JOBS FOR THE FUTURE

Nonprofit & Government Agencies

K-12 Schools

Community Partners

Community Colleges

REGIONAL CONSORTIA

Employers

Local Workforce Boards

Four-year Institutions

TWO YEARS INTO CCPT

Many Challenges & Great Promise

California Career Pathways Trust Implementation Research Report

MILBREY MCLAUGHLIN, VALERIE LUNDY-WAGNER, & BARRY GROVES

ACKNOWLEDGMENTS

Jobs for the Future (JFF) is a national nonprofit that builds educational and economic opportunity for underserved populations in the United States. JFF develops innovative programs and public policies that increase college readiness and career success and build a more highly skilled, competitive workforce. With over 30 years of experience, JFF is a recognized national leader in bridging education and work to increase economic mobility and strengthen our economy.

www.jff.org

TABLE OF CONTENTS

FOREWORD

Jobs for the Future (JFF) is pleased to share this first of a two-part study focused on lessons emerging from the California Career Pathways Trust (CCPT), an unprecedented state investment to develop routes from high school into postsecondary education and high-skill, high-wage careers. Like leaders of the many education, workforce other organizations advancing career pathways under CCPT, JFF has long promoted the alignment and integration of academic and technical learning and high school and college-level curricula. When CCPT was launched in 2014, we were proud to work with grantees as well as the California Department of Education, the California Community College Chancellor's Office, and the California Workforce Development Board to provide guidance on implementation and share promising state and national practices, thanks to the support of the Noyce Foundation. California's membership in the Pathways to Prosperity Network, a partnership between JFF and the Harvard Graduate School of Education that helps states and regions support more high school graduates to earn a postsecondary credential with labor market value, continues to facilitate this learning and fuel interest in career pathways nationally.

We are grateful to the CCPT grantees who generously shared their valuable time and views with us. Their efforts are producing hard-won results for young people even as they grapple with the challenges of such an ambitious change effort that requires new ways of working across boundaries and gaps in the state's education and workforce systems. Just as CCPT encouraged the development of regional consortia of cross-sector institutions to better bridge education and workforce systems, JFF has also been supporting regional networks of a similar, and sometimes overlapping, set of leaders advancing Linked Learning—a strategy that inspired the design of CCPT. We are hopeful that the Linked Learning Regional Hubs of Excellence, supported by the James Irvine Foundation, will produce knowledge complementary to that generated by CCPT's regional consortia about how to better align K-12 education, two- and four-year colleges, workforce systems, and employer demand in key industry sectors.

Additionally, we are grateful to the Stuart Foundation and the Noyce Foundation for their generous support of this study. The research provided JFF with another lens on the important work that CCPT has spurred—a perspective that we hope produces meaningful and actionable implementation lessons for the field.

Thank you for your interest in these findings and in the forthcoming final report, which will focus on the sustainability of CCPT efforts. Special thanks are due to my colleagues Milbrey McLaughlin, Barry Groves, and Valerie Lundy-Wagner for their hard, thoughtful, and skillful work on this research.

Joel Vargas

Vice President, School and Learning Designs
Jobs for the Future

INTRODUCTION

In July 2014, the California legislature passed Assembly Bill 86, which established the California Career Pathways Trust (CCPT) through the California Department of Education (CDE).[1] The initiative funds new regional consortia of K-12 educators, community colleges, and employers to establish career pathways designed to lead secondary students to a postsecondary degree or certification aligned with regional workforce needs.[2]

California's CCPT investment stands as one of the largest career pathways investments across all states. With AB 86, the California legislature allocated $500 million to finance two CCPT cohorts.[3] Cohort 1 (FY 2014–2018) funded 12 regional consortia with up to $15 million each, 16 regional consortia with up to $6 million each, and 11 local projects with up to $600,000 each, for a total of $282 million. Cohort 2 grants (FY 2015–2019) supported 10 regional consortia of up to $15 million each, 4 regional consortia of up to $6 million each, 20 local projects of up to $6 million each, and 6 local projects of up to $600,000 each—a commitment of $297.6 million. These multilevel grants are set up for four or five years, with infusions of funding from the state between year 1 and year 3, with an expectation that the last two years of the initiative will be fully funded by consortia partners to promote sustainability.

THINKING REGIONALLY, ACTING LOCALLY

CCPT asks all consortia participants to think on a regional scale, rather than in the usual terms of their own district, community, or postsecondary institutions. This consortium-wide perspective, and the collaborative relationships envisioned among districts, postsecondary institutions, and employers also require a new mindset about career and technical education (CTE) and a new way of operating for all CCPT participants.[4]

CCPT sponsors recognized that the initiative represented a significant departure from business as usual for all actors in that pathway with efforts needed to reflect local conditions, assets, and constraints. In order to provide flexible support for grantees' pathway ideas and local priorities, the CCPT initiative established few guidelines about how funds could be spent. In this regard, CCPT stands in contrast to other similar pathway-focused initiatives such as the Linked Learning Pilot Initiative or California Partnership Academies (CPAs), which established the CTE Pathways Program, both of which require specific data and metrics in reporting. For example, the CPAs must have 50 percent of its students deemed to be at risk in each pathway, use a

---

[1] The California Department of Education manages the state's K-12 education system and enforces education law and regulations, as noted here: http://www.cde.ca.gov/eo/mn/rr/. For a complete description of the regulatory and policy context of CCPT, see the Appendix of this report.

[2] The funding and guidelines for CCPT come through the CDE, which primarily manages the elementary and secondary education systems.

[3] http://www.cde.ca.gov/ci/ct/pt/index.asp provides background on the CCPT program, lists grantees and their funding levels.

[4] CCPT's focus is on career pathways development per the request for proposals. For many CCPT consortia, the initiative was viewed as a career and technical education initiative which is reflected throughout the report.

cohort model for its students, provide staff professional development, and designate connections with a local Workforce Investment Board. CCPT is much looser in terms of its program implementation procedures and provides relatively broad definitions of key terms such as "pathway" or work-based learning (WBL).[5] This flexibility in implementation acknowledges unique local contexts in ways that are valuable for practitioners, but it simultaneously requires considerable effort to balance often-competing local policies and procedures or results in duplication of efforts.

METHODOLOGY

This report is part of JFF's CCPT documentation, which explores Cohort 1's implementation experiences over the initiative's first two years. We began our research in the summer of 2015 and focused on consortia funded at $15 million and $6 million levels. Our 2015 summer and fall activities included attending spring and fall CCPT network convenings, collecting and reviewing relevant records data (background reports, news articles, evaluations, and policy documents), and conducting telephone interviews with representatives from 8 of the 12 $15 million grantees, 9 of the 16 $6 million grantees, and 3 of the 11 $600K grantees. These interviews each lasted 45 to 60 minutes and centered on grantees' first year activities, accomplishments, and challenges.

In spring 2016, we conducted multiday site visits to three consortia funded at the highest level: East Bay Career Pathways in northern California, Capital Academies and Pathways in the California capital region, and the Tulare-Kings Pathway Project in the Central Valley. These consortia differ in their organizational structures, histories of collaboration, regional demographics, and economies, and so present somewhat different implementation contexts. By reputation, each consortium has been successful in creating and supporting strong K-12 career pathway programs and collaborative relationships within their regions.

These "deep dive" visits allowed us to pursue issues raised in our summer/fall 2015 telephone interviews and to speak with stakeholders from K-12 and community college systems as well as from the other postsecondary, business and workforce development community about their involvement in the consortium, perspectives on CCPT accomplishments and shortfalls, and what they think remains as "work in progress" for their consortium.

We visited high school pathway sites, talked with students, teachers, and pathway coaches, and observed their work in action. Site visits also included interviews with community college CCPT staff, CTE faculty, CTE deans and workforce development or employer partners. Other Cohort 1 consortia participated in phone or in-person interviews to incorporate more geographic, demographic, and pathway diversity in our documentation research (e.g., Vallejo, Oxnard, Orange County, and Long Beach). Select staff from CDE and the California Community College Chancellor's Office (CCCCO) were also spoken to or interviewed.

---

[5] The appendix provides a narrative account of CCPT's policy context as well as a full listing of relevant state and federal policies.

The findings from these interviews, site visits, and other research activities are presented in this report. In the sections that follow, we quote directly from, and cite, actors from the three sites we visited and synthesize findings from our phone interviews and from other interactions with actors in the field.

This Introduction provides an overview of the common aspects of pathway implementation in the grant's first two years and a summary of some of the emerging benefits of this pathway work.

COHORT 1 GRANT ALLOCATION CHOICES

Despite the open-endedness of the grant, Cohort 1 consortia generally spent their CCPT funds in much the same way: providing professional development at regional and local levels; supporting collaborative arrangements and positions; and purchasing equipment to expand or update existing CTE programs.

All Cohort 1 consortia offered pathway-related training for K-12 and community college educators; funded new positions tasked with coaching, developing, and coordinating K-12 work-based learning opportunities; and financed costs associated with various convenings designed to promote cross-sector and regional conversation among district and community college educators and employers.

Many Cohort 1 leaders note that CTE programs are "behind the curve" because high capital costs constrain efforts to provide training in line with contemporary employer needs. By report, CTE programs have struggled to keep up with the skills required by rapidly changing technology, and many of their "legacy" programs such as auto workshop provide training outmoded in contemporary workplaces. As most CTE programs are more expensive than general education courses, many grantees used CCPT resources to buy new equipment, update existing facilities, and purchase materials for operation. A rural K-12 superintendent said:

> To start an engineering program is really expensive because you need a lot of equipment. So, thanks to CCPT we have 3D printers and some other equipment. Well even Project Lead the Way curriculum and training is relatively expensive but we were able to purchase it. That grant's really allowed us to build the labs, buy the equipment, do the training, get teachers out, get the materials to get rolling and get that started.

APPROACHES TO CCPT IMPLEMENTATION

Most Cohort 1 grantees drew upon relevant past experience to design and carry out CCPT grants regionally and locally. For some Cohort 1 consortia, CCPT represented unfamiliar work in its focus on K-12/postsecondary pathways, and assumptions of K-12 collaboration with local employers and community colleges. These different regional and local histories presented different implementation choices and challenges.

Most Cohort 1 consortia developed new K-12 career pathways or expanded existing ones based on existing partnerships and connections. Some existing K-12 pathways had been

developed as part of AB 790 Linked Learning initiatives or simply had a strong CTE history. For instance, established Linked Learning sites such as Long Beach, Porterville, Oakland, Sacramento, Los Angeles, and other of the "Irvine Nine" (nine districts who have received Linked Learning funding from the Irvine Foundation) could layer and extend this work with CCPT grants.

Grantees' previous involvement with other initiatives also influenced consortia activities and approaches. For instance, Elk Grove's participation in the Ford Next Generation Learning grant focused their CCPT approach on the community-building philosophy central to that initiative. Several consortia modeled their efforts to build K-12 pathways designed around communities of practice after their NAF experience. Project Lead the Way training figured prominently in consortia science, technology, and engineering pathways. Community colleges already part of either CTE or other pathway collaboratives predating CCPT (e.g., CTE Regional Consortia and Adult Education Consortia) continued convening to share curricula, sample memoranda of understanding (MOU), and best practices by industry sector, for example.

Consortia without this CCPT-relevant experience opted for a "roll out" strategy centered on building new relationships among K-12 educators, postsecondary institutions, and employers in the first year, and then identifying strategies to support and sustain them in the second year. Many of these consortia leaders stressed that this developmental work relied heavily on the support of technical assistance organizations or support providers (e.g., the Linked Learning Alliance, ConnectEd, Career Ladders Project, and NAF) since both years represented new conceptual and practical work for all stakeholders.

CCPT ACCOMPLISHMENTS AT YEAR TWO

Although grantee reports indicate that many consortia fell short of their proposed year one "measurable outcomes"—for instance in terms of the number of work-based learning internships secured, number of students involved in pathways, or the number of employers engaged— every Cohort 1 respondent we spoke with pointed to areas in which CCPT's early activities and resources made positive and important differences in their region, and so for their students. All consortia leaders saw these "process" outcomes as foundational to the pathway work ahead, to the reframing of relationships and educational opportunities in regional terms, to building supportive infrastructure, and so to the sustainability of the CCPT investment. Despite different implementation trajectories and contexts, respondents called out similar year two positive outcomes across Cohort 1 consortia.

BENEFITS FOR K-12 STUDENTS AND TEACHERS

Consortia leaders highlight many positive student gains associated with participation in strong pathway programs. For instance, principals and pathway coaches report that attendance is up and discipline issues are down. A principal whose school offers strong pathway options said: "Discipline is low to nil. Expulsions hardly exist. Test scores are higher. Grades. Just the morale. And the students are providing incentives to other students, and so helping the teachers."

Students traditionally disengaged from school and at risk of dropping out profit most from career pathway opportunities, report CCPT leaders. Said a Central Valley educator: "You look at some of our students . . . before, without the pathways, they may not even graduate from high school, and now they're accepted to UCLA or USC or a CSU. So, for that demographic group of students we serve, I think pathways serves them as well or better than anything else." And, he continued, "Engaged students motivate their teachers."

Teachers express enthusiasm for the community of practice approach adopted by many CCPT pathway initiatives. A Central Valley pathway coach explains:

> A teacher commented just not long ago: This is why I went to college to teach, not that other nonsense. Teachers love it. They're working together. They're no longer in their silos where they don't have other people working with them. Even the counselors comment on, "You know, we were the hub as a counselor, but no one else was there to assist." They're feeling now like the teachers are assisting them in some counseling duties, just to provide intervention or to identify students that have a need, and it's not just all on the one person's back.

Pathway programs featuring problem-based learning elicit similar teacher reviews. An administrator said, "[Teachers] feel like they have taken their profession back, that they have a voice, and that they can really, actually, get kids excited and interested in learning."

STRONGER PATHWAYS AND CTE PROGRAMS

CCPT funds enabled consortia to build up existing CTE pathways. One consortium leader explained: "CCPT provides an opportunity to work on existing problems, for example the California State University system accommodating CTE students. We built up confidence in K-12 CTE, and added work on 'how to function as a student in college.'" Several consortia extended career exposure down to the middle school and initiated student and parent outreach efforts to stimulate interest in pathway programs. Consortia leaders also strengthened CTE curricula by designing new curricula and coursework that meet state college and university A–G admissions requirements and integrate academic and technical courses into rigorous pathways. Community colleges used funds to develop or improve connections with high schools via dual enrollment and course articulations; resources were also used to complement pre-existing college pathway development efforts.

CCPT funds enabled grantees to address areas such as career pathways and industry-sector work-based learning development and K-12/postsecondary connections in ways they previously could not because of limited funds; or at least to address these areas at a higher level than previously possible through other restricted funding sources—federal, state, or local (e.g., Perkins, AB 790, SB 1070, or Youth Career Connect).

CCPT's flexible funds leveraged existing investments and relationships in many consortia, and more importantly, supported new positions—K-12 coaches, WBL coordinators, roundtable conveners—that made all of the existing pieces work better together. Career coaches and counselors hired with CCPT funds joined career academies and district CTE programs. Consortia leaders said coaches provided critical supports to both K-12 students and educators,

especially in light of the broad reduction in counselor positions statewide following the 2008 Great Recession. CCPT funds also strengthened Linked Learning initiatives in many settings because they allowed K-12 actors to address shortcomings in that model, in particular balancing relationships with employers and community colleges. Lead community colleges in CCPT consortia largely used funds to hire staff well versed on the local K-12 system and educators and/or employers. The insider-outsider status of these new staff facilitated progress in developing and formalizing partnerships with community colleges.

Several respondents commented that the CCPT grant gave new status and presence to CTE in their communities and region. One said: "It was like water in the desert for CTE folks." CCPT brought many K-12 superintendents and school board members to the table for the first time to consider a pathway approach to high school reform that promotes college and career readiness for all students. In the community college system, CCPT is one of multiple CTE-related initiatives, which increased awareness for CTE programs, but at times confused practitioners steeped in postsecondary career pathway development and implementation.

NEW AND STRENGTHENED RELATIONSHIPS AMONG STAKEHOLDERS

Every consortia leader saw new relationships as a benefit of CCPT and essential to promoting collaboration among employers, community colleges, and K-12 districts within the regions, as well as within sectors. Consortia leaders and other CCPT actors created multiple strategies to encourage conversation within and across sectors. Many supported communities of practice among K-12 pathway teachers, principals, coaches, and other stakeholders as a place to share information, learn together, and develop common understandings. Pathway-specific convenings—around the arts, health, agriculture, or manufacturing, for instance—provided a similar opportunity for pathway teachers, counselors, and employers.

CCPT aimed to build new relationships between districts and community colleges. Although they are still a "work in progress," many respondents credited CCPT for instigating them. A community college administrator said: "From the community college perspective, CCPT built new relationships. Schools and districts don't normally work with community colleges. Pathway community college faculty are now having regular Friday evening meetings with high school faculty; it's a new thing." A K-12 district educator agreed: "What the CCPT grant has done is really help us bring into the fold the community college teachers, which is a whole other challenge in and of itself, but the dialogue is there." In the view of many consortium leaders, these new regional relationships brought enhanced social capital to the task of implementing career pathways and enabled consortia leaders to, as one put it, "do things we could never do on our own."

MORE ATTENTION TO DATA AND INDICATORS

Although problems of data availability and cross-system compatibility created universal frustration and some friction, consortia leaders say that CCPT further stimulated efforts to develop common indicators that assess program outcomes and describe student postsecondary pathways in careers or college. CCPT pushed on the need to align data between K-12 and

higher education and to develop a common course code system. Consortia directors across the state echoed the hopeful view of a Central Valley district data analyst: "CCPT funding created a pressure to meet a [data] need. California will come out of this initiative with a much better aligned K-12/higher education data system." Or the view of a CCPT administrator: "The push to sustainability will mean better CTE data in years to come." Despite this optimism, differences in how K-12 and community college CTE classroom, pathway, and WBL data are collected and made accessible continues to dog data-sharing efforts.

CCPT also surfaced the importance of common understandings of college and career readiness indicators. Several respondents pointed to the value of the local high school student Graduate Profile as a tool to create shared understanding of actual and aspirational outcomes, including indicators with which to assess pathway program and student-level outcomes. One consortium director explained:

> I can now say with confidence that, "Our kids are going to be college-and-career-ready" because I know what the target is and what the indicators are. And before, if my English teacher was preparing a student for the way she went to college and so on, I didn't have anything to point to. The Graduate Profile sets out standards.

CCPT planning processes generated important new data about regional workforce needs. These data strengthened pathways and CTE programs by promoting a regional assessment of employer fit with CTE/pathway curricula. Prior to CCPT, respondents say, educators paid little attention to how students' high school coursework aligned with regional workforce demands. As a district CTE director commented:

> It wasn't until this grant that educators really started identifying: What are business needs and what do students need to get there? When you look at what teachers are teaching, are they really teaching what industry needs? So if they're teaching Flash or something like that, that may not be used in industry anymore but that's what the curriculum is we have. So, that's the stuff we need to clean up.

