassment policies. And the system is simple enough that employers can use it to create bite-size lessons that can be delivered to users in minutes to, say, teach factory workers about new safety procedures or ensure that restaurant workers understand menu changes.

In addition to giving employers an easy way to deliver job-related training, the Opus platform offers employees tools and resources that help them advance along career pathways. For example, it includes foundational English language courses, giving workers who are not native English speakers

an opportunity to build communication skills that can help them pursue more advanced training and job opportunities. It also includes a system for awarding performance badges and digital certificates to learners who successfully complete training activities.

Why did JFF select Opus?

The Opus platform is one of a small number of training systems that was specifically designed for the deskless workforce, and it supports the training and career advancement needs of frontline workers, including those who speak limited English. The platform features content that helps workers build important foundational skills, and its performance badging feature gives them a way to show—rather than tell—their employers what they know and what they can do.

As a vehicle that expands the number of workers who can pursue internal advancement opportunities, the Opus platform can yield long-term dividends for employers by improving retention rates and reducing recruiting and training costs.



Denver, Colorado • Founded in 2012

pairin.com

MEASURES OF IMPACT

92%

Retention rate after two years for people in job placements that were made with the help of PAIRIN tools.

5x

Workforce professionals were able to cut the amount of time they spent on administrative tasks and paperwork by a factor of five.

100%

Renewal rate of clients who use My Journey.

SEGMENT



What does PAIRIN do?

PAIRIN offers a user-friendly platform that connects individuals to professional development and employment opportunities, as well as related resources and services. Partnering with government agencies, workforce development centers, K-12 school systems, and providers of postsecondary education and training, the company uses a combination of technology and personalized service to ensure that everyone, no matter their background, can access the career and education resources they need.

A software-as-a-service (SaaS) tool driven by behavioral science, PAIRIN’s My Journey platform uses a detailed assessment survey to understand individual users’ skills, needs, and desires and then provides them with career, education, and training recommendations based on their abilities, circumstances, and stage of life. It also facilitates direct connections to resources like unemployment benefits. PAIRIN recently added a case management and referral system called the CommunityPro Suite to its lineup of tools. The new offering will give caseworkers and career counselors detailed insights into learners’ and workers’ education and employment records, enabling them to provide more targeted support.

Why did JFF select PAIRIN?

PAIRIN takes a holistic approach to supporting people as they navigate their career and education pathways. The company’s My Journey platform takes all of an individual’s circumstances and abilities into account, then aggregates data from a number of sources to provide users with easy-to-understand guidance about their options. PAIRIN also understands the importance of wraparound supports, and My Journey includes recommendations of relevant services for people who may be facing challenges like food or housing insecurity or lack of access to transportation or child care.

Additionally, PAIRIN’s platform is highly adaptable, making it easy for partners to provide up-to-date information and recommendations to users. For example, the company incorporated COVID-related resources into its system within weeks of the start of the pandemic.

JFF also featured PAIRIN in our [2020 Assessment Technology](#) market scan.



Queens, New York

Founded in 2011

pursuit.org

MEASURES OF IMPACT

4x

On average, Pursuit graduates earn more than four times as much as they did before joining the program, with their pay increasing from an average of \$18,000 to an average of \$85,000.

100%

All of the students in the Pursuit Fellowship come from low-income populations — and more than 50 percent of them receive public assistance.

60%

Sixty percent of Pursuit fellows don't have a bachelor's degree.

SEGMENTS



What does Pursuit do?

Pursuit is a nonprofit organization based in Queens, New York, that trains adults for careers as software engineers. Participants in the Pursuit Fellowship go through one year of technical and soft skills training and then receive three years of support after they finish and move into software engineering jobs. The organization created a rigorous, long-term program because the people in its target population would generally need more support than traditional coding boot camps would offer.

Pursuit has a track record of helping people who are unemployed or in low-wage jobs significantly increase their earnings. Participants in the Pursuit Fellowship make an average of \$18,000 per year before joining the program and go on to jobs paying an average of \$85,000 after they finish. Moreover, Pursuit's goal is to launch its fellows into careers as software engineers, whereas other technical training programs for people from backgrounds similar to those of Pursuit fellows usually prepare participants for entry-level IT roles.

Why did JFF select Pursuit?

Pursuit stands out for its focus on unlocking talent among unemployed and underemployed people. The organization's decision to offer fellows multiple years of follow-on support reflects its commitment to setting its graduates up for long-term career success. Recognizing that learning of a different kind continues after people get jobs, Pursuit adapts its support accordingly, helping its graduates navigate the workplace and build professional networks instead of focusing on technical training.

