

NATIONAL AFFAIRS

Earn-and-Learn Education

Bruno V. Manno

FOR AT LEAST the last 25 years, the primary goal of American K-12 schools could be summed up in three words: college for all. As a consequence, most K-12 schools today don't see career education as central to what they offer. Emphasizing vocational training and experience is thought to undermine the lofty ideal of ensuring that every student attends college and completes a four-year degree.

Though it stems from noble intentions, our focus on preparing students for higher education does not serve them well. Rather, it fails to provide young people with the practical knowledge and skills that would benefit them once they graduate. It also produces an experience gap. Young people leave high school with little understanding of the world of work and the pathways to employment. This disconnect makes it more difficult for them to transition from school to a career.

Today, college for all has lost significant public support. Many no longer believe that a college degree is the default route to success. At the same time, older ways of preparing for a career are gaining popularity.

As college-attendance rates drop, the apprenticeship program is becoming the new pathway to a career. Unlike students at a conventional college campus, students in apprenticeship programs earn a living through their work, learn from mentors in the workplace and the classroom, and receive an employer-recognized credential while taking on little to no student debt. This earn-and-learn model is spawning new forms of apprenticeships — including youth apprenticeships, pre-apprenticeships, and apprenticeship degrees — across the country.

Americans' appetite for replacing the college-for-all paradigm with more flexible, pluralistic pathways to opportunity is growing, and will

BRUNO V. MANNO is senior advisor for the Progressive Policy Institute and a former U.S. assistant secretary of education for policy and planning.

likely continue to do so. Different approaches to the earn-and-learn apprenticeship model can help meet this demand.

THE DEMAND

The past few years have witnessed a sea change in how Americans view college. The non-profit Populace reports that when Americans were asked to rank their priorities for K-12 education, “being prepared to enroll in a college or university” dropped from the 10th-highest priority (out of 57) in 2019 to 47th in 2022. Other surveys of adults and young people bespeak a growing skepticism of the value of a four-year degree. A *Wall Street Journal*/NORC survey reports that more than half of Americans (56%) believe a college degree is not worth the cost. Such views are strongest among those aged 18 to 34, as well as college graduates themselves.

Unfortunately for college-enrollment officers, Gen Z high-school students appear to agree. Today, only around half of them are considering a college degree—down more than 10 percentage points from before the pandemic. At the same time, many employers no longer use a college degree as the gatekeeper credential for jobs; instead, they’ve shifted to skills-based hiring.

Young people and their families are increasingly voting with their feet when it comes to college enrollment. First-year enrollment in four-year institutions for the fall of 2023 dropped 3.6% from the previous year, while enrollment in institutions granting associate degrees increased by the same amount. Meanwhile, the number of students opting for short-term credentials or certificates over two-year degrees increased by 9.9%. “Associate [degrees] are doing better than bachelor’s,” concludes Doug Shapiro, vice president for research at the National Student Clearinghouse. “Certificates are doing better than associates.” Taken together, these shifts signal a move away from four-year degrees and toward more practical, targeted types of learning.

If the allure of college is waning, what do Americans want out of K-12 education?

The Populace survey reports that Americans’ current priority for K-12 schools is to ensure that young people develop tangible skills. Other top priorities for K-12 education—such as ensuring young people can solve problems, demonstrate character, and do basic reading, writing, and arithmetic—are closely related to skill development. However, only one in four

Americans believe schools imbue students with practical skills, and just a third think they help cultivate problem-solving abilities and character.

Such priorities, combined with the skepticism of the four-year degree, render the apprenticeship model's resurgence unsurprising. Across demographics, there now exists a consensus that apprenticeships help people develop practical knowledge that will serve them well in the workplace. Over nine in 10 Americans view apprenticeships favorably, while more than six in 10 say apprenticeships make people more employable than a college degree. Ninety-four percent agree that apprenticeships help individuals pursue new careers.

Parents and young people express similar views on the subject. When asked to choose between a full-tuition college scholarship and a three-year apprenticeship leading to a good job, 57% of parents opt for apprenticeships. Two-thirds of Gen Z high-school students say post-secondary learning should occur on the job through internships or apprenticeships. Only a third say they would ideally learn through coursework alone.

