



WHO YOU GONNA CALL?

*Is Career Technical Education Preparing High School Students
to Fill the Skilled Trade Gap?*



Release Date: July 8, 2025

ISSUE

How can Career Technical Education (CTE) be improved to better expose high school students to various occupations, prepare them for careers after graduation, and provide specialized coursework for post-secondary education?

SUMMARY

Preparing young people for careers has been an important societal goal for centuries. From its inception, vocational education was focused on preparing secondary (high school) students to enter the workforce in industry or manufacturing directly. However, starting in the 1980s, with the rapid advancement of computing technology and its integration into many fields, the direction of training became more academic as the belief grew that occupations were becoming more complex and would require a college education. What was once vocational training became Career Technical Education (CTE)¹, designed to be accessible and beneficial for all students whether or not they intended to pursue a career or college immediately following high school.

While five of the six high school districts in San Mateo County offer CTE classes, the primary focus of the available pathways, a series of two or more classes in the same industry sector, is college preparedness and post-secondary admissions requirements. This model works well for college-bound students, whether attending a four-year university or community college, but is not practical enough for students directly entering the workforce.

Previous San Mateo County Civil Grand Juries felt so strongly about CTE that there have been two reports in the past twelve years. The 2012-2013 Civil Grand Jury investigated the programs and found that funding was lacking because available grants were not sought, and students were presented with limited CTE options. A more current report from the 2022-2023 Civil Grand Jury focused on partnerships between businesses and educators. While that Civil Grand Jury found a few examples of strong and beneficial partnerships in the County (Oracle/Design Tech High School and Genentech/South San Francisco High School), the report recommended specific actions to foster business partnerships and widen the availability of CTE courses, internships, and pre-apprenticeships.

This report, based upon twenty-four investigative interviews and extensive research, identifies new findings and additional recommendations to the entities in the County that serve our high school students. The effectiveness of the CTE programs in preparing students for potential careers or selecting a college major is questionable. Pathway completion rates are extremely low. Gaps still exist between school-business partnerships, most notably internship and pre-apprenticeship programs; work-based learning opportunities in high-skill and high-demand

¹ The California Department of Education defines CTE as “a program of study that involves a multiyear sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers.”
<https://www.cde.ca.gov/ci/ct/>

market sectors are rare. Traditional vocational pathways are only offered at a handful of schools. Little empirical data from businesses and post-secondary institutions regarding the preparedness of graduates who completed CTE pathways is available.

Given the current political environment, market volatility, potential financial instability, possible cuts to the public university systems, and the high college attrition rate, we need to provide our youth with employable skills and the ability to earn industry certifications and credentials while in high school.

BACKGROUND

Formal vocational education in schools can be traced back to the turn of the 20th century with the passage of federal legislation funding state programs that taught "agriculture, trades and industry, and homemaking." The Smith-Hughes Act of 1917 authorized the first federal funding for secondary vocational education for occupations available directly after high school as an alternative to preparing students for post-secondary education.² Over the decades, these programs morphed and evolved. Regional Occupational Centers and Programs (ROCPs)³ originated in the late 1960s and consolidated vocational training to centralized training centers focused on high school students directly entering the workforce post-graduation. ROCPs provided high-quality technical education to a larger population more economically than a single school or district could. In the late 1980s and early 1990s, vocational education came under scrutiny for tracking certain populations of students into what was thought of as an inferior academic track and away from higher education. While ROCPs still exist in other California counties, the last ROCP in San Mateo County closed on June 30, 1989.

To fill the void and as a means of introducing students to specific industries and career fields, California instituted CTE. The National Career Clusters Framework was created in 2002 as a blueprint for CTE program design across the US. In 2005, California adopted its own CTE Model Curriculum Standards. Several iterations later, California's CTE currently focuses on academic credits, industry-recognized certifications, and dual enrollment for high schoolers with a push to meet the minimum "A-G" requirements for University of California (UC) and California State University (CSU) admission.⁴ Since its inception, there has been a drive to expand CTE beyond traditional vocational programs, primarily through the expansion of pathways that integrate science, technology, engineering, and mathematics (STEM). The traditional vocational courses, such as plumbing, electrical, auto repair, carpentry, welding, etc., have largely been pushed to the community colleges. The general perception of college as the most desirable post-graduation outcome, combined with the high cost of equipment and facilities, and a lack of business partnerships, has diminished training opportunities for San Mateo County high school students interested in learning the trades.