Pursuit also uses innovative financing models to make the fellowship accessible to students, and to sustain and scale its work. For example, with the [Pursuit Bond](#), an outcomes-driven financial instrument created to attract funding from sources other than traditional philanthropies, the organization is able to help students finance their training with income share agreements, so they face no upfront costs and only begin paying after they graduate and start making more than a specified amount per year.



Richmond, California

Founded in 2018

rivetschool.org

MEASURES OF IMPACT

2.3 years

Twenty-five percent of Rivet students are on track to earn an accredited bachelor's degree in 2.3 years or less. And 50 percent are on track to earn a degree in less than four years while working full time.

89%

Rivet's first-year retention rate is 89 percent— compared with roughly 50 percent at institutions serving comparable students nationwide.

\$10K

The expected total out-of-pocket cost of a degree for a Rivet student is \$10,000 – which is 30 to 40 percent that of comparable institutions.

SEGMENT



What does Rivet School do?

In partnership with Southern New Hampshire University and Brandman University, Rivet School offers an accredited online undergraduate program in which students can earn a bachelor's degree in two or three years. To make the program accessible to working adults, Rivet has adopted a flexible learning model and offers comprehensive supports to ensure that learners are able to focus on their studies. Courses cover career-oriented subjects like business management, health care management, education, and IT.

Rivet's self-paced classes emphasize project-based learning with real-world examples. Personal coaches help students with any hurdles they encounter every step of the way—from enrollment until they complete the program. Students in the San Francisco Bay Area have access to co-working spaces where they can meet with their coaches, access the internet, or just find a quiet place to study. For six months beyond graduation, Rivet offers targeted career coaching and job placement services.

Why did JFF select Rivet School?

While some employers are embracing skills-based hiring and putting less emphasis on a four-year degree as a job requirement, JFF recognizes that college degrees do hold value and are required for certain professions, including teaching. Among organizations that offer nontraditional students opportunities to earn a bachelor's degree, Rivet School stands out for the intensity and accessibility of its programs, and for the range of supports it offers students. Rivet helps students assemble funding to pay for their educations and offers an income share agreement (ISA) under which students only start to pay tuition if they make \$40,000 per year after graduation. Personal coaches help students overcome any minor barriers and, among other things, provide “onboarding” services in which they help students learn how to learn.

Rivet School plans to expand nationwide by growing organically and partnering with like-minded organizations to set up similar programs. The organization also makes an ongoing effort to find ways to understand its impact and deepen the support it offers students. For example, it has conducted a randomized controlled trial study of its ISA program and is exploring ways to incorporate work-based learning into its curriculum.



Cambridge, Massachusetts

Founded in 2020

skillbase.hks.harvard.edu

MEASURES OF IMPACT

10,000

Since its launch in April 2020, Skillbase has attracted 10,000 users.

78

Skillbase has 78 partners.

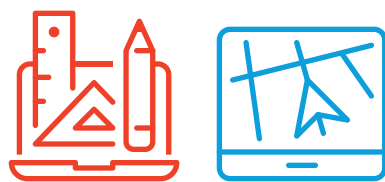
13

Skillbase's partners are located in 13 states.

500+

The Skillbase team has trained more than 500 workforce professionals to use the platform.

SEGMENTS



What does Skillbase do?

Developed by the Harvard Project on Workforce, Skillbase is an online platform designed to help people navigate the universe of free, online career resources. At its core, Skillbase is a content library informed by research on the skills that are most in demand among employers, and it has been curated to ensure that the content is accessible, relevant, and practical. Each resource linked through Skillbase was vetted and evaluated against a quality rubric developed by the Harvard Project on Workforce.

Skillbase offers people entering the workforce free access to resources that can help them build foundational skills. For people who are thinking of changing careers, Skillbase offers free online courses covering specialized technical topics.

Users can navigate the library independently, but Skillbase can also identify relevant resources for those who respond to a two-to-four-question assessment that clarifies their needs. Skillbase's creators plan to expand the number of resources available on the platform and improve its ability to offer personalized results.

Why did JFF select Skillbase?

Skillbase stands out because of its accessibility and quality. Anyone can use the platform for free, it's easy to navigate, and the curation process ensures that it offers only high-quality resources. As a result, users save time because they don't have to wade through the long lists of questionable results they might get with search engines.

To amplify the platform's impact and ensure that it reaches the people it would benefit the most, the Skillbase team partners with employment centers and community-based organizations. For example, they worked with a nonprofit to incorporate Skillbase's platform and resources into an English language class. And they have offered career center staffers training in the most effective ways to help clients who want to use Skillbase but are unfamiliar with digital tools.