Americans want a more flexible and personalized education and training system than what now exists to prepare young people for work. They are asking K-12 schools, colleges, employers, and other stakeholders to think differently about success. The goal is no longer college for all so much as it is enabling and encouraging students to pursue varied pathways to a career. With these demands in mind, we need to develop a more comprehensive career-education framework—one in which earn-and-learn apprenticeships feature prominently.

THE SUPPLY

The U.S. government established its authority to register and oversee apprenticeship programs in 1937, when President Franklin Roosevelt signed the National Apprenticeship Act into law. The measure also gave states the option to register and oversee their own apprenticeship programs. Today, about half the states do so.

Federal and state registered-apprenticeship programs provide individuals—typically adults—with classroom instruction and on-the-job training, pay these individuals for that work, and, once they complete the program, award them a nationally recognized credential that verifies their occupational proficiency. Such programs come in three models: time based, competency based, and hybrid.

Time-based programs are used most often for construction-industry apprenticeships. They require apprentices to complete a minimum of 2,000 hours allocated to a program's learning objectives. In 2008, as occupations outside the construction industry—typically those in health care, advanced manufacturing, and information technology—began to develop apprenticeship programs, the Department of Labor approved two other models: competency-based programs and a hybrid approach.

Competency-based programs are more flexible and less closely linked with time requirements than time-based programs. Apprentices move at different paces through their programs depending on their previous education and experience. Meanwhile the hybrid approach, as its name suggests, combines elements of both time- and competency-based models, with apprentices required to demonstrate competencies within a flexible time period.

Registered apprenticeships prepare individuals for rewarding employment. One study shows that workers can earn \$240,000 more over their lifetimes—\$300,000 including benefits—by participating in a program. An evaluation of the Department of Labor's American Apprenticeship Initiative reveals that earnings increased for all participants between the year before their apprenticeship began and the year following its conclusion, regardless of the occupation or the person's demographic background. On average, earnings increased by 49% for all apprentices, with women, Hispanics, and apprentices of a race other than black or white experiencing the highest earning gains.

Regrettably, America lags behind many nations in using apprenticeships to prepare individuals for the workforce. The country's 27,000 programs enroll almost 600,000 individuals, or just 0.4% of the U.S. workforce. English-speaking countries like the United Kingdom, Australia, and Canada enroll an average of eight times as many workers in apprenticeship programs as a percentage of their workforces; Germany, Austria, and Switzerland enroll up to 15 times as many. This gives the United States the lowest apprenticeship-enrollment numbers in the developed world.

What's more, as noted above, American apprenticeship programs focus heavily on construction trades like carpentry and plumbing. Other nations train apprentices for a broader range of careers, including those in the health-care, logistics, technology, and financial industries.

The bad news is that the United States lags behind the rest of the developed world in its apprenticeship programs. The good news is

that federal financial support for such programs is growing. Spending on the Office of Apprenticeship in the Labor Department's Employment and Training Administration more than doubled over a five-year period, from \$90 million in 2016 to \$185 million in 2021. In July 2024, the Department of Labor awarded \$244 million in apprenticeship grants, consistent with President Joe Biden's calls to strengthen apprenticeships. At the same time, lawmakers on the House Committee on Education and the Workforce have approved two bipartisan workforce-development bills—one of which the full House passed overwhelmingly and sent to the Senate for consideration.

All this represents progress. However, it still falls far short of the billions of dollars that the Department of Education provides traditional K-12 and post-secondary institutions.

YOUTH APPRENTICESHIPS

American high-school students are ill-informed when it comes to preparing for a career. An international study of the career interests of 15-year-olds from 79 countries (including the United States) provides four key insights into the state of career-planning among American young people.

First, outside of professional occupations like medicine, American high-school students have only a narrow sense of what a financially rewarding career might be. Second, much of what students say they will be doing in a particular field doesn't match with what workers do in that field. Third, and unsurprisingly, career planning is much weaker among students who struggle academically. Finally, almost a quarter of students cannot name a career they want to pursue.

These findings suggest increased opportunity alone will not translate into greater career success; students must be taught what awaits them in the working world and how they can set and achieve their career goals. This calls for a more comprehensive career-education framework to be integrated into K-12 schooling.

