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The Nexus Between Postsecondary Education and Workforce Development — Conclusions and Policy Options

This report is the fourth and final paper in the research series by the Commission on the nexus between postsecondary education and workforce development. Prior reports have reviewed the overall context, considered employers' concerns with whether postsecondary education is doing enough to ensure California has a competitive workforce, and examined the existing workforce activities of the state's postsecondary institutions. This final report summarizes conclusions that can be drawn from the research. It also offers some policy options that the Commission may wish to consider, including fostering collaboration and regional approaches, and improving data.

Contents

Introduction.....	1
What We Have Learned.....	1
Policy Options for Consideration	5
What is the Next Step?.....	10

The Commission advises the Governor and the Legislature on higher education policy and fiscal issues. Its primary focus is to ensure that the State's educational resources are used effectively to provide Californians with postsecondary education opportunities. More information about the Commission is available at www.cpec.ca.gov.

Introduction

The California Postsecondary Education Commission has conducted a research project exploring the nexus between postsecondary education and workforce development over the past two years. The Commission has previously adopted three reports:

- The first outlined the broad historical and contextual issues surrounding the nexus;
- The second discussed the beliefs of employers that California postsecondary education is not meeting the need for a workforce required to compete in a global, 21st century knowledge-based economy;
- The third provided a detailed look at policies and programs in California's public and private postsecondary institutions that seek to address workforce needs.

This fourth and final paper outlines conclusions that can be drawn from the research so far, and identifies a series of policy options that might be considered to strengthen the nexus between postsecondary education and workforce development. Finally, a discussion is included on how the Commission might continue pursuing this issue.

What We Have Learned

Building on the observations that were outlined in previous papers, the following are some overall conclusions that can be drawn from this research and that lead to possible policy options:

Previous reports in this research series

The Commission's previous reports on the nexus between postsecondary education and workforce development are:

A Contextual Examination of Education and Workforce Development in California

<http://www.cpec.ca.gov/completereports/2005reports/05-13.pdf>

The Nexus Between Postsecondary Education and Workforce Development: A Workforce and Employer Perspective

<http://www.cpec.ca.gov/completereports/2006reports/06-19.pdf>

How California's Postsecondary Education Systems Address Workforce Development

<http://www.cpec.ca.gov/completereports/2007reports/07-21.pdf>

- The overriding conclusion is that there is no *systemic* connection between California postsecondary education and statewide goals for assuring a competitive workforce, nor are there strong incentives for systems to align their activities with those goals. Even though all the state's postsecondary systems and institutions consider meeting workforce needs important, they approach it in varying ways depending on their specific missions. Furthermore, their efforts to address workforce needs are not necessarily aligned with statewide needs, and there are no clear measures of the impact of their programs and activities.
- No highly visible individual or entity has been consistently charged with leadership in identifying and prioritizing workforce needs at the state level. The California Workforce Investment Board, which implements federally-funded workforce legislation, seeks to offer policy leadership beyond the narrow administration of a categorical program and works with other entities on broad economic and workforce policy. There is, however, no clear vehicle systematically linking all postsecondary educational institutions to workforce and economic development leadership at the state level and through which alignment of goals can be pursued.
- The complexity of the topic is particularly challenging. At its most fundamental, this issue poses the question: "What is the purpose of education?" Even if most agree that one purpose of education is the preparation of future workers, many other questions arise. These questions include:
 - What is the ability and responsibility of postsecondary education institutions to address specific job skills?
 - In what specific ways does postsecondary education address workforce development?
 - What contributions do postsecondary education institutions make to the economy *in addition to* preparing workers?
 - How does K–12 education affect postsecondary education's ability to carry out all of its many missions, including workforce development?

