



Adrian Lopez sharpens his skills as part of the curriculum requirements in the Culinary Arts/Culinary Management program at San Diego Mesa College. This is one of the few programs in the nation that serves a menu to the public in a restaurant-replicated environment. (Photo by Carol Beilstein)

Career Technical Education Pathways Initiative ***Prepared by the Division of Economic Development and Workforce Preparation***

California Community Colleges Chancellor's Office
Jack Scott, Chancellor



NOVEMBER 2011

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November 15, 2011

The Honorable Jerry Brown
Governor of California
State Capitol
Sacramento, California 95814

Dear Governor Brown:

I am pleased to present to you the Chancellor's Office 2010-11 report on the *Career Technical Education Pathways Initiative*.

The Career Technical Education Pathways Initiative prepares students to succeed in the workforce through newly formed partnerships between the California Community Colleges and the California Department of Education. These partnerships provide students with a seamless career technical education from the middle grades through community college.

This report captures the most recent highlights of our progress in six themes incorporated into the Pathways vision. They are: career pathways and articulation; career planning and development; programs for underserved students; business and industry engagement in CTE; CTE teacher recruitment and professional development and capacity building, research and evaluation.

If you or your staff have questions regarding this report please contact Erik Skinner, vice chancellor for programs, at (916) 323-7007 or eskinner@ccco.edu.

Thank you for your interest in these programs and the students they serve.

Sincerely,

A handwritten signature in black ink that reads "Jack Scott". The signature is written in a cursive, flowing style.

Jack Scott, Ph.D.
Chancellor

Introduction

The California Community Colleges is the largest system of higher education in the nation, serving more than 2.6 million students. The state’s 112 colleges provide workforce training, teach basic mathematics and English and prepare students for transfer to universities.

Similarly, the California Department of Education (CDE) comprises the nation’s largest K–12 education system, serving 6.2 million students in 1,043 school districts. A key CDE priority is to increase the number of high school graduates who are ready for college and career.

Given their interrelated goals, the California Community Colleges Chancellor’s Office (Chancellor’s Office) and CDE have joined together to develop and implement the Career Technical Education (CTE) Pathways Initiative. Passed into law in 2005 (Senate Bill 70), the CTE Pathways Initiative funds community colleges, and K–12 schools and districts that equip students, middle grades and beyond, with the knowledge and capabilities they need for successful careers in the 21st century California workforce.

In 2007, the Chancellor’s Office and CDE commissioned WestEd to conduct an ongoing statewide evaluation of the Initiative and its individual grant-funded projects.¹ This annual summary report, prepared by WestEd, covers impact of the individual projects and overall Initiative during 2009/10.

Background and Vision

The Chancellor’s Office and CDE support the development of local and regional CTE pathway systems and integrate those systems into a statewide network that closely follows the pathways vision,² which is organized into six themes:

¹ WestEd is a subcontractor to Coast Community College District, the CTE Pathways Initiative statewide evaluation grantee.

² See Appendix — Components of the Pathways Vision.

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1) Career Pathways and Articulation for CTE Students. Align K–12 CTE — including Regional Occupational Centers and Programs (ROCPs) — with California’s community colleges and universities in order to increase the number and quality of career pathways and CTE courses, as well as student enrollment in CTE.

2) Career Planning and Development. Strengthen career awareness, exploration, and guidance; develop individual college and career plans; and connect with industries and businesses to offer intern, apprenticeship and work-based learning opportunities.

3) Programs for Underserved Students. Increase enrollment in CTE programs.

4) Business and Industry Engagement in CTE. Expand opportunities in work experience, work-based learning, job shadowing, community classrooms and internships/apprenticeships; and build a statewide system to link business and economic development with CTE.

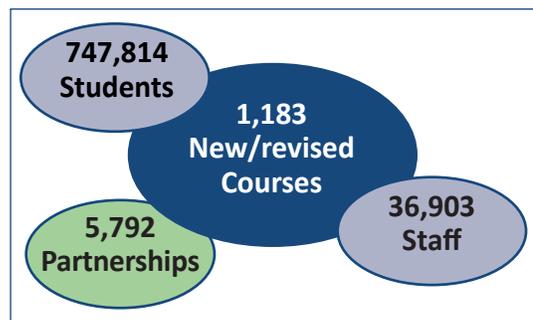
5) CTE Teacher Recruitment and Professional Development. Increase the number of students enrolled in CTE teacher preparation programs; develop in-service strategies for new teachers; offer CTE professional development activities.