In the past several years, the skilled trade gap has significantly widened as Baby Boomers retire.

² Smith-Hughes Act, Britannica, <https://www.britannica.com/topic/Smith-Hughes-Act>

³ ROCP Program Summary, California Department of Education, <https://www.cde.ca.gov/ci/ct/rp/rocp07summary.asp>

⁴ "A-G" designation refers to the lettered categories of specific course requirements that students must complete in high school to be eligible for admission to the UC and CSU systems. Courses Required for California Public University, California Department of Education, <https://www.cde.ca.gov/ci/gs/hs/hsgtable.asp>

The State of California has recognized the importance of preparing young people for trade careers with increased funding and legislation to ease some of the regulations. The Civil Grand Jury agrees that this preparation is more important than ever.

METHODOLOGY

Documents

The Civil Grand Jury reviewed the following documents, presentations and videos:

From San Mateo County Office of Education (SMCOE):

- [*San Mateo County Office of Education Strategic Plan 2023-28*](#)
- [*What is a County Office of Education?*](#)⁵

Prior San Mateo County Civil Grand Jury reports:

- [*Education is Everyone's Business: School-Business Partnerships Make an Impact in County's High Schools*](#), 2022-2023
- [*HIGH SCHOOL DIPLOMA: A TICKET TO WHERE?*](#) *San Mateo County's Approach to High School Career Technical Education*, 2011-2012

Publicly available data, including information found on federal, state, district, and individual school websites:

[*California School Dashboard*](#)
High School District Board Meeting Minutes and Presentations
National Student Clearinghouse Research Center
California Governor's Council for Career Education
US Department of Education
California Department of Education

Interviews

The Civil Grand Jury conducted a complete and thorough investigation, interviewing eighteen individuals at all levels of education, including representatives from the San Mateo County Office of Education, and educators, administrators, and staff at Cabrillo Unified School District, Jefferson Union High School District, La Honda-Pescadero Unified School District, San Mateo Union High School District, Sequoia Union High School District, and South San Francisco Unified School District. The Civil Grand Jury interviewed five hiring managers from private sector industries such as auto dealerships, independent mechanics, and HVAC businesses, as well as staff from the San Mateo County Central Labor Council.

Site Tours

During its investigation, the Civil Grand Jury conducted on-campus visits to five high schools in the County, observing classes and touring facilities including wood and auto shops, digital labs, a biotechnology lab, a textile studio, and a culinary arts kitchen.

⁵ *What is a County Office of Education?* San Mateo County Office of Education, posted September 1, 2022, <https://www.youtube.com/watch?v=Bj48yRX-9aE>

We thank everyone involved for their honest and open dialogue, taking valuable time out of busy schedules to answer our questions - and there were many - and providing us with the information we needed to complete this report.

DISCUSSION

Career Technical Education aims to be a multifaceted career and college program intended to fill the void of shuttered ROCPs and expand beyond traditional vocational courses. Tasked with exposing high school students to a preview of industry careers for those entering the workforce and potential areas of study in post-secondary education, it has yet to meet its goals.

The CTE model contains inherent inequalities due to inconsistent access to pathways across high schools in the County and an unwritten prerequisite for students to have strong math skills in many programs. These factors disproportionately affect districts with limited funding and higher populations of low-income students, particularly in rural and coastal areas of the County.

In 2022, California appropriated nearly \$1 billion to secondary and post-secondary (such as community colleges) CTE.⁶ During the same fiscal year, the estimated federal allocation of CTE assistance was more than \$175 million.⁷ Counterintuitive to the amount of funding the State appropriates and disburses through grant programs, districts must show matching funds to secure these grants. This means that districts with few businesses and/or lower property tax revenues receive less CTE funding, although they are the most in need.

Districts face challenges hiring qualified CTE teachers, securing adequate resources, including physical space to house equipment and workshops, and programmatic difficulties such as the misalignment of pathways to student interest. For a CTE program to continue receiving State and Federal government funding, students must finish a sequence of CTE courses within a pathway with a grade of C- or better.⁸ To meet these challenges and the metrics for funding, the County's high schools need to identify and address the issues currently preventing better outcomes.

