THIRD WAY

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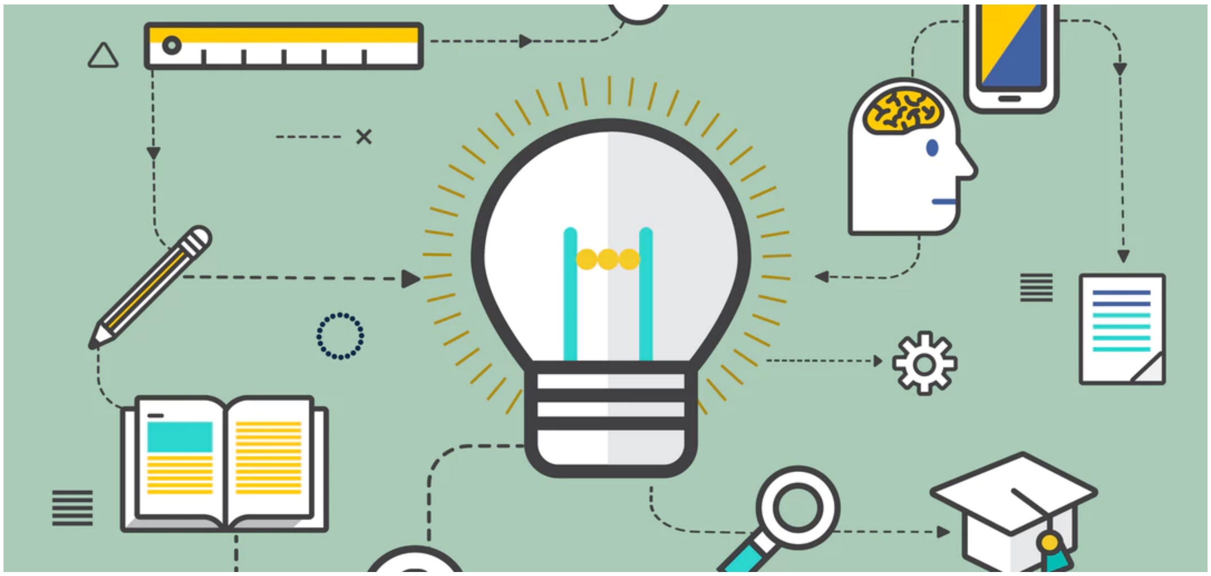
Apprenticeship America: An Idea to Reinvent Postsecondary Skills for the Digital Age



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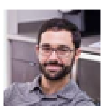

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Executive Summary

A crisis of human capital today is keeping millions of Americans from the opportunity to earn a good life. Employers' growing demand for skilled, well-paid workers is unmet, because—outside of the four-year college degree—postsecondary education is not sufficiently connected to the modern workplace. It is an industrial-era model failing to deliver in the digital age.

- Apprenticeships are a fitting solution to this problem—they allow workers to earn while they learn and provide skilled training inextricably driven by employer demand. For employers, apprenticeships provide a better-trained, more reliable workforce. For workers, apprenticeships allow them to make multiyear investments in their future with the clarity of good-paying jobs at the finish.

- Apprenticeships should be the centerpiece of a skills training system in our evolving, modern economy. But a surprisingly few 50,000 Americans officially complete apprenticeships each year. Apprenticeship America would disrupt the current model of workforce training, quickly scaling to 1 million official completions per year.

- Apprenticeship America will follow our successful public university model—in scale and ambition—by establishing a flagship Apprenticeship Institute in every state. Collectively equipped with $40 billion in federal funding, Institutes will launch new apprenticeship programs and guide apprentices to success by functioning as hubs: proactively engaging employers, workers, technical colleges, unions, and other organizations that make apprenticeships work.

- A new, subsidized Federal Apprenticeship Loan will provide the incentive to small- and medium-sized employers to join the 50-state Institute system and to train and hire more apprentices. An upgraded, streamlined apprenticeship body within the Department of Labor will oversee the new system and collect outcomes data to ensure program quality.

Over the past two centuries, we established free primary and secondary education and public two- and four-year colleges in every state. Now, we must add the missing piece, making apprenticeships a ubiquitous part of our educational system. Apprenticeship America would do just that. And it is a critical component of a modern opportunity agenda that boldly redefines government's role in the 21st century.

This spring, 3.6 million people will toss high school graduation caps into the air. [1] Some will head to an elite college across the country or the community college across town. Others will join the military or jump into the workforce. It's the first big decision of these new graduates' working lives and, arguably, the most important one. How many of them are making the right decision, setting themselves up for success in an economy that will change more over the course of their working lives than it has for any other generation?

Not nearly enough.

To help millions of Americans earn a good life in the digital age, we need to overhaul our postsecondary education system. That starts with creating a national apprenticeship system as robust and prevalent as our public university system.