6) Capacity Building, Research and Evaluation. Provide strategic leadership in CTE system development.

The Chancellor’s Office and CDE award Initiative grants to community colleges, and K–12 schools and districts that place a high priority on CTE, focusing on at least one of the components above.

Key Findings

Initiative funding has helped build 5,792 partnerships, developed or revised over 1,000 courses, provided trainings or externships to over 36,000 staff at high schools and community colleges, and served almost 750,000 students.³ WestEd’s 2009/10 evaluation found example after example of CTE Initiative projects helping to ensure students and adults succeed in college and career. Three key findings emerged from the evaluation:



³ Students participating in multiple CTE activities and multiple years are counted more than once. Subtotals include all data from the full report.

- More students from kindergarten to adult learners in community colleges have access to pathway courses, opportunities for career exploration, internships/apprenticeships and access to business/industry mentors.

“We were brand new two years ago; we started at zero. So to go from nothing to an articulation agreement with a post secondary school, a straight three-course sequence leading to the post secondary, and a middle school partner that wants to work with us is exciting.” [Cynthia Bater, Dean, California Academy of Math and Science]

- A growing number of industries and businesses see the value of CTE and are eager to provide opportunities for job shadowing, observation and workplace internships.

“This program helped bring industry and colleges closer together. It also provided a solid bridge, or pathway, for graduating students to find work in industry. Without the funding provided by this grant, the program would have never been able to get established.” [Anonymous Industry Partner, Survey Respondent]

- Increasing teacher interest and creativity in the integration of career and industry-related material in academic subjects.

“Another exciting curriculum thing is we’ve been dovetailing [health science] through our other curricula, like language arts classes. Even in Greek and Latin classes the students are studying health-related terminology. In literature they study Frankenstein — that’s a no-brainer. It’s that whole medical theme.” [Leah Jager, English/CTE Teacher, Del Norte High School]

The momentum generated by the CTE Pathways Initiative since 2005 is making significant impact: students have more industry-related pathway opportunities; teachers are signing up for professional development, externships and other CTE-related experiences; and businesses/industries are more connected and invested in their education partners and see the value in having CTE programs. However, more time is needed for these programs to reach the “tipping point.”

“The programs we developed to help our instructors integrate CTE into classroom curricula have since become models for other teachers and school districts. We have not quite reached the ‘tipping point’ where there are enough instructors and schools bringing CTE into the classroom, but we are getting closer.” [Kathy Johnson, Executive Director, Vital Link of Orange County]

Overview, Activities and Outcomes of Select Initiative Projects

This section summarizes the purpose, goals, and 2009/10 activities and outcomes of select Initiative projects, organized by the six themes incorporated in the Pathways vision. Throughout are examples of projects addressing one or more aspects of SB70 and the capacity-building needs of the high schools and community colleges relating to course articulation between those institutions and baccalaureate degree-granting programs.

Theme: Career Pathways and Articulation

CTE Community Collaborative, Supplemental and Workforce Innovation Partnership

CTE Community Collaborative and Supplemental projects provide coordinated and strategic leadership for CTE efforts in various industry sectors. Community Collaborative grantees may also apply for Workforce Innovation Partnership (WIP) grants. WIPs develop projects that identify high-quality career pathways and training priorities related to high-growth industry sectors. These projects facilitate a seamless system of CTE between secondary and postsecondary education, and focus on: expanding career exploration and development for 7th and 8th grade students; strengthening of CTE programs linked to industry sectors; teacher and faculty externships with business and industry; and professional development for those implementing CTE programs.

Partnerships must include community colleges, K–12 districts, ROCPs, adult education, business and industry. In addition, partnerships may include Workforce Investment Boards, youth councils, economic development agencies and others.

AT-A-GLANCE

\$18,014,205 awarded
52 Community Collaborative,
24 Supplemental, and 18 WIP grantees

Highlights

- Grantees can be found across all 10 of the state’s community college regions
- 309,711 students participated in CTE activities
- Partnered with 2,073 community and business organizations
- Provided 1,618 K–12 and community college faculty and counselors with work-based externships

A CTE Community Collaborative in Action: Kinders Go to College

Kinders Go to College (KGTC) brings kindergarten and university graduate students together for a day of fun and learning about education and career options. It’s an annual event held at Woodland Community College (WCC) and sponsored by the Sacramento Yolo CTE Partnership, a regional Community Collaborative. Before the event, eighth graders develop team-building and leadership skills to prepare for the mentorship roles they will assume. On event day, kindergartners are paired with eighth-grade mentors who guide them through workshops and activities facilitated by high school, community college, and university students and faculty.