Low Pathway Completer Rates

Accessing and comparing CTE completer numbers for high schools in the County is complicated. The California Department of Education's College/Career Indicator (CCI)⁹ for CTE pathway completion incorporates either State assessment results or dual enrollment credit earned with the intent to measure career *and* college readiness. Incorporating assessment results or dual enrollment coursework into the CCI skews the actual pathway completer numbers. Districts

⁶ State-by-State Funding Table, Total FY22 State Appropriation to Secondary CTE, *State of CTE*, accessed April 29, 2025, <https://ctek12funding.careertech.org/state-by-state-table/>

⁷ Ibid.

⁸ California Longitudinal Pupil Achievement Data System (CALPADS) the data collection system used for state and federal reporting, CALPADS, accessed April 29, 2025, <https://documentation.calpads.org/Glossary/Cohort/CohortGlossaryMain/#cte-completer>

⁹ California School Dashboard, College/Career Levels and Measures Report & Data - 2024, California Department of Education, accessed April 29, 2025, <https://www6.cde.ca.gov/californiamodel/ccireport?&year=2024&cdcode=4169047&scode=&reporttype=schools>

reported CCI rates between 0 to 31.4% with a county mean of just 15.1%. During interviews, districts cited several reasons for the low numbers:

- District graduation requirements;
- Misalignment in student interest with available pathways;
- Lack of pathway depth;
- Focus on preparing students for college admissions based on the UC and CSU A-G requirements; and
- Math proficiency barriers.

Graduation Requirements

Due to State minimum graduation requirements, A-G college entrance requirements, and districts' own graduation requirements, which are inconsistent throughout the County, few students in 9th and 10th grade have room in their schedule to take CTE classes. For any underclassmen who do, priority enrollment for CTE classes is given to 11th and 12th graders. Besides a review of district graduation requirements, master schedules - the comprehensive timetable of time, staff, and resource allocation (dictating class periods, teacher assignments, room usage, etc.) - should be evaluated to identify the potential for earlier access to CTE classes.

Matching Student Interest

CTE is organized around 15 industry sectors with 58 pathways. In San Mateo County high schools, pathways vary by district and high school, with no high school offering more than ten choices. Some pathways are in such high demand that there are waitlists and/or enrollment priorities. Others are harder to fill. Many are not offered at all. In one of the three districts with a 10-credit (one year) CTE graduation requirement, more than 90% of students took an introductory course, while fewer than 20% completed a pathway. This could be explained by the fact that either students lost interest in the first chosen pathway (for example, enrolling simply to meet graduation requirements or because their friends are taking it), or changed pathways and only completed the introductory year, or were unable to start a pathway until their senior year. Many districts are evaluating their current CTE courses to align with high-demand market sectors such as healthcare, trades, and automotive (electric vehicles).

It should be noted that the La Honda-Pescadero Unified School District does not have a CTE program. When the Civil Grand Jury spoke to District personnel, they stated that despite a majority of its students not matriculating to a four-year university due to a failure to meet A-G requirements, “CTE [had] not come up until the last year as a high priority for our schools by our community members.” The district is now conducting a needs assessment to understand student interest with an implementation plan to follow this summer and courses to be offered in the 2026 school year. The district will seek funds from alternate sources, such as grants for smaller school districts, but with extremely limited resources and graduating class sizes of approximately 20 students, the district cannot afford a robust program like those in neighboring districts.

Depth to Pathways

In some cases, pathways do not provide sufficient depth necessary to hold student interest through completion. Without offering and enrolling students in a capstone course (the second or

third in the pathway sequence), students may miss the opportunity to earn valuable industry certifications and/or credentials, such as CPR and first aid, OSHA 10 and OSHA 30 (construction), Food Safety/CA Food Handler (culinary arts), and ASE (automotive). In other cases, dual enrollment for college credit is unavailable, or the courses do not include academic content or lead to meaningful careers. In nearly all cases, the component of participating in internships and work-based learning is missing. It is remarkable that only one pathway in the County, at one high school, includes a formal internship class. This is most often attributed to two factors: the absence of local business relationships with CTE coordinators and/or teachers; and the liability of students under the age 18 on the premises. However, in the community classroom setting for 16-and-older students, worksite liability insurance is the responsibility of the respective school district in an unpaid work experience. In paid internships and apprenticeship programs, the student is considered hired by the employer. California state law indicates that in such cases, students are considered regular employees and are covered by the employer's workers' compensation insurance.¹⁰

Focus on College Preparedness

In the 1980s, the education system made a notable shift away from vocational education to college preparedness, emphasizing more rigorous core academic coursework, standardized testing, and reform initiatives. Then, as now, high school academic counselors vigorously advise every student to meet the minimum requirements for acceptance at California colleges.