ORGANIZATION OF THIS REPORT

The sections that follow provide an overview of Cohort 1's first and second year activities and concerns. First, we consider implementation issues from the perspective of the consortium itself. CCPT consortia represent new institutional arrangements; they came into existence with the CCPT grant. We explore a number of questions: How did Cohort 1 consortia structure themselves as new organizational forms? As regional actors? How did consortia leaders promote cross-sector arrangements in their regions? Engage diverse stakeholders in CCPT's mission and methods? Work within and across diverse demographic and economic settings within their regions?

Second, we discuss CCPT implementation experiences from the perspective of each of the primary players: K-12 educators, postsecondary partners, and employers. Although each partner signed on to common goals and made collaborative commitments as part of their CCPT proposal, each also brought particular perspectives and distinctive concerns and priorities to the table as they moved from proposal agreements to implementation activities. These differences

affect both implementation processes and outcomes and, for this reason, we discuss each stakeholder's experiences separately.

Each section includes examples of promising responses to common implementation issues. Even though Cohort 1 grantees faced challenges similar to those often encountered in efforts to engage the business community in the schools or to promote district/community college collaboration (barriers to cross-institutional or cross-sector collaboration, for instance), CCPT's flexibility allowed many consortia leaders and stakeholders to address these issues in new ways. We highlight those innovative responses and arrangements throughout the report.

Implications for sustainability conclude this report and will be developed in the subsequent report. Three broad implementation issues confront all Cohort 1 consortia as they enter their third CCPT year:

- ***Collaboration between K-12 districts and community colleges.*** K-12 districts struggle to align CTE coursework, develop dual enrollment opportunities, and establish infrastructure to consistently meet with community college faculty and leaders around pathway development. Community college structures often marginalize CTE courses and vary considerably in their operations, even within the same community college district, on enrollment procedures, pathway development, credit determination, and faculty governance.
- ***Employer engagement.*** CCPT outcomes turn on the support and engagement of business leaders and regional employers. Some consortia, especially those serving regions urgently engaged in issues of economic development, profit from active employer involvement in career pathways. However, most consortia grapple with questions of how to achieve sustained, meaningful commitment from the business community, provide a coherent framework for K-12 and community college partnership with employers, and secure CCPT employer champions for their work.
- ***Fostering and supporting a regional infrastructure and perspective.*** CCPT's regional aspirations brought in players, some new, and for new reasons. Many rural and small districts received technical assistance or other supports for the first time. Despite such benefits, however, consortia leaders in rural and urban areas agree that describing and enacting a regional perspective, plus building and funding a regional infrastructure to support CCPT, comprise both their biggest challenge and their greatest opportunity.

Our ongoing research explores these important questions.

REGIONAL CONSORTIA

California AB 86 created regional consortia via California Department of Education as a key California Career Pathways Trust (CCPT) implementation strategy. The initiative tasked consortia with developing the regional systems of supports, relationships, and resources needed to build and strengthen career pathway programs. In its regional scope and ambitious vision of cross-sector collaboration, CCPT's overarching charge to the new consortia stands without precedent in the education reform arena.

In order to maximize CCPT effectiveness, K-12 districts, community colleges, and employers all need to work together. Yet CCPT, which is administered by CDE—the state-level K-12 agent—is designed with secondary education in mind. CCPT highlights an opportunity to remedy structural disparities in CTE programs, facilities, and equipment between K-12 schools and community colleges, which can undermine collaboration between K-12 and postsecondary systems and can create competition between the two education systems for employer engagement. For example, consortia are often reluctant to endorse community college CTE programs when so many high schools often have more and better CTE resources. But consortia reluctance to endorse postsecondary CTE is at cross-purposes with the effort to engage employers, who are typically more interested in developing opportunities for older postsecondary students who will be able to fill open positions and contribute to an employer's bottom line more quickly than younger K-12 students. In addition, CCPT's time horizon of five years may also lessen its value for community colleges and employers given that relatively few students in fully implemented secondary career pathways will enter their respective institutions by the time the grant is over.

Nonetheless, CCPT's notion of regional action asks consortia to address three significant implementation tasks: changing mindsets about CTE, establishing communication among all stakeholders, and building regional infrastructure. New regional conversations and collaborations call for new strategies and structures to make them happen, align the work, and support associated system change. Mindset matters. Implementing strong career pathway programs necessitates new ways of thinking about CTE's goals, content, and stakeholders. And, a consortium's effectiveness in carrying out these responsibilities depends in large part on compelling communication about the value and requirements of the career pathways.

The CCPT initiative expanded the concept of regional consortia, which exist within the state's community college CTE and adult education programs, to include new actors. But it did not specify consortia membership or strategies so that consortia across the state could be designed to reflect particular regional realities and priorities. The next section, consortia at a glance, describes how regional consortia differ in their leadership, partners, and pathways. We then take up regional consortia's responses to the three implementation tasks described above. As Cohort 1's experience shows, consortia across the state wrestled with these core implementation tasks and confronted common obstacles in doing so.

CONSORTIA AT A GLANCE

Cohort 1 leaders all frame their CCPT mission in terms of changing mindsets about CTE and career pathways, promoting cross-institutional and cross-sector collaboration, and developing and carrying out a regional plan of action. Although Cohort 1 consortia are diverse in size, geographical configuration, and level of existing infrastructure for pathway work, they are all led by one of three agency types, and they face the shared challenge of working with partners that are historically siloed and unused to collaboration. These commonalities inform the implementation tasks and challenges that are discussed in the body of the Regional Consortia section.

CONSORTIA BY THE NUMBERS

LEAD AGENCIES

County Offices of Education: lead five $15M grants and one $6M grant

Community College Districts: lead five $15M grants and five $6M grants

K-12 Districts: lead one $15M grant and nine $6M grants

Partnership Academy: leads one $15M grant

Charter School: leads one $6M grant

TOP 5 SECTORS

Cohort 1 consortia proposed anywhere from 1 to 21 pathways. Across the state, five sectors received the most attention as pathway choices:
- Health and Medical Technology (17 consortia)
- Manufacturing and Product Development (13 consortia)
- Information and Communication Technologies (13 consortia)
- Engineering and Architecture (12 consortia)
- Agriculture and Natural Resources (9 consortia)

VARIETY OF PARTNERSHIPS

Cohort 1 CCPT proposals included a wide range of partners:
- 167 school districts
- 371 high schools
- 35 middle schools
- 22 elementary schools
- 22 adult/continuation/community schools
- 13 county offices of education
- 17 charter schools
- 8 regional occupation program centers
- 85 community colleges
- 845 business organizations
- 20 universities

THE LEAD AGENCY

Cohort 1 grantees designated different agencies to lead their consortia: county offices of education (COE), community college districts (CCDs), and K-12 districts led the bulk of the grants, and a partnership academy and charter school each led one grant. These institutionally different consortia leads brought different strengths and limitations to the initiative.

County Offices of Education

A COE is regional by design and so is well situated to take a regional perspective and develop strategies based on firsthand knowledge of regional needs, challenges, and capacities.[6] A strong COE can work in system terms and manage the structures and strategies that connect stakeholders. As one COE superintendent put it:

> We are conveners. I think that's a real advantage of county offices, and its also part of our mission. We are connectors within the K-12 space, and now the K-14 space and the pre-K-14 space. So, it is of use to our districts to be able to rely on us to be at those tables and represent them.

A CCPT director from another strong COE echoed this view:

> We're able to lead and see the overall big picture across [multiple] high schools and [multiple] pathways. We can be a connector and see where [sites] are having the same issues. We have the ability to be involved with multiple teams, to identify and help strengthen leadership across the region. District offices don't have a lot of time to build those systems or develop those partnerships.

However, not all COEs possess the capacity to play a strong regional role, either in terms of leadership or technical assistance expertise (or both). And few COEs have established connections to the business community or postsecondary institutions and so have limited ability to broker pathway relationships between educators and employers.

K-12 Districts

District leads can draw upon a history of strong relationships among teaching and administrative local staff and credibility on the ground. They also have the benefit of local knowledge, and many have contacts with community groups such as the Chamber of Commerce, prominent businessmen, and politicians. This local knowledge enables fine-tuning of strategies to best suit stakeholders, provides access to community employers, and builds influential support for CCPT's mission. A district superintendent saw district leadership as a critical asset in building strong CCPT pathways because it could incorporate fine-grained information about students: "We developed our pathways with the different student needs in mind.... We want attractive options for our students."

District leads run the risk, however, of being too 'district-centric' to work well with a diverse business community, postsecondary institutions (specifically community colleges), or to create a

---

[6] County Offices of Education: http://www.cde.ca.gov/re/sd/co/coes.asp

regional pathway vision that includes both community and four-year colleges alongside employers.

Community College Districts

CCD leads can draw on knowledge of the community college system and its member colleges to build capacity and appetite around CTE pathways. Like their COE and district peers leading CCPT grants, CCD leads also allocated the majority of their funds to K-12 work, perhaps unintentionally limiting the real and perceived potential added value of CCPT to postsecondary institutions and staff. CCDs do not have a direct role in governance at individual colleges and multi-college districts are not mandated to equitably distribute resources across all partner colleges which can be problematic for coherent, consistent and equitable implementation.

CCDs can play an important convening role, and particularly in multi-campus districts. Since CTE programs comprise a fraction of community colleges' individual, district-wide, and system-level missions and work, more guidance is required to ensure local postsecondary partners understand and value CCPT's purpose, and particularly as it complements other CTE-related work. CCDs may also have an important role in sustaining the CCPT vision and engagement by local colleges and in brokering relationships with K-12 schools and districts, COEs, and local workforce development partners to better align systems and services.

PARTNERSHIPS

Partnerships are essential to building pathways, and CCPT consortia enlisted multiple partners from education, higher education, and business. Although many of these partnerships represented long-standing relationships and shared experience, in every consortium several of the partners enlisted to support CCPT had never worked together, especially those involved in proposed cross-sector partnerships: K-12 to postsecondary, and business to K-12 and postsecondary education. The project of creating cross-sector regional partnerships is new on multiple levels; as a consortium leader observed, "Many partners are trying to reconcile old ways with new expectations.... We were aiming at system change." And another consortium leader noted that a regional focus was new to many: "Strong local pathways are not the sum of the CCPT project. The overarching purpose is to create a regional infrastructure to support and align the work."

Establishing productive relationships with those new partners figured prominently in Cohort 1 implementation; these bourgeoning relationships typically focused more on programmatic rather than systems-level work since collaboration around pathways was the first order of business. Structural factors and cultural tendencies that encourage atomization are central challenges to building cross-sector partnerships.

K-12

K-12 education institutions are famously siloed by district, school, subject matter, and even grade levels. A regional pathway approach requires K-12s to share their work and collaborate on issues such as identifying relevant indicators and developing a common language to talk about their pathway work across schools, as well as with postsecondary and employer partners.

Community Colleges

Given the California Community Colleges Chancellor's Office (CCCCO) governance structures and rules that prioritize local control, community colleges also tend to operate as fiefdoms, even within the same CCD. For example, high school student recruitment often revolves more around no-compete policies that prescribe which colleges can conduct outreach at which high schools rather than geographic proximity, enrollment trends, or alignment of employment opportunities. This organizational culture makes it difficult for K-12 districts to align curricular and non-curricular practices in the region or to come together as partners around a regional pathway strategy. Additionally, CTE courses are often marginalized in community colleges, which undermines requests for faculty to spend time and energy thinking about approaches to career pathway courses. Community colleges are also implicated in multiple CTE-related initiatives, some of which call for partnerships with K-12 districts, other community colleges, or employers/workforce development, all three, or a combination thereof. These multiple initiatives and their attendant partnerships can complicate managing relationships that are not institutionalized.

Employers

Employer groups are commonly isolated by sector—health, manufacturing, media, and agriculture, for instance. As a consequence, they have little experience collaborating with each other around CTE and pathways as intended by many employer councils or workforce development groups. Beyond the sector-specific silos, employer connections to education—K-12 or postsecondary—are often ad hoc, relying on active teachers or faculty members, rather than an organized system of employer engagement. Further, despite the fact that some, but not all, community colleges have career centers, employer engagement by way of this on-campus resource is often cut off from relationships between employers and faculty members.

COMMON IMPLEMENTATION TASKS

Consortia of all descriptions confronted similar general implementation tasks as they set about addressing their CCPT mission: changing mindsets about CTE, creating compelling communications, and building regional infrastructure.

Changing Mindsets about CTE

Changing mindsets about CTE—what it involves, its value to students—comprised the first order of business for most Cohort 1 consortia. Several CCPT leaders used the term "transformation" to describe the changes in point of view about CTE that needed to occur among K-12 and postsecondary educators, parents, students, and community stakeholders to accept CCPT conceptions of pathways, work-based experiences, and community college experience. CCPT advocates quickly learned that simply changing structures and strategies cannot promote successful pathway implementation unless the thinking that produced and supported the old structures changes as well.

Dichotomous thinking about college *or* career coursework in high school—rather than college *and* career coursework—regularly frustrates efforts to blend academic and technical coursework in pathways. In some settings, that thinking has been difficult to change. For instance, the superintendent of a district serving both wealthy and struggling families said "we really have to convince parents and kids about what's valuable. The whole notion that CCPT is your father's vocational education program is hard to dispel." A deputy sector navigator[7] matter-of-factly stated, "Our school culture is that CTE is inferior." This disconnect between traditional views of vocational education and the reality of 21st century CTE can be especially problematic for developing effective responses to employer needs for middle-skilled workers (who traditionally come from the community colleges).

High school counselors "are more about college than about career," said a district leader, "and they don't know much of anything about community colleges." His district supports a community of practice for counselors to encourage a broader view of post-high school options, and to inform them about community college opportunities.

In community colleges, career pathways are explicitly linked to CTE programs of study that are historically terminal. For community colleges seeking to strengthen and maintain relationships with four-year institutions, expanding CTE programming can require delicate relationship building. On the one hand, expanding CTE programs via dual enrollment can help community colleges with lagging enrollment. On the other hand, community college staff expressed the need to promote and grow connections to four-year institutions (for example, via associate's degree for transfer), which often perceive CTE, dual enrollment students, and related programs as inferior.

---

[7] Deputy sector navigators support education and workforce alignment in regions to support workforce training and career pathways. For more information, please see: http://doingwhatmatters.cccco.edu/WEDDGrants/GranteeRoles.aspx

Program directors, K-12 pathway coaches, and deputy sector navigators commented that teachers need to shift mindset about what constitutes student "proficiency'" in the CTE context. A pathway coach said that this shift has been especially hard for many traditional K-12 CTE teachers. Whereas in the past the successful completion of a project—say finishing a bowl in a woodworking class—would signal proficient performance, pathways now call for increased rigor and standards in the academic core courses and associated technical courses. For instance, can a student in a woodworking class successfully show the mathematics associated with creating a bowl? One deputy sector navigator began hosting a regional high school welding competition to familiarize students with employers, showcase students' aptitude to employers, and provide CTE teachers and faculty with a neutral venue for understanding pathway course quality and standards. Employers were primed to judge the competitions using the third-party industry-recognized American Welding Society (AWS) certification standards. Out of nearly 200 relatively high-performing students who participated in the competition, only four received certifications. This disappointing outcome sent a clear message to CTE educators in both K-12 schools and community colleges about the disconnect between current welding curricula and the skills and knowledge required by industry certification standards.

A CCPT pathway also asks many high school teachers to think differently about their practice. An Oakland Unified School District pathway leader: "I ask teachers if they see themselves first as an English teacher or as a pathways teacher. It is a very slow and organic transition [to be in a career pathway] for most traditional teachers, and we have been working hard on that transition in our communities of practice." They cited a colleague's shift as an example of what that change in perspective might look like. She grudgingly joined the public health pathway as a very traditional English teacher with no interest in the topic, but, slowly, as part of her pathway's community of practice, she "got acculturated into the health pathway. The first thing that started to change were some of the themes she would bring to the traditional literature they were reading…then, slowly [over the course of four years], she started to add texts related to public health."

"It's really just a mindset change," reflected a consortium director:

> Moving from traditional to a new age of education, what that should and could look like for students. I think it's scary for lots of people and it's hard, it's hard work. You have people who stick their feet in the mud and say "I will not!" The learning curve on this whole transformational process has been steeper than probably anything.

In community colleges, decision making around curriculum and pedagogy are largely left to individual faculty members and institutional and other faculty senates.

Creating Compelling Communication

Changing mindsets about CTE pathways and the value of regional work requires persuasive communication about CCPT's goals, strategies, warrant, and payoff. CCPT leaders recognize that selling and sustaining pathway work depends on compelling and inclusive communication. Reflecting on continuing their consortium's CCPT work at grant's end, a Capital Area Partnership (CAP) leader said:

A big component of this work on sustainability is communication and outreach to the community... making sure the community understands what we have. Our board of directors will say that our academies and pathways in Elk Grove are our "best kept secret." Well, that's . . . as a [former] marketing-advertising person, I just go, "Ugh!" It's essential to bring in the right people to make sure that the word's getting out and that all levels of staffing understand what academies and pathways are, not just the people who are involved in it.

But CCPT consortia leaders labored to devise effective strategies to address existing communication gaps within and across stakeholder groups, because each stakeholder group has its own way of operating and communication norms.

Few CCPT leaders or teams have experience developing cross-sector, within-sector, and regional communication strategies. In some instances, staff or consortia leaders found even internal communication inadequate. As a consequence, significant communication gaps existed among stakeholders that hobble consortia everywhere. Implementing CCPT's regional mission requires determined attention to diagnosing and addressing these communication shortfalls. In practice, developing effective CCPT communication is, as one consortium director put it, a process of "learning by doing," without much technical assistance.

A CAP CTE director summed up the problem this way:

I see it really as a building-awareness component. But when we start talking about business and education and really looking at what the communication gaps are, I don't think the goals are all so different, but the communication gap is there, even from secondary to postsecondary, and [from] some postsecondaries to other postsecondaries. So, how do we come together with common terms and common goals and seamless transitions?

This consortium addressed the need for a common language by designing "one-sheets" that could be given to educators as well as employers. It describes what work-based learning associated with their pathways entails, as well as the opportunities and needs associated with WBL. The one-sheet, Elk Grove's CAP leaders hope, will also foster shared language and conceptions of WBL across the consortium. "We didn't want all the different players in CAP saying, 'Oh, here's what we consider externships' or, 'Here's what we want for externships.' We wanted to make sure that we had a common communication, common message." Likewise, in the East Bay, the first year of CCPT work largely focused on identifying a common definition of a pathway so that all partners could use a common language in the planning, but also during the implementation phase of work.