Themed around the Community Collaborative’s grant focus — agriculture and environmental sustainability — workshop activities include building solar-powered toy cars, potting flowers, surveying land in a large field, and learning about livestock from the agriculture department at WCC.



California Partnership Academies

Structured as a school within a school, a California Partnership Academy (CPA) is a three-year program for students in grades 10–12, targeting those at risk of academic failure. The academies improve students' high school performance and postsecondary outcomes by creating a close, family-like atmosphere for students and staff; integrating academic and career technical education and establishing viable business partnerships.

AT-A-GLANCE

\$7,706,667 awarded

147 grantees

Highlights

- Each CPA focuses on one of California's 15 industry sectors
- 11,837 students participated in SB70-funded CPA programs

Students must apply, be interviewed and be selected to attend a CPA on the basis of need and interest. One half of the incoming class must meet specified at-risk criteria, including past record of irregular school attendance, at least one third of a year behind in coursework for grade level, low motivation or disinterest in the regular school program and be economically disadvantaged. Students in the 11th grade are matched with mentors from participating businesses and local community professionals who volunteer to be a career-related and/or caring adult.

Employer representatives serve on a CPA steering committee that oversees the program; help to develop the career and technical curricula; provide speakers for CPA classes; host field trips; provide mentors who serve as career-related role models; and provide internship and summer job opportunities for students. CPA teachers — whether they are CTE instructors or core academic content teachers — and business and employer representatives work together to improve the academic and career outcomes of students.

California Partnership Academy in Action: Pacifica High Culinary Arts Academy

In 2009/10, Pacifica High School modified their long-standing ROCP culinary arts program into its Culinary Arts Academy. Following the CPA model, Academy students are enrolled in core academic classes taught by teachers who tailor their classes to correspond with the food lessons in the culinary courses. Students are given additional academic support with daily after-school study halls, weekly updates on grades in all courses, and meetings with CPA teachers regarding assignments, due dates, and student progress.

With the help of industry partners, students are also placed in internships where they acquire industry experience and help the program identify and address any weaknesses in curricula and student preparation.



Theme: Career Planning and Development

Health Science Capacity Building Program

The Health Science Capacity Building (HSCB) Program provides career technical education in health care at middle and high schools across the state to prepare qualified workers will meet critical shortages. This program develops curricula; aligns curricula with California CTE standards and health science content; offers professional development for educators; offers students leadership opportunities through California Health Occupations Students of America (HOSA) and workplace learning activities; and purchases related equipment and laboratory materials.

AT-A-GLANCE

\$2,500,000 awarded
46 grantees

Highlights

- Over 6,000 students participated in health pathways
- 2,670 students participated in workplace learning experiences

Students can begin preparing for the health science pathway as early as 7th grade. By the 12th grade, students are able to identify their specific interests in medical science, having had opportunities such as mentoring middle school students, being mentored by college students, participating in internships, job shadowing at local hospitals.

Typically, students have an interest in the medical field, but need direction or focus. The HSCB program provides them with a strong academic foundation as well as exposure to the range of medical specialties, particularly through partnerships with local health care providers. Students may shadow professionals. Some students have seen live natural and cesarean-section births, cataract and lymphoma surgeries as well as dental procedures. Through these experiences, students gain a clear and more grounded sense of the medical profession and are better able to chart their career choices.

Health Science Capacity Building Program in Action: North Orange County ROCP

Significant student enrollment growth and positive life changes are taking place in the HSCB program at Esperanza and Savannah High Schools — just one year after HSCB start up. Take, for example, the story of Alexis. As a sophomore at Esperanza, Alexis had failed her classes and was slated to transfer to continuation school. Alexis requested to stay at Esperanza and take extra classes. In order to meet course requirements, she enrolled in the school's HSCB program, commonly known on campus as the Medical Sciences Academy (MSA). Alexis' first MSA course became the catalyst for her academic turnaround. She became a leader among her classroom peers and worked hard in all of her seven classes including night school. Alexis is now working toward LVN certification and has enrolled in college to further her nursing education.



