

Chapter 4

WORK-BASED LEARNING

This is a mini institute. We're the workers. We're doing real-world things here at this school. Everything is based on stuff that could happen outside of school once we start working. For example, in our projects, it's not just a group. Everybody has a different responsibility, especially the top dog, who is the project manager. In the real world, it would be our boss. It really trains us because we learn what we have to learn educationally, but we also learn what we have to learn socially or in the workforce.

Student, Digital Media Academy

One thing that's a really great thing about this Academy is the internships. I was able to intern all year in the emergency room at a local large hospital... we had two patients come in who were in full arrest. I was able to do CPR on them, alongside the technicians, doctors, and respiratory therapist... I think that was a huge experience for me because I was able to handle that....

Student, Health Academy

INTRODUCTION

Applied and work-based learning are central components of multiple pathways approaches. Applied learning enables students to learn through doing, which can result in greater understanding than learning through reading and listening alone. Students are also able to see the results of their learning, which provides motivation. Applied learning often takes the form of project-based or problem-based learning. When this is the case, applied learning promotes problem-solving skills and other forms of higher-order thinking. Work-based learning is a form of applied learning that links school-based instruction with activity that has consequences beyond the class or value beyond success in school. It is judged by professional standards; it uses the workplace, or in-depth experience with employer or community input, to engage students and promote learning and access to future educational and career opportunities.

The benefits of using work-based learning within an overall educational program are multidimensional. It can help address students' diverse learning styles. Work-based learning can add relevance to the curriculum by showing students how classroom learning applies in the world, and it can expose students to diverse career options. In addition, work-based learning promotes psychological and social development. This learning links students with mentors and other caring adults, and it can provide students with opportunities to gain confidence and impact the world they will enter beyond school (National Research Council and the Institute of Medicine, 2004; Benard, 1991).

Work-based learning has traditionally been defined by a learning experience's location — in the workplace — typically arranged for individual students. For example, in California, work-based learning is often implemented in the form of work experience or internships offered through the ROCP “community classroom” or “cooperative CTE” methodologies. School-based enterprises, however, are also considered work-based learning, even though they usually occur at the school

and are carried out by teams of students (CDE, 2008). A broader definition of work-based learning, including opportunities such as school-based enterprises, community-based group projects, and technology-facilitated experiences, may be preferable and called for if access is to be extended to more students as a required component of multiple pathway programs.¹ High-quality work-based learning has these key components:

- An explicit link between the activity and the classroom curriculum
- Direct input from professionals outside the classroom
- Assessment of work products according to professional standards
- Consequences for students beyond the class or value beyond success in school

The link to the curriculum reinforces and enhances classroom learning and distinguishes work-based learning from employment. Direct input from the employer or community means feedback throughout the experience, including physical or virtual employer visits to the school. Adherence to professional standards brings “reality” to the need for attention to timeliness and quality. Finally, students’ experience of value beyond the classroom provides a sense of accomplishment that students may not experience through traditional classroom feedback, such as grades.

Work-based activities fall along a continuum of experiences for students and exhibit increasing levels of intensity over time. Experiences begin with in-school projects and progress to projects and experiences in the outside world, with increasing complexity and consequence. The continuum often includes career speakers and tours appropriate for students as early as the elementary years, followed by job shadowing, which can begin in middle school and the early high school years. It then progresses to service learning, school-based enterprises, social enterprises, and internships — all of which may lead to both further education and career preparation activities, such as apprenticeships beyond high school. Throughout, the relationship between students and outside professionals also expands from listening to speakers to formal informational interviews, mentoring, entry into “communities of practice” outside the classroom, and more formal student/employer relationships.

Types of Work-Based Learning

Work-based learning can be categorized into the following four generic categories.

Internships are sustained learning experience in workplaces, designed to enrich classroom learning. Internships show students how their learning is applied in the world outside of school, offering access to tools, equipment, facilities, and expertise that are generally not available at school. Learning objectives are specified, and student performance is assessed. ROCPs often provide internships. They can be either unpaid, often offered as “community classroom” for students in ROCPs, or paid, offered as “cooperative CTE” for students in ROCPs.² Service

¹ The information in this chapter is based in part on research conducted with support of The James Irvine Foundation for a study entitled *Work-Based Learning in California: Opportunities and Models for Expansion* (Darche, Nayar, & Bracco, unpublished document, 2008).