The problem is that not all high school graduates complete the minimum A-G requirements. In 2023, only 63% of San Mateo County's graduates met this requirement,¹¹ meaning the other 37% were not eligible for University of California or California State University acceptance. Ineligibility for acceptance is exacerbated when a student's socioeconomic status and/or race and ethnicity are factored in, and vary between districts and high schools.

Even if graduates were accepted and enrolled, the California college attrition rate is shocking. According to the National Student Clearinghouse Research Center, 42.9% of students younger than 25 years old and 22.2% of 25 to 34 year-olds drop out of college.¹² The number is nearly double for two-year institutions, such as community colleges.

Dropout rates are not the only indicator that college isn't for everyone. College enrollment rates have been declining in recent years. Data from the National Student Clearinghouse Research Center shows enrollment of 18-year-old freshmen has dropped at four-year and two-year colleges in the fall semester of 2024. Enrollment fell 1.7 percent at community colleges, compared to 6.4

¹⁰ U.S. Department of Labor, accessed May 19, 2025, <https://www.dol.gov/agencies/whd/youthrules>

¹¹ Danielle Echeverria, "Here's how every high school in California does in preparing students for UC system," UC/CSU requirement completion rates by California county, *San Francisco Chronicle*, Aug 23, 2024, <https://www.sfchronicle.com/california/article/college-admissions-uc-csu-preparedness-19658444.php>

¹² Melanie Hanson, "College Dropout Rates," *Education Data Initiative*, Aug 16, 2024, <https://educationdata.org/college-dropout-rates#ca>

percent at public four-year institutions, and 6.2 percent at private four-year institutions.¹³

College-bound graduates who may or may not earn a degree, as well as those not seeking a post-secondary education, need more than a cursory introduction to career fields. The current programs need to be expanded to provide students with industry-recognized certifications and/or credentials through internships and pre-apprenticeships. High school graduates who complete a pathway with industry-recognized certifications and/or credentials should be prepared for not just a job, but a career in the industry sector.¹⁴ More than that, students who completed a significant portion of a CTE program and are actively pursuing a career path within that field, earn higher pay than their non-CTE counterparts.¹⁵

Math Proficiency - Algebra I

Algebra I is a state requirement in California for high school graduation. Specifically, the California Department of Education states that students must complete two courses in mathematics, one of which must be Algebra I or its equivalent.¹⁶ Inequities in math proficiency in early education may create a barrier for some students desirous of completing CTE pathways. This includes the traditional vocational pathways of building and construction, woodworking, etc., and others, such as video game design and culinary arts, where students use math to create digital games and prepare meals. Failing Algebra I impacts students in more ways than one: time spent retaking the class when they could be taking CTE courses, potentially limiting pathways due to missing essential math skills, and putting them at greater risk of not graduating from high school.¹⁷ According to the San Mateo County Office of Education (SMCOE), offering an alternative A-G equivalent algebra course that connects math to real-world applications (for example, Business Math) can significantly improve passing rates.

Guidance toward the Trade Unions

As an alternative to college, career guidance in high schools often promotes traditional, union-sponsored vocational trade programs. In fiscal year 2022, there were approximately 80,000 apprenticeships in California registered with the Department of Labor. Young workers, aged 24 and under, constituted only 31% of these apprenticeships, with over twice as many

¹³ Sara Weissman, “Fewer 18-Year-Olds Enrolled in College This Fall,” *Inside Higher Ed*, Dec. 3, 2024, <https://www.insidehighered.com/news/admissions/traditional-age/2024/12/03/fewer-18-year-olds-enrolled-college-fall>