Career Technical Student Organizations

Career Technical Student Organizations (CTSO) are national organizations with hundreds of local chapters that support students, teachers and schools in their efforts to develop the skilled workforce of the future. The organizations provide CTE teachers and their students with training and experiences geared toward cultivating career and leadership skills as well as personal and citizenship skills. Initiative funding supports six statewide CTSOs: DECA; Future Business Leaders of America; National Future Farmers of America Organization; Future Homemakers of America – Home Economics-Related Occupations; Health Occupations Students of America or HOSA and SkillsUSA.⁴

AT-A-GLANCE

\$1,333,333 awarded
6 grantees

Highlights

- CTSOs hosted at least 20,000 students at regional and state leadership conferences
- 2% increase in membership

Health Occupations Preparation and Education

Health Occupations Preparation and Education (HOPE) grants are another way the Pathways Initiative seeks to increase high school student interest in the health care industry. In three community college regions —



Nursing students provide demonstration to high school students at Chaffey College's HOPE Healthcare Expo.

Desert, North and Interior Bay — HOPE activities include developing an on-campus health preparation learning community/facility modeled after

the Mathematics, Engineering and Science Achievement program for prospective and current health occupation students; establishing an on-campus location to house the

health preparation learning community/facility; providing counselors for students to develop education plans; and linking with a work experience coordinator to develop mentorships, internships and work experience placements for students interested in health careers.

AT-A-GLANCE

\$827,586 awarded
3 grantees

Highlight

- Provided almost 10,000 students with services such as counseling, tutoring, and workshops, with more than double the number of students accessing services in 09/10 than previous years

⁴ DECA (marketing, sales and service); Future Business Leaders of America (finance, business and information technology); National Future Farmers of America Organization (agriculture and natural resources); Future Homemakers of America – Home Economics-Related Occupations (education, child development and family services); Health Occupations Students of America or HOSA (health science and medical technology); SkillsUSA (arts, media and entertainment; building and construction; energy and utilities; engineering and design; manufacturing and product development; public service; and transportation).

Youth Entrepreneurship Program

The Young Entrepreneurship Program (YEP) brings business ownership interest and concepts to youth who might not consider self-employment and business ownership as a career.

Students attending the Napa Valley Business Bootcamp met with local business owners, developed business plans and presented their work. The program trains secondary school and college faculty to integrate entrepreneurship into CTE courses. It also supports an existing statewide network of community college-hosted Small Business Development Centers and Centers for International Trade Development, which provide expertise to small business owners and extend delivery of YEP services to high school-age youth.

AT-A-GLANCE

\$1,655,172 awarded
33 grantees

Highlights

- 3,290 students attended YEP training programs
- Partnered with 736 community and business organizations
- Resulted in 71 student businesses to date

Theme: Programs for Underserved Students

Distance Learning Pilot Project

The Distance Learning Pilot Project is focused on providing access to high quality career technical education opportunities for rural students in California. Administered by the CDE, the Distance Learning Pilot expands the range of courses available to students in rural schools, providing highly qualified teachers in subjects where qualified teachers are scarce, while simultaneously improving technology skills.

“Students taking distance learning courses are given the opportunity to learn in an environment where students... learn best — using technology. This is one way to address the growing technological needs of students as they embark on the challenges of being competitive in the global job market. We must bring to our schools the skills and knowledge needed for our students to be successful in the technologically driven world in which they live and work. Distance learning is a way to do this.” [Lori Gattuso, Merced County Office of Education]

AT-A-GLANCE

\$500,000 awarded
8 grantees

Highlights

- Developed 22 new online courses and enrolled 450 students

Career Advancement Academy

Career Advancement Academies (CAA) establish pipelines to college and high-wage careers for underprepared and underemployed youth — some who might not be enrolled in the K–12 system — and adults (18–30 years). Students enrolled in CAA courses are primarily from low-income communities, are underprepared for college-level work and face multiple barriers to college and career success. The academies offer a variety of support strategies:

- Integrate work readiness, career guidance, contextualized basic skills and technical training.
- Support cohorts of students in “learning communities” where they take classes together and provide peer support.
- Use partnerships to leverage resources across community colleges, K–12, adult schools, ROCPs, Workforce Investment Boards, social service agencies and community organizations. In addition, they work across the private sector, to recruit, support, prepare and place participants — maximizing efficiency, impact and reach.
- Work with employers to target careers most in demand in the region, and to ensure that skills and competencies taught are what employers need.
- Provide a new framework for accountability to track participants, evaluate the programs, and document and share effective practices.