Ideally, such a program would span a young person's time in school, deepen his knowledge of the culture and reality of work, and help him develop professional networks and mentoring relationships that will benefit him throughout life. It would also foster a young person's sense of agency—his capacity to aspire, create, and navigate the pathways that turn career ambitions into reality.

The success of the hybrid apprenticeship model described above has encouraged the development of the youth apprenticeship—an earn-and-learn program that is typically part of a young person’s high-school experience. Unlike registered apprenticeships, youth apprenticeships have no federal definition. The think tank New America, which is leading a national effort to expand youth apprenticeships, has developed a working definition of such programs, which bear some similarities to federally registered apprenticeships. However, there are also some important differences.

The first is that, whereas registered apprenticeships cater to adults who are no longer in school, youth apprenticeships distribute classroom instruction across high schools, post-secondary institutions, and employers that partner with schools. Some of these programs create a seamless pathway to a registered apprenticeship. In Wisconsin—which, in 1991, became the first state to launch a youth-apprenticeship initiative—transition programs allow youth apprentices who graduate high school to proceed directly into registered apprenticeships.

Another distinct feature of youth apprenticeships is their focus. While adult programs are concentrated in construction trades, higher shares of youth apprenticeships are available in fields like advanced manufacturing, information technology, and logistics. North Carolina’s program offers 15 youth-apprenticeship career pathways, including early childhood education, veterinary work, and drone piloting.

Ideally, a comprehensive earn-and-learn career-education program would begin with a child’s earliest years and continue through high school. The 38-member Organization for Economic Cooperation and Development has documented models of such programs in use across the globe. Its report organizes the activities they offer into three categories: exposure activities, exploration activities, and experience activities.

Exposure activities introduce children and young people to various careers, and can begin as early as preschool. Activities may include reading books or telling stories about people in different occupations, as well as hearing directly from workers during classroom visits. As young people move through elementary, middle, and high school, exposure activities may also include age-appropriate outside-of-school experiences, such as workplace visits.

The second type of activity—exploration—offers students the opportunity to perform in-depth research on and evaluation of specific occupations. It may include activities like resume development, mock

job interviews, volunteer work, and job shadowing. These experiences typically span a student's middle- and high-school years.

Finally, experience activities consist of work-based learning as well as engagement in sustained and supervised projects and mentorships. They can take the form of either unpaid internships or paid apprenticeships. By offering students opportunities that lead to full-time jobs, further education, or both, these experiences multiply students' career options.

Some states are also beginning to develop short pre-apprenticeship programs, which typically last between a week and three months. These programs are designed to prepare individuals for entry into registered apprenticeships or other job opportunities. They often help recruit a more diverse pool of underrepresented groups to apprenticeships than might the typical program.

APPRENTICESHIP DEGREES

In the United States, where post-secondary education is the default option for many high-school graduates, making apprenticeships available to a wider audience will require demonstrating that apprenticeships need not conflict with or divert from traditional higher education. This is where the apprenticeship-degree model comes in.

Apprenticeship degrees allow individuals to serve as apprentices and earn college degrees at the same time. The United Kingdom has developed such a program, which leads to a debt-free bachelor's or master's degree from a collaborating university. The program is offered to 18- and 19-year-olds and lower-level workers who want to acquire new knowledge and skills to advance to other careers. Degrees are offered in fields that typically require significant academic work, such as health and the sciences, business and administration, and aerospace. Since the employer and the government each pay a portion of the cost, students are not eligible for student loans.

This degree-granting model is being adapted to teacher training in the United States. The non-profit Reach University—which comprises Reach Teachers College and the Graduate Institute—aims to create debt-free teacher apprenticeships that award bachelor's and master's degrees to graduates. The university offers five degree and certificate programs in partnership with more than 180 schools. The federal Pell grant typically covers most of the program's costs, with a student contribution capped at \$900 a year and philanthropy or Department of Labor apprenticeship funds covering the remaining balance.