- The persistent dichotomy between “academics” and “vocational training”, which implies that institutions must choose between one or the other, sometimes polarizes the discussion. Efforts are underway to reduce this perceived conflict. Such efforts as the new State Plan for Career Technical Education now under consideration, the work of the organization ConnectEd to develop “multiple pathways,” and rapidly growing linkages between high schools and community colleges all support a more integrated approach. Recognition is growing that *all* students must have a basic level of knowledge and skills, and that applied and theoretical knowledge both contribute to acquisition of workforce skills.
- Responsibility for meeting workforce needs is scattered among many entities: local, state, and federal government agencies; educational institutions; and public/private entities, many at the regional level. Many factors—including differences in governance, competition for resources, and institutional autonomy—make it difficult to respond in a systemic fashion. The California Workforce Investment Board—the primary state-level workforce development entity—has only tenuous connections to much of postsecondary education, except for the community colleges. Many other stakeholders in workforce development, including public and private employers, business and industry in general, training providers, public agencies, and community-based organizations, are not well-aligned with each other. For postsecondary education institutions, working with so many disparate elements to address statewide workforce needs is daunting.
- The role of postsecondary education in workforce development is of increasing importance and urgency due to the accelerating shift to a knowledge-based, demand-driven economy. This economy requires higher levels of skills and knowledge from all workers, and poses different challenges to education than it did in the Industrial Age. All levels of education—K–12 and postsecondary—have grappled with these challenges, but no consensus has yet emerged in California about how to address them.
- Some of those challenges mean thinking differently about how and to whom educational services are delivered. Education is no longer something children and youth pursue until young adulthood, at which point most enter the workforce. People who are already workers desire or now face the need for additional education to upgrade skills, advance their careers, and learn new skills as jobs change. The need for “just-in-time” training and basic education has increased. Even students who follow traditional pathways toward degrees or other forms of certification often hold jobs as well, but there is seldom a connection between that work experience and their classroom learning.
- Although the U.S. still leads the world in the quality, quantity, accessibility, and variety of its postsecondary educational systems, this dominance, and the economic competitiveness that goes with it, is declining. Many reports on America’s future economic competitiveness question whether the postsecondary education that was extraordinarily successful in improving the lives of American citizens in the 19th and 20th centuries can continue to be so in the 21st if it does not adapt more quickly to a changing world. California has seen its own economy decline from fifth to eighth place in the world, although its economy is still the largest of any state. The challenges for California are at least as great as they are for the nation.
- Employers look less to education for job-specific skills than they do for general skills—the ability to think critically, solve problems, work in collaborative teams, and communicate effectively—“basic” skills like reading, writing, and computing, and “employability” skills such as dependability, flexibility, leadership, and adaptability to new situations. Especially important is the ability to learn. No matter what level of education an employee brings to the

job or what skills the job requires, every employee will have to engage in continuous learning and mastery of new skills to succeed.

- The 1950s model in which a person with only a high school diploma could earn a middle-class living is gone. Estimates are that as many as 80% of the *new* jobs being created in our economy—and much more than half of *all* jobs in the future—will require some postsecondary education, though not necessarily a baccalaureate degree. Without postsecondary education, training or certification, a worker may find it extremely difficult to become economically secure.
- Though not all jobs will require a baccalaureate degree, the demand for that level of postsecondary education is increasingly unmet in California. The Commission’s September 2007 Accountability Framework Report on degrees awarded in selected areas of projected workforce demand concludes that California is not producing enough graduates with bachelor’s degrees to meet the state’s economic needs in a number of occupational fields for which the degree is necessary. Evidence for this includes the large number of degree holders California employers have imported from other states and countries. The report says that California needs to increase the number of baccalaureate degree-holders in high-need fields like computer-related occupations, engineering, nursing and health care, and teaching.
- California lacks data systems to better inform academic planning and program improvement around workforce needs and program success. Robust data systems that track longitudinal progress based on individual records are not fully in place. Although some progress is being made to complete a K–12 system, there are no specific plans to link those data to postsecondary education systems and to workforce data, which would allow all of those systems to examine the patterns of student progression through school and into the workforce. Also, unique identifiers for individual records differ between systems, making it difficult to create a truly longitudinal system. Without comprehensive, connected data systems aggregated at the state level, it is difficult to see how workforce stakeholders will ever have a definitive picture of how well they are doing in meeting state needs.
- Postsecondary educational systems or institutions are key players in targeted postsecondary workforce initiatives at both the state and regional levels:
 - A number of state-funded programs have sought to increase graduates in a single field such as nursing or teaching. These initiatives generally respond to immediate and urgent needs and may or may not result in long-term increase in capacity. Some are evaluated for their impacts on enrollment and degree production, but it is not clear if they show a sustained impact on the demand for workers in particular occupations.
 - Many regional collaborative efforts involve most or all educational entities within that region, including community colleges, four-year degree institutions, and others. Some are short-term efforts to meet a specific demand for workers; others support broader work that is tied to economic development goals. They are often successful at building long-term partnerships between postsecondary institutions and economic and workforce development stakeholders, particularly those representing the region’s dominant industry clusters. While many initiatives conduct internal evaluations, there is no state-level mechanism to gather data or disseminate information on “best practices” that might be replicated or expanded to help meet state goals.

