

Task Force on Workforce, Job Creation and a Stronger Economy
Proposed Goals, Issues, and Recommendations
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September 2014

Introduction

The need for a trained workforce that matches the competencies required for today's jobs has been recognized by California in its priorities, planning, and funding. (*Ref 0a-d*) The California Community Colleges have been and will continue to be an essential component of this effort. Without significant progress by our system in producing a sufficient number of qualified workers to sustain our economy, the quality of life in California will surely decline. The Board of Governors Task Force on Workforce, Job Creation, and a Stronger Economy will chart the path for the California Community Colleges to meet this challenge. (*Ref 0e*) This paper constitutes input from the field, those in the trenches of one of California's largest and most successful colleges, Mt. San Antonio College.

Goals

The California Community College Workforce Training System will:

1. design and offer degrees and certificates that are based on job competencies needed by employers, that have multiple exit-and-reentry points matching career ladders, and that are based on labor market demand,
2. assure that students who complete those degrees and certificates master those competencies and transition smoothly to the workforce,
3. provide professional development for faculty and support services for students to attain those competencies,
4. assure effective and efficient career pathway retention and completion rates for all students,
5. assure that degrees and certificates will be portable regionally and statewide, and
6. provide clear pathways and preparatory competencies so that those entering college career cohorts are well prepared to succeed regardless of their entry point be that from high schools, regional occupation programs, and adult education programs, or upon referral from a partner agency or an employer.

Issues

What issues must be addressed for the California Community Colleges to achieve these goals?

1. *Lack of Competency Based Awards.* Degrees and certificates are awarded based on passing a set of courses rather than achieving a set of competencies. (*Ref 1a-p*)
2. *Limited Response to Labor Market Demand; Limited Portability of Awards.* The number and type of degrees and certificates do not adequately meet labor market needs of business and industry and are not widely accepted as meeting the requirements for employment either regionally or statewide. (*Ref 2a-j*)
3. *Skills Gaps and Work-Based Learning.* Employers report gaps between skills acquired in training and skills needed for employment. Applied college learning environments such as labs, shops,

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clinical practice, and patron service are designed to model the work environment but still leave skill gaps for students transitioning to the workplace. Work-Based Learning is neither widely offered nor well integrated into program curricula. (Ref 3a-k)

4. *Pathways for Career Readiness Neither Specify Needed Preparatory Skills Nor Recognize Previously Acquired Skills.* Skills needed to prepare for entry into career programs are not well articulated with the various entry pathways: high schools, regional occupation programs, adult education programs, and referral from a partner agency or an employer. Students entering program cohorts are neither required to be career ready nor are their pre-existing competencies assessed and credited. (Ref 4a-i)
5. *Awards Do Not Include Occupational Soft Skills.* Certificates generally do not specifically include occupational foundational skills, and associate degrees are based on academic general education content rather than on occupational foundational skills. (Ref 5a-f)
6. *Barriers to Incumbent Worker Training.* Statutes, regulations, and campus practices inhibit the ability of community colleges to provide direct training to incumbent workers. State agencies providing incumbent worker training are under-resourced and not well coordinated. (Ref 6a-g)
7. *Limited Integration with Other State Agencies.* Community colleges do not have the flexibility to adapt to the intake and outcome requirements of other state agencies which provide job training nor do those agencies have significant incentives to encourage such partnerships. (Ref 7a-k)
8. *Funding Based on an Academic Model.* Community college funding is based on enrollment and categorical allocations. The semester census academic funding model does not support the workforce model of competency attainment which is time-bound neither by the length of the instruction cycle nor by the time-on-task needed to reach competency. The current categorical funds do not fully support the higher cost of career technical education facilities, supplies, equipment, technical support, and professional development. (Ref 8a-c)

Recommendations

1. *Establish a New CTE Scaffold System.* Create within the Community College system a structure for career technical education which aligns with the occupational structure used by state and federal workforce agencies.

The new system would consist of a scaffold structured around occupational sectors containing career ladders into which specific occupations would fit.

- Use the Standard Occupational Classification System (SOC Codes) which has an existing crosswalk to the Classification of Instructional Programs (CIP Codes) which has a crosswalk to the Taxonomy of Programs (TOP Codes). Begin by reorganizing existing approved programs around the SOC Codes while retaining the TOP Codes. Develop a transition plan that will eventually eliminate the use of TOP Codes. Note that the [Industry Sector](#) approach is the basis of the work in the Chancellor's Office Doing What Matters for Jobs and the Economy.
- Some career ladders will be state level and some will vary regionally. The Nursing Career ladder, for example, is standard around the state. See diagram at the right. This work will build on the progress made by the [Career Ladders Project](#), the [Career Pathway Project](#), and the [Adult Education Consortium Program](#).

