

## Expanding options in America's higher education landscape

By David Etwiler, CEO, the Siemens Foundation

With student debt skyrocketing past \$1.2 trillion, and with about 40 percent of students who start a four-year college track not finishing, it's time for a national gut check moment: students, parents and educators need to expand their view of what higher education means in the 21<sup>st</sup> century.

While a four-year degree is still the best route for many students, it's not the only one to a meaningful and rewarding career. When it comes to preparing America's students to compete in today's job market, we need to consider all options. That means changing perceptions and opening students' eyes to new pathways in post-secondary education.

The U.S. has a serious problem, and will for some time. An opportunity gap in middle-skill jobs (those requiring a postsecondary credential below a bachelor's degree,) particularly in STEM fields:

- In 2014, [four in ten Americans under the age of 25 were either unemployed or underemployed.](#)
- [Over the next decade, 15 of the 20 fastest-growing jobs in America will be in STEM. Within five years, there will be another 2.4 million STEM job openings.](#)
- [Nearly 50 percent of STEM jobs do not require a four-year degree and pay \\$53,000 on average,](#) a reflection of the high demand from employers.

This gap -- between jobs being created in STEM industries (including advanced manufacturing, energy, healthcare and information technology) and the opportunity for many young people to pursue them -- is simply too large to ignore. And the Siemens Foundation is committed to addressing it.

Here's how we're doing that:

**First, we must change the perception of middle-skill job opportunities in this country from a "fall back option" to a "career pathway of choice."** These are great jobs accessible with low to no student debt and unlimited potential. Besides being a good job in their own right, STEM middle-skill jobs are often a spring board to limitless career pathways.

That's why we recently announced, with our partners at the Aspen Institute's College Excellence Program, a new program called [Siemens Technical Scholars](#) that will help us build a cadre of young adults to spread the good word about the value of these opportunities. This initiative will profile successful STEM middle-skill scholars in the classroom and the workplace to increase awareness about these great career pathways. Siemens Technical Scholars builds on Aspen's renowned [Prize for Community College Excellence](#), the nation's signature recognition of high performing community colleges, which the Foundation is also supporting.

**Second, we're identifying, championing and scaling proven workforce training models.** Together with the National Governors Association's Center for Best Practices, we're looking at what makes work-based learning models effective, how to bring them to scale for young adults and how to move them into STEM fields. We're also supporting the NGA Center in providing a variety of activities to the winners of the [American Apprenticeships Grants](#) to help them reach their goals to scale and expand the apprenticeship model.

Such public-private partnerships are helping integrate more training-based programs into the American higher education landscape with curriculum that gives students the skills they need for success on the job.

At Siemens, the company's first U.S. apprentices graduated this summer. After four years of on-the-job training (with pay) at Siemens Energy facility in Charlotte, while simultaneously attending Central Piedmont Community College, they earned an associate's degree in mechatronics along with a Journeyman Certification from the North Carolina Department of Labor.

With the youth unemployment rate well above the national jobless rate, apprenticeships provide a 'win-win' proposition, training students for skilled jobs that employers need to fill. Through apprenticeships, we can see the possibilities that come with an enhanced focus on training coupled with higher education – with students getting a solid career start that functions as a springboard, not a ceiling.

This is a big, complex issue that takes more than one company investing heavily in its current and future workforce. It takes a broad-based approach involving companies, labor, educators, foundations, government and more. In the end, this work is about making a difference in the lives of young adults across this country—those who don't yet know the power and potential they hold.