² There is no formal definition of “internship” in the California *Education Code*, only of “community classroom” and “cooperative vocational education” (now “cooperative CTE”), implemented primarily, but not exclusively, by

learning is an internship that occurs in the nonprofit sector; it is of particular value to students who envision social services careers.

Enterprises and community-based projects can either be of a commercial nature, known as “school-based enterprises,” or of a social nature, recently named “social enterprises for learning” or “civic enterprise.” These entrepreneurial activities produce goods or services for sale or use to people other than the students involved. Examples include student-run cafes or video production studios that serve clients and may generate some revenue (though seldom enough to cover all costs). Social enterprises focus on community needs and produce services that benefit a specified “client,” such as a city agency. While social enterprises may continue over time, with successive groups of students participating, community-based projects are social enterprises of shorter duration.

Two School-Based Enterprises — One “Commercial” and One “Social”

The City of Petaluma asked Petaluma High School’s (PHS) construction arts program to provide street fixtures for downtown Petaluma. The City Council awarded the downtown redevelopment contract to the PHS program in 2003. Students in the drafting, metal, and wood shop classes have since designed, manufactured, and installed more than 300 metal benches, bike bollards, and other fixtures in the downtown. The construction arts program has used the proceeds from the work to upgrade shop tools and facilities to current industry standards so that PHS construction arts students can gain relevant industry experience.

At Emery Secondary School, in Emeryville, the Youth-Plan-Learn-Act-Now (Y-PLAN) experience involved a research project related to community needs that students completed in teams with the support of a UC Berkeley mentor. The project included the selection of a community project based on the needs assessments; investigation, site visits, and meetings with city officials to collect information and formulate solutions; synthesis of research and findings; ongoing reflection, writing, design, and modeling; preparation of final materials and PowerPoint presentation; and a final presentation before community members, parents, school and school district administrators, and city officials.

Technical mentoring (or “virtual apprenticeship”) is work-based learning whereby professionals provide direct, systematic input to students’ actual work. Technical mentoring may occur in the workplace as part of an internship or in a classroom. It may also occur through videoconferencing or web-based applications. The use of electronic means to connect professionals and students enables more students to have access to input from professionals. Technical mentoring differs from career or personal mentoring in its focus on student work, rather than career exploration or personal growth.

Simulated workplace experience mirrors work environments. Examples include automotive or construction programs in which sustained industry involvement allows students to develop and apply their skills in the context of industry standards.

ROCPs, which then become the vehicles for offering internships. Work Experience Education can also be used to offer internships, but the monitoring requirements are lower than they are in ROCPs.

EFFECTIVE PRACTICE

High-quality, work-based learning approaches employ effective pedagogy and structure to engage students. Teacher knowledge and skills and effective partnerships with businesses and communities are also critical.

Pedagogy

Applied and work-based learning experiences, to be effective, must be truly engaging, offer opportunities for reflection, be intentionally linked to classroom curriculum, and be assessed by both the teacher and the employer/client (Bailey, Hughes, & Moore, 2004; NWW; Norton Grubb, personal communication, December 19, 2008, as cited in Darche, Nayar, & Bracco, unpublished document, 2008). Eight criteria are identified as effective practice for work-based learning (see sidebar) (Darche, Nayar, & Bracco, unpublished document, 2008).

Pedagogical Criteria for Effective Practice in Work-Based Learning

In the workplace:*

1. Experiences offer in-depth engagement that reinforces academic and technical content and promotes higher-order thinking skills.
2. Opportunities are provided for exposure to communities of practice and social networks that support cognitive, social, personal, and career development.
3. Opportunities are provided for rotation among positions and functions with exposure to multiple supervisors for career development purposes as well as enhanced learning.

In the classroom:

4. Opportunities are provided for reflection about the experiences and their connection to classroom learning and students' personal interests.

Connecting the workplace with the classroom for students:

5. Learning opportunities in the workplace or community are identified and aligned with standards.
6. Learning objectives are specified through learning plans and monitored through close communication between teachers and employers.
7. Students receive close supervision from teachers or coordinators.

Assessment of learning in the workplace and classroom:

8. Student performance is assessed and documented, with input from the employer, client, or community.

* For those activities not physically taking place in the workplace, parallel experiences should be provided—for example, through school-based enterprises.