**Sector → Career Ladder → Occupation
Scaffold Example using SOC Codes**

Sector: 47-0000 Construction & Extraction

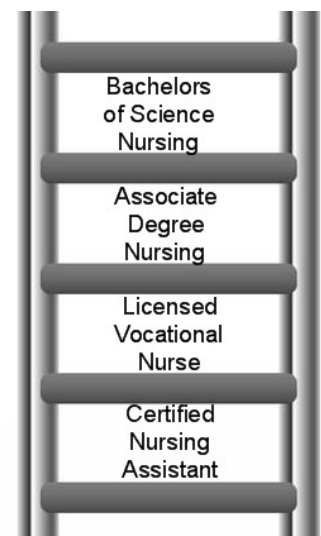
Career Ladder Rung: 47-2000 Construction Trades

Occupation: 47-2210 Sheet Metal Worker

Sector: 27-0000 Arts, Design, Entertainment, Media

Career Ladder Rung: 27-1000 Art & Design Worker

Occupation: 27-1024 Graphic Designer



- Some occupations will have specialties that can be detailed with specific job titles.
- The CTE Scaffold System will serve 1) as the basis for state and regional occupational competencies, 2) for use of labor market information, 3) for state approval of CTE programs, 4) for regional alignment and collaboration activities, and 5) for marketing community college CTE programs; [an example of the Automotive Career Ladder use for marketing is attached.](#)

2. *Identify Competencies for Occupations.* Create a system of competencies 1) for entering a program of study, 2) as foundational competencies, and 3) as knowledge/content competencies for each occupation.

- Entry competencies will assist in creating clear pathways into college programs of study from high schools and regional occupational programs as well as referrals from businesses and partner state workforce agencies.
- Foundational competencies are the “basic skills” of CTE. New students with entry skill gaps will be assisted in closing foundational skills gaps through specific noncredit curricula.
- At the state level, develop and fund a common assessment tool for CTE foundational competencies. Examples of foundation competencies systems for specific occupations are the O*NET system and the ACT Workkeys system which also includes assessment tools. Colleges would have the option of using the common assessment tool or developing their own system. This project would be similar to the current project to create common assessment for mathematics, English, and English as a Second Language.
- Knowledge/content competencies are specific knowledge and abilities required for success in a job. They are similar to the CTE Program Learning Outcomes which college faculty are required to develop to meet current accreditation standards. The proposed standard would assure that CTE PLOs are specifically designed to meet employment skills for each occupation.
- At the state level, develop and fund a system to establish a basis set of knowledge/content competencies for each occupational program. This process would build upon the [Sector Navigator and Deputy Sector Navigator system](#) and would include teams of faculty with specific occupational program expertise. The state funded system would be directly driven by employment competencies for each occupation. This system would be similar to the [Associate Degree for Transfer](#) process in which each ADT requires that colleges follow a [Transfer Model Curriculum](#), a set of courses for each degree. Every course in each college’s ADTs must be assigned a [C-ID number](#) which specifies that it meets the published course content, rigor, and course objectives as determined through review by an intersegmental faculty group. Similarly, the knowledge/content competencies for each occupational program would be determined by an “intersegmental” group of faculty and employers.
- The current review and approval process for occupational programs would continue. The regional process would be augmented to include review and approval by an “intersegmental” group of college and employer representatives to determine that the program meets both the foundational and knowledge competencies aligned with curriculum content, pedagogy, and performance based competency assessment.
- Occupational competencies will serve as the basis for the design of curriculum and pedagogy, for entry and exit performance assessments, for alignment of intake and outcome processes with partner agencies, and for alignment with employer hiring requirements.

ACT WorkKeys Foundation Skills--Graphic Designer	
Skill Area	Level
Applied Mathematics	4
Reading for Information	3
Locating Information	4
Business Writing	4
Listening	4
Observation	4
Teamwork	3

- Use technology to increase simulation-based assessment and learning based on defined metrics for core competencies. Validates metrics using teams of faculty and industry experts established regionally. Use these assessment outcomes to tailor follow up instruction to close learning gaps—essentially flipping the process so that assessment drives instruction both summatively and formatively.
- Foundational and knowledge competencies will be listed in college publications, listed on transcripts, and printed on degree and certificate diplomas. These competencies will be part of the state and regional career ladders and will demonstrate the transferability of skills among related occupations.
- Of particular importance is the use of career ladders and occupational program competencies in the alignment with K-12 vocational programs and with Regional Occupational Programs. Of particular utility in this alignment process will be the [Career Technical Education Pathways Initiative](#), the [Career Pathways Trust](#), and [AB 86 Adult Education Consortium Program](#).