¹⁴ College, Career and Community Partnerships, San Mateo County Office of Education, accessed May 31, 2025, <https://www.smcoe.org/for-educators/cte-college-and-career-readiness>

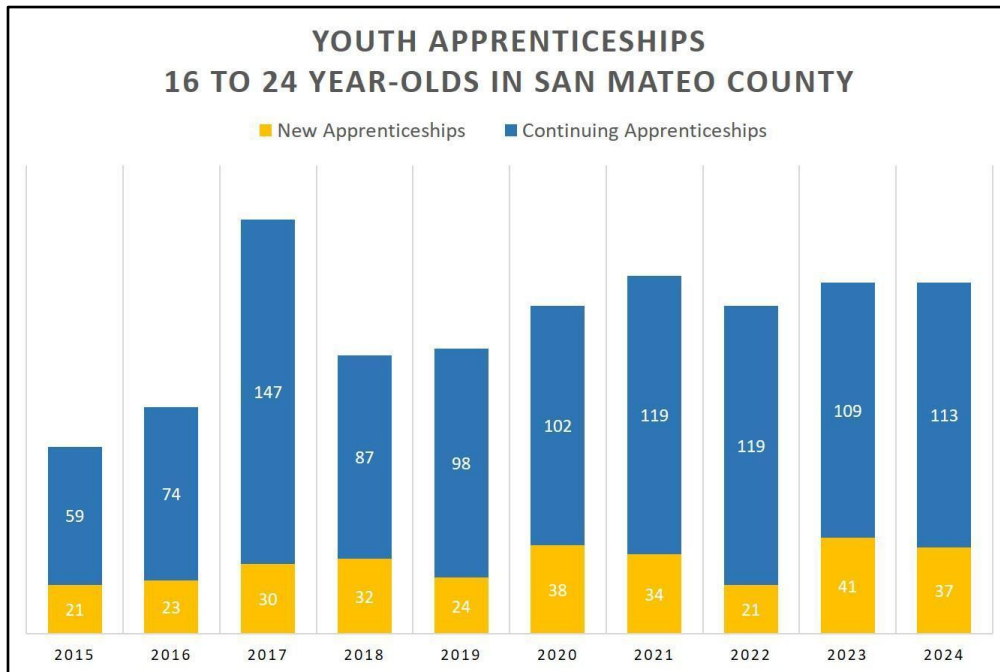
¹⁵ Earnings for CTE Study, *TechEd Magazine*, <https://www.techedmagazine.com/earnings-for-cte-study>, May 10, 2023

¹⁶ Mathematics Graduation Requirements - High School, Minimum graduation requirements for mathematics, California Department of Education, accessed April 29, 2025, <https://www.cde.ca.gov/ci/gq/hs/hsgmath.asp>

¹⁷ Bill Gates, “More students flunk this high school course than any other,” *Gates Notes*, Dec 7, 2021, <https://www.gatesnotes.com/helping-students-succeed-in-algebra>

apprenticeships provided to workers aged 25–54.¹⁸ And of those young workers lucky enough to secure an apprenticeship, 94% were male.¹⁹ More than four in five (82%) of the apprenticeships were unionized.²⁰

In San Mateo County, where thousands of high school students graduate annually, the numbers are troubling. Based on data entered or uploaded into the Registered Apprenticeship Partners Information Database System (RAPIDS) for 16 to 24 year-olds, of the 150 active apprenticeships in the County in 2024, only 37 were new apprenticeships, and 92% of the apprentices were male.²¹



"New Apprenticeships" represent apprentices who began their training in that fiscal year. "Continuing Apprenticeships" are those who are in active apprenticeships less new apprenticeships. Chart: Civil Grand Jury - Source: [Apprenticeship USA](https://www.apprenticeship.gov)

¹⁸ "California's Future is Clocked In: The Experiences of Young Workers," UCLA Labor Center, November 2023, https://www.labor.ucla.edu/wp-content/uploads/2023/11/DownloadedNov7_Young-Workers-in-California.pdf

¹⁹ Ibid.

²⁰ Ibid.

²¹ Apprentices by State Dashboard, Apprenticeship USA, accessed May 6, 2025, <https://www.apprenticeship.gov/data-and-statistics/apprentices-by-state-dashboard>

While it is not surprising that young eligible workers are provided few opportunities in trade unions, there are other career options.