As an aggregator of existing online content, Skillbase can continually expand its library by adding new third-party resources as they become available.



Frisco, Texas • Founded in 2011

trivie.com

MEASURES OF IMPACT

86%

Trivie analysis indicates that users of its training tools remember up to 86 percent of what they learned more than 12 months finishing a lesson.

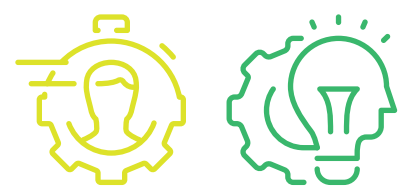
70%

An employer in the energy sector saw a 70 percent reduction in safety mishaps after more than 90 percent of its employees participated in safety training through Trivie.

27%

An employer in the pharmaceutical sector experienced a 27 percent increase in sales after using Trivie for sales training and onboarding activities.

SEGMENTS



What does Trivie do?

Trivie makes a training platform that delivers microlessons to users in the form of fun trivia games. Founded in 2012, Trivie started out in the gaming business, selling a trivia app called Battle of Wits that was once the No. 1 game on Apple’s App Store. Recognizing that people were learning things as they played the game, Trivie studied the science of learning and developed an AI-powered workplace training platform that uses gamification techniques to engage users and help them learn and retain information.

Built to offer personalized experiences that deliver measurable results through the process of adaptive learning, Trivie tracks individual users’ proficiency levels over time to assess how well they understand certain topics. It also predicts when people are likely to forget things and recommends personalized quizzes to help them recapture knowledge they may have lost. Other gaming features built into Trivie include badges, leaderboards, and mastery scores. Trivie uses these tools to tap into user’s motivations and learning preferences.

Trivie offers employers analytics that provide insights into what a workforce knows, where there are gaps in knowledge, and whether there are opportunities to deepen learning. The company’s goal is to ensure that the knowledge conveyed in its lessons is actionable and that learners put it to use on the job. It seems to have worked for one employer in the energy sector, which saw a 70 percent reduction in workplace accidents after using Trivie for safety training.

Why did JFF select Trivie?

Thanks to its roots in gaming, Trivie already knows how to use gamification techniques to build engaging digital experiences, giving it a head start on established training providers and makers of enterprise learning management systems, which are just beginning to explore microlearning and gamification.

Trivie eschews traditional one-and-done training and instead embraces adaptive learning, which is designed to improve learning outcomes over time through lessons delivered on an ongoing basis.

Trivie can be used on any mobile device and is therefore capable of reaching large numbers of workers, including those in the deskless workforce. Moreover, Trivie’s ability to assess employee knowledge and award badges to recognize capabilities can promote skills-based hiring and support the creation of internal pathways for growth.

UVA **EDGE**

Charlottesville, Virginia
 Founded in 2020
edge.virginia.edu

MEASURES OF IMPACT

12 months

Students can complete the six-course training program in 12 months.

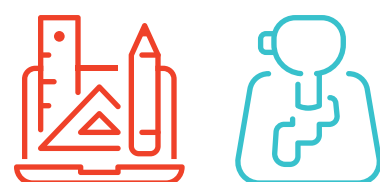
20 credits

People who complete the UVA program earn 20 transferable undergraduate credits.

\$300

UVA employees pay only about \$300 to participate in UVA Edge if they apply two years of their employee education benefit to the cost of tuition.

SEGMENTS



What does UVA Edge do?

UVA Edge is a new program at the University of Virginia’s flagship Charlottesville campus that offers working adults an opportunity to earn up to 20 college credits while developing foundational digital and human skills. A yearlong, three-semester program with six courses, UVA Edge features a liberal arts curriculum that covers a range of transferable skills, including critical thinking, communication, data analysis, and writing.

Initially conceived as a professional development opportunity for UVA employees who don’t have degrees, UVA Edge is also open to non-employees. With a mix of in-person evening classes and online instruction that can be accessed at any time, it’s designed to accommodate the schedules of working adults. It’s also affordable for staff members, who pay only about \$300 out of pocket if they apply two years of their education benefits to the cost of tuition.

Why did JFF select UVA Edge?

We chose UVA Edge as an Innovator to Watch because it offers a liberal arts education. Unlike many other short-term training programs—which typically emphasize the rapid development of in-demand technical skills that can lead to immediate jobs—UVA Edge opens up multiple pathways for graduates, who can choose to pursue a degree, apply their new skills to their current jobs, or seek new opportunities. UVA Edge helps people acquire evergreen skills that will always be in demand, no matter how the economy changes.