The Problem

The main shortcoming of US postsecondary education is this: **Too few workers are being trained for good-paying, middle-skill jobs**. These jobs require significant training beyond a high school diploma but short of a four-year college degree. The training required can involve an associate's degree, a professional certificate, or some other specialized training.

Middle-skill jobs are not an isolated segment of the jobs market. Rather, they include 251 occupations, ranging from acute care nurses (earning $70,000 a year) to wind turbine service technicians (earning $54,000 a year). [2] These jobs make up 53% of jobs in the United States, but only 43% of the country's workers are trained at the middle-skill level. [3] Considering that there is an oversupply of low-skilled workers—21% of the workforce relative to 16% of jobs—it's clear that educating more people at the middle-skill level would spread more opportunity to more people.

So if the jobs are there, why aren't more workers completing training for in-demand, middle-skill work? High school graduates simply do not have enough high-quality pathways to get the skills they need to earn in an economy marked by disruption.

Employers' growing demand for skilled, well-paid workers is unmet, because—outside of the four-year college degree—postsecondary education is too disconnected from the modern workplace. It is an industrial-era model failing to deliver in the digital age.

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Fortunately, there exists a proven system used to pull educators and employers together in a way that gives workers better and more reliable pathways to middle-skills jobs: the apprenticeship. In other developed economies, such as France, Scotland, Germany, and England, apprenticeships are a consistent and dependable portion of job pipelines. In Switzerland, for example, 70% of all students choose apprenticeships and 30% of companies participate. [4] The country also boasts a 58% college enrollment rate, proving that apprenticeships are a complement to—not a detractor from—college education. [5] How much more ubiquitous are apprenticeships in Switzerland? In 2012, just shy of 150,000 Americans began an apprenticeship. If we had the same rate of participation as Switzerland, that figure would rise to 3.1 million. [6] In other words, US employers have only begun to uncover the potential of apprenticeships.

What is an apprenticeship?

The Department of Labor considers an employer-worker relationship to be a qualified apprenticeship when:

- The worker receives on-the-job training under the direction of the employer's personnel (normally at least

2,000 hours);

- The worker also receives theoretical and practical classroom instruction (a recommended minimum of 144 hours);

- The worker earns a wage during his or her training; and

- The training results in an industry-recognized credential after one to six years.

While apprenticeships have taken a large role in the postsecondary systems of several other advanced economies, there is still a dearth of them in the United States, leaving workers without a value option post-high school. Two root causes explain why:

1. Our apprenticeship system was built for the industrial era, not the digital one.

Currently, apprenticeships are largely contained to traditional, blue-collar occupations such as those in manufacturing and construction. These industries require a highly-trained workforce as technologies and processes become more sophisticated. Together, these occupations comprise 11.4% of US employment but also contain more than 29% of apprenticeships. [7] But according to the Harvard Business Review, there are currently 47 occupations that are ripe for creating new apprenticeships. [8] These occupations—which include welders, computer-controlled machine tool operators, tax preparers, and solar installers—have in common a requirement for post-high school training, above-average worker stability, and the provision of a living wage. Research has shown that when employers do create new apprenticeships, their return on a dollar invested averages $1.47. [9]

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Just as our apprenticeship system hasn't evolved to incorporate new industries, it has also failed to accommodate the needs of modern workers. In short, there is a deep shortage of support structures for increasingly diverse apprentices. In a Mathematica study of 10 states with registered apprenticeships, women within male-dominated apprenticeship programs had lower completion rates. The women attributed these rates to barriers such as lack of childcare and indicated they required different supports to sustain themselves. [10] To improve their odds of successfully enrolling in and completing apprenticeships, many workers benefit from supportive services such as childcare, academic tutoring, mentorship, and career counseling. Some support services are provided by unions when they offer apprenticeships—that's why unions boast higher completion rates. [11] But all too often, support services are an afterthought, making apprenticeships less accessible to diverse populations.

2. The process to register an apprenticeship is burdensome and bureaucratic.

So why haven't employers of these occupations launched apprenticeships on their own? Industries without a tradition of apprenticeship have been slow to adopt the model in part due to what employers describe as a burdensome, bureaucratic registration process.

Businesses are required to complete a lengthy set of tedious paperwork to register their programs with the federal government. Further, they have to specifically design the curriculum to meet Department of Labor requirements instead of following requirements that are appropriate to their industries' standards. The result? Businesses are either going around the system and forming unregistered apprenticeships, or they are remaining on the sidelines altogether.