3. *Establish Associate Degrees in Applied Technology.* The AAT Degrees would require both foundation competencies and knowledge/content competencies. The AAT degrees would replace existing AA and AS degrees in vocational areas. The associate degree requirement of a major would be replaced with knowledge/content competencies, and the general education requirement would be replaced with foundation competencies. Performance based assessment and work-based learning would be required components.

4. *Develop and Fund Professional Development for CTE Faculty.* Faculty in occupational areas have distinctly different needs to stay current in their fields. No current system exists to assure or even incentivize such currency. In many cases this is true for the program itself—the need to support the currency and relevance of the competencies taught and assessed is not met.

From Program and Course Approval Handbook:

The Chancellor's Office relies on the advice of the Career Technical Education Regional Consortia when reviewing the approval criterion of need, especially in comparing the proposed program to others that are offered by other community colleges in the region. Consortium approval also assures program originators that the design of their program curriculum is along the lines of current good practice as judged by their professional peers.

- Fund requirements or incentives for CTE faculty to stay current in their fields through externships, licensing, or industry certification as appropriate.
- Fund requirements or incentives for program accreditation or industry certification where available.
- Fund the development and implementation of a statewide ePortfolio system and an accompanying performance based assessment system to provide student work products for ePortfolios.

5. *Strengthen CTE Regional Consortia.* Economies in California tend to be regional in nature. The existing CTE Regional Consortia are well situated to coordinate regional response to labor market needs, to facilitate partnerships among community colleges and with other workforce organizations, and to play a role in distribution of CTE Program Enhancement Funds. Add to the existing Regional Consortia role in the approval occupational programs as described in the Program and Course Approval Handbook (see box):

- Certifying labor market demand and training shortage as a requirement for new programs, for periodic review of existing programs, and for receiving CTE Program Enhancement Funds (a current requirement). While these funds are one-time for 2014-15, the certification process should continue as should efforts to approve as ongoing the CTE Enhancement Fund. Regional

Centers of Excellence have the provision of labor market information and training gaps as part of their charge.

- Coordinating the availability of occupational programs within the region both in regard to capacity and geography. This has also been part of the certification for use of CTE Enhancement Funds by regional consortia and should continue—as should funding which is essential to achieve this objective.
- Establishing career ladders in occupational sectors within the region. Deputy Sector Navigators have this activity within the scope of their work. Regional Consortia are well positioned to use career ladders in both the coordination and marketing functions.
- Coordinating the allocation of CTE Enhancement Funds, again emphasizing the ongoing need for these resources.
- Define a role for CTE Regional Consortia in work-based learning: regional internship placement, regional center for assessment of prior learning through articulated credit-by-exam, and opportunities for industry-based certification.

6. *Better Serve Incumbent Workers.*

- Review the limitations currently in place for [Instructional Service Agreements](#) to receive apportionment funding for contract education. In particular:
 - Allow delivery of content by professional experts under the direction of a qualified faculty member without requiring line-of-sight supervision (Title 5, Section 58058),
 - Remove the open enrollment requirement (Title 5, Section 58051.5, 51006 and 58106),
 - Broaden the Chancellor's Office delegation of authority to cover contract education, and
 - Establish Title 5 standards for curriculum approval of credit courses exclusively for contract education with expedited approval process (Title 5 Section 55002x).
- Broaden partnerships with Workforce Investment Boards and the Employment Training Panel as described below.

7. *Strengthen Partnerships with Workforce Investment Boards and Employment Development Department.*

While online resources are available such as CalJOBS, WorkSmart, America's Job Centers, and CACareerCafe, on-the-ground partnerships at the Job Centers are limited. In the area of job placement, the missions of the Employment Development Department, the Workforce Investment Boards, and the California Community Colleges clearly overlap.

- At the system level, develop a strategic plan, jointly with the California Workforce Investment Board and the Employment Development Department, to increase partnership opportunities between the two organizations, particularly at the local level.
- Further integrate online job resources among state agencies and expand and strengthen partnerships at One Stop Job Centers throughout the state.
- Design and fund a system for Workforce Investment Boards to assess clients on occupational foundation skills in preparation for referral to community colleges.
- Develop and fund noncredit short-term vocational programs designed to accept just-in-time Individual Training Account referrals from Workforce Investment Board, particularly to attain occupational foundation skills necessary for their target occupations.

8. *Increase the Role of Community College with the Employment Training Panel.*

- Design and fund an allocation of ETP funds for contract education delivered by community colleges.

- Design and fund an allocation of ETP funds to CTE Regional Consortia to support work-based learning.

