

# Digital Skills and Job Training: Community-driven initiatives are leading the way in preparing Americans for today's jobs

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Even as the unemployment rate falls, many positions that require digital skills go unfilled, while lower- and middle-income Americans often have trouble finding well-paying jobs. To address this, community-driven initiatives have emerged that aim to develop digital skills for Americans seeking to participate in the 21st century economy. These bottom-up initiatives are unfolding largely outside the traditional job-training ecosystem, which has been sluggish to respond to the changing economy and face declining budgets. These community-driven programs rely on collaboration with other digital equity efforts and have been resourceful in patching together funds to serve lower-income citizens. They operate at a small scale, show promise by engaging the community, but must build assessment into their operations to demonstrate results.

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## Jobs in the 21st Century

The Great Recession meant joblessness for many Americans, but unemployment struck those with lower income or less education the hardest. In 2013, 21% of Americans whose household incomes were \$20,000 annually or less were unemployed compared to just 3.2% of those whose household incomes annually exceeded \$150,000. Even as the unemployment rate has plummeted, the unemployment rate for those with a college degree is under 2.5% while those with a high school degree or less have an unemployment rate close to 5%.

As unemployment has fallen, the bulk of new jobs added in the economy have gone to those with college degrees, that is, people with skills to work in a 21<sup>st</sup> century economy that demands digital readiness. For those with high school degrees or less, the picture is less rosy. For this group, there are today nearly 3 million fewer jobs than at the outset of the Great Recession; moreover, lower-income people with jobs have endured stagnant wages.

One area of opportunity for low-income Americans is in so-called middle-skill jobs – jobs that do not require a college degree, pay a living wage, and usually require skills in dealing with technology and people. A 2016 study projected that the nation would need, by 2018, to increase the number of middle-skill workers by 3 million to meet demand. The current middle-skill workforce is aging, creating an urgent need for younger workers to fill these slots as current workers retire.

A deficit of digital skills explains some of the supply-demand gap between available jobs and people to fill them. In a workforce where about half of all job postings are for middle-skill positions, the vast majority (82%) of them require digital skills and these jobs generally earn a 17% pay premium over other middle-skill jobs. Yet as many as half or more of Americans have low or moderate levels of “digital readiness” and people in these groups have the demographic characteristics of middle-skill workers. Training to close digital-skills gaps and prepare people for jobs that require facility with digital tools seems to be the recipe to confront the challenge.

However, the federal job-training system has not always shown itself to be effective, faces declining budgets, and is sluggishly responding to changing workforce-skill needs. The good news is that a more nimble approach to dealing with digital skills and jobs is emerging at the community level in many parts of the country. There are lessons for stakeholders who look to community-driven, workforce training initiatives that emphasize digital skills.

## Job training in the United States

Recent initiatives at the federal level have sought to better manage once disparate federal training programs while giving greater latitude to states in allocating increasingly scarce funds. The Workforce Innovation and Opportunity Act of 2014 (WIOA) brought together federal programs for dislocated workers, youth, adult training services, and nationwide public employment offices. One thrust of the WIOA was to require states to better align training programs to employer needs and encourage them to contract with third parties to provide training services. But federal funding for job training (which is passed through to states) is declining. Workforce programs and post-secondary career and technical education programs have seen budgets fall by over one-third in real terms since 2001.

Using digital tools has been one approach to do more with less with respect to job training, but that has unfolded in fits and starts. The [National Broadband Plan](#) in 2010 recommended a “one stop” approach by which an online platform for job postings would evolve over time from a job search tool to a career planning resource. Today, the Labor Department’s [CareerOneStop](#) website directs people to job training, search, and career services, but falls short of the broadband plan’s ambitious vision of offering people a comprehensive job and career planning tool.

Toward the end of the Obama Administration, the [Broadband Opportunity Council](#) recommended that the Department of Labor (DOL) help states identify programs that might benefit from broadband investment. The emphasis was more on job-training programs as beneficiaries of broadband (i.e., the agencies would have high-speed access onsite) than on integrating broadband into service delivery. DOL has no systematic way to track whether states or localities use broadband in job training, although a [searchable database](#) that DOL manages indicates that just a half dozen states ever mention broadband in their job-training strategic plans.

