Working on Working:
Reimagining Training Models in a New Era

Business Innovations for the Future of Work
Drexel University
Philadelphia, PA

November 6, 2019

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The views expressed today are my own and not necessarily those of the Federal Reserve System or the Federal Open Market Committee (FOMC).

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Good afternoon. It really is important to have this group assembled here to have these conversations, so I first want to thank everyone for coming.

Second, I want to deliver a disclaimer that's familiar by now to our friends and partners: The views I express today are mine alone and do not necessarily reflect those of anyone else in the Federal Reserve System.

The agenda topics are so important because we're addressing the future of work at a distinctive point of history. No one here needs to be told that the landscape of work is changing. But I would argue that that's always been the case: From the Industrial Revolution to the rise of Silicon Valley, we have always found new and more efficient ways of doing things. It's a fundamental part of the human story.

Things are, however, a bit different this time around. For one, the change is coming a lot faster than it used to. For another, the labor market itself is different. Together, they create a unique set of circumstances that pretty much gives us the chance of a lifetime.

Unemployment is at a half-century low. Businesses are having trouble finding skilled workers. This has, to some extent, forced us to view the workforce from a new perspective. In an employers' market, it's easy to see jobs as individual vacancies; there's a seemingly endless supply of candidates, each one more credentialed than the last. But when the candidates are in shorter supply than the jobs, we have to think about how to solve the problem systemically —

not just to fill the vacancies we have now, but to train, recruit, and upskill a workforce that can adapt to future needs. Because we know that future is coming at us fast.

An abundance of research, including from the Philadelphia Fed, has shown the effect automation will have — and is already having — on work. There is no question that technology is altering or eliminating some jobs, just as it has throughout history. Research shows, however, that other hallmarks of those previous cycles are also evident now: Where some jobs are destroyed, others will emerge. The Luddites may have been right about how the mechanized loom would affect them individually, but it created a boom in the textile industry that required a host of new workers. Today, too, we see new jobs arising from the exact machines that rendered the old ones obsolete: Even five years ago, who'd heard of a professional drone operator? Now employers can't find enough of them.

What's crucial in the research on artificial intelligence is that we don't just know what jobs are likely to go, we know who's likely to be most affected. It's the people who are already disproportionately represented among vulnerable workers — women, people of color, younger people, and workers in lower-skilled positions. But this presents an opportunity. We can pinpoint the people who'll need support; the people businesses can view as the next wave of skilled workers. That allows businesses to create a pool of desperately needed talent, but more importantly, it means we can create access to *careers,* instead of the soul-crushing cycle of taking a job, losing it to a machine, finding a new one, and being automated out of that. This is an incredible opportunity, as long as we make that investment, and make it in the right way.

We have an abundance of research that points to the skills we'll need in, and for, the future. People will need technological skills, of course — everything from your sandwich order at Wawa to health care is being digitized. But one of the most important lessons of AI's march forward is that it makes the advantage of distinctly human skills entirely clear. More than anything right now, employers are looking for those abilities, the "soft skills" that can't be robotized. Which means that as we look at the methods and programs we put into place to train people — whether they're our existing staff, people who'll be displaced by automation, or people still on the sidelines — we know that technical skills are key, but they should be taught with an emphasis on adaptability and critical thinking. We need programs that arm people with practical knowledge, while honing those core, uniquely human skills that will allow them to not just perform well in one specific job, but to succeed as that job — and the next one — evolves. And, importantly, to move up the professional ladder.

One of the most important factors in this event's discussions is that it convenes a multitude of players. Because none of this can be accomplished by a single group or sector.

It would be easy to frame this discussion in terms of outcomes — who benefits and why that should motivate them. But the truth is, there's no one discrete incentive for any particular sector; there are a thousand good reasons, all intertwined, that matter to all of us. A skilled, adaptable workforce is good for everyone. It gets business done, it draws investment to cities, and it lifts the local economy. It helps us build more inclusive growth and a more equitable society.

And it stands to reason that if we all benefit, we should all play a part.

Each of us, whether we come from a public, private, philanthropic, or academic organization, has expertise that the rest of us need.

It's a core tenet of management science that the most effective leaders assemble a team of experts.