9. *Expand Work-Based Learning.*

- Design and fund an initiative to establish Work-Based Learning Centers at each college.
- Through CTE Regional Consortia, establish a regional resource centers to develop internships and other work-based learning opportunities with employers, labor unions, Workforce Investment Boards, and other agencies.
- Establish and fund a categorical program to support the requirement of a work-based learning experience for each CTE program.
- Require internships and/or work-based learning directly related to the field of study for the awarding of degrees and certificates in CTE programs.

10. *Establish Pathways for High School Preparation; Expand Credit by Exam for Prior Learning.* Current K-12 and ROP initiatives such as Linked Learning and Career Pathways Trust Grants emphasize acquisition of work-ready competencies. Many who come to community colleges already work in the field in which they seek a degree or certificate. These high school students and incumbent workers share a common element: prior learning. Community colleges have two existing systems for these groups to obtain college credit for prior learning. High school courses can be articulated for credit under Title 5

11. *Adapt Funding to CTE Needs.*

- Modify current Title 5 regulations on repeatability to allow students who have not mastered required competencies for a given CTE course to continue their enrollment in the course or to repeat the course.
- Establish a categorical fund to provide dedicated resources for developing new CTE programs to meet labor market demand, to modify and update existing CTE programs to match required competencies, support professional development of CTE faculty—in particular externships that allow faculty to work in their field of expertise and to maintain state or industry certification, and to fund state-of-the-art equipment, supplies, technicians, and facilities. This is the role of the current CTE Enhancement Fund.

Annotated Bibliography and References Organized by Issue Areas

0. Introduction

- a. [*Shared Strategy for a Shared Prosperity-California's Strategic Workforce Development Plan: 2013-17*](#), California Workforce Investment Board
 - “*For California to maintain its status as a place of innovation and shared prosperity, those institutions must support a “retraining economy.”* Workers must be learners who can traverse a labor market landscape that is less about “jobs” and more about a set of marketable skills broadly relevant to industry sectors within regional economies.” (page 1-1) This statement sets the challenge for community colleges to assure that CTE programs are focused on marketable skills set by employers and based on regional needs.
 - “*Working with partners to build new kinds of integrated programs, including career pathway programs.*” (page 1-2) The theme of partnerships runs throughout the plan. The pathway strategy is a key unifying element in those partnerships. Community colleges must be willing and able to adjust policies and practices to mesh with other state training agencies.
 - “*Align multiple agency state plans to address statewide goals and priorities, and identify and resolve inconsistencies in program measures, goals, and rules to improve program alignment and outcomes.*” This objective in the System Alignment and Accountability Goal is essential to set

expectations from the top down to assure that alignment occurs. Too many parts of the state have fragmented working relationships and differing leadership priorities among local training agencies.

- “Focus on skills attainment and industry-recognized credentials.” (page 6-2) Credentials, for us meaning degrees and certificates, must be portable—recognized for skill attainment by employers regionally at least and statewide at best.
- “Governor Brown signed legislation in 2011 that impacts local performance.” (page 6-3) SB 734, AB 554, and 698 set higher performance standards for Local Workforce Investment Boards. Community colleges have not reviewed policies and procedures that position us to be supporting partners to our local WIBs in reaching these goals.

- b. [Moving Forward: Workforce Development in California](#), California EDGE Coalition, October 2013. This paper summarizes some of the recent progress made in transforming California’s job training system, articulates challenge impeding progress, and makes bold recommendations for how those challenges can be overcome.

- *“Policy directives are being written and resources are being invested to develop regional and sector-focused partnerships that align education and training providers to leverage resources, develop career pathways, and respond to regional labor market needs.”*
- The paper goes on to summarize the areas of progress: Bolstering Career Pathways, Reinventing Adult Education, Targeting Investments to Key Industry, Implementing the California Clean Energy Jobs Act, and Strengthening the Role of the State Workforce.
- The paper concludes with challenges and recommendations—succinct and powerful statements—on key policy and implementation issues including: 1) Linking Initiatives, 2) Building on Existing Strengths, 3) Creating a Stable Regional Infrastructure, 4) Articulating Pathways, and 5) Enhancing Funding.

- c. [Empowering Community Colleges to Build the Nation’s Future](#), American Association of Community Colleges, 2014. Based on AACC’s 21st Century Initiative, this broad ranging guide to improving community college completion touches on many of the issues pertinent to improving job training. Below are selected quotes from the seven recommendations which are germane to the issues raised in our paper. Readers are encouraged to read the entire Empowering document to get the complete context of these statements.