Further, both district and postsecondary partners acknowledge the mixed messages students and families receive about pathways. On the one hand students are encouraged to meet A–G requirements (for four-year college eligibility) and take honors or Advanced Placement courses. On the other hand, CCPT promotes CTE course taking that may or not meet A–G requirements but leads most readily to community college programs of study. Even CTE courses that meet A–G requirements via University of California Curriculum Integration (UCCI) may not be perceived as sufficiently rigorous on competitive four-year college applications.

The inconsistent communication between community colleges and K-12 districts around career pathways development also proves difficult. CCPT effectively asks consortia to promote two-year CTE programs, yet in many instances high schools have more up-to-date and better quality equipment for CTE programs than their local community colleges. These tangible disparities unintentionally undermine collaboration, namely the positioning of community colleges as a preferred choice.

Consortia leaders described a number of strategies that have been effective in communicating CCPT's regional, cross-institutional CTE approach. Engaging, user-friendly consortium and site websites with information relevant to all stakeholders, including links to pathway descriptions, employer opportunities, and consortium partners, are essential communication tools. Many also found such low-tech strategies as flyers (in the local newspapers) and postcards (with event information in English and Spanish) to be effective advertising for pathway opportunities, especially when supplemented by evening, dinner-provided information sessions for parents, employers, and the community. Most effective of all were pathway presentations featuring young people who describe their pathway activities and the value that pathways represent to them.

But, these low-tech communication strategies, they caution, are effective only when accompanied by active, targeted outreach strategies. Cohort 1 grantees learned that effective regional communication requires multipronged strategies that are directed at specific audiences, but convey a common message and consistent call for action.

Building Regional Infrastructure

Most consortia leaders—even those in sites benefiting from established pathways and deep CTE traditions—saw CCPT's regional vision as "a little scary" and a very ambitious goal for a three-year grant. Across Cohort 1 consortia, leaders commented that even where they had previously worked well regionally, the CCPT grant required new and different kinds of working arrangements, investments, and relationships that take time to develop. Consortia leaders across the state report that insufficient infrastructure currently exists to support or sustain CCPT's regional vision and change, and that appropriate regional infrastructure needs to be imagined and built. The general absence of regional infrastructures or cross-sector relationships demanded early attention from consortia leaders.

Several consortia leaders commented on the general absence of technical assistance early on from support providers or from the state to help them and their teams address issues promoting system change at a regional level. As one director put it: "There are a lot of support providers who know how to do a lot of good ground-up work. But there are not a lot who know how to do system-down work ... [and] few, if any, are doing system-level coaching work. We [in the region] don't have a lot of experience doing system-down work." Consortia leaders felt the system-level, regional work is essential to implementing and sustaining a regional collaborative and will be difficult to design and carry out absent technical assistance and dedicated funding.

The task of creating regional infrastructure is somewhat less daunting for consortia that have some existing networks and collaborations in place, which can be mobilized to support the

CCPT grant. For instance, the strong vocational education structure that existed in rural Tulare County formed a platform for the Tulare-Kings CCPT project. According to a Tulare COE leader:

> The Tulare County Organization for Vocational Education basically oversaw 13 districts, and everything worked through the TCOVE office to fund these Regional Occupation Programs…when the pathways came in, that was a great transition. Now, we have that same type of collaboration that we had with the ROPs (Regional Occupational Programs) happening with the pathways. TKPP (Tulare-Kings Pathway Project) has kind of absorbed what ROP was doing but kept that infrastructure. As far as that collaboration piece working together, that [existing infrastructure] has been critical.

Other consortia focused on a community rather than a school district as the foundational network for building regional infrastructure. Elk Grove's CAP applied the lessons it learned about cross-sector collaboration in the context of a prior Ford Next Generation Learning grant, which designates a community rather than a school district to support learning reforms. An Elk Grove's leader said:

> To truly do Linked Learning it has to involve the community. So most of our work has been not so much around career, technical education, and academies as it has been about how we build systems that include our community and our region. At the granular level of Linked Learning, it really takes a village to raise a child.

Cohort 1 grantees also invented several strategies to foster regional collaboration and action. Effective approaches built commitment to CCPT through participation and concrete connections to pathway work and processes. They convened new regional roundtables or expanded those already in existence. Some consortia established sector-specific roundtables and professional learning communities to bring together employers from similar industries—health, construction, and information technology, for instance—to discuss such topics as work-based learning, internships, and teacher externships. These efforts aimed to increase capacity around pathway work both individually and collectively.

Many of the critical issues that confront initiatives operating across traditional boundaries, as does CCPT, occur at the "joints" or the intersections of existing systems: failed communication, misunderstandings, and incompatible decisions. In more effective consortia, one or two people often serve as a connecting thread across the region. Tulare-Kings supported and staffed communities of practice for all stakeholder groups—program directors, district CTE directors, coaches from all pathways, postsecondary deans and faculty, principals, and lead teachers. A TKPP leader observed: "Although this means I go to lots of meetings, I also can be the 'thread' that connects them all and provide a consistent message. It works beautifully."

Conceiving of "region" in smaller terms is another approach to creating regional infrastructure. Spurred by often-frustrating efforts to convene partners across an expansive region, at least one consortium moved to a "micro-regional" or "subregional" approach in year two of their CCPT grant on the grounds that greater proximity made relationships easier to foster and meetings easier to convene. This organizing principle also allowed each local geographical area to have agencies prioritize their specific economic and educational needs.

**PROMISING PRACTICE: SUBREGIONAL COLLABORATION
IN THE EAST BAY**

The East Bay Career Pathway consortia, led by the Peralta Community College district, sprawls along the densely populated 45-mile corridor of western Contra Costa and Alameda counties. It includes 11 K-12 districts ranging from large, high-poverty urban districts to those serving small, affluent cities, as well as one charter school organization, six community colleges, four Workforce Investment Boards (WIBs), and two COEs. In its first year, EBCP had limited success convening the collaborative because of time and travel costs, as well as members' feelings that the concerns, opportunities, and resources of their local settings were not addressed in consortium-wide gatherings.

In response to these concerns, EBCP created three sub regional nodes—north, mid, and south—in its second year. Each node contains K-12 districts, at least one community college, WIBs, community-based organizations, chambers of commerce, and business associations. This subregional strategy, most respondents say, has been effective in enabling them to be, as one put it, "local and focal," and to deal with the significant diversity in district contexts as well as local businesses in their node. The director of the Eden ROP, situated in the south node, said:

> The regional work-based learning needs and opportunities are different within the EBCP. We're challenged by how to meet the needs of large businesses as well as the many local mom-and-pop concerns. That was the rationale for dividing into the smaller regions. It's working pretty well now, but it was challenging in the beginning ... [because] local chambers and educators would say 'we're interested in what's good for our district or community.' I'd say 'No we're a region!' I think they've got it now.

EBCP built on work originated under SB 1070 and further developed Local Pathway Action Teams composed of CTE faculty from community colleges and feeder high schools to play a major role in subregional collaboration. LPATs, organized around sector-specific pathways, meet monthly to co-develop goals, design and strengthen college and career pathways, scale up work-based learning, and ease high school to community college transitions. The EBCP director commented that the 12 LPATs each operate differently and "at different levels of greatness."

Respondents generally saw the LPATs as a "valuable piece of work spearheaded by the EBCP" and as an effective resource for building more direct lines of communication between districts and community colleges. "It's getting everyone in one pathway in the room to discuss how to continue to grow and move forward.... It has been very powerful. You design the action to concentrate on what you want to concentrate on." In West Contra Costa, for example, the pathway, including teachers from WCCUSD and Contra Costa College, resulted in a Memorandum of Understanding about dual enrollment—no small achievement in the EBCP context.

Networks reportedly also function well in these smaller East Bay nodes. For example, the Alameda COE supported a subregional Superintendents' Council that, in the view of the

ACOE superintendent, has been a "great value-add. Very few of our [18 Superintendents and 3 ROP superintendents] miss meetings.... That is a key touch point for us at least in the county."

Another successful strategy for building regional infrastructure takes a learning (rather than a training or mandate) driven approach and involves building regional collaboration around an issue. For example, Tulare- Kings CCPT consortium established a College and Career Collaborative (CCC) as a "regional learning community" to stimulate regional dialogue and provide a place where members can meet regularly to dig into common issues or goals.

CCC learning events meet every other month and involve K-8 and K-12 districts, community colleges, California State Universities and a University of California campus, as well as private colleges in the region. A CCC staff member explained that "We started to be very intentional and thinking about: What does that pathway look like? And giving teachers some time and space to meet with their college peers and look at: What's this pipeline look like?"

On alternative months, the Collaborative sponsors all-day industry summits bringing together community college and high school faculty, administrators, counselors, plus middle school, industry, and workforce development folks to talk about industry sectors. The first one in November 2015 focused on business. It had an industry panel, and participants crafted pathways that aligned to postsecondary: "Being very strategic and intentional about how they make that pipeline happen and identifying the job opportunities that exist." The January summit focused on health and resulted in 90 externships set up across five locations in the Tulare-Kings two-county area. These collaborative meetings receive high marks from participants.

COMMON IMPLEMENTATION CHALLENGES

Regional thinking and action are both a strength of the CCPT vision and the source of many implementation challenges. Consortia struggled with similar implementation issues across regional contexts, despite differences in the maturity of existing networks and cross-sector relationships or depth of CTE roots. Central among them are lack of supportive leadership, insufficient intermediary organizations to provide technical assistance, difficulty attracting staff, a variety of issues related to collecting and using data, and the challenges of coordinating systems and resources.

SUPPORTIVE LEADERSHIP

Supportive, consistent leadership in all domains—K-12, postsecondary, and business—and at all levels—state, regional, district, site, and program—proved crucial to developing and supporting robust CCPT career pathways. Virtually all strong programs pointed to active champions throughout their consortia—individuals who "walked the talk"—as essential to their positive CCPT implementation. Without leaders' expressed support for CCPT goals and strategies, mindset change about the value of pathway work proved difficult. We also heard how lack of explicit support in even one stakeholder group could restrict pathway development and opportunities for students, and how changes in leadership—a new dean or VP, mayor, WIB

director, district superintendent, or community college president—could disrupt local CTE/CCPT efforts and regional networks. The opposite is always true: at least one consortium benefited from a leadership change. In one region a new community college dean, supportive of pathways and dual enrollment, moderated faculty resistance to the previous dean's CTE pathway work, and according to the CCPT director, it's now "full steam ahead on dual enrollment."

Leaders advocating for CCPT goals and strategies topped the list of factors influencing effective project implementation and expectations about sustainability. K-12 consortia leaders—district and county office of education superintendents and associate superintendents, project directors, principals, school board members—with backgrounds in, and commitment to CTE bring particular focus to their CCPT initiative and "changed mindsets" about the value of career pathways. They speak with passion to members of the business community, community members, and fellow educators about the value of CTE pathways for all students and for the region's economic development interests. As one regional CCPT coach put it:

> I think our programs are successful because of our leadership…I mean, we've got a WBL coordinator, we've got a CCPT director, we've got an associate superintendent, and then the superintendent, we really have people leading our work who understand it, believe in it, are passionate about it, and care about teachers, and care about kids.

Fostering and supporting "distributive leadership" among all relevant stakeholder groups throughout the consortium is a successful strategy for promoting continuity and sustaining pathway work. A distributed leadership strategy aims to create advocates throughout an organization or system, rather than locating leadership solely at the top. The Elk Grove CAP did this through designing and facilitating interlocking roundtables—small learning communities and communities of practice. Each roundtable was created to build knowledge and regional relationships within particular groups: business people associated with specific sectors, K-12 teachers with common disciplinary agenda, and principals.

Tulare-Kings used a similar method to devolve decision making about such questions as course alignment, multiple measures of student outcomes, outreach to students and parents, and principal leadership to communities of practice throughout the region. School board members, business representatives, and community leaders regularly participate in sessions convened around specific issues.[8] This strategy has strengthened relationships and understanding among stakeholders, increased coherence of K-12 Linked Learning and other pathway programs within and across districts, and supported the sharing of promising practices.

CCPT directors point to the value of a distributed leadership implementation approach, and the meetings that support it, as a source of stability and continuity for the initiative. In their experience, locating leadership responsibilities with stakeholder groups responsible for carrying out the work provides steadiness and consistency in the face of changes at the top. One said:

---

[8] Tulare-Kings Linked Learning Consortium convenings in support of distributed leadership in the region include TKLL Executive Council, TKLL Directors of Community of Practice, TKLL Coaches Community of Practice, TKLL Lead Teachers Community of Practice, TKLL Consortium Professional Learning, Regional Community Resource Development Workgroup, Regional Data Workgroup, Regional Postsecondary Workgroup, and Regional Work Based Learning Workgroup.

So, fortunately, those of us at the "worker bee" level, have had steady relationships and built understandings, you know; whereas, the upper levels maybe had some... had some egos... territoriality, or what have you. But we've all been doing the work together, meeting together, whether it was through academies or ROP or just being CTE teachers, and, so, we just carry on . . .

A distributed leadership strategy explicitly strengthens the voice and influence of those doing the work on the ground and those responsible for cross-institutional conversations.

SHORTAGE OF INTERMEDIARY ORGANIZATIONS

Intermediary organizations are essential to the successful implementation of CTE pathways. Intermediaries work to broker productive relationships among K-12 and postsecondary institutions and employers. Typically, they assist K-12 educators with tasks such as identifying work-based learning opportunities, securing industry professionals to participate in pathway programs as speakers or mentors, or convening employers and business leaders around pathway needs and contributions. Among Cohort 1 consortia, many different types of institutions serve as intermediary organizations: COEs, local WIBs, Chambers of Commerce, and regional economic development nonprofits, as examples.

Although they are essential to building regional pathway infrastructure, Cohort 1 leaders across the state say that effective intermediaries generally are in short supply; many consortia enter their third CCPT year still searching for one. Sector-specific organizations such as those dedicated to manufacturing, health care, or agriculture exist around the state, but sector-neutral intermediaries are few and far between. And few intermediaries in California are familiar with and work alongside community colleges. The cross-sector intermediary role that CCPT imagines as a consortium support is a relatively new one in many regions.

Not surprisingly, intermediaries' effectiveness as convener and broker of pathway opportunities varied significantly among Cohort 1 grantees. Most often, intermediaries were enlisted as purveyors of work-based learning internships and other types of work-based learning opportunities, but their capacity to make these arrangements differed substantially depending on organizational experience and history. More effective intermediaries were able to build on established relationships and previous collaborations to foster new connections, commitments, and engagement with CCPT's mission. Less successful intermediaries lacked capacity, experience, or connections sufficient to this important brokering task. They often adopted a relatively passive stance in contrast to the "go-get-'em" approach of intermediaries effective in this brokering role.

Some consortia leaders hope that effective intermediary organizations may emerge as a consequence of CCPT's regional focus. For instance, one said: "I think there's such power in everyone to some degree using the same measures; to some degree looking at the same data that we're trying to solve the same problem. And then, that will naturally lead to the formation of the kind of intermediary efforts that work to connect between business and postsecondary and K-12." But consortia leaders concur that creating and developing this kind of intermediary organization takes time, regional leadership, and resources.

PROMISING PRACTICE: INNOVATE TULARE-KINGS

INNOVATE Tulare-Kings (ITK) was established in 2013 as an employer-driven intermediary to support the Tulare-Kings Linked Learning Consortium.[9] The nonprofit is funded in large part by the CCPT and early investments made by the Tulare COE and the WIB of Tulare County.

Its mission, "to engage business partners in regional strategies that advance economic objectives, measure impact, and enhance education and workforce partnerships," reflects regional economic challenges and employer demands for a more highly skilled workforce. ITK functions as a powerful CCPT promoter and partner. The intermediary develops presentations and meetings that marshal education and regional workforce outcome data to make a compelling *business* case for active employer involvement in pathway work. ITK persuasively shows why employers' concrete support for career pathway work in Tulare-Kings serves their self-interest in addition to advancing the region's economic and social well-being. The result of ITK's advocacy efforts is an impressive level of regional employer engagement with work-based learning internships, mentoring, and building strong CTE programs.

ITK does more than make the business case; it acts regionally to strengthen and expand relationships among employers and educators and opportunities for students. ITK's efforts facilitate the expansion of employer and workforce partnerships for the 39 pathway programs that currently exist in the two counties; by 2018, ITK aims to broker opportunities for 10,000 students to explore careers and gain job skills. Building on the NAF (formerly National Academy Foundation) and Linked Learning strategy of strong academic advisory boards, ITK partners with employers to provide the tools and resources they need to be successful in providing these experiences. ITK works to coordinate and support schools, academies, and programs across the region and to create a continuum of work-based learning experiences aligned to the regional economy. For example, ITK, a member of the Workforce Investment Board of Tulare County, in partnership with community partners and deputy sector navigators, has developed and maintained two active industry-sector committees to support pathways' work—Health Care and Advanced Manufacturing. The Tulare County WIB also established a relationship with Tulare County Farm Bureau to gather input from the agriculture sector. To assess return on investment, ITK brings together stakeholders to evaluate the efficiency of the region's investment in career pathways and preparing the future workforce.

