

THE CRITICAL NEED FOR CAREER TECHNICAL EDUCATION IS NOT A MYTH **A California story that is probably happening in your state**

It is well known that California enjoys the world's fifth largest economy. This is partly due to 50/60 years of an infrastructure built around manufacturing entrepreneurs, workers, schools, and customer supply chains. But, as they say, "Houston, we have a problem."

There is growing evidence that California's school systems have internal, critical issues that are having a negative impact on career and technical opportunities for students and the companies that ultimately hire them. The result is that businesses in the trades and industry sectors are suffering severe skills shortages for want of a technically trained workforce.

What's causing this?

Simply put, there are three common findings throughout the various studies that explain the decline of "SHOP" training programs in California middle schools, high schools, and community colleges as well as in the California University system that require attention:

1. The growing retirement of existing Career Technical Education (CTE) teachers.
2. The lack of a pipeline for new CTE teachers.
3. School counselors that lack the necessary familiarity with CTE career opportunities, providing sufficient motivation to encourage students to consider the benefits of a CTE career.

The result could be disastrous for the future of California manufacturing industries. Why?

According to an article by Boston Consulting Group entitled *Made in America: The Future of US Manufacturing*, the primary resource manufacturing companies need to succeed is, "...a bigger, more highly skilled workforce...(with) digital skills but also adaptive skills like critical thinking and complex problem solving in order to install, operate, maintain, and optimize the new technologies." Unfortunately, there is a shortage of this type of worker, largely due to a diminishing number of teachers necessary to train them.

So, where is this workforce going to come from?

The hard truth is that there is no easy answer. For instance, we can't rely solely on policymakers. While policymakers are often vocal about how important manufacturing jobs are to the economy and the skill level needed to fuel those jobs, what they fail to understand are the components necessary to populate the jobs with skilled workers.

For instance, according to a survey by the Small Manufacturers' Institute (SMI) with 300 California Career Technical Educators between April 18, 2020, and May 14, 2020, a majority of high school and college teachers who participated in the study are nearing retirement and participants reported difficulty in finding replacement teachers when someone does retire. To make matters worse, as more experienced teachers with graduate degrees retire, newer teachers who replace them with less education and less experience may not be able to teach students to industry standards, further putting manufacturing at risk because graduating students could potentially fail to meet employment expectations.

Survey participants also pointed to the lack of an adequate number of CTE teacher training programs funneling teachers into local community colleges and trade schools. Today, there are no California State Universities (CSU) offering traditional degrees in multi-discipline Industrial Technical Education.

Instead, these universities offer single subject credentialing programs, and the California Community Colleges are attempting to bridge the teacher gap with a program called Teach California. These institutional solutions have been marginal and the question over the next three to five years will be if these efforts will be enough to fill the pending gaps.

Clearly, we need a specialized workforce pipeline. Recruiting teachers directly from industry, however, can be problematic because while stable paychecks may be appealing, salaries are much higher for industry tradespeople. This eliminates the incentive for tradespeople to leave the workforce and join the classroom. Add to that the fact that the pay is even lower if these individuals don't have a 4-year degree, which many don't. Additionally, tradespeople are trained for 'hands-on' work and may find it difficult to obtain a teaching credential, partly because they may not have the temperament nor the management skills necessary for a classroom.

Where does that leave us?

It leaves us in a difficult place because we waited too long. We can't rely on policymakers. We're losing CTE teachers too quickly through retirement and natural attrition. Career CTE teachers are often replaced by teachers with less qualifications, giving their students a shaky foundation with which to look for jobs. And recruiting teaching professionals from the industry itself is difficult because of the lower pay and need for teacher-training. Lastly, survey participants reported that school career counselors are not adequately informed on CTE job opportunities and therefore tend not to encourage students to follow that path, even though students who focused on CTE courses in high school had higher median annual earnings than students who did not focus on CTE.

So, where do we go from here?

First, we must agree that the critical need for Career Technical Education (CTE) is not a myth. In fact, if something isn't done and done soon, the status quo will kill many of these trade programs, leaving Career Technical Education as a shadow of what it was. This could potentially destroy many critical industry sectors within 10 years. The only question will be, which ones?

Therefore, all of this points to the need for a concerted effort to:

- 1) Encourage and facilitate college students and/or trades people to take the necessary steps to move into teaching.
- 2) Train counselors appropriately to support CTE programs and encourage students to enroll in CTE programs.
- 3) Raise public awareness of the economic and community benefits of having robust CTE programs.

If it is true that the ratio of jobs in our economy is 1:2:7, meaning that for every job in a field that requires a graduate degree, two (2) jobs will require a bachelor's degree, and seven (7) jobs will require a two-year degree or technical industry certification, then it is the 7 jobs out of 10 that CTE trains students for. And that's a statistic that can't be ignored.

David Goodreau
President, Small Manufacturers Institute david@sminet.org

The Small Manufacturers' Institute (SMI) is a manufacturing-driven institute that supports California Manufacturers through state-wide, regional, and grassroots participation in identifying their specific needs, coordinating existing resources and services and disseminating those programs through established providers and associations. SMI is a California 501-c3 not-for-profit corporation, incorporated in 1994, and is not a membership association.