- California does a poor job helping students structure their education to support their career aspirations. Career counseling and guidance are in short supply in the K–12 and postsecondary education systems. While tools are available for students to learn what jobs are in demand and how to prepare for them, access to these tools and assistance in using them is often limited. This can affect program choice—and program planning—in postsecondary institutions, and consequently, may limit academic and career opportunities for many individuals. Not only do students need access to information for immediate decisions on education and careers, but they also need the skills to manage their own career over time—skills the current system may not sufficiently develop.

Policy Options for Consideration

Recommendations for policy options to strengthen the nexus between postsecondary education and workforce development should be grounded in several basic principles:

- State leadership is critical in defining goals and identifying resources, but implementing those goals is likely to be most successful at the regional level.
- In a multi-system environment like California’s, strong collaboration is essential to progress; collaboration is a learned skill that requires policy and resource support from state leaders.
- Workforce development cannot be viewed separately from economic development and education; these three components are inextricably linked.
- The state’s economy and workforce needs are driven by demand; educational institutions must recognize that demand and find ways to accommodate it while carrying out their missions.

The following recommendations focus on systemic approaches that can build postsecondary capacity to meet economic and workforce needs.

Improve and Link Data

The Commission’s September 2007 accountability report cites the need for better data on educational outcomes linked to workforce outcomes. It says: *“The Commission believes greater emphasis should be placed on tracking occupational outcomes for students and strongly supports linking student data-bases with employment-wage data maintained by the state and federal government.”* In order for that to happen, the state must rapidly complete development of a comprehensive, longitudinal, unit-specific data system for K–12 education—a process which, after many years, finally appears to be on track toward completion. The system would also need to ensure that high quality unit-specific systems are supported in all public postsecondary education systems.

The state must then create a mechanism to link the records of postsecondary students, both graduates and leavers, to the base wage file to track their labor market experiences. This data would allow the state to estimate the effects of education on employment and earnings, and to track whether students remain in the state, return for further education, or leave the labor market altogether. Technical, legal, and financial issues must be addressed. But other states have resolved these issues and have created linked data systems to inform educational, workforce and

economic policy. The Commission is the most appropriate agency to manage this data system, and the state should enact that policy and provide funding to create and maintain it.

Promote State-Level Collaboration

California has no strong vehicle to involve all postsecondary institutions in dialogue on better meeting state workforce needs and to promote state-level and regional collaboration between postsecondary education and other workforce stakeholders. Two strategies to address this weakness should be considered and pursued:

- AB 365 proposed creating a task force to devise appropriate measures of postsecondary contributions to workforce development. AB 365 was strongly supported by the Legislature, but it was vetoed by the Governor on grounds that legislation is not needed to achieve the goal. The Labor and Workforce Development Agency should be asked to collaborate with the Commission in convening a task force to move that goal forward without legislation.
- The policy framework published in 2001 under the state's Regional Workforce Preparation and Economic Development Act (RWPEDA) recommended making permanent the state agency partnership established in that Act. It also recommended including the University of California and the California State University as partners, in addition to the community colleges and K–12 state-level entities already represented. The notion of a more permanent and visible state-level partnership, which was also a goal of AB 365, should be revisited. A high-level state partnership of key agency heads should be re-established as recommended in RWPEDA, with expanded postsecondary representation. Alternatively, the California Workforce Investment Board (CWIB), which has emerged as the state's primary workforce policy body, could be expanded to involve postsecondary education representation beyond community colleges. Adding UC and CSU, and the independent institutions, would put postsecondary education more fully "at the table." [NOTE: SB 293, passed in 2006 to codify the CWIB's composition and responsibilities, includes a broad state plan that could become the policy vehicle to expand the discussion beyond simply implementing the federal program.]

Encourage Regional Strategies

Postsecondary institutions are probably most active in addressing workforce needs through collaborative efforts at the regional level. Many UCs, CSUs, community colleges and independent institutions work with economic and workforce development stakeholders to design programs, restructure existing programs, develop data, and promote long-term planning to support regional economies. Under RWPEDA in the late 1990s, state grants promoted expansion of these regional efforts, but the law expired. Collaboration continues to some degree, even without state funding; however, regional collaboration overall has yet to reach a sufficiently critical mass to have an impact on the achievement of state-level goals.

