

A Unique Solution to Tackle the Shortage of CNC Machinists

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Today we are so pleased to welcome Ivan Rosenberg and Mike Bastine to discuss the first-of-its-kind collaboration between machine technology educators and specialists in education to provide specialized training and job placement in the manufacturing industry.

In 2017, the U.S. Department of Labor (DOL)¹ reported there were close to 400,000 openings for CNC machinists nationally—a number that continues to rise as the wave of retirements drains the manufacturing workforce. Without new strategies, it's not going to get any better.

As any recruiter will tell you, it's a tremendous challenge to find—and keep—candidates who possess the particular combination of skills and characteristics needed for CNC. In addition to having good programming skills, the best candidates must exhibit strong focus, attention to detail, and discipline to perform sometimes repetitive tasks alone, safely, and without distraction.

When Ivan Rosenberg, PhD, Managing Partner for InVista Associates, which specializes in solving critical business problems, heard about the CNC operator shortage, he discovered a solution right in his own home. Dr. Rosenberg recognized that many of the sought-after characteristics of CNC machinists matched his own children—two young adults with high-functioning autism. Knowing that parents of

autistic children are often dedicated to finding ways to help their children be independent, Dr. Rosenberg came up with a large-scale solution, which he named the Uniquely Abled Project (UAP).

“These individuals are not disabled, they are uniquely abled and that was my first order of business—to change the perception of disabled.”
Dr. Ivan Rosenberg, Founder, Uniquely Abled Project, Valley Village, California

The Uniquely Abled Project is exactly as it sounds – a program for uniquely abled individuals who have huge potential and need to be given the chance to succeed in a meaningful career. These uniquely abled individuals have high IQs, a strong work ethic, and the patience to succeed when given the chance. The UAP then created the Uniquely Abled Academy (UAA) to provide structure and a career pathway for the program and serve as an implementation guideline for educational institutions to collaborate with partners like Tooling U-SME and other service organizations.

In the spring of 2018, the College of the Canyons (COC) in Santa Clarita, California, was one of two colleges to get on board with the program. “At COC, we created a boot-camp style CNC machining program specifically for these high-functioning autistic folks,” said Mike Bastine, UAA Director. After completing a 12-week program, 10 trainees graduated from the first UAA cohort and qualified for entry-level positions as CNC operators, machinist apprentices, and machine trainees.

To find candidates, COC used several resources, including their K–12 channels and counselors' offices, the Autism Network, and the internet through blogs and advertising. The biggest resource was the autism Facebook page, which is frequented by both parents and trainees. Parents were eager to find their sons and daughters a living wage and career they could be proud of, and many were willing to travel two to three hours for the class.

The vetting process to find qualified candidates and test them was similar to that of students enrolling at the community college. “It was really important the students had a strong support structure at home and wanted to do the program themselves—not just because the parents wanted it,” said Bastine. The criteria for entering the program was specific.

- 18 years or older
- High school or GED graduate degree
- Successfully pass the ACT WorkKeys pre-test
- Secure government and sponsor funding for the fee-based program
- Transportation
- Ability to work Monday – Friday eight hours a day
- Assurance that they were comfortable in the training environment
- A good attitude

Full disclosure of the environment was key not only as a safety factor, it was also important to the success of the trainee. “There are loud noises, strong smells, and big machines. We do this because we don’t want to waste anyone’s time trying to adjust. The effort is huge on their part, and we are there to support them all along the way,” said Bastine.

The UAA at College of the Canyons is a blended program of Tooling U-SME online training combined with classroom instruction and hands-on experience. The UAA structure also includes three NIMS CNC certifications. “Everything they produce is competency-based, measured, and validated for NIMS credentials,” said Bastine.

“There were nine services required to set up the program, and we had no problem finding collaboration from community services, the Department of Rehabilitation, and Goodwill Industries to help with implementation and funding,” said Bastine.

“Tooling U-SME was a great resource for providing online training for these individuals because they could do it at their own speed and on their own time. It reinforced the lessons from the classroom, and gave them more time for hands-on training,” said Bastine.

The program proved to be very beneficial for the college by opening up new employers for them to service. COC provided workshops to train the trainers on how to teach these unique individuals and for the employers to understand how to manage them. Everyone was all-in and the trainees exceeded everyone’s expectations.

COC partnered with Americas Job Centers of California to increase visibility for the program and with Jay Nolan

Community Services, which supports individuals with disabilities, to serve as the career coordinator for the program. “One of their representatives was in the class to manage any issues that came up, from potential disruptions in class, to providing transportation and helping with funding issues. They are partners all the way.” said Bastine.

There was no cost to the trainees and their parents for the program as Goodwill Industries and the Department of Rehabilitation became the sponsors. “Think of the impact on the economy and community by giving these individuals jobs. They are no longer on the government payroll. They are filling a real need for manufacturing jobs and increasing the employment rate in a community. Plus, the individuals themselves feel accomplished, respected, and part of something important. It’s a win, win situation,” said Dr. Rosenberg.

At the end of 12 weeks, graduates come out of the program with a full package of commendations and benefits including:

- Tooling U-SME Training Program/Certificates
- College certificate of completion
- Three NIMS credentials for CNC
- ACT WorkKeys certificate
- Polished resume
- Products they have made
- Mock interviews
- Scheduled job interviews

“It was a dream come true finding out about this. For the first time ever, I’m actually seeing a future!”
Justin, Graduate of Uniquely Abled Academy

COC invited potential employers to come in and see the program in action, and by the end, every single trainee had a job. “They were that good,” said Bastine. The trainees were excited because they also had been looking for an opportunity where they could make a difference and feel respected. Their attitude was, “Ready to work!” So far, 100% of the graduates have been placed in positions within their community.

“This is working out so well. We are going to start cross training on a more advanced machines.”

Susan Solebello, Human Resources, Mulgrew Aircraft Components, Inc.

COC plans to run another cohort this year, and five additional colleges have signed up for the UAA. “The goal is to have this program fill the CNC skills gap all over the country. It’s a real opportunity to make a difference,” said Dr. Rosenberg.

1. www.bls.gov/ooh/production/machinists-and-tool-and-die-makers.htm#tab-6