Whatever the promise of these reforms, the evidence to date on the effectiveness of federally-supported, job-training programs is mixed. A [2015 meta-analysis](#) of active labor market programs around the world showed that these programs, which can take the form of public employment services, job training, or employment subsidies which pay a portion of the wage of unemployed workers as they gain skills on the job, often do not pay off. In the short term, there is little evidence that training programs have much impact on employment rates. Employment subsidies have no or even negative impacts on employment. The only positive impact was found in programs that bolster human capital – that is, skill-oriented training that make workers more productive. These benefits tend to show up over time in better pay for workers.

At the federal level, DOL has undertaken a “gold standard” evaluation of individuals who receive job-training services. [Preliminary results](#) show that, 15 months after training, there was little impact on earnings for those who had the full range of intensive training services (relative to those who had a less expansive set of interventions). And those with the full range of WIOA services were less likely to have jobs with fringe benefits such as health insurance. Clients who received a narrower range of services had higher earnings than others, though this difference may be due to factors for which the study was unable to control.

## Middle-skill jobs, job training, and technology

The decline in workforce training funds at the federal level is playing out as demand for middle-skill jobs remains strong and supply of workers with such skills falls short. According to the [National Skills Coalition](#), middle-skill jobs comprise 53% of today’s labor market, but 43% of workers have skills appropriate to such jobs. Burning Glass Technologies’ 2017 “[Digital Edge](#)” report has a slightly lower estimate of the middle-skills market at 46%. But Burning Glass also finds that a strong majority (82%) of middle-skill jobs are digitally intensive. Put differently, 38% of all job postings are digitally-intensive, middle-skill jobs.

They are good jobs. Digitally-intensive, middle-skill jobs pay more than non-digitally intensive ones and are often pathways to higher-paying jobs that ordinarily require at least a bachelor’s degree. These jobs are also in [demand throughout the country](#), not just in traditional technology clusters such as Silicon Valley or Boston. [Demand for tech-intensive](#), middle-skill jobs is likely to be robust for some time.

## The response to the middle-skill tech-job gap is local and organic

If the federal government's job-training response to changes in the workforce seem tepid, the opposite is true for community-driven initiatives to develop digital skills. Here are just a few examples of how communities have used digital skills as center pieces for job training for middle-skill jobs.

In Ohio, the [Digital Works](#) program helps people acquire the digital (and other) skills needed to be part of the modern workforce. Digital Works has a three-week training program to prepare people to work from their homes. Demand for such jobs (e.g., customer service calls from a variety of industries) is high. Many potential employees prefer to work at home (e.g., those in rural areas where job opportunities are scarce but the commute to urban areas is too far) or have to work at home (some ex-offenders). The Digital Works training is not just about digital skills, but also the “soft” skills to work independently and handle sensitive or challenging interactions with customers. Digital Works has programs in eight different states and has to date placed 900 workers.

In Westminster, Maryland, the [Mid-Atlantic Gigabit Innovation Collaboratory](#) (MAGIC) is part of an initiative to build a fiber-optic network to serve all households and businesses in town. MAGIC addresses the “fiber, what for?” question. Officials with MAGIC note that half of Westminster residents go elsewhere to work each day – usually in the Baltimore metro area. MAGIC seeks to spark an interest in technology and innovation through events aimed at students. One project is “capture the flag” that gives students a cybersecurity problem to address. The project is also networked, in that students connect with people in other gigabit-network cities (such as Wilson, North Carolina, and Orem, Utah) to collaborate.

Overall, MAGIC's work touches about 400 students in a given year. Its financial support is mainly from the city. Because it undertakes its training in a non-traditional way, it is not clear whether MAGIC might be eligible for state or federal workforce funds – although MAGIC officials may explore that.