- Specify Needed Preparatory Skills and Recognize Previously Acquired Skills
- *“Expand prior-learning assessments. Maximize appropriate awards of college credits for prior learning, such as learning acquired through military service.” From Recommendation 1: Increase completion rates by 50% by 2020.*
 - *“[Community colleges also can reduce learning time through assessments of prior learning, accelerated competency-based modules, and self-paced adaptive learning options.” From Recommendation 3 Close the American Skills Gap.*
 - *“Define and measure college readiness. Use clear metrics and appropriate assessments to define college readiness, establish baseline data, and longitudinally track progress toward improved student outcomes.” From Recommendation 2: Dramatically improve college readiness.*

Specify Needed Entry Skills/Competency Based Awards

- *“Better alignment of learning is central to improving college completion. This includes alignment between high school graduation standards and college entry requirements, between community college exit competencies and university program requirements, and between the knowledge and skills gained in postsecondary education and those needed for current and emerging jobs in the labor market.” From Recommendation 4: Refocus the Community College Mission.*

Integrate Community Colleges with Other State Workforce Agencies

- *“Establish and support community partnerships. Actively engage in collaborative work, such as pre-K through postsecondary and workforce consortia and other multisystem partnerships.” From Recommendation 2: Dramatically improve college readiness.*
- *“Collaborate with K–12 partners; focus work in the 10 areas of engagement:” 1) college-going culture, 2) aligned curricula, 3) professional development, 4) early interventions, 5) dual/concurrent enrollment, 6) program evaluation, 7) program design and delivery, 8) uses of data, 9) assessment of college readiness, and 10) reallocation of resources. From Recommendation 2: Dramatically improve college readiness.*
- *“State policy, workforce development agencies, and community colleges should incorporate three intersecting elements: career pathway programs, sector strategies, and industry clusters.” From Recommendation 3: Close the American Skills Gap*

Skills Gap/Limited Response to Labor Market Demand

- *"To close the skills gap, community colleges will need to build capacity for identifying unfilled labor market needs and ensure that career education and training programs are targeted to address those high-need areas."* From Recommendation 3: Close the American Skills Gap.

Lack of Competency Based Awards

- *"Colleges can engage industry subject matter experts to help develop in-depth competency-based curricula and credentials."* From Recommendation 3: Close the American Skills Gap.
- *"With competency-based learning, the value of credentials is clearly defined in terms of what students know and are able to do."* From Recommendation 4: Refocus the Community College Mission.

Work-Based Learning

- *"Effective educational practice will require more work-based learning, including internships, apprenticeships, and clinical placements."* From Recommendation 3 Close the American Skills Gap.

d. [Ready to Work: New Actions to Expand Job-Driven Training and Broaden the Pathway to the Middle Class](#), White House, July 2014. President Obama presented a bold challenge to community colleges in the 2014 State of the Union message and then followed with many

policy changes and funding incentives detailed in this document. Some quotes:

- *"It means connecting companies to community colleges that can help design training to fill their specific needs."* President Barack Obama, State of the Union, January 28, 2014.
- *"EARN AND LEARN. Offer work-based learning opportunities with employers – on-the-job training, internships, pre-apprenticeships, and Registered Apprenticeships – as training paths to employment."*
- *"REGIONAL PARTNERSHIPS. Coordinate American Job Centers, local employers, education and training providers, economic development agencies, and other public and private entities, to make the most of limited resources."*
- *"As of October 1, 2014, competitive training grant applications by all agencies will require or preference elements of a job-driven checklist, touching 25 grants totaling \$1.4 billion."*
- *"The Department of Labor will announce \$30 million in competitive grants for states to align policy, governance, program, and performance measurement across training programs. DOL will send a letter to states with funding criteria in the fall of 2014, with an application available in winter 2015."*
- *"Laying the Groundwork for Fall Apprenticeship Competition. In partnership with a range of national organizations, Skills for America's Future will undertake an outreach and capacity building program for prospective applicants and their employer partners to the forthcoming grant solicitation on the expansion of the country's apprenticeship opportunities."*

e. [Task Force on Workforce, Job Creation and a Stronger Economy](#), Board of Governors, September 2014 Retreat

- *"California is a set of regional economies, not a monolithic one."* This statement has two implications for community colleges. First, regional colleges need to work together to be responsive to labor market needs in the region. Second, program development and approval process need to be timely and involve stronger regional review and approval.
- *"California invests over \$4 billion annually in career education, employment training, and workforce development through a variety of public agencies, including local Workforce Investment Boards, Employment Training Panel, Adult Education system, California Community Colleges, etc."* Collaboration among state job training agencies is not only strategic it is an imperative from a fiscal standpoint. Agency leaders must find ways for these dollars to be invested in common projects whose outcome accountability measures are aligned to make efficient use of this tremendous investment of state taxpayer dollars.
- *"Evolving structures intended to respond to changing skills needs, making them more inclusive of competencies, online delivery, employer-customized education, and work-based learning."* This succinct and powerful statement challenges California Community Colleges to undergo transformative changes in policies and procedures to 1) base our degrees and certificates on job competencies, 2) remove barriers to delivering training targeted directly to meet employer needs—especially for their incumbent workers, and 3) actively infuse work-based learning into our degrees and certificates.