The head of Human Resources for a Grand Rapids-based manufacturer summed up the situation: "We used to have a registered program, but now all our training is unregistered. . .The difference: we have more freedom to decide how long the program should be, the mix of skills and how many hours trainees should spend on exactly which tasks. There's also less paperwork – we don't have to deal with an onerous application process." [12]

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Left Behind

A troubling consequence of our arcane apprenticeship system is that it leaves too many women and people of color behind. Women make up nearly half the US workforce but hold less than 10% of apprenticeships. [13] In construction, the industry with the most apprenticeships, only 2.1% of them are held by women. There's also a racial gap. A 2015 Department of Labor study found that within occupations, people of color are less likely to hold apprenticeships than their white counterparts. [14] Furthermore, the average age of a new apprentice in the United States is 29, which is higher than it would be if employers were actively and successfully recruiting young people as they enter the postsecondary system.

According to the American Enterprise Institute, "Some limited survey data suggests that the number of apprentices in unregistered programs greatly exceeds the number of registered apprentices." [15] But if an apprenticeship program is unregistered, it likely does not provide the same benefits and protections of a registered apprenticeship. Hours of classroom instruction may be minimal, wage growth opportunities may not exist, and the program may not conclude with a recognized credential. Unfortunately, far too many employers have remained on the sidelines altogether, offering neither registered nor unregistered apprenticeships.

The Solution: Apprenticeship America

Apprenticeship America will create a national network for apprenticeships as robust as our four-year public colleges. In the 2016-17 school year, public colleges and universities conferred 1.2 million bachelor's degrees. [16] The number of active apprentices that year was 190,000. [17] Apprenticeship America would set the goal of eliminating that deficit, achieving a six-fold increase in annual apprenticeship completers or, simply put, 1 million new apprenticeships. Apprenticeship America is centered on two critical policy interventions: the creation of 50 flagship Apprenticeship Institutes and the establishment of a new Federal Apprenticeship Loan.

50 Flagship Apprenticeship Institutes

The backbone of our national network would be one Apprenticeship Institute in every state, becoming flagship institutions the way land grant colleges have become. The physical presence of institutes dotting the country is not only necessary to bring apprenticeships to every community, but —this model is also the missing ingredient that has stunted the model of apprenticeship in America.

An apprenticeship institute builds on the existing model of an apprenticeship *intermediary*: an organization that builds a vital link between employers, educators, and apprentices. It does so by helping to establish apprenticeship programs and guiding apprentices from recruitment to completion. Another way to think of an intermediary is as a hub, because it sits at the center of multiple, vital participants in an apprenticeship, to ensure all involved move forward in a cooperative way. Intermediaries have been successfully proven in Germany, Switzerland, and some US states. The Urban Institute's Robert Lerman writes, "Nearly every country with a large-scale apprenticeship program relies heavily on intermediary organizations." [18] Jobs for the Future's Myriam Sullivan writes, "Strong intermediaries are crucial to the development and management of apprenticeships." [19]

In Switzerland, 70% of all students choose apprenticeships and 30% of companies participate. The country also boasts a 57% college enrollment rate, proving that apprenticeships are a complement to, not in competition with, a college education.

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Each of these 50 Apprenticeship Institutes would be scaled to meet the needs of their particular states and designed to meet the needs of American workers in the digital age. For large states, additional funding would be provided to establish branches to better reach all communities. Just as, for example, the University of California system has nine college campuses, the Apprenticeship Institute in California could establish a similar network of satellite institutes throughout the state.

Specifically, an Apprenticeship Institute would:

1. Identify locally in-demand occupations ripe for apprenticeships by using labor market data and maintaining active engagement with employers, unions, and state and local government workforce offices;

2. Actively recruit employers, particularly small- and medium-sized businesses, to establish new apprenticeship programs—often in partnership with each other—or expand existing apprenticeship programs;

3. Guide employers through the process of designing high-quality apprenticeship curricula, including assisting in the government registration process and identifying appropriate local colleges or unions to provide classroom instruction;

4. Elevate the stature of apprenticeships among potential apprentices and their families through ambitious local marketing and by exposing K-12 students to apprenticeships as early as middle school;

5. Recruit and match young people with available apprenticeships by maintaining active relationships with high schools, particularly with their guidance counseling offices and community and technical colleges;

6. Recruit and match mid-career workers with available apprenticeships by focusing on formerly incarcerated individuals, workers displaced by trade or automation, recovering addicts, and workers returning to the labor force after family caregiving responsibilities;

7. Supplement classroom and technical education of apprentices by providing universal soft skills education for apprentices in all occupations;
8. Provide each apprentice with a professional career counselor, a mentor—typically a successful former apprentice in his or her occupation— and academic tutoring when necessary;
9. Provide or connect apprentices with young children to affordable childcare services; and
10. Continuously evaluate the quality of the apprenticeship curricula, recruitment and partnership efforts, support services, and publicly report on quality metrics established by the Department of Labor.

For apprentices, the presence and importance of an Institute in their lives would be so sweeping and fundamental, that Institutes would become for apprentices what flagship colleges are for four-year students.