We also believe that UVA Edge can serve as a model that shows other employers how investing in ongoing employee training can pay off. Among other things, such programs can boost retention and expand the capabilities of an employer’s existing workforce. And for its part, UVA Edge creates pathways to degree programs for nontraditional students. We would like to see employers across the country adopt similar programs, so adult learners everywhere can benefit from this innovative model.



Conclusion

The greatest leaders and companies have long understood that their people drive their competitive advantage—more than strategy, more than intellectual property, more than the balance sheet. There’s simply no substitute for the inventiveness, adaptability, and commitment of an engaged and well-prepared team. Families, communities, and society also benefit when workers have the skills and the drive to help their employers—and themselves—succeed.



Alex Swartsel
Deputy Director, Acceleration

So the question then becomes, what tools, resources, and strategies should employers use to ensure that their employees have the support they need to learn and grow? And more important, how do we create new career pathways in which workers have opportunities—and the support of their employers—to continue learning and growing throughout their lives, not just in their first months or years in any one job?

Our work to chart this complex landscape points us to three vital priorities:

Lifelong learning ecosystems.

First, it's essential for workers to have a range of training and development options that meet them where they are throughout their lives. Not everyone needs the same learning opportunities in the same order. Some people might begin with foundational training through programs in the Prepare segment of the market, then settle into an occupation and occasionally participate in specialized Accelerate training to build skills for advancement opportunities, and ultimately decide that they want their jobs to be lifetime careers, meaning they'd need Recharge programs to keep their skills up to date. But other people might switch professions throughout their lives. They would need to regularly participate in immersive Shift training programs, and perhaps even look into comprehensive Journey offerings when they want to assess their options. Employers, workforce development leaders, training providers, and educators should strive to create an integrated work and learning ecosystem to ensure that people have access to the programs they need where and when they need them.

Supports that help learning stick.

Second, training is most effective when participants are able to internalize what they're learning and truly understand the material. To create the conditions that make that possible, employers and training providers must do what they can remove barriers that could keep people from fully engaging in learning. That might mean ensuring that learners have access to the devices and technologies they need, or helping them find reliable transportation or child care services. Moreover, they should provide training that's relevant to the work participants do, perhaps offering work-based learning opportunities or choosing other models that allow people to put the lessons they learn in the classroom into practice on the job. And they could build communities and networks of support that connect learners to other people who share their experiences and are wrestling with similar challenges, creating an environment where everyone feels like they belong and everyone helps one another and achieves more than they could on their own.

The right data to inform decisions and transform lives.

Finally, on the whole there's still too little information, and too few resources, to help workers learn about, navigate, and evaluate their training, education, and development options. Data that would help learners make these decisions, such as information about program designs and outcomes, is inconsistent at best—even for people who know where to look. Training providers should recognize that learners are valuable customers who are trying to make important career decisions that will have a big impact on their lives. We all have an opportunity to ensure that learners have access to all of the information they need to make informed choices about learning options—and at JFF, we're working with our partners to make that vision a reality.

Alex Hernandez of UVA Edge told us about “electric” learning experiences—the moments that leave us forever changed by something we’ve learned. Those moments look different for each of us, but we can all experience the same spark of inspiration. What would the world look like if every one of us had access to those moments of electricity—every time we needed to take the next step in our careers?

“The country is full of dynamic and diverse talent, and we can’t afford to leave anyone behind. And as technology evolves and changes the way that we work, we need to change the way that we learn. JFF is committed to ensuring that everyone has access to the most innovative and effective workforce education (or learning) and training solutions, preparing our labor force to drive competitive and resilient businesses and organizations.”

—Rusty Greiff, Chief Strategy and Growth Officer, JFF





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JFF is building a society in which everyone has access to the skills, resources, and credentials they need to achieve economic advancement. To reach this goal, we accelerate the alignment, transformation, and reimagination of the American workforce and education systems.

JFF Labs bridges JFF’s traditional field leadership with new relationships, practices, and business models. We partner with visionary entrepreneurs, Fortune 500 companies, and investors to foster innovative solutions that create positive change in education and workforce systems.

This market scan is a product of the JFF Labs go-to-market Accelerator. At JFF Labs, we identify and scale the most innovative and advanced technologies with the potential to transform America’s education and workforce systems.

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APPENDIX

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About The Workday Foundation

The Workday Foundation strives to positively impact our communities and support employees in their charitable contributions. Our goal is to create meaningful employment, break the cycle of poverty, and transform lives.



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