- f. [Strategic Plan: California Community Colleges Economic and Workforce Development Program](#), CCCCCO, Adopted 1992, Updated December 1998. At this point ED>Net was the California Community College Economic Development Network. The plan consists of startup activities for system involvement in economic development. The ten regions were assigned responsibilities by this plan. Initiatives in eleven occupational clusters were funded. Goals and objectives are listed for each.

1. *Lack of Competency Based Awards.*

- a. [Training is Key to Matching Up Jobs and Workers](#) by Thomas E. Perez, Secretary of Labor, 2014
- *"So we have ready-to-work people looking for work. And we have ready-to-fill jobs that employers can't fill. If we want to continue our economic recovery, grow our middle class and ensure a prosperous future, we've got to match them up... But here's the rub: too often, they [employers] can't find workers who have the skills they need."* Secretary Perez is challenging our job training system to be responsive to labor market needs—specifically to provide the skill competencies which match job requirements—not just any degree or certificate, but those that provide competencies for students to get available jobs.
 - *"So what exactly does "job-driven training" look like? Here's an example. High school students in the East San Gabriel Valley are getting hands-on career training in science, technology and health care industries. Through the regional Career Pathways Partnership, school officials are offering students an integrated academic and career development curriculum, providing them with industry-recognized credentials upon graduation and a leg up to succeed in college."* [By the way, that partner is Mt. San Antonio College.] Pathways like this from high schools and ROPs to community college are key to job training. California community colleges must modify policies and procedures to better enable such pathway partnerships.
 - *"In April, this program was awarded a \$4.5 million Youth CareerConnect grant from the Department of Labor to expand the program to more students. We're putting more than a billion dollars on the street in grant funding to support programs like this one."* California must be better prepared to compete for these job training dollars, and one of our major deficits is the lack of partnerships among K-12/ROPs, employers, and community colleges.
- b. [Left Out, Left Behind: California's Widening Workforce Training Gap](#), Encina Advisors, 2013. This paper documents the training gap and quantifies both the shortage and the fiscal implications for the state and its residents.
- *"Career education used to be the primary charge of California's community college system. Community colleges have shifted their main focus to serve students who seek to transfer to traditional four-year colleges."*
 - *"Over the next ten years, about 2.45 million Californians who seek a community college education will be unable to do so."*
 - *"According to the California Employment Development Department, many of the fastest-growing occupations in the state will require an associate degree or post-secondary non-degree award."* [Data on job openings show highest associate degree demand for health professionals, managers, preschool teachers, cosmetologists, and paralegals.]
 - *"Statewide, over the next decade, the gap will result in a projected loss of foregone personal income of \$52.2 billion."*
- An investment in community college career technical education by the state is essential to turn around the training gap, impact unemployment, and provide livable wages for California's middle class.
- c. *Creating a Competency-Based Credentialing Ecosystem*, Joan Wills et al, Center for Law and Social Policy, April 2014, <http://www.clasp.org/resources-and-publications/files/Developing-a-Competency-Based-Credentialing-Ecosystem.pdf>
- *"Large scale expansion of the use of credentials that recognize an individual's competencies – regardless of means of acquisition – is essential to meet the demands of students, job seekers, employers, government and education and training providers."* The paper goes on to describe the current dysfunctional system and call on all stakeholders to do their part in producing this change.
- d. [The Missing Piece: Quantifying Non-Completion Pathways to Success](#), Kathy Booth and Peter Bahr, 2013. This research followed the outcomes of "skill-builder" students for six years.

- Skills-builder students were defined as non-completing first-time students who enrolled for no more than four semesters; who carried a mean course-credit load of six or fewer credits; and who achieved a unit success rate (the ratio of credits earned to credits attempted) of at least 70%.
 - There were 174,864 such students, one in seven (14%) first-time students.
 - 58% enrolled in CTE fields: engineering and industrial technologies (19%), business and management (13%), public and protective services (8%), family and consumer sciences (7%), and information technology (5%).
 - There were 24 CTE subfields in which skills-builders course-taking was evident, with 16 subfields yielding significant earnings gains. Specific fields and wage gains are documented in the report.
- It is clear that “skill-builder” students are acquiring job competencies of value in the labor market even though they have not completed a degree or certificate. A competency based curriculum would recognize these competencies—even anticipate their desirability by studying labor market trends.