Program Structure

The work-based learning programs' structure also has a direct bearing on the practice's effectiveness. For example, the following factors have been identified as effective practice for work-based learning:

- Experiences are connected to thematic programs and to students' interests.
- Experiences are sequenced.
- Teachers, counselors, and other staff at the school coordinate their services to support students.
- Partnerships are created with postsecondary institutions, apprenticeships, and job training programs.
- The work-based learning coordination function is adequately staffed.
- School scheduling enables work-based learning.

In addition, the following programmatic elements are important structural issues that could enable more widespread implementation of work-based learning:

- The degree to which schools employ group versus individual activities is a key decision that requires attention at the outset of any new work-based learning initiative (Stern, 1997). Group activities hold promise for expanding access to opportunities outside the classroom, as they are cost-effective and can multiply learning opportunities. Group activities may be particularly conducive to learning in situations where group approaches are actually used in industry.
- Better and more widespread use of technology holds promise for programs that can use technology to enhance learning. While not every industry lends itself to "virtual experiences," the use of technology offers a cost effective way to expand work-based learning and maintain equitable access to opportunities.

Teacher Knowledge and Skills

Another important factor for effective practice involves the following teacher knowledge and skills (Bailey, Hughes, & Moore, 2004; Grubb & Badway, 1998):

- Understanding the workplace and culture of the industries in which students are being placed
- Understanding students' academic requirements
- The ability to work both independently and in teams, and to model the kind of openness to learning that teachers hope to instill in students
- Skill in facilitation that enables teachers to help students reflect on their experiences in meaningful ways
- Communication and coordination skills

Partnerships with Businesses and Communities

The quality of partnerships with employers is also a critical factor. The employer/client perspective is what distinguishes work-based learning from other forms of pedagogy and makes it a particularly powerful strategy. Successful internships require close partnership with employers in all aspects of the process (Hamilton & Hamilton, 1997).

Employers participate in work-based learning for various reasons, including recruiting future employees and helping to motivate their existing workers. If for-profit entities are to participate meaningfully over the long term, they will need to do so for more than philanthropic reasons, particularly if educators hope to place “at-risk” students in the workplace, given the increased levels of support that could be required (Bailey, Hughes, & Moore, 2004).

Partnership Building and Advisory Boards

Meaningful, mutually beneficial, ongoing partnerships with industry are the most important means to ensure quality work-based learning. It is important to nurture these relationships, both through well-designed advisory board structures and processes, and through ongoing communication. For example, the NAF trains educators in structuring and running effective advisory boards. Such boards not only identify opportunities for students, but can also identify resources to sustain programs.

Personalized Relationships with Employers

Personal connections must be made to establish and maintain opportunities for students. The role of a coordinator in engaging employers is paramount. Once opportunities are established, further collaboration is required to create effective learning plans for students that also meet employers' needs.

The ROCP teacher, having come into education with experience in industry as required by the ROCP credential, is responsible for employer outreach and student placement and monitoring. In academy programs, lead teachers often take on these responsibilities. In schoolwide or districtwide programs, coordinators may be assigned to work with employers and then link teachers and students with these opportunities. For example, the Petaluma Unified School District employs a “community entrepreneur” whose primary responsibility is to engage the community and secure learning opportunities for students. In all cases, the involvement of individuals who understand *both* the world of education and industry is critical.

Continuity Through Systemic Approaches

Employers appreciate continuity and predictability in addition to well-organized processes. Events such as the annual “Groundhog Job Shadow Day,” while not intended to provide in-depth experiences for students, nevertheless offer an opportunity to connect schools with the community and draw attention to the importance of career exposure for students. More significantly, continuity is offered through coursework and coordinators that employers can

count on over time. In this way, employers can be assured of a growing qualified workforce in their industry and have a greater interest in investing in programs.

Other Administrative Requirements

Other administrative criteria important in conducting effective work-based learning include the following (New Ways to Work [NWW], 2003):

- Experiences comply with state and federal laws.
- The district or school has adequate liability and workers compensation insurance.
- Students can easily and safely get to their opportunities; transportation is provided or provided for, as necessary.

CURRENT STATUS

Work-based learning is currently delivered through programs at comprehensive high schools, ROCPs, charter schools, and after-school programs. This section describes the various means by which work-based learning is delivered in California.