---

[9] http://www.innovatetk.org/

Innovate Tulare-Kings Purpose Map:
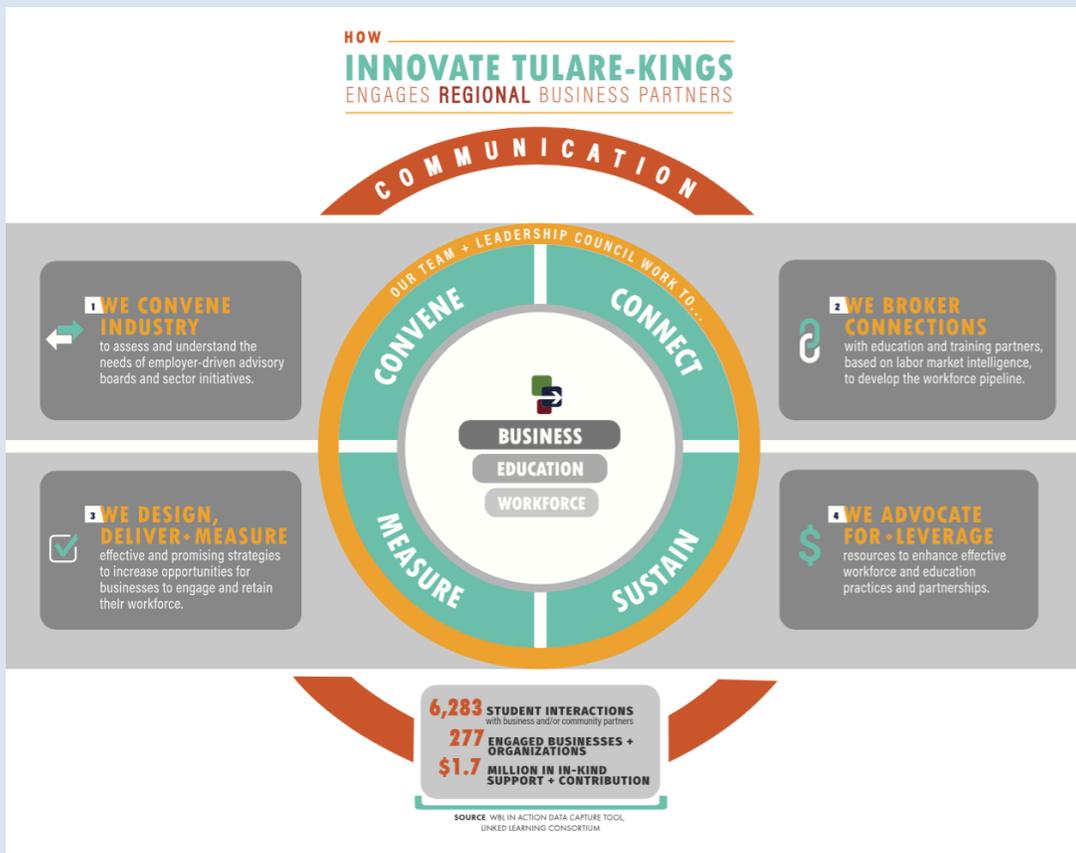
STAFFING

CCPT implementation calls for several new positions, especially consortia staff responsible for coordinating communication and supporting K-12 work-based learning within the region. Most consortia experienced difficulties finding qualified staff and hiring them within the confines of the grant. A separate aspect of staffing that has emerged from the first two years' work is the centrality of coaches to pathway work.

Many agencies found recruiting well-qualified individuals challenging because of HR hiring processes and timelines. One community college dean observed that by the time the position is approved by the relevant officials and we "hire someone to support CCPT, the grant will be closed." In instances where community colleges wanted to hire K-12 staff or vice versa, differences in processes and protocols across agencies and individual institutions required significant time and energy to sort out. Also, since many of the new positions could terminate with the end of the CCPT grant, people with the desired skill sets or credentials—in communications or data management, for instance—were often difficult to find. For example, as one community college institutional researcher noted, "we wrote into the grant a half-time

position for supporting the data collection efforts. That was appreciated, that was good. But as we got closer to the end of the first year, we didn't find anybody for the half-time role."

The different competencies associated with backgrounds in industry or in education also complicated staffing choices. The ideal consortium leaders possess background in both education and business—they are "bilingual" and have credibility in both sectors. Respondents believe that these sector competencies can be blended into coaching or leadership positions by appointing individuals who have experience in both business and education, or by creating business/education teams. But they also stressed that, except in unusual instances, one person cannot interact effectively with both employers and educators if absent that dual background.

COACHES

Consortia that have prioritized hiring coaches report that they play a crucial role in brokering relationships between K-12 educators and employers and serving as "translators" between two realms that often seem to be operating at cross-purposes. Coaches support K-12 pathways' work-based learning initiatives through their connections to consortia partners or experience with the business sector. Working with its partner, the Sacramento Employment and Training Agency, the Elk Grove CAP invested in career specialists, individuals with extensive experience in pathway-specific careers, to serve as sector coaches: "We have actual FTE people dedicated to that work" so it is not tacked onto the job of a pathway leader. A CAP pathway leader reflected on why industry background brought essential perspective to pathway work:

> But what [career specialists] do really great is the industry side, because they've all been associated with industry. I think bringing that different expertise together to support our teachers is huge, because the teachers don't have the industry contacts and stuff that the career specialists do. And career specialists, they don't have the district view that we have.

A coach in the Tulare-Kings Linked Learning Consortium underscored the importance of business savvy when dealing with employers around work-based learning or other opportunities to expose K-12 students to careers:

> I feel the one requirement [of a successful Linked Learning or pathway program] is that the person has to have a job development background... a history of working with employers. Because employers don't do very well when you don't respond to their phone calls, to their emails, in a timely manner.

In his view, K-12 educators are not always sensitive to employer expectations. Many employers agree. More than one complained how hard it can be to understand what K-12 educators want or why: "Stop. Enough acronyms. We don't need edu-lingo, you need to speak it so that we understand what you're doing, so we can go out there and speak about this to our colleagues." Coaches are critical to bridging these communication barriers between K-12 educators and employers.

DATA CHALLENGES

Accurate data are essential for developing and sustaining new pathway programs and systems, and the bigger the changes, the more critical the data. In order to collect and use data in meaningful ways, all stakeholders must agree on which data should be captured, effective data collection systems need to be in place, and mechanisms for sharing and analyzing data must exist.

Challenges around data exist across all CCPT Cohort 1 consortia. In general, consortia partners have neither a common understanding of existing data systems and processes nor capability to connect existing data in ways that can be useful for regional cross-sector collaboration. CCPT leaders struggled with collectively deciding how to operationalize concepts within and across the K-12 and community college systems, with varying levels of success. In some consortia, establishing common definitions and language ranked as a first-year priority.

Unclear Accountability Requirements

By design, few concrete accountability guidelines are built into the CCPT grant in order to locate responsibility for defining partnership arrangements with consortia. But this vagueness, combined with a lack of shared definitions or metrics about what constitutes a pathway and markers of pathway development, produces uncertainty among consortia directors about relevant data and indicators for which they will be held responsible, or commitments to which partners can be held accountable. For instance, one institutional researcher noted confusion around "what's going to be reported and what's going to be needed for sustainable development of pathways," and several consortia leaders expressed frustration with community colleges' or employers' failure to fulfill initial pledges to support pathways, and felt they had little recourse in terms of holding their partners accountable to these stated assurances.

The collaboration requirements embedded in the CCPT grants represent new terrain for partners. Employers and community colleges often find K-12 districts' requests for new partnerships, and the accountability associated with these relationships, to be unclear in large part because they reflect evolving relationships and understandings and take time to develop.

Multiple, Incompatible Data Systems

Simple bookkeeping issues trouble many pathway data analysts: "Our biggest hurdle was just figuring out how to flag kids [who are active pathway participants] and not kids who showed up one day and then left. It's like, who really is our group? That's just a tremendous amount of work."

CTE or career pathways data are not fully captured in primary data collection systems, or consistently across community colleges or K-12 districts. The multiple data systems available for K-12 and community college sectors thus further complicate data issues and frustrate efforts to track students' pathway experiences and outcomes. Respondents mentioned several different data tools available to them, some of which don't work well yet. Further, existing data systems are incompatible or incomplete across sectors. The CTE LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by

Cal-PASS Plus, attempts to bring coherence to the multiple data systems in play. It is designed to facilitate engagement around K-12 and community college CTE program effectiveness, but because participation in the system is optional, it is not yet widely used across the state. A separate system, LaunchPath, facilitates matching between employers and students around work-based learning, and specifically internship opportunities. "The [K-12] schools find it extremely cumbersome," said a consortium director. And, "it's only for internships which, frankly, are not our big problem." This consortium director's comment echoes concerns heard across the initiative:

> One of the problems has been that we've multiple data collection processes that don't necessarily align. Now, it's going into CALPADS, which is great, but the rules for CALPADS aren't always clear. Direction from CDE is sometimes convoluted. And then, working with our tech services and our research and evaluation and [making] sure we're all speaking the same language. And what's the district doing, and what are the sites doing? There are so many variables!

Difficulty Collecting Data

Collecting adequate information on K-12 students' work-based learning activities and pathway outcomes plagued almost all consortia, since no comprehensive statewide database—including secondary, postsecondary, and employment outcomes—exists. It is not possible to fully capture student experiences within and across systems either. Inconsistency among indicators also complicates efforts to integrate data from different pathways and educational institutions within the same sector. In response, some consortia have created new tools. For instance, the Oakland Unified School District developed a smartphone app to gather student data about their Linked Learning pathway experiences. Porterville Unified School District conducts an end-of-year survey of graduating pathway seniors to collect information about their pathway experiences and future plans. The district expects to use these data to follow their graduates beyond high school to college or career.

Some consortia are working to develop tools that can assess students' pathway experiences within and after high school. For instance, Tulare-Kings consortia partners are using data tools that cross systems to assess overall supports for pathways. The data lead explained, "We haven't collected any data on college students, but we have collected data on K-12 students that have participated in work-based learning opportunities."

The Tulare County Office of Education likewise uses student-level data to look across pathways in the region. A respondent from the Tulare-Kings data community of practice said: "We try to find out how successful our pathways are. That's a little bit different than asking 'how are my students doing?' We actually are looking at 'how are our systems doing?'"

Several consortia able to build upon more mature relationships and networks developed rubrics to specify desired outcomes that accommodate varying levels of development for different pathways. Creation of rubrics to use across the region provided a more general response to the lack of common definitions within the CCPT initiative, especially on what constituted a pathway. Respondents in one consortium that expended considerable effort to develop the rubric said that "it will be a real benefit to students" in terms of bringing coherence to their pathway experiences. They also said "It solved a lot of the community college/K-12 data issues" because

it built upon shared understanding and agreement on a baseline of promising practices and benchmarks.

Sustainability Decisions Require Data

Data about positive CCPT outcomes can undergird sustainability arguments. And, lack of relevant data can frustrate efforts to make a strong case for continued district pathway support once funding ends. But in most consortia, requests for new indicators and measurement processes push hard against shortfalls in existing capacity and tools. A COE technical assistance provider worried that she would not have the data she needed at grant's end to buttress a case for sustaining CCPT work: "I am not going to have the data to tell districts that this works, so they'll put it in the Local Control Accountability Plan (LCAP) two years from now." A California Community Colleges Chancellors Office informant indicated available support for data by community colleges, but qualified it: "We'll try to work with colleges who have programs and think they want to do more. . . but they didn't see where using a tool would grow [their pathway work], and so what if it did, they had no mandate to do that."

COORDINATION OF RESOURCES AND OPPORTUNITIES

Across the board there is an unmet need among educators for central repositories of vetted pathway course curricula, answers to implementation questions, and technical assistance. Similarly, business leaders and educators ask for a "one-stop shopping" resource to coordinate work-based learning opportunities, internships, and other requests for employer involvement such as job shadowing, participation on an advisory group, or attendance at a student event.

The UCCI initiative is working on the need for clarity around pathway course curricula, and identifying courses that meet both A–G and CTE requirements. More than 10,000 courses are now approved; however, to what extent these courses are stand-alone CTE courses or part of specific career pathways remains unclear.

In the absence of a single clearinghouse for curricula, partners are finding creative ways to share resources. One community college faculty member and dual enrollment instructor explained that another partner "did all the curriculum, all the training materials, and put on a 'train the trainer,' then I developed the curriculum based off of theirs, and implemented that" within my institution.

Some intermediaries share course materials across participating schools and districts. Communities of practice, professional learning communities, and other strategies that support K-12 practitioner learning also enable exchange of materials and expertise. But these approaches are no substitute for a central repository of information about curricula, implementation options, and technical support.

There are some examples of efforts to create one-stop shops to coordinate employer outreach and develop work-based learning opportunities: Porterville has established such a resource in their district office, and Ventura County and San Bernardino City Unified School District reportedly have an effective one-stop shopping program. However, while consortia across the state recognize the need for better K-12 employer-supported pathway coordination, designing and supporting this capability continues to be slow and frustrating work.

K-12 PUBLIC SCHOOLS

California Career Pathways Trust asks participating K-12 schools and districts to think regionally and act locally. For most K-12 actors, thinking regionally requires a new mindset about potential partners and resources; building regional relationships and networks takes time and effort. Acting locally to implement CCPT can be even more challenging for K-12 educators, however. The CCPT initiative requires districts to change long-standing ways of doing things: hiring teachers and pathway coaches, scheduling coursework, coordinating with employers and postsecondary institutions, and providing professional supports for teachers. These core school and district activities are all implicated by career pathways work.

Successful CCPT implementation entails: leadership and career technical education (CTE) advocacy throughout the entire system, including superintendents, boards, and principals; community and business champions; postsecondary collaboration; and flexibility, patience, and willingness to make fundamental change in many of the ways district and school systems operate.

But K-12 educators say that grappling with these local and regional implementation challenges pays off and is helping to create relationships and structures that can sustain CCPT work into the future. Teachers, administrators, and pathway coaches report feeling more connected to each other, more supported and invigorated by connections with other educators doing similar work. When pathways work as intended, they create rich opportunities for students to gain CTE skills and experience.

In this portion of the CCPT report, we describe the progress of K-12 school districts after two years of grant funding, identify central implementation challenges shared by districts participating in consortia across the state, and highlight promising practices for overcoming these challenges.

CCPT grants provide funding for postsecondary institutions, employers, and intermediaries, but the vast majority of funding and resources has been invested in high schools and districts. Districts included in Cohort 1 CCPT grants vary on just about every conceivable dimension relevant to implementation: size, metropolitan status, socioeconomic status, demographics, capacity, CTE history, and political support. The allocation of CCPT resources reflects local differences in CTE history, involvement with Linked Learning, and workforce development concerns. District administrators call out Linked Learning involvement as especially salient to CCPT implementation because, as one site administrator put it, "they already have [pathway] systems in place." Districts and schools with Linked Learning experience have developed curricula to support work-based learning (WBL) courses and have begun to establish productive relationships with employers.

A major challenge for virtually every school district has been to consider career pathways from a regional perspective. Thinking regionally involved district educators in new conversations and

new work. As one mid-level district manager said, that shift in perspective was a "heavy lift because we were focused on systemic change, building a regional infrastructure. We tried to temper expectations about what partners could continue and accomplish. . . . Not everyone was going to get data sharing agreements, make placement goals, and so on."

Across these diverse local contexts, similar factors supported or constrained CCPT implementation. Key factors include leadership and advocacy, district procedural issues, professional supports, and outreach.

LEADERSHIP AND ADVOCACY

Successful, robust CCPT pathways require supportive leadership in at least one level of the district organization and champions within the community. At the superintendent and board level, supportive leadership is characterized by funding pathways work, championship and advocacy, and leading by example. At the school level, supportive leadership is provided by principals who carve out and protect planning time and encourage creative solutions around schedules and partnerships. Finally, coaches and work-based learning coordinators and directors build the infrastructure required for the long-term sustainability of pathways programs.

Community and business leadership is equally important, since effective pathways programs are inextricably linked with local industry. Engaged business and community leaders can ensure that curricula are aligned with the needs of local industry, provide access to meaningful work-based learning opportunities, and broaden industry participation in pathways programs by helping to recruit additional partners from the local businesses community.

EDUCATION LEADERS

Local Boards and Superintendents

The local board and district superintendent play key roles in supporting and sustaining CTE programs. In proposing annual budgets, the superintendent can show support for CTE by adequately allocating resources such as staffing, facilities, materials, professional development, administrative support, and equipment, as well as by including CTE in the district's Local Control and Accountability Plan (LCAP). A site administrator explains:

> CTE is all over our LCAP. And the district's providing more funding. It's a priority for our district. State standards and Linked Learning are top priority in this district. And that was the purpose behind the broad-based coalition that we put together. And, again, it's been mentioned a number of times, having the superintendent and board support, you can't do it without them.

A site-level coach in another district also pointed to the importance of superintendent and board support for CTE as expressed in LCAP allocations: "LCAP has helped us. The Local Control Funding Formula (LCFF) put these dollars in one pot and we can write a plan for and use. So, we have been fortunate to be able to put more money towards CTE because of that . . . so it gives our kids lots and lots of opportunities."

Although in many instances district leadership had long supported CTE, in at least one district superintendent CTE advocacy resulted in the CCPT grant. An East Bay superintendent commented that this grant "turned me on to career technical education as a lever for high school transformation."

District-level leadership includes championship and advocacy. Teachers and principals associated with effective pathway programs widely agreed with this biotech teacher's assessment of the importance of this type of leadership:

> I think that our programs are successful because of our leadership. . . . I mean we really have people leading our district and leading this work who believe in it and are passionate about it and care about teachers and care about kids. . . . Teachers are better because of us, but I think that the programs would be successful anyway because we have such great leadership.

Similarly, a Porterville principal commented:

> If I didn't have direct support from our board, down through the superintendent, into our district, in support of pathways, we would not be as successful as we have been. Because a lot of the work-based learning is supported through his office, they support us and manage . . . getting help with business partners. I don't have enough time to do what the superintendent does.

Educators everywhere point to the importance of supportive leadership throughout the district system. "You cannot do this without a board, superintendent on board, and pathway coaches and work-based coordinators and a director," asserted a district administrator.

Site Leadership

Teachers associated with strong CCPT programs call out the "absolutely essential" strategic importance of principals' support—protecting planning time, enabling schedule coordination efforts, and encouraging creative thinking around curriculum and instruction. Site leaders' encouragement to think differently about practice in the context of CCPT-supported activities led to productive new relationships with existing programs such as this one described by a site administrator:

> At Cutler-Orosi Joint Unified School District, they have their AVID (Advancement Via Individual Determination) program working in concert with their CCPT implementation. . . . We found a correlation here in our district . . . we found was that students who are in AVID and in a career pathway academy, their academic success is much higher. And so, last summer, we sent a lot of our career pathway academy teachers to some AVID training.

Maintaining strong site or district leadership presents a challenge in most settings but is essential for CCPT sustainability. Leadership changes could threaten pathway programs when new leaders arrive with a different agenda or insufficient understanding of CTE pathway programs. The solution to this challenge is building leadership within the systems that remain in place when principals and superintendents leave. A district CTE coach put the problem this way:

The principal did a really nice job and just did the research for Project Lead the Way, presented it to teachers, and was excited about it, and every single teacher jumped onboard . . . but if that principal leaves and somebody comes in with different priorities, that could be gone tomorrow. So a challenge is leadership education . . . because the teachers are there forever.

Elk Grove Unified, Visalia, Porterville and other districts intentionally invest in "growing" supportive pathway leaders as a way to strengthen their programs over time. For instance, as an instructional coach described his job:

My focus is primarily leadership. I coordinate. A lot of my time consists of meeting with pathway teams, but I work directly on the sites with the school principals focusing on leadership, building capacity, relationships with staff, and as a think partner. And I have been here now four years doing this.

In addition, leadership needs to be flexible given the new terrain being engaged by CCPT. In one district the coaches said that "we're flying the plane as we build it. We call it an aircraft carrier because we don't know what's going to land on us. And that's what we have been doing along the way, because there's no model to follow."