- e. *Career Opportunities: Career Technical Education and the College Completion Agenda, Part I: Structure and Funding of Career Technical Education in the California Community Colleges*, Nancy Shulock and Jeremy Offenstein
- f. [Youth and Work: Restoring Teen and Young Adult Connections to Opportunity](#), The Annie E. Casey Foundation, 2012
- g. [Knowing and Doing: Connecting Learning & Work](#), Lili Allen, Christopher J. Hogan, Adria Steinberg, Jobs for the Future
- h. [O*NET Resource Center](#)
- i. [O*NET Summary for Graphic Designers](#)
- j. [Standard Occupational Classification System](#) (SOC Codes), U. S. Bureau of Labor Statistics
The SOC) System is a federal system of classifying occupations. It is used by all federal agencies that collect and use occupational data. The SOC classifies workers at four levels of aggregation: 1) major group; 2) minor group; 3) broad occupation; and 4) detailed occupation. The system is used to manage government programs that deal with occupational data and for matters involving industrial and labor relations. It is helpful to students looking for occupational education, for schools with occupational programs, and for those looking for work. The SOC codes are useful to employers and employees to compare wages. SOC codes are required for state approval of occupational programs as described in the [Program and Course Approval Handbook](#) which states, “The proposal must include projections from LMI for the most applicable Standard Occupational Classification (SOC) codes and geographical regions to be served by the program.”

2. *Limited Response to Labor Market Demand, Limited Portability of Awards.*

- a. [Help Wanted: Projections of Jobs and Education Requirements Through 2018](#), Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, 2010
- b. [Portable, Stackable Credentials-A New Education Model for Industry-Specific Career Pathways](#), James T. Austin, Gail Mellow, and Mitch Rosin, 2012
- c. [America’s Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond](#), Harry J. Holzer and Robert I. Lerman, 2007

3. *Skills Gaps and Work-Based Learning.*

- a. [Middle-Skill Spotlight: An Analysis of Four In-Demand Sectors With A Community College Focus](#) by EMSI, 2014
- b. [California’s Forgotten Middle](#), National Skills Coalition, 2012
- c. [Boiling Point-The Skills Gap in U.S. Manufacturing](#), Tom Morrison, 2011
- d. [A Better Measure of Skills Gaps: Utilizing ACT Skill Profile and Assessment](#)

- e. [*Data for Strategic Skill Research*](#), ACT, 2014
 - f. [*The Shocking Truth About the Skills Gap*](#), CareerBuilder, 2014
 - g. [*Changing Lives, Building a Workforce: Preparing Community College Students for Jobs and Careers*](#), ACT, 2012
 - h. [*Preparing 21st Century Citizens: The Role of Work-Based Learning in Linked Learning*](#), by M. Felicity Rogers-Chapman and Linda Darling-Hammond, 2013
 - i. [*Recovery: Job Growth and Education Requirements Through 2020*](#), Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, 2013
 - j. [*Hiring and Higher Education: Business Executives Talk about the Costs and Benefits of College*](#), Steve Farkas, 2011
 - k. [*Work-Based Learning in California: Opportunities and Models for Expansion*](#), Svetlana Darche, Nara Nayar, and Kathy Reeves Bracco, 2009
4. Needed Preparatory Skills are Not Specified and Previously Acquired Skills Are Not Recognized
- a. [*Statewide Career Pathways: Creating School to College Articulation, a Handbook for Articulating With Secondary Schools and ROCPs*](#), by Statewide Career Pathways, April 2008
 - b. [*Get With the Program: Accelerating Community College Students' Entry into and Completion of Programs of Study*](#) by Davis Jenkins and Sung-Woo Cho, 2012
 - c. [*Working Hard, Left Behind: Education as a Pathway from Poverty to Prosperity for Working Californians*](#), Kim H. Tran, 2013
 - d. [*Sense of Direction: The Importance of Helping Community College Students*](#)
 - e. [*Select and Enter a Program of Study*](#), Colleen Moore and Nancy Shulock, 2011
 - f. [*Restructuring California's Adult Education System*](#), MAC Taylor, 2012
 - g. [*Youth and Work: Restoring Teen and Young Adult Connections to Opportunity*](#), The Annie E. Casey Foundation, 2012
 - h. [*Left Out, Left Behind: California's Widening Workforce Training Gap*](#), Encina Advisors, 2013
 - i. [*The Missing Piece: Quantifying Non-Completion Pathways to Success*](#), Kathy Booth and Peter Bahr, 2013
5. Awards Do Not Include Occupational Soft Skills.
- a. [*AACC Position Statement on the Associate Degree*](#), 1998
 - b. [*The Road Less Traveled: Realizing the Potential of Career Technical Education in the California Community Colleges*](#), Nancy Shulock, 2011
 - c. [*Industry Competency Models and the ACT National Career Readiness Certificate*](#), ACT, 2013
 - d. [*The Condition of Work Readiness in the United States*](#), ACT, 2013
 - e. [*Work Readiness Standards and Benchmarks*](#), ACT, 2013
 - f. [*What Work Requires of Schools: A SCANS Report For America 2000*](#), The Secretary's Commission On Achieving Necessary Skills, U.S. Department Of Labor, June 1991
6. Barriers to Incumbent Worker Training.
- a. [*What Is Contract Education?*](#) From CCCCCO's Doing What Matters
 - b. [*Guidelines for Instructional Service Agreements*](#), CCCCCO, 2012
 - c. [*California Corporate College*](#) and [*CDCR Case Study*](#)
 - d. [*Contract Education-A Background Paper*](#), ASCCC, 1998
 - e. Employment Training Panel: [*Program Overview*](#), [*Frequently Asked Questions*](#), [*Eligible Training Agencies*](#), [*PowerPoint Overview*](#)