Academy Programs That Offer Work-Based Learning

California Partnership Academies

Work-based learning is mandatory for CPA students in the summer between their eleventh and twelfth grade years. All academy students participate in a mentoring experience during their junior year that encompasses career development, job or college shadowing, and goal setting. After their junior year, students performing well enough to be on track for graduation are placed in jobs, with employers making the hiring decisions. The local ROCP provides many of the CPA work-based learning opportunities.

National Academy Foundation Academies

NAF academies operate as small learning communities in high schools or autonomous small schools across the country. Required work-based learning in the NAF academies takes the form of internships, most of which are paid. These internships (which typically last between six and ten weeks) are an extension of the NAF academy classroom instruction and curriculum and are supervised by business leaders in a professional setting.

Regional Occupational Centers and Programs

The majority of work-based learning opportunities are provided through 74 ROCPs serving every school district in California. ROCPs offer both paid and non-paid workplace experiences. ROCP instructors facilitate student placements and monitor the experiences through site visits. Businesses have formal training agreements with local ROCPs to allow hands-on training at the workplace, under the supervision of a CTE credentialed teacher who has industry experience and often has pre-existing relationships with employers. Coordinating and supervising the

community classroom and cooperative CTE components are an integral part of an ROCP instructor's responsibilities, with paid time allotted for this task. Many ROCP courses offer industry-recognized certification, in addition to ROCP certificates based on industry standards.

Until recent budget changes, ROCPs collected average daily attendance (ADA) funding for student participation in all of the courses when students enrolled in ROCP classes beyond the 240 minutes required in the district's school day. The California *Education Code* prescribes the formulas for calculating ADA on the basis of the amount of time students spend in the workplace for either paid or unpaid work-based learning. The ROCP funding stream has expanded students' school days and enabled teachers to supervise students in the workplace.

Supervised Agricultural Experience

The Supervised Agricultural Experience program provides workplace or entrepreneurial projects that students carry out under the supervision of their instructors and often with guidance and advice from the industry. This student experience program is a stated component for all agricultural education programs and the students enrolled in them, as stated in *Education Code* Section 52454. This component involves thousands of agricultural students statewide who conduct supervised agricultural experience projects in every career pathway area of Agriculture and Natural Resources. This program provides the students with opportunities to not only conduct their projects and advance their education but also provides them opportunities to exhibit at county, district, and state fairs, and compete in the Proficiency Awards Program at the local, region, state, and national levels of the Future Farmers of America (FFA) student organization to measure their competency.

Other Opportunities in Comprehensive High Schools

Several types of work-based learning opportunities are available within comprehensive high schools, which receive funding through the CDE or are formally designated in the California *Education Code*. These opportunities include service learning, Work Experience Education (WEE), WorkAbility, and CTE student organization activities. Internships, school-based enterprises, and other types of experiences are implemented, but they are not formally recognized in the *Education Code*.

Service Learning

Service learning is an instructional strategy whereby students learn academic content standards by participating in organized service that addresses community needs and fosters civic responsibility. While service learning involves community service, it goes beyond the current community service requirements in many California high schools. True service learning is intentionally connected to the classroom curriculum, and it provides an opportunity for integration through well-planned projects that involve both academic and CTE knowledge and staff. The Fowler Unified School District uses service learning to integrate academic learning with real life projects in the community. The district reports better student attendance, graduation rates, and better test scores. In the alternative school, students at-risk of dropping out have

combined mathematics knowledge and construction skills to build sheds, teacher demonstration tables, and student benches for an elementary school.

Work Experience Education

WEE is a course of study that the governing board of any school district or local educational agency may establish according to provisions of the California *Education Code*. WEE programs extend learning experiences into the community where worksites become learning laboratories. While there are no “extra” funds for WEE, a school district may allocate some of its general fund dollars towards this program or use Perkins funding. The WEE program combines a workplace component with related classroom instruction to “maximize the value of the on-the-job experience”(Work Experience Education Guide).³ Three kinds of WEE are offered: “exploratory” is for unpaid career exploration; “vocational” focuses on specific occupations and is paid; and “general” provides general workplace skills and is paid. Of the three kinds of WEE, “vocational work experience” holds the most promise for providing experiences linked to classroom curriculum. However, the difficulty in achieving a “critical mass” of students in a single industry area to form a full vocational WEE class makes these classes difficult to offer. The exception may be in agriculture, which enrolls large numbers of students, as the vocational WEE does at Tulare High School.