In our work at the Philadelphia Fed, we've gathered examples of this in our Research in Action Labs. Our academic research provides a host of evidence that we're working to apply practically in communities around our District. But it obviously wouldn't work if we just marched in and told people what the academic paper says we should do. We have to have partners from all corners — they're the ones with the expertise. So when, for instance, we launched the first RIA Lab in northeastern PA to improve transportation infrastructure, we had representatives from the community, business, labor, city officials. Everyone played a role.

What's important about this is that we collectively found a way to address both the region's and individual participants' specific issues. For instance, Geisinger, the main health-care provider in the region, is feeling the industry-wide pressure of rapidly increasing need coupled with a workforce in short supply. And like any other job, if your employees can't get to you, you don't have a staff. But a light bulb went off during the process that they could solve a second problem: They were losing money when people didn't show up to their appointments. So they started an "appointment navigator" initiative to cover those last miles, whether by van, taxi, or ride share, to ensure their patients could get there.

That's the kind of creative thinking we need right now. And while each city and town is unique, we now have a blueprint we can hand to other areas.

So this conversation between and across experts is vitally important, and that outside-the-box thinking is equally crucial. We hear from employers, for instance, that there's a massive skills shortage. And there's evidence to back that up. But we also hear from hiring experts — and our own research shows — that some of that might be mitigated by different attitudes and approaches to recruiting.

Our economists analyzed a huge data set — more than 90 percent of all online postings — to look at the factors affecting the length of time a job stays open. One of those researchers, Ryo Tashiro, will discuss this study with you, so I'll keep the spoilers to a minimum. But overall, they found what we would expect, which is that routine, manual positions filled quickly and the ones requiring cognitive skills stayed open longer. Or, the ones most likely to automate were most easily filled, while the ones requiring innately human skills were hardest. They also found that the higher the bar for educational attainment or years' experience, the more time the position went unfilled.

The clear lesson is that it's harder to hire a psychologist than an assembly-line worker. But there may be something more, something we saw in a different area of research. "Opportunity occupations" are ones that pay at or above the median wage but don't require a four-year degree. And while, by definition, they don't require a traditional degree, there was evidence that employers began inflating degree and experience expectations in the years after the recession. We saw this trend in other areas as well, and while it has largely reversed itself, it's a good reminder to think about what we're really looking for. As someone who comes from academia, it surprises people when I say we often assign too much power to that traditional degree. This moment requires thinking creatively, and that includes reassessing our assessment. Looking beyond degrees as the sole benchmark of skill can help mine those untapped resources.

And, finally, that shift in thinking has to extend to how we see workers — not as an expense, but an investment; a core asset that's essential to the business. That could be upskilling existing staff or investing in local potential. All those people at risk of being automated out of a job could go through the revolving doors of the traditional "train and pray" model, or we can invest in them to give them, and Philadelphia, a better future.

Obviously, we can't ask people to make an investment we're not willing to make ourselves. In 2018, the Philadelphia Fed brought on Social Finance to help us launch an innovative new funding model for workforce investment — one that allows private sector firms to be investors, rather than simply serving on boards or allocating philanthropic dollars.

Outside of this room, that might not sound radical. But in the world of public-private partnerships, it's essentially turning the old model on its head. And we're very pleased that two of those partners are with us today.

The first is Philadelphia Works, our local workforce investment board, which will be providing the upfront investment in this pilot training program. The other is a company that is on the frontline of technological and workforce change, and knows firsthand the skills that are vital to Philadelphia: Comcast.

As part of this new financial model, Comcast is committed to paying for outcomes once they are achieved, such as staying on the job for over six months. The model also creates a better feedback loop between employers and the workforce board to make it more effective.

At the heart of this partnership are the subjects we're tackling here today: training that develops both technical and adaptive skills; a collaborative approach that brings in experts across sectors; and a fundamental understanding that workforce development is an investment.

And now, I'm very pleased to introduce one of the people who made this pilot happen, the co-founder and CEO of Social Finance, Tracy Palandjian.

Under Tracy's direction, Social Finance is leading the field of Pay for Success financing and Social Impact Bonds. She brings an unparalleled perspective to this conversation, so please help me welcome her to share some of those insights.