The unprecedented number of Baby Boomers retiring, declining interest from subsequent generations in the trades, and the perception of college as the essential path to success has created a skilled trade gap. Substantial job vacancies already exist in critical trades such as construction, carpentry, electricians, welding, plumbing, retail, health care, hospitality, and food service. As Baby Boomers continue to retire, three million skilled trades jobs openings are expected in the US by 2028.²² Many members of Generation Z (those born between 1997 and 2012) who are disenfranchised by the high cost of college tuition and the burden of student loans see opportunity. This “Toolbelt Generation” is choosing to bypass higher education in favor of meaningful, purpose-driven work with job stability and financial security.²³

Local businesses that were interviewed are starved for employees and are willing to hire and train graduates for entry-level positions, providing them with valuable skills, immediate income, and an opportunity to advance in a career path. All the hiring managers at the businesses interviewed for this report said they are actively looking for employees who are willing to work hard and are open to learning new skills; young age was not a deterrent.

High school career counselors should include in their discussions with students the viable options for post-graduation employment, and this should take place early in students' high school education.

Resources, Resources, Resources

CTE-certified teachers are the most difficult resource to obtain. Without these experienced professionals with specialized industry knowledge, districts are limited in the depth and breadth of CTE options they can offer students. Time and time again, school administrators and staff spoke about the challenges of luring industry veterans away from their lucrative jobs due to the low pay of teaching in comparison. These highly qualified individuals with years of industry experience are presented with entry-level salaries instead of pay commensurate with their experience. CTE instructors are required to have a high school diploma (at minimum), 3,000 hours of industry experience, and complete a CTE preparation program to receive a CTE-designated subject teaching credential.²⁴ In the course of this investigation, the Civil Grand Jury learned that Superintendents are not prevented by union contracts from negotiating salary schedules based on pay commensurate with industry work experience to alleviate CTE teacher shortages and attract the most qualified candidates.

²² Ezra Greenberg, Erik Schaefer, and Brooke Weddle, “Tradespeople wanted: The need for critical trade skills in the US,” McKinsey & Company, April 9, 2024, <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/tradespeople-wanted-the-need-for-critical-trade-skills-in-the-us>

²³ Te-Ping Chen, “How Gen Z Is Becoming the Toolbelt Generation,” *WSJ.com*, April 1, 2024, <https://www.wsj.com/lifestyle/careers/gen-z-trades-jobs-plumbing-welding-a76b5e43>

²⁴ Designated Subjects Career Technical Education Teaching Credential, Commission on Teacher Credentialing, accessed May 27, 2025, [https://www.ctc.ca.gov/credentials/leaflets/designated-subjects-\(cl-888\)](https://www.ctc.ca.gov/credentials/leaflets/designated-subjects-(cl-888))

Pending Bills Impacting CTE

CTE is a hot topic locally and nationally. Many new bills impacting CTE were passed in recent years, others are making their way through the California Legislature, and many more have been or are expected to be introduced by lawmakers. These bills cover topics such as:

- Job protection for CTE teachers,
- Extending waiver periods to credential individuals in CTE who meet specific criteria,
- Notifying parents or guardians of 11th and 12th graders about local apprenticeship and pre-apprenticeship programs, and
- Limiting criminal background checks to those who supervise, mentor, or provide direct guidance or instruction to pupils (a significant cost savings for businesses hiring interns).

It would be beneficial to have one entity in the county monitor the legislation to share the information with local business partners and Superintendents, who in turn disseminate it to district CTE personnel, counselors, parents, etc. District personnel interviewed were not aware of current legislation. During discussions with the Civil Grand Jury, SMCOE indicated it already follows this activity, making it the logical entity to spearhead such an initiative. This, for example, could be done via a section on the SMCOE website.

Role of the San Mateo County Office of Education

SMCOE does not directly oversee or govern local school districts, but provides valuable support and services that are essential to school district operations. These include fiscal accountability and solvency, approval of district Local Control Accountability Plans (LCAPs), professional development, and serving the County's most vulnerable students (expelled, incarcerated, special needs, and early learners).

