

Innovative Approaches to California's College & Career Pathway Teacher Shortages

CONTEXT

- The legislature has made significant investments in developing high school pathways that can prepare students for both college and career, creating integrated academic Career Technical Education (CTE) curriculum, and aligning pathway development with postsecondary career pathways as well as with workforce demand.
- Pathway development has improved student achievement, graduation rates and transitions into college and careers, and has brought valuable real world applications to implementation of new state standards.
- Recent workforce shortages in high demand sectors have inspired efforts to align workforce development and education resources, and sparked industry investment in college and career pathway development.
- While the general teacher shortage is growing, the shortage of CTE teachers is even more severe.
- Pathways in high demand fields, such as Health and STEM pathways, are severely impacted by this shortage of qualified credentialed CTE teachers, particularly for courses offered for both CTE and academic (a-g UC/CSU eligibility) credit.
- This shortage of CTE teachers in the academic core obstructs equitable access to high quality career pathways for thousands of students across the state.

IMPLICATIONS FOR THE FIELD

High quality college and career pathways depend upon a strong CTE course sequence that is integrated with the academic core. However, without CTE faculty, students in college and career pathways are denied access to current, state-of-the-art programs to prepare them for careers in the 21st century workforce. This shortage denies pathways access to critical expertise in current industry standards, industry-specific performance tasks and relevant practical applications of academic content, all invaluable to implementation of new state standards.

Two thirds (67%) of the leads at high school sites with Career Pathways Trust-funded pathways who responded to a California Department of Education-sponsored survey reported that recruiting and retaining pathway instructors with appropriate credentials was challenging or very challenging. About the same number (65%) found it challenging or very challenging to find faculty with appropriate credentials for dual Academic/CTE courses. College and career pathways serving large low-income and second language learner populations have great difficulty attracting and keeping qualified CTE teachers for high demand fields, such as health and engineering. Hiram Johnson High School in Sacramento City Unified School District is a case in point. Serving predominantly low-income and second language learners, their Technology and Engineering Design Academy was forced to close because they could not find a CTE teacher in Engineering, and their Health and Medical Science pathway has not been able to hold onto a CTE teacher in Health for the past two years.

ROLE OF INDUSTRY

ROOTS OF THE CTE TEACHER SHORTAGE

- The often large pay differentials between teaching and working in high demand fields
- Growth in teacher retirements
- Lack of CTE teacher education programs
- Minimal access to site-based mentorship for new CTE teachers causing low retention
- Social Security disincentives for industry professionals entering teaching
- The historically lower status of the teaching profession, and of CTE within the profession

Industry partners are crucial to addressing this shortage. Industry partners invested in developing a 21st workforce are already working with educators to infuse real-world performance tasks into curriculum and offer work-based learning opportunities to students. Many provide externships so that pathway teachers can learn about career fields and industry-based applications of the academic subjects they teach. Industry co-teaching partnerships, teacher externships and sabbaticals, and intensive summer fellowships in industry, such as those organized by IgnitEd (formerly IISME) are innovative approaches that infuse industry expertise into teacher preparation for career pathways. Industry involvement in teacher education ensures that teachers learn how to effectively integrate academic and career education.

ACADEMIC/CTE INTEGRATION

As schools work to integrate academic and career-technical education, the number of CTE courses meeting UC/CSU a-g requirements has exploded, yet the number of programs training teachers for those courses has dwindled. The shortage of skilled and credentialed teachers for these courses obstructs students' access to an integrated college and career preparatory program of study. Few Single Subject credentials authorize teaching CTE in the academic core, and few colleges offer those credentials. There are only 15 Designated Subjects credential programs left in California, nine sponsored by county offices of education. Without intensive effort, the expansion of college and career pathways will be stymied by this gap in programs to recruit and prepare essential CTE core faculty.

The CTC has begun developing "bridges" to allow CTE teachers to get the appropriate training to be able to teach in the academic core, and Single Subject teachers to be able to teach CTE, but programs to incentivize and organize this shift in teacher capacity are lacking. At the same time, the legislature's over \$1.4 billion investment in pathway development has doubled the number of college and career pathways, dramatically increasing demand for such teachers. Collaborative, innovative programs to expand the supply of teachers skilled at teaching technical content, particularly within the academic core, are essential if California is to meet ESSA's demand for college and career readiness, and inclusion of CTE in the academic core.