The state should support efforts to foster such collaboration and assure that it involves all levels of education as well as other key players. Local Workforce Investment Boards have an important role in finding ways to assure more regional approaches are taken even by entities that only serve portions of a given region. Encouraging strong regional collaboration to meet workforce needs will require dedicated state funds to seed and support collaborative partnerships. Clear measures of success and evaluation of the effectiveness of investments in collaborative work must be built in. State funds that are provided should be targeted to the achievement of state goals, and should help leverage funds from other sources to sustain and build upon the work.

Better Articulate the Role of Postsecondary General Education

The emphasis by employers on the need for skills such as critical thinking, problem solving, and communication highlights the role of postsecondary “general” or “liberal arts” education, the arena in which such skills are assumed to be developed. However, there are few visible measures of what it means to master these skills. What exactly are they, and how much is enough? Do students acquire them “by osmosis” or can they be deliberately and systematically cultivated by specific instructional strategies and/or course content? How can we support the development of these desirable workforce skills in general education and other college courses without compromising academic freedom? These are questions that should be addressed.

Even though general academic courses and liberal arts programs are intended to build key skills that underlie workforce readiness, some believe these courses and programs have little connection to the real world and should be de-emphasized in favor of more occupationally-related courses and programs. That belief may be fed by a failure of academics to describe how these skills are actually developed and to consider how their acquisition can be demonstrated and measured. It may not be enough simply to assert that general or liberal arts education produces these skills—it may be necessary to show how and to what degree.

Higher education institutions are engaged in an expanding dialogue about “liberal arts,” especially in the context of general education courses required of all students. The CSU, in its current strategic planning process, is considering models of better measuring the acquisition of abstract skills and how this relates to the evidence they need to develop for WASC accreditation. Postsecondary education institutions in California and many other states are looking at better defining what students need to know and be able to do that is important to their working future. Some schools, such as Miami Dade College, define and measure “core skills” that all students should develop, no matter what degree they pursue. Exploration of the role of postsecondary general education needs to continue and expand in order to better understand and articulate its contribution to students’ success in the workforce.

Compile and Disseminate ‘Best Practices’

The state should work with educational systems and workforce entities to compile some sort of inventory, preferably Web-based, of successful workforce and economic development partnerships in which postsecondary institutions play a key role. This information could inform discussion of measures of how institutions meet workforce goals, and could provide models for institutions in other regions to consider in building similar efforts. It is not expected that such an inventory could ever be comprehensive, but if it were centrally maintained, expanded as much as possible, and disseminated widely through existing academic and workforce entities, it could provide information and contacts useful to many institutions, and it might stimulate replication of successful efforts.

It must not be overlooked here that that postsecondary education institutions already directly and indirectly support workforce development, and the compilation of information should include some or all of these. For example: extension programs that often respond quickly and systematically to immediate workforce needs; career-technical programs, especially at the community colleges, that are targeted to training workers for key occupations represented in each region’s major industries; the involvement of faculty and staff on local and regional bodies that regularly include workforce needs among their concerns; research targeted to better understanding economic

and workforce needs that becomes valuable to an entire region; and basic and applied research in various economic and scientific sectors that supports economic innovation.

Strengthen Alignment with K–12 Education

As postsecondary institutions look more closely at outcomes by which they can gauge their contribution to workforce development, they should also examine how to better align K–12 and postsecondary education around academic outcomes. This is especially important because postsecondary general education programs that produce the skills employers want require students to develop a foundation for those skills during their K–12 years. It is difficult to teach critical thinking, problem solving and teamwork to college students who have not been grounded in those skills prior to high school graduation. Postsecondary education must be deeply involved in supporting K–12 school improvement efforts—not just through teacher and administrator preparation but through broad-based connections that help ensure a high school diploma does not become the end of the road or simply a certificate of completion but a gateway through which students continue to grow and develop over time, no matter what path they choose.

Increase Focus on Career Development

The state and its public education systems—K–12 and postsecondary—should consider strategies to increase quality career development support for all students. Better research is needed on the quantity and quality of career development resources available and staffing that supports it, and how this may have changed over time. Career centers in high schools and colleges are helpful but not sufficient without skilled counselors who work directly with students to access and interpret information, such as federal and state occupational data and the Commission’s STEPS Internet system, and utilizing it in planning their academic programs.

Career counseling should be seen in the context of increasing career development skills on an ongoing basis—career awareness activities in elementary and middle school; direct planning and experiential activities in high school and college; and planning for career advancement and/or career change after students enter the workforce. The goal is not to predetermine students’ career paths but to enable them to structure their courses and extracurricular activities so they are able to prepare for what they think they would like to do. In a rapidly changing economy, it is anticipated that most workers will change careers several times over the course of their working lives. Postsecondary education could help provide services that enable students to develop skills to manage their careers for maximum satisfaction and economic security.