WorkAbility

WorkAbility is a work experience designed specifically for students with special needs. The program’s mission is “to promote the involvement of key stakeholders including students, families, educators, employers and other agencies in planning and implementing an array of services that will culminate in successful student transition to employment, lifelong learning and quality of life.” WorkAbility includes a school-based component, connecting activities, such as career assessment and exploration, and work-based learning. Students receive subsidized or unsubsidized wages. While WorkAbility only serves a small percentage of the student population, it is a critical program for students with special needs. In addition, it can serve as a model for other work-based learning efforts within multiple pathways programs.

Career Technical Student Organizations

Although competitions sponsored by career technical student organizations (CTSO) are not usually considered work-based learning, so many aspects of these experiences reflect high-quality practice in work-based learning that they can be considered a form of work-based learning. CTSOs recognized by the CDE include Distributive Education Clubs of America, FHA-Hero, Future Business Leaders of America, FFA, Health Occupations Students of America, and Skills USA, with FFA being the largest. Like other CTSOs, FFA combines in-class activities; student-directed independent projects (which may take place at or outside the school site and be paid, unpaid, or entrepreneurial); and CTSO-directed activities, such as chapter meetings and competitions, to foster students’ workplace skill development, technical skills and knowledge, citizenship and leadership skills, and academic success.

³ To obtain a copy of the Work Experience Education Guide, e-mail Kimberly Born at kborn@cde.ca.gov

Business and industry leaders support CTSOs through donations to their foundations and participation in alumni groups, leadership, and judging competitions. CTSOs are often described as a "family," with the tight-knit connections among instructors, industry, and students supporting alignment of educational goals with industry goals, and facilitating students' seamless progression from high school to postsecondary education and careers.

Charter Schools and After-School Programs

Charter Schools

Charter schools are public schools that provide instruction in any of grades K-12 and may have a content theme, such as art or engineering, or a pedagogical theme, such as project-based learning. The existence of a critical mass of students in one industry sector facilitates internships and other forms of work-based learning. Oakland School for the Arts is an example of such a charter school. Similarly, schools that include project-based learning or "learning through internships" can establish systematic processes, with quality controls, to provide worthwhile experiences for students and industry partners. High Tech High in San Diego and The Met San Diego are examples.

In addition, charter school teachers may choose to not join the teachers' union or to waive their union rights, enabling them to work different hours than might otherwise be allowable. This flexibility can facilitate successful work-based learning by allowing teachers to meet with employers or conduct site visits outside of the normal school day. In addition to those schools mentioned, the Envision schools and the Center for Applied Research and Technology, a joint venture of the Fresno and Clovis school districts, have utilized the charter school model for the flexibility that it affords.

After-School Programs

After-school programs generally do not offer the kinds of work-based learning that would meet all the criteria listed earlier. However, if coordinated with academies and classrooms, after-school programs can augment school capacity. To the extent that some organizations have as their mission expanding career opportunities for youth (e.g., Girls, Inc.) and have built strong relationships with employers, these programs can sometimes serve as intermediaries between schools and employers.

Examples of Programs Supported by Nonprofit Organizations

The following programs are only a few examples of work-based learning offered by non-state supported initiatives. They exemplify high-quality practice and offer opportunities for replication or expansion of work-based learning. Each program is supported or coordinated by a third-party organization that provides expertise, materials, and tools and often leverages other resources.

Social Enterprises for Learning

Social enterprises for learning are similar to school-based enterprises, but they focus on social rather than commercial activity. Social Enterprises for Learning (SEfL), operated through U.C. Berkeley's Center for Cities and Schools (<http://citiesandschools.berkeley.edu/>), are school-based, community-driven enterprises in which students identify a community need and work with local government and the community to develop a product or specific service to address that need. SEfLs aim to: a) produce goods or services for clients or customers; b) provide benefits to a larger community or general public; and c) enable participants to develop a specific knowledge or skill. To the extent possible, students initiate, plan, design, and manage their own projects. Center-sponsored SEfLs are currently operating in the San Francisco Unified School District, West Contra Costa Unified School District, and Emery Unified School District.