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PROSPECTIVE SOLUTIONS

- Allocate funds for innovative programs to prepare the CTE teachers needed for 21st century college and career pathways, through programs for new CTE teacher education and dual credentialing of the current workforce.
- Invest in the development of teacher preparation programs that prepare teachers to integrate academics and CTE, prioritizing high demand sectors within regional economies.
- Encourage industry sector involvement in pathway teacher preparation and professional development.
- Promote teaching pathways within industry sectors using industry partnerships and regional collaboration across secondary and postsecondary partnerships so that programs build upon current pathway alignment efforts.
- Fund programs that collaborate with industry in pre-service and in-service CTE teacher preparation so that teachers are able to garner appropriate experience in the industry field, and can access industry resources to obtain appropriate certifications (e.g., certification trainings, intensive paid summer externships and joint employer-district sponsored sabbaticals).
- Improve CTE induction resources to strengthen supports for new CTE teachers. Strong mentorship programs have been shown to improve new CTE teacher retention by as much as 600%. Provide resources to expand the CDE's CTE Teach Mentor Program.
- Support programs to prepare current Single Subject credential holders to obtain a CTE credential and current Designated Subject credential holders to obtain a Single Subject credential.

EXPECTED IMPACT

Policy initiatives that prioritize these approaches should produce a surge in innovative, industry-involved programs incorporating CTE teacher education and professional development for both new and in-service teachers. Already county offices, districts and teacher education programs are looking for ways to collaborate to increase the number of teachers able to teach CTE in the academic core, particularly in high demand sectors.

With support and incentives, local LEAs will incorporate such programs into their LCAPs, and teacher education programs will be developed to train CTE teachers, particularly for credentials that authorize CTE in the academic core, and to serve in high-poverty schools. The capacity of the teacher workforce to integrate academics with career-field applications will increase, which is critical to high-quality pathway development. A variety of scalable models for pathway teacher preparation and professional development will offer options for future local and statewide policy initiatives. Teachers capable of simultaneously implementing both college and career preparation in high schools will shrink achievement and skills gaps and increase employability and college going rates for students.

POTENTIAL RESOURCES FOR CREATING INNOVATIVE PROGRAMS

- The CDE has significant resources and programs designed to support CTE teacher professional development.
- The CTC has been developing avenues to increase the number of dual credentialed teachers, in an effort to address this critical need.
- A consortium of ten California Community Colleges in the Teacher Preparation Pipeline STEM/CTE have worked since 2014 with business and workforce development partners to develop teacher preparation programs in Science, Technology, Engineering and Mathematics (STEM) fields as well as other CTE fields.
- The Teacher Education Program at the CSU Chancellor's Office has committed to addressing the needs of the pathway teacher workforce, and many CSUs are already engaged in transforming teacher education and education leadership programs to better address college and career pathways.
- The California Teachers Association has been supportive of these efforts in the past, and is involved in discussions to develop solutions.
- Local LEAs are seeking to develop innovative CTE credentialing programs to increase the skills, capacity, and flexibility of the pathway teacher workforce.
- Industry representatives are actively engaged in pathway development through sector specific, regional and statewide organizations. Industry resources can support CTE credentialing of both new and current pathway teachers.
- Student professional associations are already engaged in identifying potential pathway teachers for mentoring and support for single subject credentialing in agricultural science, and are well positioned to do so for single subject credential programs in the health sector.

CONTACT the Pathway Teacher Workforce Network

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TIPS FOR USING THIS AWARDS FOR INNOVATION POLICY BRIEF

- Have coffee with your district or county office legislative liaison to review the policy paper and provide examples of how these issues are affecting your district or region.
- Submit this brief for endorsement by the professional associations with which you work, to solicit their support for legislative actions that address these concerns.
- Use this brief to write a letter to your legislators and to key education committee legislators with examples of how these issues are affecting your district or region, requesting legislation that will address these issues.
- Bring the brief to any context in which policy makers are approachable, and ask them if they are aware of the crisis pathway workforce leaders are facing.
- Bring this brief to district and regional discussions of LCAP or any other strategic priority-setting conversations.