LEADERSHIP PROMISING PRACTICE: LONG BEACH UNIFIED SCHOOL DISTRICT

Long Beach Unified School District (LBUSD) has had a strong implementation of Linked Learning and its four components: rigorous academics, technical training, work-based learning, and comprehensive support services. The secret to its success? A superintendent who is committed to the work and leads by example, and a district-wide willingness to prioritize the CCPT work at all levels. A former employee explains LBUSD's success this way: "The strongest best practice is the superintendent and his vision and leadership style. He sets the tone for the district. . . . He is a committed leader and has focused energy on pathway development . . . [so] they do this work in a sustained way. . . . Chris [Steinhauser] is invested in the people he is working with. . . . He is not a top down leader, but engages others in this work. . . . He has a tremendous humility to seek and continually learn . . . to get better to serve kids well. . . . I don't know if Chris would say this, but he is a servant leader."

Superintendent Steinhauser is coauthor of the Long Beach College Promise, which guarantees a seamless local pathway from high school through college. The district has been doing this work for some time, and it continues to get better because leaders ensure that pathways are a priority when making decisions about resource allocation, instructional priorities, and working with their partners.

Setting priorities for the organization is a critical aspect of Steinhauser's leadership. A former LBUSD administrator recalled that "when Long Beach City College was not getting the data it needed for a grant application, the president called Steinhauser, who marched down to the data folks and said 'send it.' This unified message from education leadership has meant that folks in the trenches are amenable to trying to find workarounds to such problems as faculty credentialing, alignment, and so forth."

Superintendent Chris Steinhauser's unrelenting commitment to pathways for all is a driving force for Long Beach Unified's successes.

BUSINESS AND COMMUNITY LEADERSHIP

Where community and business sector leaders see a strong CTE program as important to the region's economic development and long-term viability, CTE programs typically find enthusiastic support. Local business leaders' explicit subscription to CTE and career pathways provides essential focus and political capital for the district's efforts.

But in consortia where economic development needs are less urgent, K-12 educators often find "selling" CTE to business and community leaders an uphill struggle. In those contexts, engaging business leaders requires concerted and proactive effort on the part of districts. The Visalia Unified School District (VUSD) in Tulare County did exactly that—reviving the moribund Visalia Partners in Education (VPIE) to engage local business leaders and build community support for CTE pathways.[10]

COMMUNITY ENGAGEMENT PROMISING PRACTICE: VISALIA PARTNERS IN EDUCATION

Organized in 2002 to support a community approach to work-based learning, VPIE built upon existing business and community partnerships and received annual funding from Visalia Unified School District's general fund and industry partners to support VUSD's CTE programs. After a decade of minimal activity, VPIE was reinvigorated in 2013 when the district joined the Tulare-Kings Linked Learning Consortium and began working actively to engage employers by focusing on community needs and presenting business leaders with specific, well-thought-out ideas and actionable requests.

In 2013, VUSD invited local business leaders, the Chamber of Commerce, Visalia Economic Development Corporation, the Tulare County Workforce Investment Board, the Tulare County Farm Bureau, and the City of Visalia to reinvent VPIE with the goal of increasing industry engagement in work-based learning, developing new partnerships with the business community and public sector, and building support for CTE and career readiness. District leaders say that employers have stepped up their involvement in response to these VPIE facilitated conversations and its clear focus on community needs: "We [tell them we] just don't want speakers, we want you to take our kids and get them a summer job, give them an internship, expose them, see what they can do. So, we have just been doing that the last couple of years."

The group meets as a whole every two months, and advisory subcommittees convene more often on an as-needed basis. A VPIE leader stressed the importance of bringing prominent local business leaders to the table: "VPIE is sort of a 'Who's-Who' of business in Visalia . . . because we realized to make things happen, you need the movers and shakers." And, to engage these well-regarded community members, he continued, "It's essential that you have a plan, that you come to them with a clear vision and documented need."

[10] http://www.linkedlearning.org/wp-content/uploads/2016/02/A-Community-Approach-to-Work-Based-Learning_William-Davis.pdf

VPIE serves as VUSD's intermediary organization and the umbrella organization for all Linked Learning and CTE in the district. In this role, VPIE advises VUSD on CTE and Linked Learning development and implementation, reviews pathway and academy work to ensure alignment to the local economy, promotes CTE and Linked Learning in the community, acts as the voice of local business, and promotes and supports work-based learning activities. The group hosts education and business partner recognition events annually. Upcoming work involves a messaging and marketing campaign "to blast out to the community around Visalia Partners in Education," as well as a capital campaign to expand VPIE's capabilities and internship recruitment.

In some consortia, another approach to developing business and community leadership involves Regional Occupational Centers (ROC) as intermediaries. For instance, under the leadership of their superintendent, one ROC works with member districts, industry partners and postsecondary connections to create work-based learning opportunities, while also providing 135 career preparation courses that high schools could not provide by themselves. The superintendent said: "The programs that we run here are expensive. If you are trying to run them on a high school campus, they wouldn't be used all day. So facilities-wise it is not a smart decision. . . . We also offer classes on the high school campuses that are tightly aligned with the CTE programs on the ROC campus in Hayward. . . . We could not offer what we offer if it were not for this regional approach." These ROC classes also are predominately approved for UC/CSU admissions as part of their A–G requirements, and so bring academic rigor to CTE pathway programs in the region. The superintendent underscored the importance of the ROC's role: "With this strong leadership at the intermediary level, kids are provided with excellent programs leading to success in college and career. These programs for juniors and seniors are state-of-the-art CTE options for kids directly tied to the industry sectors with excellent business participation." In addition, acting as an intermediary, the superintendent has created strong regional ties with the local community colleges and facilitated the Local Pathway Teams. The result, she says, "is a true community of practice in the region among CTE providers."

DISTRICT IMPLEMENTATION ISSUES

Even with strong leadership among district and site administrators, board members, and effective community advocates, most K-12 districts confronted similar implementation issues as they set about creating and supporting pathway programs. These issues centered on staffing challenges, relationships with postsecondary partners, and district procedural complexities. Some districts invented workarounds or new strategies in response; we highlight a few of them.

STAFFING

Finding and retaining trained, qualified staff is problematic at all levels, from counselors to teachers to administrators. The underlying reasons for this difficulty include an inadequate supply of trained, experienced staff; low salaries; and structural disincentives to engage in pathways work that range from the insecurity of short-term grant funded positions to state and federal laws that threaten the social security status of experienced technical workers who might be interested in pathways work after retirement.

Administrators

Finding, hiring, and keeping administrative staff for the CCPT grant has been problematic. There are virtually no programs for preparing and training CTE administrators. And with the CCPT grant having a five-year life span, few individuals are choosing to work in these programs. There is tremendous administrative turnover, and many administrators have had no training or even experience with CTE programs. With the turnover comes a loss in continuity, and, in some cases, a significant loss of institutional knowledge. One administrator observed: "These programs are built on relationships among players. When one player leaves, sometimes the whole program fails." Another administrator commented that "we are seeing the CCPT administrators leaving at an alarming rate."

Teachers

The most significant factor in students' learning is good teachers. As one district administrator noted:

> I have been fortunate enough to hire amazing teachers. Really, in my opinion . . . [if] the quality of the program, the organization, the writing, the curriculum is important, your scope and sequence . . . it doesn't really matter so much, but what really matters is who's doing it. I mean, if you've got the best people doing it, you're going to have great programs; it's not rocket science at all.

However, this administrator's "good fortune" in hiring "amazing" teachers for CCPT programs stands as an exception; staffing and teacher availability frustrated CCPT implementation in districts throughout the state. Teachers must have the correct credentials, be willing to accept the union bargained compensation package, have the required skills and knowledge, possess appropriate work-based experiences, and in many cases, be willing to complete additional coursework.

Barriers to Entry

Regulatory issues make it cumbersome for individuals from industry interested in teaching in a CTE pathway to obtain a teaching credential, and it is difficult for regular education teachers to qualify for and obtain a CTE credential. Further, teachers are not available in certain disciplines (such as STEM) across geographic areas because of compensation, lack of full-time positions, or difficult credentialing issues. Identifying candidates for CTE positions often requires different recruiting processes than those used for academic teachers. For example, a district-level

coordinator stated: "Hiring CTE teachers is different from regular academic teachers—welders do not look at EDJOIN when they look for a job."

Sector differences in CTE teacher, K-12 coach, and work-based learning sponsor availability plague all CCPT consortia. Filling staff positions related to health, engineering, or manufacturing is particularly difficult statewide. The health sector raises problems of defining pathways and developing WBL on internship opportunities because it includes so many diverse occupations—physical therapist, nurse practitioner, emergency responder, to name just a few. Engineering presents different problems: rapid sector change makes many traditional CTE teachers (auto shop or woodworking) no longer relevant to current employer demands.

Financial considerations present a significant barrier to entry for individuals considering a CTE position after retiring from industry. A person who moves from a job that is in the social security system into the teacher retirement system is hurt financially by changing systems. One explained the problem this way:

> And one of the big hindrances to hiring is the whole issue with Social Security. And we have people in that retire at 50, but what's the incentive, if they already have earned their Social Security, for them to come in and teach? If somebody earns two pensions, then they should get two pensions. So, that . . . that is a hindrance, because people think: "Well, I'm just going to get screwed over if I do that, I'll just stay retired." And those would be amazingly qualified people that we would love to have.

For those who do want to become CTE teachers, obtaining the necessary credentials can be a significant barrier. There are two main types of teaching credentials for pathway teachers: regular teaching credentials and career technical education credentials. The latter have unique requirements for authorization. Often, teachers with only the regular credentials can teach the academic support classes but not the specific CTE course. Conversely, instructors with the CTE credential can teach in a specific CTE pathway, but not the academic core courses.

CTE credentials for K-12 tend to come at a significant cost of time and money. To receive a CTE credential in an industry sector requires three education courses, 3,000 hours of industry experience; this prerequisite can be reduced to 1,000 for someone who has been a teacher and has industry certificates. For a teacher to receive a single-subject regular credential, authorization requires a bachelor's degree, an extra year of teacher preparation coursework, student teaching, passing a specific subject area exam, and earning a passing mark on the teaching performance assessment.

Finally, schools often don't have a full-time position available, which makes these jobs attractive only to individuals looking for part-time work.[11]

Working Conditions

Salaries and job security are central barriers to recruiting CTE teachers from industry. In health or engineering, said one director, "It's not so attractive for someone to cut their wage in half and

---

[11] For more information on the CTE instructional staff, please see: http://www.jff.org/publications/missing-link-californias-pathways-movement.

then be put on temporary contracts every year so you have no security." An ROP director points to aspects of manufacturing—welding and machining—as being "tough ones because they earn so much more." A site principal worried that "Animation is hard. I have been trying to hire a second teacher for ten years. Credentialing is hard, but the more difficult problem is the pay; animators walk in the door making 80 grand a year."

Professional status is also a factor in recruiting and retention. In some environments, CTE teachers are considered second-class instructors, as they are not part of the "academic core," and they are often not seen as supporting the primary mission of the system: to prepare students for college. The "special" (designated single subject) CTE credential also differentiates those teachers from other staff, and they can be paid at a lower rate than traditionally credentialed teachers.

Other aspects of CTE teachers' working conditions can discourage "academic" teachers' involvement with pathway initiatives. Differential load figures prominently. Because of the specific requirements for most CTE programs, the burden on CTE teachers is greater than regular teachers: they must order their own materials, create new curriculum, gather data for program accountability, work with specific cohorts of students, articulate programs, work with business partners, work independently, and attend additional meetings.

Counselors

Counselors are essential to successful implementation of pathway programs. But districts face the dual obstacle of the general statewide shortage of counselors compounded by counselors' minimal knowledge of CTE coursework and pathway programs and opportunities.

In strong pathway programs, counselors work to ensure that kids get the CTE courses that they want. "If there is a conflict in the schedule, we would try to hand-register and move some things around so it would work. And I would say that's one of the biggest challenges," reflected a guidance counselor. A department coordinator commented on the importance of counselors to successful pathway implementation: "Our counselors are the ones who market the program. Counselors go to support and do the one-to-one smaller groups and start in December through the end of the year. ...We have a step-up event in our middle school that gets a pretty big crowd."

With one of the highest counselor-to-student ratios in the country, many California counselors have neither the time, nor the training, to adequately counsel CTE students about pathways or postsecondary options. Yet, an essential component of Linked Learning and career pathways is support services that "help students master the advanced academic and technical content for success in and outside of school." These services may include personal and academic counseling for students. Counselors, along with other adults on campus, can provide a personalized environment that allow students to thrive academically, socially, and emotionally.

CREATIVE STAFFING SOLUTIONS

Some districts have found creative ways to hire and retain CTE staff, including incentives, proactive recruiting, credentialing workarounds, and instructional support. In several consortia,

CCPT resources—funds, technical assistance, and employer connections—make a substantial and positive difference to CTE teachers' professional lives.

Incentives

Monetary and other incentives, such as opportunities to work closely with colleagues, are important tools for recruiting, hiring, and retaining CTE teachers for pathway programs. The flexibility of the CCPT grant means that districts can use funds creatively to overcome structural barriers that discourage individuals from becoming CTE teachers and joining pathway programs. Porterville officials told us that they "Provide incentives to all pathway teachers. They receive a stipend for their work, in order to…work in common planning periods, they work together and participate in professional learning and professional development." Porterville also works with Fresno State to place student teachers in their CTE classrooms and actively recruit staff from traditional high school classrooms. According to the Linked Learning director:

> When we opened the school, we recruited the staff the same way that we recruited students: If you're interested, we can teach you the skills and the training, and go beyond to provide you that professional development. And because it's hard work, we will provide you the incentives and the support structures that you need in order to make this right.

District administrators note that that the school board, school leaders, and human resources staff all need to be onboard with these creative approaches to recruiting, because they can represent a significant departure from a district's typical hiring and compensation practices. A Linked Learning coordinator reflected:

> The district has to be onboard, HR, cabinet included, in regards to the hiring process. I mean, we created a pathway lead job description and a pathway coach description. We provide incentives to all pathway teachers. They receive a stipend for their work with the expectation that they collaborate, they work in common planning periods, they work together and participate in professional learning and professional development.

Training Incumbent Teachers

Some districts provided training opportunities to move traditional CTE teachers into STEM pathway positions. A principal told us: "Our lead engineering teacher was an old shop teacher, and he came in and took the training with Project Lead the Way. He did the whole training and now this is his, what, fifth, sixth year? And now, he's the master, the kids think he's an engineer."

Credentialing Workarounds

Several districts, often in partnership with their County Office of Education (COE), have devised workarounds to meet credentialing challenges. Tulare COE actively supports CTE certification through its IMPACT Program, which is certified to grant the Preliminary and Clear Designated Subjects Career Technical Education Credential. This credential is aimed at career technical, trade, and vocational instruction and enables candidates to use their past experience in the industry sectors to earn their credential.

The Alameda County Office of Education (ACOE) has established a new Human Resources division to do some in-house CTE credentialing and to explore what ACOE can do to create a robust ability to credential folks in this area. "Right now there's nothing," says the ACOE superintendent.

Vallejo Unified School District has started an in-house credentialing program designed to credential prospective and current teachers with the certification that they need to support the district's career pathways. One district official told us that they "hire teachers in internship programs who can start work before they are fully credentialed. Other districts hire teachers on emergency credentials who have bachelor's degrees and are enrolled in teacher-preparation programs."

Oakland Unified School District has provided a path for certificated teachers to become CTE certified teachers through externships and release time during the school year and summer.

Districts also use industry experience to certify teachers in hard-to-staff areas such as manufacturing. One superintendent recounts this recruitment discussion with a former welder: "Do you have a college degree?" he said. "No," I said. "Do you have an Associate's?" he said. "No," I said. "Have you worked five years in the business?" he said. "Yes," I said. "We can hire you. We can get you the credential."

These COE efforts or local workarounds can provide short-term solutions to the CTE credentialing problems, but many educators see the root predicament of CTE teacher availability as one the state must address. One advised:

> The state is going to have to look at bringing some of these colleges back to do CTE training, hiring some people in areas such as advanced manufacturing. It's awful, virtually impossible, unless you happen to find someone who is independently wealthy. We are facing a huge teacher shortage in this state. We need to . . . offer a CTE credential concurrently with the teacher credential. . . . We need to streamline the process to get a CTE credential. . . . [Teachers have to] figure out a way to do externships, but do you want to work all summer, on top of teaching just to get the CTE credential?

Procedural Challenges

Districts' traditional ways of doing business complicate efforts to develop well-coordinated pathways. In particular, the requirements of CTE courses are incompatible with the traditional high school schedule, which consists of five or six 50-minute periods each day. Since CTE courses have historically been viewed as secondary to the academic program, the schedule is typically built around the academic offerings. But in order for CTE pathways to succeed, scheduling must be driven by the CTE courses rather than vice versa. This shift poses both logistical and cultural challenges, which require flexibility, patience, technical support, and leadership to overcome.

Other issues that must be addressed at the local level to create thriving career pathway programs include maintaining the allocation of state revenue per student, negotiations with

faculty associations, course articulation, and getting Memorandum of Understanding (MOUs) among various school entities developed and signed.

Developing CTE pathways also means administrators and teachers need to adopt a new way of operating as they create opportunities for students. Rather than rolling out a new fully formed initiative or curriculum, educators recommend that when starting a pathway program, it is important to:

> Start small. You can't accomplish it in one year, you can't accomplish it in three or four years, you have to do it step-by-step and build, working to improve, and build each step of your program as you go. You have to do it as a team, there's no one individual; you'd be so burned out. Do it in stages and having a team where everybody has their strengths and weaknesses... we always go to in-services as a team.

Master Schedule

Growing CTE pathways at the local level means that the site administration must meld the new programs and courses into existing structures. Nothing is more key to this than the master schedule in the comprehensive high school. District administrators struggle to create student master schedules that support CTE pathways. While block master schedules (chunking larger amounts of time per student period) better support CTE pathways and allow more student course choice, they can be incompatible with existing class schedules. A site principal told us that "without a flexible block master schedule, we could not offer our current CTE courses." The components of the master schedule that need to be addressed include number of periods in the day, block versus traditional schedules, and prioritizing CTE schedules.

Adding Periods

The traditional high school master schedule has six periods offered for approximately fifty minutes per day. With increased requirements for graduation and meeting the minimum requirements for entrance into the state college and university system (the A–G requirements), it is difficult for students to fit CTE classes into their six-period schedules. Principals have commented that the addition of a seventh, and sometimes an eighth, period provides flexibility and options for CTE students. "Taking eight blocks a year gives kids so many more opportunities than a traditional school. That's part of what's really helped us because we are on a block schedule. You're choosing between Band and French 3 and Biotech 3 and all that, [but] you are not having to choose [from limited options]: you have enough room in our schedule to do most anything."