Strengthen Career Technical Education

The adoption of a new state Career Technical Education (CTE) plan is an opportunity to consider the role of applied learning in the achievement of overall educational goals and in preparing all students for the workplace as well as for college success. The new plan, scheduled for adoption by the State Board of Education and the Board of Governors of the California Community Colleges early in 2008, has been structured to be much more than a spending plan for federal CTE funds. It seeks to clarify the role of Career Technical Education in both secondary and postsecondary education, and to articulate CTE as a vehicle for teaching and learning strategies that connect students to the real world. CTE should no longer be seen as sorting students out of postsecondary education, but as offering multiple pathways to academic and workforce success. The community colleges are deeply engaged in this discussion and in considering how applied learn-

ing can support academic achievement. The discussion should also involve postsecondary institutions that offer baccalaureate, graduate and professional degrees.

Align System and Campus Research and Planning

Aligning postsecondary education with workforce development should be an explicit part of the mission for each postsecondary system and institution, even those that define their main purpose as liberal arts education. This is not to suggest that schools should assume responsibility for “job training” but that they should articulate in an understandable and visible fashion how the education they will provide enables students to be successful workers—not the only role adults must assume, but certainly one of the major roles in life.

In addition, the systems should build into their way of operation regular collaboration with other workforce stakeholders, including K–12 and postsecondary education providers and workforce and economic development agencies. Individual institutions should explicitly align their work-related goals with regional needs. Goals and objectives should be accompanied by measures of success. Those measures should be monitored and reported, along with results of academic programs.

The state’s two largest public university systems—the University of California and California State University—should consider more visible institutional structures and/or staffing within the state system offices that will shape and articulate the university’s workforce role. Responsibility for workforce development efforts should be clearly assigned in the system administration and the role should be a priority in that person’s job description. That person (or persons) should take the lead in planning the university’s role in workforce development and measuring the impact of its work, and should also be the university’s liaison to external workforce stakeholders.

Secure Adequate Resources

Some of the more successful workforce initiatives with which postsecondary education collaborated were initiated with dedicated state funds. While it can be argued that additional resources are not the total answer to increasing postsecondary contributions to state workforce needs, some increases in funding may be essential, especially to support work which would otherwise be impossible given the fiscal structure of the systems. For instance, some programs that directly address regional workforce needs may be higher in cost than institutions can afford within their existing budgets. Community colleges find it difficult to compete with the private sector to attract faculty for high-skill career technical courses, and expensive equipment and facilities for some CTE programs are not affordable. The Governor and Legislature have provided significantly more funding for Career Technical Education in the last several years, with at least half those resources going to community colleges. The impact of those funds is not yet clear, but it is hoped they will generate significant increases in needed courses and programs.

Additional funds may be helpful to support a number of activities that increase the capacity of *all* the state’s public postsecondary education systems to support workforce needs. Examples include: better articulation from secondary to postsecondary courses and from two-year to four-year college programs; faculty and staff outreach, participation, and ongoing involvement in regional collaborative activities; establishing and implementing measures of success for programs and courses that have a direct workforce impact; supporting institutional research and planning for workforce development; and expansion of career development and counseling for students. It is critical that the allocation of additional resources for workforce-related activities at any level

of postsecondary education be accompanied by rigorous evaluation that identifies program impact and provides useful information about what does and does not work.

What Is The Next Step?

The role of postsecondary education in shaping the development of a competitive workforce continues to be an important policy issue for the future of California. The completion of this series of four reports must not end the Commission's examination of the topic. It is recommended that the Commission continue the workforce nexus as a research and policy priority.

Moving forward, the staff should work with the Workforce Advisory Committee and the postsecondary systems to review the research questions raised over the past two years to determine which remain unaddressed, and to identify new areas of research. A potentially fruitful area would be to take a deeper look at successful regional workforce development initiatives through case studies, interviews, surveys, or other data. Interviews conducted by Commission staff to date suggest that very interesting and useful information can be gained from such research to help inform recommendations on effective campus practices that support workforce development.

Before determining what additional research to pursue, the Commission may wish first to focus staff resources on pursuing implementation of the policy options it considers most important or timely. The options presented in this paper are offered only in their most bare bones form. The Commission may also wish to consider other options not presented in this paper. It is recommended that the Commission indicate which policy options it would like to pursue, highlight the priority items among those, and direct staff to develop an action plan for implementation.