A key to the cohesion and enactment of the CAAs is the support they receive from the Career Ladders Project (CLP). The CLP provides technical assistance, documents lessons and fosters a community of learners among sites across the Bay Area, central valley, and Los Angeles. The CLP staff developed and maintain a centralized CAA project database/management site for program faculty and managers. More info: www.careerladdersproject.org.

AT-A-GLANCE

\$4,137,931 awarded

3 grantees

Highlights

- Served over 6,400 students since their inception three years ago
- 89% of their students complete CAA courses once enrolled

Career Advancement Academies in Action: East Bay Career Advancement Academy

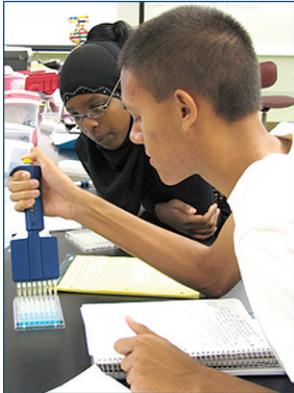
East Bay Career Advancement Academy is one of three pilot CAAs established in 2007/08. Headquartered in Oakland, CA, this CAA provides opportunities to prepare for a wide array of career paths, from child development and culinary arts to bio manufacturing and transportation technology. Students are recruited through a variety of channels, including faith groups, parole officers, adult education sites and other community-based organizations.

Few of the students that come into the CAA see themselves as “college material,” but project staff note that one of the most exciting effects of the program is how it enables students to turn a corner, and start to self-identify as people who can succeed in a college environment. Both students and staff attribute a large part of this effect to the close-knit relationships and community environment of a program that focuses on careful integration between courses and high levels of faculty collaboration and involvement. More info: www.ebcareeracademy.org/about.shtml.

Theme: Business and Industry Engagement in CTE

Career Technical Education Liaison Hubs

The Chancellor's Office administers eight CTE Liaison Hubs throughout the state to promote relationships between business and industry.



Students at the Life Sciences Summer Institute, an annual event by the San Diego Workforce Partnership and BioCom.

The hubs ensure high school and ROCP course alignment with community college CTE programs; promote models for integrating coursework, student internships and faculty externships; and improve the quality of work-based learning, career exploration and career outreach materials, with a special focus on emerging industries.

AT-A-GLANCE

\$1,241,379 awarded

8 grantees

Highlights

- Hubs developed a GIS mapping program (www.californiatechedresources.org) locating all high school and community college industrial technology programs existing in the state
- Enhanced website (www.wplrc.org) with information gathered by surveying SB70 Community Collaborative Projects throughout the state to determine how best to support their activities

Career Development and Work-Based Learning Linkages to Professional Organizations

This project, which is overseen by the Chancellor's Office in conjunction with Irvine Valley College, connects educators and college students to professional associations. It creates learning and career development activities, tools and resources delivered by a network of trained counselors and career professionals in each region. Project work has resulted in the development of a professional association database to connect students to the workplace; a social network called Ning that connects counselors and career professionals to explore and share successful practices and resources related to student success and career development and the California Career Café⁵ (<http://www.cacareercafe.com>).

AT-A-GLANCE

\$551,724 awarded

1 grantee

Highlights

- 521 counselors and staff participated in 10 Regional Workshops to receive training in how to use CaCareerCafe.com and share successful projects
- 189 counselors and career staff participated in "Connecting Students to the Workplace" training

⁵ California Career Café promotes greater student success on CA community college campuses by providing students with 24/7 career information and connect to professional associations to conduct informational interviews, find internships and seek out mentors. It also encourages students to contact and visit their campus's counselors and/or career center.

Theme: CTE Teacher Recruitment and Professional Development

Teacher Preparation Pipeline

The pipeline creates opportunities for community college students interested in pursuing a teaching career in CTE. These students are often professionals who have many years of industry experience and expertise, but have limited knowledge on how to effectively translate that experience and expertise into effective classroom instruction. Pipeline projects seek to strengthen teacher preparation, specifically CTE teachers. The pipeline forms partnerships with community colleges, K–12 districts, ROCPs, California State Universities and the University of California. The grant recipients were in seven of the state’s 10 community college regions.