The 2022-2023 Civil Grand Jury concluded that SMCOE should take a more active role in facilitating relationships that will shape the future and direction of CTE in the County's high schools, going so far as to formally recommend:

“By February 1, 2024, the SMCOE should prepare a plan, by which it supports and facilitates on an annual basis, initial contacts and meetings between school administrators and business leaders to explore potential partnerships, including financial support, curriculum development, internships, professional mentors, and on-site exposure to work environments.”

When questioned about SMCOE's own responses to the 2023 report and the current status of the recommendation, SMCOE was uncertain if a plan was ever prepared.

Metrics for Measuring CTE Success

“One of the great mistakes is to judge policies and programs by their intentions rather than their results.” - Milton Friedman

One of the most valuable pieces of information the district CTE coordinators seek to acquire is what students are doing post-graduation - are they working or in school, and does their career or college major relate to the CTE classes they took in high school? As of now, limited national

data suggests that most CTE completers, regardless of pathway, end up in a different major when they get to college.²⁵ Gathering this data, a requirement of grant funding, has proven challenging for every district in the County, with response percentages in the single digits to low twenties. Districts have tried multiple means of contacting former students with exit surveys, from emails to mailings, to testing more complex systems. However, once students graduate, they are no longer under the district's purview and have no onus to respond. Other avenues of reaching students need to be explored and creative strategies devised. One way would be to utilize the resources of alumni and booster groups that tend to have higher response rates. Another would be via social media outreach.

Along these same lines, little data exists on businesses' satisfaction with student CTE performance. To refine pathways, adapt curriculum for relevance and rigor, identify classroom instructional strategies, and improve outcomes, district CTE coordinators and teachers involved with intern and pre-apprentice placement should solicit feedback from these businesses. The Civil Grand Jury recognizes that currently only one high school offers a formal internship class, but as internships are added and the programs expand, the feedback loop will become increasingly important.

Businesses that hire graduates are in a position to provide vital assessments of attained industry knowledge and/or skills, ensuring that CTE pathways are closely aligned to labor market demand, feature experiential learning opportunities, and provide a seamless transition from education to occupation. The County and districts should foster these types of cross-sector relationships to facilitate recommendations and guidance on improving the curriculum to meet industry-specific needs.

FINDINGS

- F1. Students do not have sufficient opportunity to begin a CTE pathway before 11th or 12th grade due to District graduation requirements beyond State standards and a focus on preparing students for college admissions based on the UC and CSU A-G course requirements.
- F2. Pathway completion rates within the County are only 15% on average. Factors include a lack of pathways with depth, a mismatch of pathways to student interest, and barriers to entry into pathways, resulting in lost opportunities for students and funding for districts.
- F3. The high school district stated it has challenges with hiring qualified individuals with industry experience for CTE positions due to lower pay in education. Superintendents have the ability to negotiate salary schedules and offer CTE candidates compensation based upon years of industry experience (and not years of teaching).
- F4. The district is not fully aware of new legislation impacting CTE programs, such as notifying parents or guardians of 11th and 12th graders about local pre-apprenticeship and apprenticeship programs, the loosening of internship rules and regulations for businesses hosting students, etc.

²⁵Zeyu Xu and Ben Backes, "*The case for specialized career and technical education*," Thomas B. Fordham Institute, Sept. 12, 2022, <https://fordhaminstitute.org/national/commentary/case-specialized-career-and-technical-education>

- F5. The systems used by the district to follow up on graduating seniors have not been successful in gathering enough participation to provide useful data, with return rate percentages between single digits to low twenties.

RECOMMENDATIONS

- R1. By March 31, 2026, SMCOE should analyze districts' master schedules for CTE pathway completion outcomes and recommend potential improvements.
- R2. By January 1, 2026, each school district should ensure all pathways include a capstone course, add classes with dual enrollment credit, and those with certifications/credentials.
- R3. By April 30, 2026, the district school board should determine if, and where, students' schedules can be opened up for more CTE and dual enrollment opportunities earlier in their high school careers by evaluating district graduation requirements versus state-mandated requirements.
- R4. By August 1, 2026, the district should work with the union(s) to negotiate mutually agreeable salaries for CTE teachers based on pay commensurate with CTE experience, to incentivize talented and experienced candidates to apply.
- R5. By October 31, 2025, SMCOE should share new legislation impacting CTE programs with business partners (via such means as Advisory Meetings, Steering Committees, etc.) and Superintendents who in turn disseminate it to their constituents (district CTE personnel, counselors, parents, etc.).
- R6. By March 31, 2026, each school district should develop a more effective means or system for capturing post-graduate information, specifically if graduates are working or studying in the field of their completed pathway.