Virtual Enterprise

Simulated workplace environments, like Virtual Enterprise (<http://www.virtualenterprise.org>), allow students to engage in the hands-on learning of an internship or other work-based placement in a controlled environment. Virtual Enterprise takes place on the school campus and online, and it avoids many of the logistical complications (such as workers' compensation, transportation, and multi-site supervision) of workplace-based learning. Virtual Enterprises are often part of or the entire business education course; they can form part of a coherent sequence of courses leading to a culminating capstone activity or course. Students set up and operate a "virtual" business with local business partners. The students decide on the business, its products or services, and management structure; use current software; develop communication skills; and operate their virtual business on the Internet in a global network, using both academic and career and technical knowledge. The Virtual Business Enterprise Center is in Bakersfield in the Kern High School District and currently serves over 4,000 students in 147 schools in California.

ACME Animation Network

ACME is an example of a technology-facilitated forum. It is a third-party virtual space that provides resources to high school students in animation courses. A tiered system of peer and professional feedback and advice allows students to receive guidance on their work from college students and professional animators as well as from their instructors. ACME students can have valuable contact with professionals representing an industry that may not be in their geographical area. ACME currently operates in 59 schools and serves 1,482 students.

CHALLENGES

The challenges to implementing work-based learning fall into the following interrelated categories.

Definitional Issues

Work-based learning is generally thought to occur in workplaces, with individual students placed with individual employers. However, this model is not always possible or desirable. Placing

large numbers of students into workplaces would be very difficult. An expanded definition of work-based learning would facilitate access to these experiences while imparting the benefits of work-based learning. Further, current work-based learning definitions and policies the *Education Code* and the *California Code of Regulations* may constrain implementation of work-based learning in multiple pathways programs. The following are some examples:

- **Community classroom and cooperative CTE.** The definition of community classroom reflects the past view of CTE and work-based learning as preparing students primarily for entry-level employment: “ ‘Community Classroom’ is an instructional methodology which utilizes unpaid on-the-job training experiences at business, industry, and public agency sites to assist students in acquiring those competencies (skills, knowledge, and attitudes) necessary to acquire entry-level employment.” This definition would be more consistent with the multiple pathways initiative’s aims if it read “to prepare students for entry-level employment, postsecondary education and long-term careers.”

In addition, a community classroom teacher is defined as “the certified vocational education instructor, employed by the local educational agency operating a community classroom” (<http://www.cawee.org/Legal/Barclays.pdf>). The requirement that these methodologies be implemented only by CTE instructors suggests that if academic teachers within multiple pathways programs choose to implement these methodologies, they would have to do so in a team with a CTE instructor, or obtain a CTE credential. In a team situation, however, workplace supervision usually would need to be the responsibility of the CTE teacher, who would be more familiar than the academic teacher about industry safety issues.

- **Internship and field study.** There is no formal definition in the *Education Code* of “internship,” “field study,” “school-based enterprise,” “social enterprise for learning,” or other forms of work-based learning that could be offered through either an academic or a CTE course.
- **Classroom-based instruction.** SB 740 (2001) defines “classroom-based instruction” as occurring when students are under the immediate supervision and control of a credentialed, charter school employee at the school site. SB 740’s restrictions may limit work-based learning in charter schools. In placing significant requirements on schools using more than 20 percent of their instructional time for “non-classroom-based instruction,” SB 740 combines internships, independent study, home schooling, and distance education, among other activities, into a single, restricted category (CDE, 2008).⁴

Time

The time to place and monitor students in the workplace, and the lack of flexibility regarding the school schedule are additional challenges. Short class periods make work-based learning

⁴ Charter school students may enroll in ROCP courses as concurrently enrolled students. However, further inquiry is necessary to ascertain whether the unique allocation of charter school ADA – calculated not by instructional minutes per day, but by instructional minutes per year – would impact charter schools’ access to ROCP ADA.

difficult, and travel time adds further constraints. Block periods are critical for applied and project-based learning and facilitate work-based learning, but the 240-minute school day can still pose a challenge. Schools have used ROCPs to extend the school day, given that ROCPs could draw down ADA for student enrollments beyond the 240-minute school day. However the current budget situation of “flexibility” may jeopardize this strategy. In addition, lack of time in the school day for work-based learning is aggravated by requirements for school improvement efforts that do not support a multiple pathways approach.

Both CPAs and NAF academies require their students to participate in summer internships or mentorships. However, many educators seek to implement work-based learning during the school year as well. After-school programs that are connected with classroom curricula can expand the school day.