AT-A-GLANCE

\$1,655,172 awarded
10 grantees

Highlight

- 725 high school and 3,608 college students have enrolled in a TPP pathway since 2006; of these, 56 high school and 1,055 college students completed the pathway

Statewide Career Pathways — Creating School to College Articulation

School-to-college articulations are formal agreements in which credits earned at one institution of higher education will be honored by another.

Statewide Career Pathways, also known as Regional Curriculum Alignment, increases the number, efficiency and transportability of articulation agreements between secondary schools, ROCPs and community colleges. Activities

AT-A-GLANCE

\$1,241,379 awarded
1 grantee

Highlight

- As of December 2010, 1,425 new articulation agreements were posted in the Statewide Career Pathways public database (www.statewidewidthways.org/showagreements.php)



WhoDoUWant2B.com, a comprehensive, statewide marketing campaign, now provides a richer, more complete self-exploration of the CTE experience.

include the development of templates to facilitate articulation; creation and maintenance of a comprehensive database of existing agreements; facilitation of an easy student transition from high schools and ROCPs to college CTE programs; support for local colleges to host events (e.g., Regional Articulation Days) that support the establishment of new articulation agreements and renewals of old agreements; and support for a statewide marketing campaign to stimulate interest in California CTE programs.

CTE Online

Schools, ROCPs, California Partnership Academies and other CTE-related efforts need resources that allow them to develop, adapt and deliver high-quality CTE curricula based on California’s CTE Standards and Frameworks. They also need resources that help them integrate CTE and academic learning, and to help students build academic skills and meet “a-g” requirements. The website, CTE Online (www.CTEOnline.org), was created to offer these resources to CTE professionals and boasts a database of model curricula for all industry sectors, classroom resources and teacher training opportunities, as well as links to CTE TEACH (see below).

AT-A-GLANCE

\$1,000,000 awarded
1 grantee

Highlights

- Designed and conducted nine Model Curriculum Institutes with 200 participants
- Launched new curriculum development tools on CTE Online

New Teacher Workshops (CTE TEACH)

New Teacher Workshops (www.cteonline.org/go/groups/cteteach) is a web-based and on-site CTE teacher training program offered by the Colton-Redlands-Yucaipa Regional Occupational Program and administered by the CDE. The program is designed to increase teacher retention, teacher training, teacher effectiveness and student learning through a system of ongoing support.

AT-A-GLANCE

\$1,250,000 awarded
1 grantee

Highlight

- 1,150 teachers trained

It also provides an early orientation program for new CTE teacher credentialing that helps industry professionals make the transition to the classroom. Participating entities include K–12 school districts, community colleges, adult schools, ROCPs and charter schools.

The program has shown encouraging early results, with new teachers reporting more confidence, informed instructional practices and increased professional growth.

“Helping new teachers understand the ‘business’ of teaching and guiding them through the sometimes overwhelming early days in the classroom allows them to bring their best — their passion for their subject and their own love of learning to students.”⁶ [Lisa Knuppel, Coordinator of Instructional Programs, Coastline ROP]

6 “Teacher Tip.” CTE TEACH: The Apple Newsletter, JAN/FEB. 2011: 1

“a-g” Guide Project

In order for high school students to be eligible for admission to University of California and California State University institutions, they must complete a minimum of 15 academic courses that fall into one of seven categories, known as the “a-g” subjects. Courses must meet the requirements specified by university faculty before they are placed on an “a-g” course list. All California public schools use this list to guide their own course offerings.

The “a-g” Guide Project expands the number and types of CTE courses that qualify as “a-g” courses. The University of California Office of the President (UCOP) helps high school educators develop these courses. These efforts have taken shape in the form of increased professional development, the University of California Curriculum Integration Institute, and improvement to the infrastructure at the UCOP that handles course submissions and approvals to speed turnaround and provide more feedback on submissions.