- f. [ETP Funded Contracts for 2014-15](#) including CCC priorities through: [Glendale CCD](#), [Kern CCD](#), [Riverside CCD](#), [Glendale Community College Professional Development Center](#)
- g. [RFA for Technical Assistance Provider for Contract Education](#)/Program Overview, CCCCCO, and [successful application from Mt. San Antonio College](#) (with regulatory barriers, implementation challenges, and promising practices)

7. *Limited Integration with Other State Agencies.*

- a. [State Working Group of Key Public Workforce Development Institutions](#), California Workforce Investment Board
- b. [WorkSmart Fact Sheet](#), Employment Development Department, 2006
- c. [America's Job Centers of California](#), Employment Development Department, 2013
- d. [Economic and Workforce Development Overview](#), CCCCCO
- e. [California Community Colleges Partners with California Employment Development Department to Integrate CalJOBS into CACareerCafe](#), CCCCCO, March 2013
- f. [Unemployment Insurance Code Section 14020](#)-California Workforce Investment Act, State Planning
- g. [SB 118 \(2013, Lieu\)](#) WIB Plan - California Industry Sector Initiative
- h. [California Labor and Workforce Development Agency](#): List of Overseen Agencies
- i. [Los Angeles Workforce Systems Collaborative](#)
- j. [Pathways to Prosperity Meeting the Challenge of Preparing Young Americans for the 21st Century](#), Harvard Graduate School of Education, 2011
- k. [Taking Root: The Virginia Career Pathways System](#), Melissa Goldberg and Julian L. Alssid, 2012

8. *Funding Based on an Academic Model.*

- a. [Career Opportunities: Career Technical Education and the College Completion Agenda, Part I: Structure and Funding of Career Technical Education in the California Community Colleges](#), Nancy Shulock and Jeremy Offenstein, 2012
- b. [Workforce Investments: State Strategies to Preserve Higher-Cost Career Education Programs in Community and Technical Colleges](#), Nancy Shulock, Jodi Lewis, and Connie Tan, 2013
- c. [Funding For Community College Career Technical Education](#), California EDGE Coalition, 2014
- d. *What's The Value of an Associate's Degree? The Return on Investment For Graduates And Taxpayers*, Jorge Klor de Alva and Mark Schneider, October 2013
- e. *In This Together: The Hidden Cost of Young Adult Unemployment*, Rory O'Sullivan, Konrad Mugglestone, and Tom Allison, January 2014
- f. *The Real Cost of College: Time & Credits to Degree at California Community Colleges*, The Campaign for College for College Opportunity, July 2014
- g. *Report of the CCCT CTE Task Force on Differential Funding for CTE Programs*, Jim Moreno and Andreea Serban, January 2013. This study measured "differential costs" for fifteen CTE programs and found them considerably higher than traditional programs.
 - "Differential costs are those that are caused by specific requirements for the delivery of a CTE program such as specialized equipment, required specific additional staff for the program, specialized program accreditation."
 - "For example, the differential cost per unit for the Dental Assisting Program at Orange Coast College was \$225.86 in 2011-12, it was \$662.76 per unit for the Dental Hygiene Program at Sacramento City College and \$434 for the Registered Nursing Program at Glendale Community College."
 - "Explore the possibility of a revision of the funding method for California Community Colleges to include an average differential reimbursement factor for high cost CTE programs; the definition and criteria for determining high cost CTE programs could include the criteria employed in this study or others."