The Federal Apprenticeship Loan

To supercharge the availability of apprenticeships, Institutes would have a new tool: a new Federal Apprenticeship Loan.

Even with the help of Institutes, employers looking to start or meaningfully expand an apprenticeship program must make an upfront investment before seeing a return. By definition, new apprentices are less productive than fully trained workers. Yet, they still must be paid. To help with that upfront investment, new Federal Apprenticeship Loans would be made available to small- and medium-sized employers so apprenticeships flourish across sectors and industries.

To maximize its impact, the Federal Apprenticeship Loan would be:

- Offered to employers with fewer than 5,000 workers;
- Offered in sums of up to $10,000 per new apprenticeship position created;
- Fully guaranteed by the federal government, allowing for extremely low, near-risk-free interest rates;
- Administered directly by the federal government, similar to federal student loans;
- Repayable over four to eight years, depending on the length of the apprenticeship; and
- Partially forgiven when employers meet certain quality benchmarks with their apprenticeship programs. For example, the federal government would pay for as much as 100% of remaining loan interest and 25% of loan principal to those employers with high rates of apprentice completion, retention, or wage growth.

In the long run, apprenticeships are a worthwhile investment for a company. That's why direct payments to companies, in the form of a guaranteed loan as opposed to tax credits or grants, are the most appropriate incentive program to go alongside Apprenticeship Institutes.

Apprenticeship America sets the goal of achieving a six-fold increase in annual apprenticeship completers or, simply put, 1 million new apprenticeships.

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From Vision to Action

It's hard to understate the scale of change required to create 50 flagship Apprenticeship Institutes under Apprenticeship

America. Some would be scaled-up existing intermediaries, and others would be built from scratch. Institutes would reach a range of localities by having satellites scattered across their respective states. With the goal of collectively adding 1 million apprenticeships per cohort, Institutes on average would have to support 20,000 apprentices per cohort, a scale similar to that of flagship public universities.

To get the Institute network in place, simply increasing funding through the current programs will not suffice. Rather, a new Department of Labor (DOL) Division of Apprenticeships should be created, led by a new Deputy Secretary of Labor for Apprenticeships. This would put the US government's apprenticeship body three notches higher on the organizational chart. The new division would include three offices:

- The new **Office of Apprenticeship Institutes** would rigorously evaluate applications for, select, and fund the 50 Apprenticeship Institutes, selecting one flagship institutes for each state. The office would prioritize applicants that demonstrate an ability to leverage existing public institutions, such as community college system. It would also ensure that only applicants with a robust quality assurance process would be eligible for the institute designation, ensuring that quality controls are built into the national network from the beginning. Institutes would have access to $40 billion in DoL grants over the first 10 years of the program, which would be awarded by this office;

- The new **Office of Apprenticeship Investment** would oversee the administration of Federal Apprenticeship Loans. This office would use a $5 billion fund to guarantee the loans and to create and administer loan forgiveness incentives; and

- The repurposed and retooled **Office of Apprenticeship Evaluation** (from the existing Office of Apprenticeships) would continue to register individual apprenticeship programs but under a new, streamlined process. It would also collect individual apprentice unit-level data from all participants nationwide over the course of their enrollment and years after, in order to evaluate apprenticeships by the extent to which they raise workers' wages. This would dramatically improve upon existing quality controls at the federal level.

Altogether, Apprenticeship America would likely cost around $50 billion over a ten-year period. One approach to financing this cost is by eliminating various loopholes in the Trump tax bill. One example: The expansion of bonus depreciation is specifically targeted to businesses that invest in physical equipment and machinery. [20] It has a rationale in a recession, but we're not in a recession. Repealing that tax break and devoting the revenue to investment in human capital would indeed be an enduring and profitable long-run investment for the US economy.

An apprenticeship institute builds a vital link between employers, educators, and apprentices. It does so by helping to establish apprenticeship programs and guiding apprentices from recruitment to completion

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Conclusion

Jobs in the new digital age require vastly new skills. As work evolves, so too must the training and options for postsecondary education. We need more college completers, to be sure. That's why we've proposed a College Value Guarantee to improve college quality and graduation rates. But workers must also have other opportunities to earn a good life. That's the goal Apprenticeship America aspires to achieve.

For apprentices, the presence and importance of an Institute in their lives would be so sweeping and fundamental, that Institutes would become for apprentices what flagship colleges are for four-year students. What the University of Colorado at Boulder is to the engineers, economists, and biologists who graduate from there is what the Colorado Apprenticeship Institute would mean to its graduating apprentices in welding, graphic design, and underwriting.

With a national apprenticeship system as robust as our four-year public colleges, our education-to-workforce pipelines will become as varied and dynamic as they must become, in order for workers to succeed in the digital age.

TOPICS

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ENDNOTES

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