Louisville, Kentucky, has an explicit digital-inclusion plan that aims at using a range of community resources to prepare citizens for middle-skill jobs. The city's digital-inclusion plan also places a priority on preparing people for jobs in professional environments where digital skills are necessary. To carry out these goals, Louisville's Metropolitan government partners with the private and public sectors, as well as community anchor institutions. Louisville's digital-inclusion efforts have included collaboration with the start-up community in the metro area, but it has also become involved with other public-sector programs. One is with the Louisville Free Public Library, which places digital literacy as a high priority in its service provision. Louisville's metro government has also joined forces with the federal government's [ConnectHome USA](#) initiative to encourage online access in public housing. For the most part, the digital-inclusion work in Louisville is done with little public funding and a lot of donation of time and resources (e.g., refurbished computers). [After a year of operation](#), however, the initiative is trying to build a digital-inclusion fund to be housed at the [Community Foundation of Louisville](#).

The greater Kansas City area has been at the forefront of national digital-inclusion efforts, driven in part by its status as the first Google Fiber city, which the company announced in 2011. The community has formed the [Kansas City Coalition for Digital Inclusion](#) that has broad participation from schools, the public library, local government, and the entrepreneurial community. Much of the coalition's work focuses on the digital divide as traditionally understood – getting low-cost computers in the hands of those in need, connecting in-need populations to discounted service offerings, and cultivating digital skills.

Job training also comes into play. Kansas City's 2015 [Digital Inclusion Report](#) explicitly called for local businesses to engage with digital inclusion in order to bolster the area's level of workforce skills. The report noted that people whose jobs increasingly rely on technology could find themselves "on their own" to figure out workforce relevant tech skills absent any community-wide programs to support digital skills. Kansas City also has a digital-inclusion fund that invests in a range of projects – several of which include digital skills for the workplace.

The above is far from a comprehensive survey of community-driven initiatives to cultivate digital skills for low-income people. But the examples provide a flavor of how communities are addressing the digital-skills challenge.

## Lessons

This overview of the community-driven, job-training ecosystem points to several lessons:

- 1. Community-collaboration is baked into emerging job-training initiatives that focus on digital skills.** Digital Works is an outgrowth of a 2009 [Broadband Technology Opportunity Program](#) (BTOP) grant that aimed to close the digital divide in Ohio. That BTOP grant went to [Connect Your Community](#), which has roots in northeast Ohio dating to the early 2000s. Westminster's MAGIC grew out of the construction of a citywide-broadband network that required community collaboration to take hold. And Louisville and Kansas City saw their digital-skills job-training programs coalesce in conjunction with Google Fiber announcing its intent to build networks in each city – an award that the company made only when the community had shown a capacity to collaborate.
- 2. Digital-skills job-training programs are closely tethered to other community digital initiatives.** In several examples above (e.g. Digital Works and Kansas City), digital-skills initiatives started their lives as programs to increase the number of people with online access at home. Several are also part of initiatives to build high-speed networks to all corners of the community. Cultivating digital skills is embedded in wider efforts to address digital equity. When it comes to home broadband adoption, there is a nearly 40 point gap between households headed by a person with a high-school degree or less (46%) and those headed by someone with a college education (85%). Thus, the need for digital-equity interventions beyond job training is real.
- 3. The scale of these initiatives is modest:** In the examples above, the number of people touched by the programs count in the hundreds. Although there is no census of job-training programs devoted to digital skills, it seems unlikely that those which exist can fully meet the needs of an economy where the number of job openings exceeds the number of those unemployed, and where digitally-intensive, middle-skill jobs make up about 4 in 10 of all job postings. At the same time, the modest scale of these initiatives may help them gain the trust of the community members they serve.

## The path forward

With federal funds for job training trending downward, and with returns from existing programs unclear, it is too much to expect government funds to support emerging community-based initiatives to train people in job-relevant digital skills. Moreover, these community initiatives are too new to understand their impacts – and given the funding climate, it would behoove these initiatives to build assessment into their operations.

Yet the fact that the several examples cited here originate at the community level is a cause for optimism. As sociologist Patrick Sharkey has documented, the [presence of newly-founded, non-profit groups](#) is among the reasons why crime fell in many cities over the past several decades. This doesn't mean that community-driven programs to develop digital skills will have a positive impact; it merely suggests that the emergence of these programs has promise. Going forward, it may make sense to network these job-training initiatives so that they can learn from each other and provide a resource for other communities trying to get started. As they share lessons and assess results, these initiatives will have the basis to make a case for more funding. This could, in turn, help expand the scope of such programs and, therefore, prepare more Americans for well-paying jobs.



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