The traditional vocational Regional Occupational Center programs served eleventh and twelfth grade students with at least one CTE class (comprised of one to two periods) and sometimes supplemented by specific core academic classes. Many CCPT schools now offer CTE pathways to every student, and include an academic core where students become a cohort tied to their CTE strand. To ensure that students have access to the CTE and academic core cohort classes, schools must employ strategies that maximize CTE student placement opportunities. Engaging all students in pathway programs, or making them available to all students, challenges educators to find ways to accommodate academic requirements and work-based learning placements.

Block Scheduling

CTE pathways and courses tend to have special requirements such as unique facilities and materials, internship and externship requirements, possible postsecondary connections, and the need for common teacher planning time. Many CTE courses are best taught in larger blocks of time (for example, a block of two traditional periods) that are accommodated by a block schedule (for instance, where classes may be offered every other day with longer class periods). Most CCPT thriving schools utilize a seven- or eight-period day with some form of block scheduling.

Prioritizing CTE Schedules

Placing students and courses into a complex master schedule can make or break a CTE school pathway. One successful strategy is to first place the CTE pathway courses in the master schedule (before the other courses) to ensure that students have access to their CTE courses. Another complementary strategy is to schedule the CTE pathway students into their classes before the rest of the student body. Placing CTE students first (some schools hand-schedule these students rather than using the automated computer algorithm) maximizes the percent of CTE students who are successfully scheduled. This strategy facilitates maximum alignment of courses and inclusion of the most students.

As with other CCPT implementation issues, administrators' understanding and active support for finding effective responses is essential to pathway implementation. One teacher commented that "You have to have the buy-in from your administration, and that [ranges] from just a little blessing, all the way down to support for scheduling. . . . The admin has to have your back. . . . The admin can explain to the staff why they have to have the kids grouped together so those courses may be a little bit smaller." In supportive school contexts, the pathways with their interdisciplinary, integrated courses take precedence when scheduling CTE classes and students. A CTE teacher sums up: "Students need to be cohorted and classes have [to accommodate] peer academies and things like that. So [these considerations] sort of take precedence."

By adopting a block schedule, offering seven or eight periods of classes, placing CTE courses in optimum spots in the master schedule, and optimizing the protocol for placing students in classes, schools are more successful in creating added access for CTE students. Conversely, by not adopting these strategies, it may be difficult to grow or maintain current CTE programs. Having a quality site level master schedule process enhances the CTE program at the school. But since schools have autonomy to devise their instructional schedule, and faculty must approve them, schedules and pathway options can and do look differently across schools even in the same district.

MASTER SCHEDULE PROMISING PRACTICE: TRAINING AND SUPPORT FROM THE COLLEGE AND CAREER ACADEMY SUPPORT NETWORK

High schools face the daunting task of scheduling and prioritizing career pathways as part of the CCPT grants. Since creating master schedules that support CTE pathways is both extremely complex and new in most districts, outside support is essential. The College and Career Academy Support Network (CCASN) offers both materials and training to support administrators in creating the types of schedules that are essential for successful pathway implementation.

CCASN has developed materials for schools to utilize in creating and using a master schedule that supports career pathways and CTE classes. They have an excellent free website where they have collected and share their materials. CCASN works with school personnel to facilitate quality master schedule results. Some of their topics include scheduling students and teachers together, involving teachers in developing the master schedule, gathering information before beginning, creating bell schedules, dealing with inclusion and equity, building in common planning time, and ensuring that the master schedule meets the sites mission and vision for kids.

CCASN also offers master schedule training for administrators that helps in prioritizing CTE pathways and ensuring the successful placement of students in those courses. CCASN has a team of providers that will deploy to the school site to help site teams deal with their master schedule CTE pathway issues. This type of support is invaluable.

A site administrator gushed that "We just had a professional development with CCASN, on the master schedule and they were outstanding. . . . They brought in spreadsheets, Excel spreadsheets that they have created for any program, and a flash drive with all of their documents on it. And they do an amazing job."

Collaboration with Postsecondary Institutions

CCPT pathways assume cooperative agreements with partner community colleges that allow and encourage dual and concurrent enrollment in K-12 and community college programs. But that cooperation and buy-in has been difficult to achieve in many instances. Creating alignment and links between K-12 and postsecondary around curriculum, course content, and course credit has been difficult in many districts, especially in those without long-standing community college/K-12 collaboration such as those in Long Beach.

And there is a pressing need for clarification and assistance in supporting dual enrollment. The Holden Bill, AB 288, which went into effect January 1, 2016, supports mechanisms for high school students to take college courses, increases underrepresented students' exposure to college coursework through, "College and Career Access Pathways Partnerships," and builds career pathways reflective of a region's economic needs. But its success in promoting dual enrollment remains to be seen.

Some districts tackle the issue of postsecondary collaboration through their consortia. The Tulare-Kings consortium, for example, works directly with local community colleges to support member districts' efforts to align coursework and develop dual enrollment courses. The East Bay Career Pathways consortium has had some success in promoting K12-community college collaboration through the Local Pathway Action Teams (LPATs). Some East Bay schools initiated subject-area K-12/community college faculty teams to plan pathway coursework. However, even if participating faculty could agree on a course of action, the community college bargaining unit sometimes blocked the arrangement.

Negotiating with Bargaining Units

Expanding CCPT pathways may require changes in working conditions at both the K-12 and community college levels that necessitate contract adjustments and/or a specific MOU. These agreements must be negotiated with either the authorized representative of the affected employees or, in almost all cases, the teachers' union. With entities that have restrictive collective bargaining agreements on working conditions, districts have found it difficult to negotiate changes to promote CTE at the secondary and postsecondary levels. However, with strong leadership at both the administrative and teacher union level, pathway programs have thrived.

PROFESSIONAL SUPPORTS

Quality programs that we observed had curricula that were aligned, integrated, rigorous, and career focused. The strongest programs have elements of Linked Learning or NAF (formerly the National Academy Foundation). Creating such programs requires highly trained teachers and a comprehensive support system. A Porterville coach speaks to the importance of professional development (PD):

> The professional training of your teachers . . . I do believe that [the] Linked Learning [approach] is a winning system, and combined with NAF and their structure for academies, I think if you implement that right, you're going to win…. The district has devoted one day a month to staff development.

In confronting the need to create and adopt new curricula and ensure quality instruction, CCPT teachers and administrators turned to several sources of support, including the CDE, district-wide collaboration opportunities for teachers, communities of practice, and coaches.

The state's Department of Education is an important source of curricula and extended professional community. CDE supports CTE Online, a resource devoted to connecting CTE educators and leaders to quality curriculum models, shared communities of practice, and professional development tools that emphasize industry- and career-related coursework. The CDE also sponsors the website My Digital Chalkboard (www.mydigitalchalkboard.org), which includes searchable teaching resources, professional development opportunities, and an online community.

The CDE also provides a CCPT leadership retreat that has received high marks from practitioners and has conducted two institutes statewide for CCPT over two years. According to

a CDE official, "We had about 400 grantees and it was really more of a conference design, but the workshops focused on promising practice and focused on shining the light on the grantees and the work that they are doing." This year, the CDE is planning to conduct five workshops around California on "developing work-based learning, [promoting] local and regional industry partnerships, [and] creating career pathways with integrated curriculum, early college credit, and data collection and tracking." The state is also planning four video modules to be shared with the field in "industry partnerships, work-based learning, integrated curriculum, and the community college system."

District-Wide Collaboration

Most districts created opportunities for teachers to collaborate around curriculum and instruction, gaining professional knowledge and building networks with other teachers. Especially valuable to CCPT implementation are sessions organized by the pathway sector. "The sector meetings help because then the folks who are doing common work have a chance to talk and get to know each other, so now, they have built a relationship that just isn't someone's name at another school."

Other useful district- or school-designed professional development featured interdisciplinary discussions aimed at coordinating coursework within a pathway. Teachers expressed enthusiasm for these sessions and the curricula that resulted. For instance:

> We did a water bottle project wherein the kids in the English class read a book about rockets. And for the science part, it is to observe and develop Newton's Laws of Motion. And the engineering part is to design and create the bottle rockets. . . . They all see the value of that deeper comprehension when they're collaboratively working on a unit of study, and what's being taught across the curriculum.

Communities of practice, collaborations that bring together educators engaged in similar work, serve as important support for both teachers and coaches. In talking about improved district professional development related to CCPT, teachers also underscored the value of same-role communities of practice:

> We now have a district PD where all of the academy coordinators come together, so we are really aligning site-wide and district-wide with all of the different work-based learning opportunities, and the teachers going with Linked Learning and doing their self-assessment and evaluations and thinks like that. We are all on the same page.

A CTE teacher explained that "We coordinate work-based learning [at] a conference that they offer every year, it's part of our professional development timeline."

San Leandro and Porterville Unified School District have both created communities of practice for counselors to meet and learn from the group about the needs of CTE and pathway students. Topics include creating master schedules, supporting CTE teachers, and helping students learn about careers.

Support Providers

Multiple K-12 educators said that they could not do this pathway work without their support providers. These providers assist districts on curriculum, professional development, and other topics (for example, help with the master schedule or facilitating meetings). Districts singled out the Linked Learning Alliance, NAF, ConnectEd, Project Lead the Way, Jobs for the Future, and mentor districts as offering valuable assistance in their pathway development and support. (Mentor districts are those districts that have agreed to assist other districts with their pathway work, such as the Porterville Unified School District). Districts without Linked Learning experience especially profited from support providers' assistance in developing new project-based curricula and work-based opportunities.

> **PROFESSIONAL SUPPORT PROMISING PRACTICE: ELK GROVE UNIFIED SCHOOL DISTRICT**
>
> The Elk Grove Unified School District in Sacramento County provides exemplary staff development, curriculum, and general staff support for its CTE staff. Through a cadre of career specialists and coaches, the CTE pathway teachers have access to comprehensive support in all areas of their responsibility. The specialists and coaches call themselves the "worker bees" who get things done to support pathway programs while teachers teach. Examples of support include assistance with engaging employers, writing curriculum, learning instructional methodology, and providing time for alignment of course content with standards.
>
> In providing support for the teachers, an Elk Grove career coach mentioned that one teacher "needed some assistance with guest speakers. I said let us do that. So, he just kind of looked at me for a little bit, I guess to kind of take it in. And then, he just kind of smiled. He's not used to it." An Elk Grove teacher reflected, "Without the career coach it would be much more difficult to get professionals [to a career fair]. If I didn't have the support of something like SETA (Sacramento Employment and Training Agency), I might not have done it. . . . So that really has been a fantastic thing." The career specialist helps "teachers build their advisory boards . . . because, as a teacher, they don't really have time to do research online and then to make phone calls and follow up with people. So that is one of the roles that we have taken over." The coaches also ensure that the teachers "have support from industry, so that they are making sure that [courses/curricula] are aligned with what industry needs."
>
> The coaches also help with answering credentialing questions, organizing field trips, and sharing best practices. Having the coaches support career specialists has facilitated better alignment both vertically and horizontally throughout the district. An Elk Grove CTE teacher described this support: "He has been a great coach, helping us get our pathways aligned better [and] working with our administrators, so that is a lot of support." A coach with teaching experience was able to work with newer teachers to "come in and talk about the pathway and the curriculum that goes with it. And [the teachers are] on their way to establishing something solid for outcomes for the pathways, so that the whole team is on the same page." The coach observed that they have the capacity to "meet with teachers individually and work on course sequencing and things like that in their pathway, but then also to bring them together as a

larger group—there's power in that."

A new coach commented on the value of the support between coaches and specialists. They "challenged us to look at our programs and say: Is this really all it can be? And it kind of pushes you to look at it to the next level. . . . You need somebody to be there to challenge but also to support what the challenge brings."

OUTREACH AND RECRUITING

Only a few California districts (such as Vallejo Unified and Oxnard Union High School District) require that all high school students enroll in a career pathway, and few colleges or school districts require that students complete a CTE course for entrance or graduation. As students and their parents have a choice with regard to taking CTE courses, strong recruiting is essential to successful CCPT programs. To be effective, recruitment efforts have to reach students in the early grades, employ a wide range of methods to disseminate information, and actively reach out to all families in the district. Some districts employ one of these approaches, and the most successful districts use all of them.

Some K-12 districts are starting to recruit and prepare students in the early grades. A district official explained:

> District-wide, we're putting in some initiatives with career exploration and awareness throughout the different areas, along different industries, such as the health science and engineering and so forth. This past year, we started with fifth and fourth grade with some career exploration at the community college level. And we're just trying to make sure we have all of our arrows pointing in the same direction.

Across the board, CCPT educators found that students—both past and present—were the best recruiters. "We have graduates who come back and speak to them about that. They speak to them about the jobs they've gotten or the college, the experience, and how easy some of the entry-level classes have been because of what we've done. That sells it. That itself sells itself."

Some districts go out of their way to ensure that Spanish-speaking families have an equal opportunity to be part of the pathway program. A Central Valley administrator explained:

> We present the programs in both English and Spanish…. The first year we did this we had about four or five [Spanish-speaking] parents in the audience, it was very low attended. This past two years, we have had about a hundred or so . . . and they have so many questions…. So it's nice to see people in the screening rooms for both English and Spanish get filled in the evening sessions.

OUTREACH PROMISING PRACTICE: VISALIA UNIFIED SCHOOL DISTRICT

The Visalia Unified School District offers ten Linked Learning Academies in five high schools. Students who chose this option are enrolled in the academies their freshman year, and transportation for students throughout the district is provided. Annually, a comprehensive publication about CTE and pathway opportunities is offered to students and parents, with additional resources online. All district eighth graders attend recruiting events for the academy programs in the spring. A district administrator explained that "There are multiple parent events that also have Spanish translations. . . . We recruit at our middle school. We advertise in the district." A Visalia teacher said that we have our 'Map to the Future' career fair that's gotten bigger and bigger. . . . We bring on about 30 different careers for our kids just [to] get exposed to, and that helps. . . . [Doing a lot of different recruiting activities is] like throwing spaghetti on the wall: something's going to stick."

Participating K-12 public schools have much to celebrate only two years into the CCPT grant: stakeholders from within and across districts working together in new ways, teachers reporting high levels of satisfaction with the support they are receiving to develop pathways programs, and positive student responses to pathway opportunities. A great deal of work remains to be done, and many implementation issues continue to challenge K-12 public schools, but educators across the state are working hard to live up to the promise of the CCPT initiative by developing effective CTE pathways and new regional relationships.

POSTSECONDARY INSTITUTIONS

The California Career Pathways Trust was designed to promote partnerships between K-12 districts and community colleges and between education and local business and industry. Building career pathways involves better articulation, alignment, and integration of curriculum and course sequences between high school and community colleges so that students are better prepared at each step of learning to take the next step toward completion of a postsecondary credential that leads to a good local job. Community colleges are central partners in CCPT because they not only focus on general education transfer to four-year colleges, they also are the primary public postsecondary provider of career technical education (CTE) and credentials in the state. As such, at the state level the California Community College Chancellor's Office (CCCCO) partnered with the California Department of Education and Workforce Development Board in designing CCPT, and CCPT successfully encouraged some community college districts to lead regional consortia.

In terms of implementation, community colleges' success is rooted in the development of new and stronger partnerships and pathways as well as deeper relationships with local partners in K-12 and business/industry. However, community college CCPT stakeholders describe challenges related to imbalanced incentives and ownership of CCPT at the system, district, and local levels; limited capacity for strategic change; a complicated culture of decision making and competition; and a disjuncture between current college offerings and industry needs. Administrators, faculty, and other staff in the community college system, district, and local campuses report feeling both optimistic about the new and deeper partnerships and unclear about how to maximize opportunity and sustain the work, given other initiatives requiring the time and attention of postsecondary educators.

In this section of the CCPT year two report, we describe the progress of community colleges, identify central implementation challenges, and highlight promising practices for overcoming these challenges.

NEW AND STRONGER PARTNERSHIPS AND PATHWAYS

CCPT encourages postsecondary institutions and high schools to jointly plan and implement career pathways. Postsecondary staff seemed to appreciate the resources and time granted by CCPT to be deliberate in these endeavors. As one faculty member said: "What it's done is it's allowed us to be a lot more strategic and intentional about working with our high school partners, and specifically on the, I would say, on the educational curriculum side of things."

CCPT's goal to improve the success of students transitioning from high school through college with a postsecondary credential was clearly a central focus of community college faculty. As a community college administrator put it:

Really, what we're trying to do is to ensure that the curriculum [high schools who are implementing dual enrollment in pathways] have is as close to and is aligned as possible with what we're teaching. The idea being that... where possible, either through articulation or through concurrent enrollment... we'll be able to get students in... so that they can have that formal pathway started in high school... and then just transition straight into our institution and already have the college credit and be on their way to earning a certificate or degree in an applied field.

These efforts to align curricula involve thoughtful technical work and significant institutional commitments to validate coursework designed by partners, both of which take time and effort made possible by CCPT. They also require creativity and negotiation both across and within CCPT institutions.

PROMISING PRACTICE:
DEVELOPING CONSORTIA-WIDE ARTICULATION AGREEMENTS

In two CCPT consortia, partners are working to develop a regional agreement that would enable high school students to take an articulated course and receive credit at any one of the participating CCPT consortia community colleges. Participating colleges would need to agree that if a high school student satisfactorily passes the articulated course from a consortia college, any one of them could confer the college-level credit. In one consortia, partners are starting from a common "College 101" syllabus and then negotiating how to incorporate individual college and department-specific additions. At the end of year two of CCPT, design and planning work were still underway in these consortia, but the agreement had not yet been implemented region-wide. This promising effort demonstrates the substantial investment of time and energy that is required to shift the emphasis from local to regional thinking and acting.

BUILDING BONDS BEYOND CCPT

Beyond the technical work, some CCPT community college staff also described examples of how partners are using the grant opportunity not merely to create pathways and programs, but also to explore strategies for working differently together and for combining resources to pursue common goals. As one partner described: "... everybody's coming with funding, but everyone also is coming with ideas. Truly, we're looking at our work plans and saying: How can we leverage each other's work and activities to minimize the 'heavy lifting' and to really braid our funding."

Similarly, there are signs that some participating CCPT community colleges are considering how to build and shift organizational capacity to execute the bridging functions necessary to continue creating career pathways between education systems and employers. One college staff member reported:

We're in the process of transforming [an existing facility] into a CTE center, but [that involves] hiring someone that's going to be specifically in charge of internship

development and placement, and tracking our students, and then developing partnerships with business and industry to place folks in. So, we're making a pretty radical shift there. We'll continue to do the same services... but we're going to add that internship component to there and kind of transform that space in the next six months.

