The Obama administration’s $175 million investment in American apprenticeship grants signifies that federal policymakers are focused on workforce issues, including America’s high youth-unemployment rates, through expansion of apprenticeship programs. The youth unemployment rate stood at 10.10 percent in January 2017. Meanwhile the youth unemployment rates in countries heavily invested in apprenticeships programs such as, Germany or Switzerland, are, 6.5 percent and 3.1 percent respectively.

One major difference between America’s apprenticeship system and that of European countries is European countries’ focus on targeting students early in their high school career. A study at American University found the average age of U.S. apprentices is nearly 30 years old, compared to 17 in Switzerland and 18 in Germany. One of the keys to success of apprenticeship programs in these Central European countries is getting an early start.

As a culture, there seems to still be a lingering stigma associated with vocational education in the U.S. “The U.S. should be ashamed for devaluing apprenticeship programs for so many years,” said former U.S. Secretary of Labor Thomas Perez, speaking at the launch of a Colorado youth apprenticeship program in September 2016. “Now is the right time to learn from other countries’ experiences.”

According to the National Skills Coalition, 53 percent of American jobs were middle-skill in 2015, meaning they required more than a high school diploma but less than a four-year degree. However, only 43 percent of the country is trained to fill these middle-skill jobs. The Georgetown University Center on Education and the Workforce predicts that by 2018 the United States will face a shortfall of credentialed workers of approximately 3 million workers with associate’s degrees or higher.

A centuries-old workforce strategy, apprenticeships can feel like they are from another era, or be seen as an inferior form of post-secondary training. However, in a time of high college tuition, high unemployment rates among young workers and difficulty securing jobs, apprenticeships are a powerful pathway into middle to high wage employment. A study from the Department of Labor found that on average participants in registered apprenticeship programs earn $300,000 more over the course of their careers than similar individuals who did not participate.

As states begin to embrace apprenticeships as a promising opportunity for their youth, engaging students in pre-apprenticeship training during high school is vital to their programs’ success. Below are examples of strategies being employed by states and private companies to blend secondary education with apprenticeship models.

California

California’s 2015-2016 budget increased appropriations for apprenticeship programs from $22 million to $29.1 million, with $15 million earmarked for pre-apprenticeship programs. California’s Employment Training Panel supplements funding from the state and is committed to investing in new, nontraditional apprenticeship programs such as healthcare, information technology and culinary arts.
Colorado

Funded entirely by private businesses, CareerWise Colorado is a new program that seeks to transform the way students move from high school into careers. Bloomberg Philanthropies and JP Morgan Chase Co. announced a $9.5 million fund last fall to help kick start the program that will be cost-free for the state. Modeled after Swiss apprenticeship programs that are also privately funded, Colorado is looking to fill jobs in finance, IT, engineering and biomedical sciences. Swiss businesses found the program to be a more effective way of finding employees than traditional hiring practices that results in less turnover and fewer wasted training costs. The program, set to start in fall 2017, will allow students to begin participating in 11th grade. Participating students will be able to spend up to three days per week getting paid to work for a company, while receiving job-based training and earning college credit. Once finished with high school, students will be able to continue working for the company full time or continue their education. Colorado’s goal by 2027 is to have 10 high school students enrolled in the program, but it is unclear if private companies will continue to invest as heavily as the state anticipates.

Kentucky

In 2013, Kentucky’s Office of Career and Technical Education, in partnership with the Kentucky Labor Cabinet, introduced the Tech Ready Apprentices for Careers in Kentucky, or TRACK, pre-apprenticeship program. TRACK’s purpose is to provide high school students a path to postsecondary apprenticeship training. TRACK currently provides youth apprenticeship programs in advanced manufacturing, carpentry, electrical technology and welding. Upon completing the program, students earn industry certification and credit they can transfer should they decide to pursue a registered apprenticeship program after high school. After the first year of implementation, all 119 participating students moved on to a registered apprenticeship with employers.

Minnesota

Minnesota’s innovative apprenticeship model takes an inclusive stakeholder approach incorporating government, employers and educators across sectors to provide a holistic apprenticeship experience. The PIPELINE project—Private Investment, Public Education, Labor, and Industry Experience—addresses current and future workforce needs through a dual-training program. PIPELINE resulted in the formation of councils comprising more than 400 employers from the state, representatives from higher education and industry experts. These councils define competency standards as well as identify occupations suited for apprenticeships. The councils are continuously examining needs across industries and adjusting standards and instruction based on those needs.