The federal departments of education and labor are also working together to create paid registered-apprenticeship programs for teaching by combining Department of Labor apprenticeship funding with Department of Education K-12 funding. The program seeks to fill teaching jobs by recruiting local community members—including education paraprofessionals, career changers, and high-school and college students—into teaching careers. In January 2022, Tennessee became the first state to receive Department of Labor approval for a partnership program, in that case between Austin Peay State University and the Clarksville-Montgomery County School System. Today, 39 states and the District of Columbia have received Department of Labor approval to offer apprenticeship programs for teachers, and at least 32 school districts are participating in these programs.

A final type of apprenticeship-degree program offers colleges the option to “unbundle” the four-year degree into building blocks, or stackable credentials, to be earned while working. As an apprentice’s career progresses, he can choose to proceed along one of several designated pathways leading to a degree. A recent study of the Virginia Community College System shows that such programs typically increase employment by four percentage points and quarterly wages by \$375.

KEEPING UP WITH DEMAND

In addition to focusing more on career education in K-12 schooling, policymakers must counter America’s apprenticeship deficiencies by expanding existing programs and creating new ones.

Elected officials have several places they can turn to for assistance in expanding their apprenticeship programs. Since 2016, the Department of Labor has supported a State Apprenticeship Expansion project that includes an Apprenticeship Professionals Learning Network. Additionally, an increasing number of non-profit organizations are offering policy guidance and practical assistance to states on creating new programs. These include the Progressive Policy Institute (for which I am an advisor), ExcelinEd, Bellwether, and the Education Strategy Group.

New third-party organizations called “apprenticeship intermediaries” can also be used to build and expand programs. Ryan Craig, author of *Apprentice Nation*, suggests that these organizations will be central to America’s effort to expand apprenticeship programs.

Apprenticeship intermediaries can be public, non-profit, or for-profit organizations, and can work locally, regionally, statewide, or nationally.

They may comprise community colleges, chambers of commerce, or commercial staffing companies that can create, run, and pay the upfront costs of apprenticeships, acting as go-betweens and points of contact for all the partners involved in the program. Companies can then “try before they buy” an apprentice and pay a fee to the intermediary for recruiting, training, and matching employees with firms. In 2022, California created the nation’s first state-based funding formula for apprenticeships wherein intermediaries get paid for every apprentice they hire and train.

Robert Lerman, an Urban Institute fellow, has proposed a 10-point plan for how the United States can scale up apprenticeships such that 30% or more of an age cohort can enroll in them. This plan, which Craig further develops in his book, would entail three priority tasks: creating more apprenticeship intermediaries, developing occupational standards in fields where they do not exist, and expanding the classroom-learning infrastructure for apprentices.

To be successful, any effort to expand apprenticeship programs will have to brand and market them as genuine and effective pathways to jobs and opportunity. It will need to create additional apprentice-screening and assessment instruments—including digital-learning and employment records—for a talent marketplace. It will need to incorporate a full-service counseling and advisory-services effort, and train more mentors and classroom instructors. Finally, it will have to offer a research, evaluation, and information program to keep track of successes and lessons learned in order to improve the program.

AN OPPORTUNITY PROGRAM

The college-for-all model creates what law professor Joseph Fishkin calls a “bottleneck” to opportunity. The earn-and-learn apprenticeship approach breaks through this bottleneck via opportunity pluralism—an approach I have previously written about in these pages—which holds that people should be encouraged to pursue varied pathways to a career. By valuing both educational and employment outcomes, the new apprenticeship paradigm makes the nation’s opportunity infrastructure more flexible and more pluralistic.

Apprenticeship programs help young people gain a greater understanding of their own interests, values, and abilities by “trying on” different careers. On a practical level, they create faster and cheaper

pathways to jobs. They also rest on an opportunity equation that includes *what* individuals know as well as *whom* they know, which is key to occupational success. Pursuing a career requires not only habits of mind, but habits of association; not only technical, but relational skills. Developing marketable skills is important, of course, but in order to truly flourish, people also need to learn how to build social networks that will offer them new opportunities to grow.

Today's earn-and-learn apprenticeships are cultivating both hard skills and soft networks. Building on the traditional registered-apprenticeship model, these programs foster opportunity pluralism at the K-12 and post-secondary levels. This moves the locus of learning from the campus to the workplace—and that is good news for young Americans.