BARRIERS TO PROGRESS

Although CCPT is leading to many positive changes between K-12, community colleges, and with business/workforce partners, many college partners struggle to drive faster and more effectively toward the consortia's ambitious grant goals. CCPT is a powerful lever for aligning pathways across K-12 and postsecondary, but respondents explained that changes needed to scale up pathways across K-12, community college, and workforce systems are bigger than their one institution, community college district, or CCPT consortia. Indeed, respondents pointed out—implicitly and explicitly—that these three systems were not designed to work together in more than a loosely coupled way. In fact, California's community colleges are engaged in numerous change initiatives, like those under the Strong Workforce Program, which have great potential to complement and accelerate the achievement of CCPT goals, but many college staff viewed the simultaneity of these initiatives as a challenge. In all, there are four issues cited by community colleges indicating that CCPT work is bumping up against larger systemic barriers in their organizations.

INCENTIVES AND OWNERSHIP

The complexity of California's community college system comes from its large size and its local governance structure. Collectively, the 113 community colleges and 72 community college districts are governed by their own boards and serve diverse geographical regions. Accordingly, much of the influence the Chancellor's Office can exert is in the form of incentives. For example, the Chancellor's Office can set a vision and priorities through grant programs, but it has little power to direct local college policy and practices. Incentives alone have not proved sufficient in achieving the transformations needed for true ownership of the initiatives at the district- or site-level. Moreover, the effect of having too many carrots driving multiple and related regional collaborations may inadvertently stretch the capacity of those partnerships, a point discussed in more detail in the following section.

CCPT is guided by a collaborative state agency effort between the Chancellor's Office, the Department of Education, and the Workforce Development Board, but CDE is responsible for the funding, reporting, and other administrative functions. Thus, despite receiving grant funds to lead and participate in CCPT consortia, many community colleges still view CCPT as fundamentally a K-12-driven initiative, according to a senior official in the Chancellor's Office. This can sometimes contribute to a lack of postsecondary ownership for CCPT goals and does little to counteract the feeling of "no accountability, no incentives for participating" from community colleges and their faculty.

The sentiment was echoed by a community college faculty member supportive of CCPT but doubtful about its potential for engaging college faculty and administrators more meaningfully or

beyond the grant: "So, we want system change to create mechanisms for doing that [pathway work], but nobody really wants to do that if they don't have to.... But if you're going to make me do it, I'll do it, but I need a salesman to come over and make me do it; otherwise, I'm not going to do it."

CAPACITY FOR STRATEGIC CHANGE

California's community colleges are undertaking several substantial initiatives to improve their own curricula, courses, student supports, and guidance systems, and to align them more tightly with local economic needs and the needs of the wide array of adults and youth they serve. These initiatives, to name just a few, include the Student Success and Support Program, Student Equity, CTE consortia, Adult Basic Education Consortia, and Guided Pathways. A number of these share CCPT's CTE and regional foci, encouraging collaboration between area colleges to share resources, learning, and technical assistance; and to create cohesion in vision and strategies across institutions. Given California's size, diversity, and the complexity of its community college system, regional approaches to promoting change are arguably sensible, especially given the differences in regional-based economies and employment opportunities.

But regional approaches have also created pressure on community colleges to dedicate staff, time, and other resources to numerous initiatives entailing multiple meetings and significant coordination and consensus building. Although the initiatives provide financial support for grant activities, they are happening at a time when many community college leaders and faculty feel that the resources they lost during the last recession have only partially been replenished during the economic recovery, and that new funds in the form of grant initiatives may be focusing staff on too many special projects rather than core functions. As one faculty member said: "We're inundated with so many things, whether it be career pathways, job readiness, college readiness, industry readiness, and grants here-and-there, and funding here-and-there, it just becomes convoluted."

Another observed:

> *[New funding should allow community colleges* to] continue . . . with the people that are doing the work, letting them do the sort of stuff that they've been doing, as opposed to making them do new stuff. Because then you're also trying to spend money on new stuff, and you're just wasting money. Spend the money on the stuff that you need to spend it on: you need to spend it on the faculty; or you need to spend it on supplies; or continuing to repair your equipment that's dying that is [needed] for your pathway; you need to continue to spend it on the personnel. That's key. You need to be able to continue that work-based learning person, the project manager person, your dean, your whatever. Fund the things that are already funded, not seven new positions.

Community colleges may experience the work as hard to manage because they view these efforts as discrete and perhaps marginal instead of comprehensive and transformative. Some administrators and faculty had trouble seeing the relationship among various initiatives, and they lacked a mindset or strategy about how to coalesce related initiatives and attendant resources to achieve greater efficiency and shifts in core practices. The Chancellor Office's strategy of using grant opportunities to influence practice may inadvertently perpetuate this

fragmentation even though the programs operate under a coherent, comprehensive rubric and vision. Another challenge—but perhaps also an opportunity—is that many of the initiatives are evidently pulling on the attentions of the same community college staff. As one faculty member noted: "Our Adult Ed Consortium has some of the same schools as our CCPT.... I think a lot of their Adult Ed Consortium folks are the same folks that they're working with on the CCPT grants."

This confusion suggests that community colleges could use support in understanding how these change efforts can be organized, streamlined, and used together strategically to better meet their mission and state goals.

CULTURE OF DECISION MAKING AND COMPETITION

Community colleges' complicated decision-making structures differ from those of K-12 systems. The authority of faculty senates, curriculum committees, and hiring committees belie the notion of a simple hierarchy directed from the top down at the system, community college district, regional, or local level. Particularly with regard to matters of curriculum, faculty exert much influence—making such a curriculum-intensive initiative as CCPT a challenge to shepherd through decision-making structures. Further, these decisions can be rife with underlying turf and competition concerns, which are fueled by enrollment-driven funding for community colleges: more students in seats equates with more funding from the district and state. Community colleges and faculty have a stake in keeping their course enrollments healthy. As one college leader noted: "[Our college] and [another college in the region] are very much competitors, very, very competitive. There is a lot of 'bad blood,' mainly because [the other college] is seen by [our] people as raiding our district for students."

Moving course approval and other key decisions through postsecondary institutions can be particularly difficult for staff hired by CCPT grant funds. Many are not full-time faculty and hold temporary positions. Because CCPT focuses on alignment with high schools, they must spend significant effort designing and facilitating activities that expose high school students to community colleges, CTE programs, and planning career fairs, as well as those that connect K-12 and college faculty. But such staff are less likely to have status in or know how to navigate community college decision-making structures and competitive landscapes.

One CCPT staff member recalls the difficulty in articulating one course across the consortium's community colleges:

> I go to the dean and I said, "Hey, this is the problem I'm having . . . . And this is ridiculous because this class is articulated throughout the state!" He said, "I'm not her boss." "What do you mean, you're not her boss? You're the dean and she's faculty?" And he goes, "You don't understand our system." So, I said, "Could you please call a meeting?" So, we called the meeting of faculty, and [the faculty member] stood up and she had the guts to say it to all her faculty, she said, "I will lose my enrollment if this [change for CCPT] is done." And her faculty supported her. And I looked at the dean, he's like, "It's dead, it's a dead class."

Another way that competition for enrollment creates barriers for CCPT is that particular K-12 districts are seen as being in the primary enrollment catchment area of specific colleges even

though other colleges may be within reasonable travel distance for students. Ideally, CCPT regional consortia would be able to match high school students having particular career interests and pathways to colleges where the course offerings in those areas are the strongest. But community colleges' enrollment-driven incentives sometimes prevent this, as one college staff member reports that their CCPT colleague was told by other consortia partners that "he's not allowed to go to [some local] high schools" because such outreach would impinge upon a nearby community college whose catchment area includes those schools.

AVAILABLE OFFERINGS VERSUS INDUSTRY NEEDS

Business, industry, and workforce systems are also essential partners in CCPT and other career pathway efforts. Pathways, and the degrees and certifications that they lead to, ought to have value in the labor market by meeting both employer needs for more highly-skilled workers and employee needs for a career with good wages and growth opportunities. CCPT is designed to encourage workforce partners to work with education partners to ensure this alignment. But this is another ambitious CCPT change goal, given that such cross-system relationships and design work are not the norm. And, as another section of this report describes, engaging employers in this joint work has been one of the more challenging aspects of CCPT implementation.

Past approaches to engaging employers no longer suffice to imagine and develop CCPT pathways. That is, colleges have often relied on individual faculty expertise and relationships with industry partners in designing CTE offerings and workforce connections, rather than aligning programming with regional economic needs. High schools have often similarly designed career pathways based on the interests of staff and students rather than on labor market data. And colleges and high schools in a region typically operate independently of one another. This lack of coordination is evident when college staff describe struggles to align their offerings with high schools: "There's engineering at high schools but not a super-strong program at [a local college]. And then, there's this really great manufacturing program at [the same college], but there's no pathway there [at the school district]."

A deputy sector navigator (regional positions created by the Chancellor's Office to encourage stronger career pathways connected to the economic needs) in one CCPT consortium noted that one CCPT college's welding program did not seem aligned to industry needs, citing the fact that many of its graduates fail to pass the industry certification.

However, the CCPT grant prompted postsecondary institutions to start building new relationships and component pathways with K-12 that could serve as the foundation for more systemic work. And some regions were able to accelerate and expand built upon earlier work. More established regional groups that existed prior to CCPT, such as CTE Regional Consortia and Adult Education Consortia, and that had done previous work to develop partnerships, were able to connect community college faculty with high school teachers focused on the same industry sectors, convene high school and community college advisors/counselors, and develop regional meetings with priority industry representatives and sectors.

PROMISING PRACTICE: DEVELOPING REGIONAL PARTNERSHIPS WITH EMPLOYERS

One such region is worthy of note for a promising practice in this regard. In the Tulare-Kings Consortium, a deputy sector navigator connects high school teachers, community college faculty, and industry partners in advanced manufacturing. He has facilitated a series of meetings and site visits for sector-specific instructional staff to meet at industry workplaces. These convenings provide educators at both levels with multiple opportunities to understand industry needs in a practical setting, and it facilitates a collaborative dialogue about connecting student-learning outcomes to employer needs and industry standards. CTE instructional staff are also identifying potential externship opportunities, an opportunity for students to spend time working in an industry placement that reinforces both their understanding of industry needs and their ability to create stronger career pathways.

Community colleges have been significantly involved with, and responsible for, many of the successes evident in CCPT regional consortia advancing career pathways. Yet, for many community colleges, CCPT coincided with other system-wide and regionally focused efforts to improve access to higher education, improve retention, increase credential completion and transfer, and strengthen links to regional economic needs. Despite that, CCPT represents important progress for education and workforce systems that have grown up apart for so long. And there are many positive pressures and programs—CCPT and others—designed to align them. However, these forces naturally reveal some strain in community colleges trying to be responsive but not always able to be strategic; community colleges have their own distinct structures, incentives, capabilities, and cultural norms that sometimes stand in the way of faster progress in working with K-12 and workforce partners to achieve CCPT goals. If CCPT and other initiatives could change those systemic factors, the cross-sector work needed to scale up career pathways could be accelerated and institutionalized. But for the time being, the result of CCPT might be best seen as making some positive steps toward these conditions.

EMPLOYERS

Engaging employers is critical to CCPT's work. Successful career exposure opportunities for students, meaningful work experiences, and rigorous pathway development require employers committed to CCPT's warrant and mission. An engaged business community provides guest speakers, mentors, paid and unpaid internships, externships, and often summer jobs for students. An engaged business community also participates in student competitions and work-readiness programs and contributes to conversations about pathway curricula, standards, and outcomes. And an engaged business community can provide influential support for CTE programs and employer networks in their communities and in the region. But many Cohort 1 consortia report significant challenges in this area, for a number of reasons: the business community in any given region is diverse and includes a variety of players with different interests, incentives, and capacities; and there are few existing relationships and structures for cooperation between employers and educators in both K-12 and higher education (separately or together), which require considerable investment of time and talent to build.

A sense of urgency about regional workforce conditions generally produced high levels of employer involvement across Cohort 1 consortia. Consortia with the most successful employer involvement include those operating in the Central Valley, where workforce concerns compel employer outreach to students and active involvement in constructing internships and pathways, and in small economically distressed areas where "all hands on deck" sentiments toward community well-being motivates workforce development efforts. In addition, consortia making substantive progress involving the business community generally also had strong workforce investment boards, supportive Chambers of Commerce, or intermediary organizations that could draw upon good relationships in the business community to broker opportunities for students. In this section, we summarize the central challenges to engaging employers primarily in K-12 pathway work and highlight successful approaches that can be replicated across the state.

CHALLENGES TO EMPLOYER ENGAGEMENT

While meaningful partnerships with the business community animate CCPT in several regions, uneven employer engagement has frustrated many Cohort 1 consortia. Consortia leaders point to difficulties identifying CEO champions in their regions and a resulting weak employer CTE advocacy or willingness to get involved with pathways in other than a pro forma way. Several consortia leaders expressed disappointment, for instance, that too many employers failed to live up to commitments made in their CCPT proposal.

Many of these challenges stem from three central factors: the novelty of the demands being placed on employers; logistical challenges around employing students; and employers' generally limited understanding of pathway work and the potential it represents to strengthen both their own talent pipelines and the local economy in which they operate.

NEW ROLES AND RESPONSIBILITIES

The scope and type of employer involvement imagined by CCPT differs from that assumed by traditional CTE programs in K-12 (e.g., California Partnership Academies and even Linked Learning approaches) and community colleges. Although Linked Learning initiatives brought employers to the table in many K-12 districts, CCPT pathway work differs from Linked Learning in its explicit links to CTE and connections to postsecondary institutions.

CCPT envisions employer participation in regional terms, responding to regional workforce needs, whereas Linked Learning seeks available employers to support work-based learning (WBL) opportunities and practical education in general, with less focus on local workforce demand. CCPT's vision implicates employers, as it does districts and postsecondary institutions, in regional, system-level change.

Strong local workforce investment boards have promoted that shift in areas such as Long Beach and Tulare-Kings. Regional leadership groups such as the Sacramento's Valley Vision provide technical assistance, access to regional leadership networks, support for collective impact, and other cross-sector regional strategies.[12] INNOVATE Tulare-Kings (ITK) explicitly adopts a regional perspective and convenes business leaders from Tulare and Kings Counties in support of WBL.

But not all employers or workforce development staffs subscribe to CCPT's regional vision. For example, one workforce development partner told us that she didn't believe in a "regional" approach. Ultimately, she felt that a regional approach was not necessary to enlist substantive employer engagement for career pathways, and that the old way of work—relying on ad-hoc relationships—was a likely outcome of the CCPT initiative.

Expanding the support of the business community presents a significant opportunity for state workforce investment board leaders and technical assistance providers.

Sector Differences

Sector differences figure significantly in employer engagement and student/employer matching challenges. For instance, although health is the most popular pathway sector across the state, it can also be the most difficult to engage employers because the sector itself is multifaceted, relies on multiple providers, and presents many coordination complexities. Further, students' participation in health-related WBL or internships must comply with HIPAA (Health Insurance Portability and Accountability Act) patient confidentiality regulations.

In some sectors, such as the very popular IT, skill levels sought by employers often exceed what high school students can bring to the workplace. Yet IT also is seen as a promising focus for pathways since almost every business—from "mom and pops" to big corporations—have IT needs and represent a potential opportunity for students to get involved.

In the Central Valley, pathway leads and coaches find it can be difficult to work with agriculture because of the long-standing, strong presence of the Future Farmers of America in their

---

[12] See: http://valleyvision.org

communities. Efforts to engage agriculture also have had to respond to the diversity within this sector. Tulare-King's career pathway engagement manager:

> Ag gets divided up into things. What farmer people care about is not what farm-to-fork people care about. Our first ag-sector convening wasn't all that successful. There were around 80 people there. I quickly learned that the turkey farmer wasn't of interest to everybody, and the corn people were their own group. That was an 'Aha! Oh, this group is really diverse!' For my next ag-sector meeting, I did four subgroups. . . . It went much better.

Sector differences require sector-specific convenings, relationships, and supports. Cohort 1 consortia designed several successful approaches to address different sector differences, cultures, and requirements. For example, Capital Academies and Pathways (CAP) affiliated with the Elk Grove area supports sector roundtables that meet regularly to discuss WBL and internship opportunities as well as pathway curricula and alignment. Tulare-Kings facilitates communities of practice for sector coaches that meets once a month to learn about sector operation across the region and better support particular sector pathways.

LOGISTICAL CHALLENGES

Labor and liability laws designed to protect minors, school schedules, and other logistical issues pose challenges to effective employer engagement. Employers, educators, and intermediaries frequently work collaboratively to remove logistical obstacles and clear the way for employer participation in pathway work.

Liability Concerns

Many employers hesitate to get involved because of worries about liability risks for minors. WBL opportunities or internships connected to manufacturing pathways proved especially problematic, since regulations require that an individual be 18 or over to be on the floor. Some consortia leaders wondered if it might be possible to revise the regulations that deal with liability issues associated with "hands-on experience . . . changing the [regulations] where a job shadow or maybe an internship would be treated a little bit differently so a kid with interest in advanced manufacturing can get the relevant experience."

Districts participating in the Tulare-Kings consortium have developed work-arounds that satisfy employers and their own legal counsels. For example, in Porterville, schools sponsoring the manufacturing pathway take care of insurance issues so industry can participate. A pathways director in Porterville's explains:

> We have a consortium for the insured through our JPA (Joint Powers Authority). We have districts, multiple districts onboard, so all the students, county-wide, fill out the same paperwork. We had to come up with a way where if you have a 16–17 year old with interest in advanced manufacturing who wants to be on the line floor, the industry is able to bring them in without saying 'I don't want to be responsible.'

Visalia, one of Tulare's largest districts, works through the district's risk management department and through its insurance agency to add a rider to their policy to cover the time

students are on the job unsupervised by a teacher, whether job shadowing or participating in an internship.

Students' Constraints

Limits on students' availability pose another problem for employers: their school schedules often do not accommodate employers' needs or preferences. A Regional Occupational Programs director commented that when youth can only be available for an hour or two during the day because of school constraints, "that really doesn't do anything for employers. There's no incentive for them to take them; it's almost annoying to them, to be honest."

Educators also wrestle with issues of student transportation—how to get them to job sites, WBL opportunities, or internships.

Uncoordinated Pathway Matching

CCPT initiatives seek to involve employers in many ways—as classroom speakers, mentors, WBL sponsors, advisors, and more. But employers generally do not have a "one-stop" resource that matches employer interests and opportunities with pathway needs. This absence hinders employer involvement. Lacking a coordinating resource in the consortia or member districts, employers complain that they receive inconsistent messages, contradictory requests, or "you've gotta be kidding" unrealistic asks for their involvement. An effective intermediary organization such as ITK can broker these relationships and forge a consistent message, but many consortia struggle to develop a resource to coordinate work at the intersection of pathways and business. The result, as one consortium leader put it, is that "Folks looking for resources—speakers, internships, contacts—are tripping over each other." Consortia leaders request technical assistance and strategic support in building and using these one-stop brokering tools.