AT-A-GLANCE

\$450,000 awarded

1 grantee

Highlight

- In 2009/10, over 7,600 CTE courses met “a-g” requirements

Recommendations

The 2009/10 evaluation highlights three key recommendations that will further strengthen collaboration between community colleges and high schools, and expand CTE programs and related opportunities for elementary and secondary school students:

- **Strengthen statewide coordination and support of regional pathway building.**
Coordination at the state level is needed to keep the regions focused on a common vision and ensure that the disparate grant categories come together as a whole. To further strengthen coordination and support of regional pathway building, the Chancellor’s Office and CDE made noticeable progress in two important areas: sponsorship or support for ongoing communication across all regions, especially in the form of pre-conferences; and online resources and websites to disseminate information among grantees and create venues for them to connect. Each is briefly discussed below:
 - Meetings held at existing statewide conferences promoted communication among Initiative grantees across all regions. For example, a pre-conference at the California Community College Association for Occupational Education conference in the spring featured the Career Advancement Academies as well as the work of the Career Ladders Project. Another pre-conference session in fall 2011 focused on the future of the CTE Pathways Initiative, as well as five separate breakout sessions designated for grantees.
 - Initiative funding helped create or update such websites as CTE Online (www.CTEOnline.org) which provides links to CTE TEACH. Another example is the California Career Café (www.cacareercafe.com). Both of these sites provide the latest information about promising practices within career development.
- **Provide more professional learning opportunities — workshops, webinars — that help grantees develop and share curricula and effective instructional strategies.**
Grantees report that they seek professional learning opportunities that help them develop pathways curricula and effective instructional strategies (e.g., contextualized learning). A number of regional efforts described in this report offer effective, targeted professional development. Further, statewide initiatives such as the UCCI Institutes, Statewide Pathways, the Teacher Preparation Pipeline project and CTE TEACH are excellent examples of cross-regional efforts to support professional learning.

- **Clarify goals and provide self-assessment tools so that grantees have a better idea of how to collect data and measure their own progress, and a forum for sharing models of student data tracking.** At the local and state levels, it is important to systematically monitor progress and use data to inform programmatic and policy decisions. The Chancellor’s Office and CDE should also consider:
 - Working with grantees, especially newly established partnerships, to clarify goals, determine indicators for measuring progress, and set outcome targets that provide grantees with a year-long schedule with realistic deadlines.
 - Providing grantees with monitoring and accountability tools to help evaluate progress — for example, self-assessment tools and rubrics for systematically analyzing program implementation and for assessing student outcomes — and supporting them to use resultant data to inform decisions about capacity-building investments.
 - Facilitating the sharing of local models for student data tracking across K–12 and postsecondary systems. California’s efforts to create a data system that can track students from pre-K through college are lagging but gaining momentum from incentives such as the competition for federal Race to the Top or Innovation funding. Pathways partnerships can benefit from sharing locally developed models for data tracking.

Conclusion

As demonstrated throughout this report, pockets of success illustrate the substantial power of the pathways learning approach to change lives and bolster economic health. Momentum exists among many regional education and business leaders moving closer to a “tipping point” of creating more self-sustaining systems and infrastructure more resilient to weather budget shifts. California can harness the talent and energy of regional and local efforts by continuing to provide centralized coordination and support of pathway programs to create even faster progress and see a more potent impact from its investment.

Acknowledgments

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Appendix: Components of the Pathways Vision

Over the long-term, the vision is to have a statewide, regionally-based infrastructure that supports a system of pathways that prepare students with rigorous academics as well as career skills. Key components in each region would be:

- **A partnership of leaders** from K–12, community colleges, other IHEs and regional business and industry. The partnership articulates a vision, agreed-upon goals and a long-range plan. While the plan evolves over time, partners remain committed to the vision and goals, which guide the partnership in seeking resources for its work and taking advantage of new funding opportunities to further enhance efforts toward its goals.
- **Alignment of curriculum across systems.** The partnership’s collaborators work to develop a curriculum for each of the region’s identified pathways that integrates CTE skills and provides rigorous, “a-g” fulfilling academics in high school; leads to certification and/or an associate’s degree in a specified career field in community college and positions students for four-year degree programs and/or well-paying, in-demand careers.
- **Capacity building, policy support and structural integration within systems.**
 - High schools need a teaching force prepared to teach rigorous academics as well as career and technical skills. This requires professional development for teachers, involvement of industry professionals and IHE faculty in classrooms and opportunities for teachers to spend time in workplaces. School and district policies need to enable structural integration of the pathways approach to high school learning.
 - Middle schools need curriculum that readies students for high school pathways and need to inform and excite students and their families about pathways and choices ahead.
 - Community colleges need exchanges that bring industry experts to campus to work directly with students and offer faculty fellowships for rotating from campus to workplaces.
- **Statewide coordination, support and networking.** A statewide system needs a coordination hub that provides each region with technical assistance, models, research findings, promising practices and provides the needed links across regions for exchange of ideas and lessons learned—in short, to create a community of practice.



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