South Carolina

States looking to develop or expand their apprenticeship program can look at South Carolina’s comprehensive apprenticeship model. The South Carolina Department of Economic Development offers employers apprenticeship consulting services free of charge. The consultants work as liaisons between businesses and states by meeting with employers, discussing needs and skills gaps, facilitating the process of registering new apprenticeship programs, and acting as advisors for apprentices throughout the duration of the apprenticeship. South Carolina recently hired a new consultant specifically for advising companies starting youth apprenticeships. Along with offering consultants, South Carolina’s apprenticeship model thrives due to the relationship between the state’s technical college system and an apprenticeship task force called Apprenticeship Carolina. An economic development affiliate within the SC Technical College System, Apprenticeship Carolina provides apprentices with training tailored to employers’ needs. Employers communicate closely with colleges to design a curriculum to best serve the company’s needs. This joint effort with the SC Technical College System helps provide training in the most efficient way possible. The partnership has served more than 17,000 apprentices in 842 programs, since its establishment with 90 employers in 2007.

Wisconsin

Wisconsin’s Department of Workforce Development oversees the state Youth Apprenticeship program, which serves 2,500 high school juniors and seniors. Established in 1991, the Wisconsin Youth Apprenticeship program is one of the oldest in the country. Participating students complete 450 to 900 hours of on-site learning along with two to four semesters of classroom instruction. Students receive paid work, industry certification and class credit toward graduation and are eligible for college credit in some cases. Wisconsin’s School-to-Work initiative integrates the Youth Apprenticeship program with the state’s registered apprenticeship program, helping students transition from youth apprenticeships to registered apprenticeships upon graduation.

Alamo Academies

San Antonio was one of the first cities to address the widening skills gap through an innovative apprenticeship model by the nonprofit organization Alamo Academies. Using industry-driven curriculum, 94 percent of Alamo Academy graduates enter higher education or high-wage careers in aerospace, manufacturing, information technology and health. Alamo Academy is a demand-based education model incorporating target enrollment levels based on
workforce demand. A collaborative process follows where employers help Alamo Academies recruit participants, develop curriculum and enroll students in the dual-credit career academy that allows students to complete high school and college graduation requirements in a given field. Alamo Academies created pathways for public high schools and community colleges to help meet industry demand. The model has been transferred to other cities and even internationally. Seattle looked to Alamo Academies to strengthen its aerospace apprenticeships, and recently leaders from Columbia, Brazil, and the Dominican Republic visited San Antonio to learn how to replicate Alamo Academies in their counties.

**IBM’s P-Tech**

In 2011, IBM, in partnership with the New York City Department of Education, launched P-Tech—Pathways in Technology Early College High School. This six-year program blends traditional four-year high school with two years of college-level instruction so that students will graduate with an associate’s degree. IBM provides mentors and internships during the program, and gives preference to the institution’s graduates when hiring. P-Tech operates like a normal high school and gets no funding from IBM, although IBM does support the school through curriculum development, training programs and student internships. P-Tech was initially criticized for being too rigorous and fast paced, resulting in poor performance from the students. In fall 2014, 21 percent of grades earned in the college-level classes were Ds and Fs. Today 60 percent of the original class of 97 are still on track to graduate on time, with 11 students graduating early and moving on to jobs with IBM.

Several states have also begun to incentivize companies to adopt apprenticeships by offering tax credits to participating businesses and tuition assistance for students.

Policy obstacles states may face when developing pre-apprenticeship programs include ensuring apprentices meet high school graduation requirements, federal and state labor laws for youth, having proficient teachers able to provide technical instruction, and the cultural stigma regarding apprenticeships. A recent study by Young Invincibles examining millennials’ feelings toward apprenticeships showed knowledge of apprenticeship programs remains low among youth. Providing shadowing opportunities, employing marketing strategies communicating the benefits of apprenticeships, and engaging high schoolers directly can help promote a better understanding of the benefits of today’s apprenticeship programs among young adults.

Going forward, other states looking to expand their apprenticeship policies and programs can use these examples as a guide for testing new strategies. One trend that emerged through all of the examples cited above is collaboration. The most successful apprenticeship models involved partnerships between educators, employers, lawmakers, industry experts, etc. Partnership among stakeholders, especially high industry engagement, is crucial for providing well-rounded training that meets industry needs and standards and for building a sustainable career pathway for students.