WEAK INCENTIVES TO GET INVOLVED

When pathways function as they are designed to do—creating a steady source of skilled, well-prepared graduates to fill a wide range of jobs in the local economy—engaging employers will be relatively straightforward because the business benefits of active pathway participation will be self-evident. But in the current, early stage of pathway development, employers need to be sold on the benefits of actively participating in pathway work (for instance, providing WBL internships, teacher externships, or shadowing opportunities). Currently, incentives in many areas are limited to a "community service" rationale—not typically a compelling motivation to spend time, resources, and energy on developing new relationships with schools, districts, and postsecondary institutions. Employers receive no funds for participation, and many see few direct short-term benefits to their involvement in CTE pathway efforts, especially those with K-12. Instead they see costs in terms of time, responsibility, and employee productivity. To this point, an advocate for business engagement with CCPT pathways highlighted the "difficulty of

establishing a business case for establishing a work-based learning opportunity" and stressed the need to identify and communicate an appealing "pitch" to the broader business community.[13]

Consortia and intermediaries successful in bringing the business community into full pathway partnerships tend to frame warrant for employer support in compelling regional workforce development terms. For example, the Workforce Investment Board of Tulare County serves a region struggling with manufacturing turndown, a slowed economy, low academic proficiency rates, and troubling school dropout numbers. It frames its mission in terms of making "critical investment in workforce training and education so that businesses can compete and prosper, and our community can thrive." ITK, the Tulare-Kings intermediary, states its purpose in similar terms:

> INNOVATE Tulare-Kings is an industry-driven intermediary that helps bridge the gap that exists between business and education. ITK's mission is to engage business partners in regional strategies that advance economic objectives, measure impact, and enhance education and workforce partnerships.

Despite such gains, employer engagement for CCPT focuses primarily on supporting K-12 students. The extent to which employers are thought-leaders in developing coherent regional WBL opportunities that span local K-12 and higher education institutions remains to be seen.

SUCCESSFUL EMPLOYER ENGAGEMENT STRATEGIES

Despite the many challenges facing Cohort 1 consortia, there are examples of successful employer engagement efforts. The most successful approaches tend to share a number of characteristics: they are proactive in their outreach and messaging to business partners; they understand that students are the best ambassadors for pathways work; and they focus on inspiring employers by sharing the vision that is at the heart of the CCPT and building relationships driven by that vision.

PROACTIVE OUTREACH

Effective employer engagement strategies and successful district partnerships with the business community adopt a proactive stance; they focus on building employers' knowledge about the region's youth and educational resources and actively market pathways as an approach to workforce development that can benefit employers and the community. Proactive outreach entails seeking out employers via multiple communication channels, in contrast to more traditional and passive communication approaches such as mailers or newspaper pieces. These proactive approaches are deliberately employer-facing and explicitly make the case for why employers should get involved. They tend to use plain, accessible language, avoiding 'edu-

---

[13] Presentation by Rhea Aguinaldo, Northern CA Outreach Manager, Small Business Majority, February 18, 2016, Visalia, CA. "Challenges and solutions to engaging small business owners with work-based learning opportunities."

speak' about what employers' involvement would entail, and present employer engagement as a forward-looking tool for workforce and business development.

Consortia successful in building employer interest in career pathway work invest in active regional outreach. Taking the show on the road paid dividends in the Tulare-Kings region, for example. Consortium representatives met with workforce development committees, made presentations to local industry partners about their pathway work, and traveled to regional career expos to talk about their Linked Learning initiatives and pathway academies. The consortium director said: "It's getting people familiarized with our career pathway academies. We're doing presentations in the evening to various boards and organizations, talking about our work-based learning continuum, talking about our career pathway trust grant funds, and the overall work. We're out there."

In addition to road shows, the Tulare-Kings consortium offers employers concrete, hands-on experiences with WBL through various project-based activities: "Engaging industry partners is a top priority. . . . The majority of our team has found that project-based learning brings them in." Tulare-Kings leaders underscore how important it is for employers to understand the "why" of the work—the why being the region's poor track record of educational attainment and high school graduation:

> We have to bring them into another space and we have to get them with kids, and we need to have them understand our "why," and make it their "why," and they do make it their "why." Then they get involved with guest speaking. But it's not coming in and just rah-rah-rah, it's coming in with a purpose, working with the teacher with a purpose, and it's job shadowing with a purpose. The "why" is what gets them initially in, and then when they start working with kids, they realize how rewarding it is, and the goal is to bring these kids back into our area.

In the Sacramento region, Sacramento Employment and Training Agency (SETA) works actively with CAP and CRANE (Capital Regional Academies for the Next Economy) consortia to contact employers about WBL and internship opportunities. Their career specialists are, according to CAP's director, "doing a lot of aggressive work around job readiness with students." SETA collaborates with CAP and CRANE to develop industry advisories and bring industry in to support the pathways. CAP leaders report that this strategy is "blossoming" and has been effective in encouraging employers to support their area high schools. While they continue their interactions with regional business leaders though connections with local workforce investment boards and the Chamber of Commerce, CAP leaders believe that engaging with employers at all levels is "better than the high level ask to the CEO. We're starting from the bottom and moving up. . . . We're still trying to do regional awareness and employer engagement, so we're trying to get the pipeline to meet in the middle. We're working it from both ends."

Presentations inform the business community about pathway work, describing why and how it matters for students and for the region, especially in terms of workforce development. For example, Tulare-Kings' ITK convenes a Work-Based Learning in Action conference every

year.[14] Presentations from educators, business representatives, regional leaders, and consortium leaders provide information about what work-based learning is and how it contributes to the region's future, offer suggestions about how to get involved, and detail the regional WBL supports in place. PowerPoint presentations from 2015–16 start with "Work-Based Learning 101" and end with "You are not alone: Regional supports for WBL." Tulare-Kings pathways project's director: "We aim to carry that message [through strategies such as Work-Based Learning in Action] to the higher levels, ones we cannot even touch ourselves. Bringing in those champions and trying to spread the word, marketing, has been on the top of our list."

Successful employer engagement often includes technical assistance and support from consortia coaches and program directors. In addition to making WBL and intern matches "user friendly," consortia such as Tulare and CAP provide technical assistance and other supports where needed. Tulare-Kings' career engagement manager recalls the request made by a principal in the North American Meat Institute eager to involve students locally: "He said, 'We want students to come and job shadow. We don't know how to do that, we don't have the structures in place; can you help us with that?' And we're like, 'Oh, of course, we can! We'd love to do that.'"

Many recount instances of how, once engaged, employers become eager pathway partners. For instance, Tulare career specialists point to the enthusiastic participation of Leprino, the nation's largest mozzarella cheese maker. The company's buy-in resulted from a sit-down with them to explain how career pathways could benefit their company by developing students' skills and knowledge. "They said 'we'll provide the equipment; we'll show you how to do it so your kids have the skills.'"

INTRODUCING THE STUDENTS

Several consortia did a bit of public relations about their students with the business community to foster their willingness to sponsor WBL slots. One director said, "We banked on the power of seeing kids. Once they see our kids, they're bowled over. We started with sending them our 'best and brightest' for that PR purpose." Consortia leaders across the state highlighted the payoff from bringing employers into direct contact with students in order to hear about their career interests, goals, and enthusiasm for pathway work. Video presentations by pathway students at various business gatherings stimulated employer interest, but by far most effective were opportunities for employers' up-close interaction with students. Productive and seemingly no-fail strategies included involving employers as judges for student competitions, serving on an interview panel as part of a work-readiness program, or providing hands-on, classroom assistance with students' CTE projects. Leaders of Porterville's Linked Learning initiative described this process: "One of the main hooks, really, is to have them to serve on an interview panel. And that's where they get to really engage with the students."

---

[14] For more information on ITK Work-Based Learning in Action, please see: http://www.innovatetk.org/wbl-in-action/

BUILDING RELATIONSHIPS, LEADING WITH VISION

Relationships are essential to engaging employers in pathway work, and it is essential that relationships be based on "transformation" or vision, rather than "transaction." Randy Wallace, executive director of Tulare's ITK and longtime workforce development champion, explains this distinction:

> . . . it starts with building trust and relationship. It's a big mistake for schools to begin in a transactional mode—asking for so many internships, so many WBL slots. Sometimes educators are their own worst enemies. When you think "transformational" you have to be able to look in a window that's two years wide, and you have to have framework, a vision. Without that, employer buy-in is tough. The convening that has legs is not because you have a grant but because you're working off the principle of: I'm building the regional economy and really believe in it.

Consortia leaders successful in bringing employers into pathway work stress the importance of being responsive to employers' needs and interests and taking the time to build strong relationships. For instance, leaders of Porterville's well-regarded Linked Learning initiative said:

> I think work-based learning is very successful if you go with the approach that allows the business partner to choose how they want to get involved without telling them it's an either "yes" or "no" answer [to something we suggest]. The moment they are hooked with students, they're on, they're with us, and they want to know, "How else can I help out?" But if we start right away saying we're going for the home run, the finished product, asking for an internship, they're going to be hesitant and say, "Wait a minute!" And it starts with building that trust and relationship.

Others provided similar advice about successful ways to engage employers. Several counseled not asking right away for paid internships, but instead exposing them to students and enlisting their expertise as advisors. A leader in Porterville:

> . . . that [ask] will scare them away. I want them to open the doors of opportunities for our students and let the students be that selling point. One hundred percent of our juniors are interviewed. This year it took about 110 business partners to carry this off. Also, from the beginning of building those advisory boards, we always said that they would not be fundraising booster clubs. They would be a council that gives advice on data, instruction curriculum, work-based learning . . . be the expert. . . . They also take a long view, rather than focus on immediate gain.

NEXT STEPS FOR CCPT

This report describes CCPT implementation among Cohort 1 grantees and includes a preliminary set of observations and implications for state support. A final report, focused on how Cohort 1 grantees are preparing for and addressing sustainability, will be released later in 2017 after another round of data collection has been completed. That final report will revisit and build from the implications noted here and will provide recommendations for policymakers.

Concerns about sustaining CCPT work figured prominently in local leaders' thinking as they headed into the grant's third year. Across consortia, the most pressing issue involved incorporating key CCPT grant-financed positions into the fabric of partner institutions. Many of CCPT's accomplishments relied on new positions—consortia leaders and network facilitators, pathway and sector coaches, work-based learning coordinators, postsecondary CCPT contacts. These temporary, grant-funded roles proved essential to leveraging, connecting, and supporting pathway work locally and regionally, and leaders are scrambling to keep these positions.

More mature consortia such as Elk Grove and Tulare-Kings drew upon established connections or shared experience to support their pathway work. Because of these existing strong relationships and commitments, leaders expect that much CCPT pathway work will continue, especially at the K-12 level. But they also worry about loss of funding for the consortia leaders and other partners who provide direction, coordination, and advocacy for the work. Leaders in less mature consortia are uncertain that pathway accomplishments, especially the new cross-sector and cross-institutional arrangements, can be sustained once CCPT funding goes away and, with it, support for coordinating positions and technical assistance.

Some K-12 districts have protected key CCPT positions by including them in CTE budgets authorized through the Local Control Accountability Plan (LCAP). Several Cohort 1 consortia have a Cohort 2 CCPT grant in the same or nearby region, and these funds often help to strengthen structures, processes, and staffing central to sustaining Cohort 1 pathway work.

How much career pathway work started with CCPT funds will be sustained in community colleges and with employers is less clear. Community colleges are struggling to identify the benefits of their CCPT work and how to strengthen career pathway work. Employers continue to participate in career pathway development; however, roadblocks preventing more systematic engagement on a regional level with secondary and postsecondary education persist.

Our research to date points to at least two implications for state support that emerge from our observations:

- Despite the fact that CCPT was a one-time infusion of funds that expires in June 2017, the state should continue to invest in technical assistance for local pathway work and for developing regional infrastructure through existing and/or new initiatives. CCPT provided support to build new expertise and staffing within regions, and it also enabled consortia to enlist the support of experienced technical assistance providers to accelerate their efforts. Practitioners spoke highly of the support they were able to secure with CCPT

funds (e.g., ConnectEd, College and Career Academy Support Network, WestEd, Linked Learning Alliance, Career Ladders Project, Napa County Office of Education, and High Tech High); however, CCPT grantees wanted more help to develop the regional infrastructure called for by CCPT. In general, consortia expressed need for more technical assistance and for better understanding of how to connect to specific expertise so as to troubleshoot problems in a timely manner.

- The cross-agency collaboration of CDE, the Chancellor's Office, and the Workforce Development Board through efforts such as CCPT; the California Compact for Career Pathway Quality, Equity and Scale; or the California Workforce Pathways Joint Advisory Committee is more imperative than ever. CCPT stakeholders are struggling to understand and manage the requirements and guidelines of existing and new programs that have similar goals but sometimes differ in important ways (e.g., CCPT, CTE Incentive Funds, and Adult Basic Education Consortia). For example, unlike CCPT, the Career Technical Education Incentive Grant did not prioritize or incentivize cross-sector partnerships. This has already sent mixed signals to K-12 districts about the importance of, and instability in plans for, staff who play important roles in building career pathways. And, however inadvertent the effect, new grant opportunities combined with short timelines on current grants can cause institutions to become distracted by chasing new dollars instead of sustaining attention on long-term goals. To the degree the various agencies involved in CCPT can model coordination, create and communicate a common vision, and send consistent and complementary messages to local institutions in their purview, it becomes more likely that those institutions will engage in more strategic partnerships with sustained focus.

Our continuing research explores factors that support or constrain sustainability of CCPT implementation among Cohort 1 grantees as their third year draws to an end. The final report will provide more detailed policy recommendations.

GLOSSARY

AGENS	Agriculture and environmental sciences
ACOE	Alameda County Office of Education
AVID	Advancement Via Individual Determination
CalPADS	California Longitudinal Pupil Achievement Data System
CAP	Capital Academies and Pathways (K-12)
CAP	Capital Area Partnership (Regional Consortia)
CCASN	College and Career Academy Support Network
CCC	College and Career Collaborative
CCCCO	California Community College Chancellor's Office
CCD	community college district
CCPT	California Career Pathways Trust
CDE	California Department of Education
CLP	Career Ladders Project
COE	County Office of Education
CPA	California Partnership Academies
CRANE	Capital Regional Academies for the Next Economy
CTE	career and technical education
CSU	California State University
DSN	Deputy Sector Navigator
EBCP	East Bay Career Pathways
HIPAA	Health Insurance Portability and Accountability Act
ITK	INNOVATE Tulare Kings

JPA	Joint Powers Authority
LCAP	Local Control Accountability Plan
LCFF	Local Control Funding Formula
LEA	Local Educational Agency
LBUSD	Long Beach Unified School District
LPAT	Local Project Action Team
MOU	Memorandum of Understanding
NAF	formerly National Academy Foundation
PD	professional development
PLTW	Project Lead the Way
ROC	Regional Occupational Centers
ROP	Regional Occupational Programs
ROCP	Regional Occupational Centers & Programs
SETA	Sacramento Employment and Training Agency
TCOVE	Tulare County Office of Vocational Education
TKLL	Tulare-Kings Linked Learning
TKPP	Tulare-Kings Pathway Project
UC	University of California
UCCI	University of California Curriculum Integration
VUSD	Visalia Unified School District
VPIE	Visalia Partners in Education
WIB	Workforce Investment Board
WBL	work-based learning

APPENDIX

CCPT's Key Regulatory and Policy Context

Initiatives/Regulations	Year	Sector	Description
CA Assembly Bill 86 Education finance: education omnibus trailer bill (AB 86)	2015	Higher Education	AB 86 allocates funding for two-year planning and implementation grants. The funds were provided to eligible consortia for the purpose of developing regional plans for adult education. The bill outlines expectations for consortium development as well as planning and implementation requirements to establish the Adult Education Consortium Program. The intent of AB 86 is to expand and improve the provision of adult education via these consortia with incremental investments.
CA Assembly Bill 288 Public schools: College and Career Access Pathways partnerships (AB 288)	2015	K-12/ Higher Ed.	AB 288 expands access to concurrent enrollment programs for students by specifically authorizing college courses to be offered on a high school campus exclusively to high school students. It increases exposure to college coursework and environments for underserved students by specifically authorizing community college districts that have formed a Career Access Pathways partnership to grant limited priority enrollment to those students. AB 288 creates a framework that provides districts flexibility to design Career Access Pathway partnerships that work for students, parents, and teachers. The bill also promotes accountability for student learning by granting school districts more authority to monitor a student's progress and obtain student academic records from the participating community college.
Senate Bill 852 Budget Act of 2014 (CTE Enhancement)	2015	Higher Education	The CTE Enhancement funds provided a one-time opportunity to create incentives for California community colleges to develop, enhance, retool, and expand quality career technical education offerings that build upon

			existing community college regional capacity to respond to regional labor market needs. The bill also seeks to increase the impact of college career technical education programs on regional economies; statewide accountability data collection and performance evaluation; statewide training, development and coordination; labor market research; and continuous program improvements.
Regional Occupational Centers & Programs (ROCPs)	NA	K-12/Higher Ed.	Initially established in 1967, ROCPs provide high school students 16 years of age and older, and also adult students, with valuable career and technical education so they can enter the workforce with skills and competencies to be successful, pursue advanced training in postsecondary educational institutions, and/or upgrade existing skills and knowledge.
California Partnership Academies (CPAs)	1993	K-12	CPAs follow a 3-year program, spanning grades 10 to 12, that is structured as a school-within-a-school. Academies incorporate integrated academic and career technical education, business partnerships, mentoring, and internships.
Local Control Funding Formula (LCFF)	2013	K-12	LCFF replaced the previous kindergarten through grade 12 finance system that had been in existence for roughly 40 years. For school districts and charter schools, the LCFF establishes base, supplemental, and concentration grants in place of the myriad of previously existing K-12 funding streams, including revenue limits, general purpose block grants, and most of the 50-plus state categorical programs that existed at the time. For county offices of education, the LCFF establishes separate funding streams for oversight activities and instructional programs.
Local Control and Accountability Plan (LCAP)	2013	K-12	The LCAP is used in conjunction with the Annual Update Template to provide details regarding local education agencies (LEAs') actions and expenditures to support pupil outcomes and overall performance pursuant to relevant

			Education Code. For each school and district, county office of education, and charter school, the LCAP should describe goals and specific actions to achieve those goals for all pupils as well as each subgroup identified for each of the state priorities and any locally identified priorities.
University of California Curriculum Integration (UCCI)	2009	K-12/Higher Ed.	The UCCI is an initiative of Student Affairs, Admissions (High School Articulation) at the UC Office of the President, with funding administered by the California Department of Education. The UCCI program is dedicated to supporting California high schools as they work to prepare students for success in college and in life. As part of the University of California system-wide High School Articulation Unit, the UCCI program focuses on assisting high schools with the development and implementation of integrated courses that unite academic study with career technical education.

JOBS FOR THE FUTURE