Quality and Lack of Models

Although real engagement at the workplace, the need for reflection in the classroom, and curricular connection between the two are important for work-based learning (Bailey, Hughes, & Moore, 2004, and Grubb & Badway, 1998), these features are not always present, especially in programs that are not designed and monitored carefully, or when scheduling limits the amount of time students can spend in workplaces. While ROCP has many quality programs, few models of quality work-based learning in comprehensive high schools exist.

Transportation

Transportation is a significant logistical concern. Students with their own transportation or with access to public transportation have advantages over other students. When individual placements are desirable to enhance student learning, student access to transportation is critical. Palmdale High School’s work-based learning programs use donated vans to transport students. Like most ROCPs, East San Gabriel Valley ROP dedicates funding to buses, while San Francisco’s Build SF relies on public transportation.

Teacher Capacity, Experience, and Preparation

Teacher capacity to develop offsite work-based learning opportunities and lack of teacher experience in the workplace are additional challenges. While ROCP teachers have this experience, most other teachers do not. Teachers must have knowledge about the opportunities available, both across the community and within the organizations. They must also be able to link workplace learning to the classroom curriculum.

Employer Engagement

Outside of ROCPs, many districts do not have meaningful relationships with their local employers and communities. Time and knowledge are needed to build and nurture employer relationships, including advisory committees. Sufficient opportunities are also needed to accommodate large numbers of students in multiple pathway programs in a given community, particularly during a time of high unemployment.

Funding

Prior to 2009, funding for work-based learning (beyond WEE) was largely provided through ADA generated by ROCP attendance, and it may now be provided through ROCP block funding at districts' discretion. The Perkins funds may be used to support start-up and improvement of work-based learning for students in approved CTE programs (CDE & CCCCO, 2008)⁵ but not ongoing operation. Some resources are available through the CDE for service learning and for work-based learning offered in CPAs. In addition, Workforce Investment Act funding may be used for work-based learning for some students. Beyond these funds and those provided through nonprofit and private sector initiatives, no resources are specifically designated for work-based learning that non-CTE teachers may want to implement to enhance their courses, as had been the case when funds were available through the National School-to-Work Opportunities Act.

Data and Accountability

One of the most challenging policy barriers to work-based learning is the current emphasis on high-stakes standardized testing. The current accountability system limits the definition of “rigor” to what can be measured on standardized tests, thus deemphasizing activities that may be more rigorous but which are more difficult to measure (Grubb & Oakes, 2007; WestEd, 2006). In addition, the standards against which achievement is assessed emphasize breadth versus depth, whereas work-based learning is intended to promote depth of understanding (ACT, 2007).

Workers' Compensation and Liability Insurance

Workers' compensation coverage is required in the *Education Code* and state and federal labor laws to implement work-based learning. If work-based learning opportunities are paid, employers assume responsibility for workers' compensation, but if they are unpaid, the district must ensure that it has the appropriate policies to cover students in the case of accident or injury. The *Education Code* requires ROCPs to have these policies in place (CDE, 2008). School districts must also provide workers' compensation insurance for students in exploratory (unpaid) work experience (<http://www.cde.ca.gov/ci/ct/we/>). Most likely, all districts currently maintain adequate coverage to run work-based learning programs. However, significant expansion of work-based learning placements in workplaces may require some districts to review their policies and ensure that the teachers supervising the experiences are knowledgeable about relevant safety issues.

⁵ From the California State Plan for CTE p. 226: Courses assisted with Perkins IV funds must be integral to an approved CTE sequence of courses; be explicitly designed to prepare students with career skills that lead to employment (employment could be at the completion of high school, community college, apprenticeship, or four-year college or university); have no less than 50 percent of course curriculum and content directly related to the development of career knowledge and skills (the California CTE Model Curriculum Standards and Frameworks can be useful tools in ensuring and validating that sufficient CTE content is embedded in the curriculum); have business and industry involvement in the development and validation of the curriculum; and be taught by a teacher who meets the CTE teacher credential and occupational experience qualifications.

CONCLUSION

Work-based learning is a central component of multiple pathway approaches. However, opportunities for work-placed based learning have changed over the past decades. It is important that California policy supports new forms of work-based learning, including school-based enterprises, social enterprises for learning and community-based group projects, and technology-facilitated experiences. California needs to align its policy and regulatory frameworks to support work-based learning opportunities and to ensure that work-based learning is closely linked to high-quality pathways curricula.

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