REQUEST FOR RESPONSES

Pursuant to Penal Code 933.05, the Civil Grand Jury requests responses from the following governing bodies:

Local Education Agency	Finding	Recommendation
San Mateo County Superintendent	F1, F2, F4	R1, R5
Cabrillo Unified School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6
Jefferson Union High School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6
La Honda-Pescadero Unified School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6
San Mateo Union High School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6
Sequoia Union High School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6
South San Francisco Unified School District	F1, F2, F3, F4, F5, F6	R2, R3, R4, R6

The governing bodies indicated above should be aware that the comment or response of the governing body must be subject to the notice, agenda, and open meeting requirement of the Brown Act.

RESPONSE REQUIREMENTS

California Penal Code Section 933.05 provides as follows (emphasis added)

- (a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall report one of the following:
 - (1) The respondent **agrees** with the finding.
 - (2) The respondent **disagrees** wholly or partially with the finding, in which case the response shall **specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.**
- (b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:
 - (1) The recommendation has been implemented, **with a summary regarding the implemented action.**
 - (2) The recommendation has not yet been implemented but will be implemented in the future, **with a timeframe for implementation.**
 - (3) The recommendation requires further analysis, **with an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when**

applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.

- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, **with an explanation therefor.**

GLOSSARY

A-G Requirements

A uniform minimum set of courses required for admission as a freshman to the University of California (UC) and California State University (CSU) systems. Subjects include English, mathematics (including Algebra I), social studies/science, science, world language, visual and performing arts. A-G requirements often differ from high school graduation requirements.

Capstone Course

The final year project, seminar, thesis or dissertation course within a Career Technical Education program that serves as the culmination experience of that program.

Career Technical Education (CTE)

An educational approach that combines academic and technical skills to prepare students for careers in specific industries. Formerly known as vocational education, it now includes both traditional trades and high-tech fields.

Community Classroom

A community classroom is an instructional methodology which utilizes unpaid on-the-job training experiences at business, industry, and public agency sites to assist students in acquiring those competencies (skills, knowledge, and attitudes) necessary to acquire entry-level employment.

Completer (CTE Completer)

A student who finishes a full sequence of CTE pathway courses, including the capstone course, often meeting additional performance metrics for funding and state recognition.

Comprehensive High School

A comprehensive high school is designed to offer a wide range of academic programs and courses. Continuation high schools serve students who are at risk of not completing high school. For the purposes of this report, the focus is on comprehensive schools.

Credential (Industry-Recognized)

Typically, exam-based certification or official recognition of skill proficiency issued by third party industry organizations and often tied to employability. Examples include OSHA, Adobe Certified Associate, ASE, First Aid and CPR, and Safe Food Handling.

CTE Pathway

A program of study that involves a multiyear sequence of courses that integrates core academic, technical, and real world knowledge, and skills and experiences to prepare students for post-secondary education and careers.

Dual Enrollment

Dual enrollment courses earn students both high school and college credit while still attending high school. These courses are typically offered through community college partnerships.

Local Control Accountability Plan (LCAP)

A three-year plan required by the State of California in which school districts outline goals, actions, services and expenditures for improving student outcomes.

Pathway

See Career Technical Education Pathway.

Post-Secondary Education

Education beyond high school, including community college, trade school, or a four-year university.

Pre-apprenticeship

A program that prepares individuals to enter and succeed in registered apprenticeships by offering basic skills and introductory exposure to the trade.

Regional Occupational Centers and Programs (ROCPs)

State-funded, regional programs or centers allowing students from various schools or districts to attend career technical training programs regardless of the geographic location of their residence in a county or region. ROCPs were designed to prepare students and adults to enter the workforce, pursue advanced training, and upgrade existing skills. San Mateo County's last ROCP closed in 1989.

Work-Based Learning (WBL)

Experiences that connect classroom learning with real-world work environments, such as internships, job shadowing, or apprenticeships.