

## WBL/SG21 Framework

### I. Purpose of Framework

The purpose of this framework is to outline and establish regionally agreed upon procedures and goals for the SG21 MIS data element and the work-based learning (WBL) data collection processes essential to the data element. The importance of this framework is increasing significantly as the Chancellor's office is anticipated to connect SG21 to some form of college-based funding. Understanding the full range of experiences will support professional learning around best practices and future research related to accumulation of WBL experiences. Improved tracking will also enable the region to advocate to leadership and legislators the full level of activity, together with results, which could inform future investments.

Collecting accurate data is critical for tracking progress toward the goal of expanding Work-Based Learning. In its simplest form, the MIS Data Element SG21 is intended to capture the number of students participating in WBL experiences at each college. There are three category codes associated with different types of WBL (i.e., A: preparing for employment, B: applying learning in practical experiences, and C: building career awareness). If a student has participated in more than one type of WBL experience during the reporting term, only the highest applicable category code is recorded. Also, since only the broad category codes are reported (A, B, or C) the detail on types of experiences within each code are not recorded. Colleges are encouraged to collect data on the types of WBL experiences within each category code (i.e., sub-categories). This will allow colleges to understand the full-range of student WBL experiences at their colleges and also allow them to report one code for SG21. The table below provides the category codes associated with different types of WBL (i.e. preparing for employment, applying learning in practical experiences, and building career awareness), reflecting the continuum of experiences. (WBL MIS Data Element SG21 One Pager, 2020)

DED#	DATA ELEMENT NAME	FORMAT
<b>SG21</b>	<b>STUDENT-WORK-BASED-LEARNING-STATUS</b>	<b>X(01)</b>
This element indicates whether the student participated in specific types of work-based learning during the reporting term.		
Coding	Meaning	
A	Student participated in work-based learning preparing the student for employment in a specific range of occupations, such as internships, work experience, and capstone projects	
B	Student participated in work-based learning allowing the student to apply learning through practical experience and interaction with professionals from industry and the community outside of school, such as job shadows, service learning, class projects or challenges, and mentorships	
C	Student participated in work-based learning allowing the student to build awareness of the variety of careers available, begin identifying areas of interest, and explore career options, such as guest speakers, company tours, field trips, career fairs, and mock interviews	
N	Student did not participate in work-based learning	
X	Unknown/unreported	

## II. Work-Based Learning Definition

Work-based learning (WBL) is a critical strategy to support learning and prepare students for the workforce; it makes learning relevant and leads to strong labor market outcomes. Employers also benefit from the preparation of a strong workforce in general to the vetting of specific prospective employees. (WBL MIS Data Element SG21 One Pager, 2020)

WBL spans a continuum of experiences — from career awareness to training — that allow students to apply classroom content in professional settings while gaining real-world experience and demonstrating competencies to employers. (WBL MIS Data Element SG21 One Pager, 2020)

In 2019 the Regional Consortium collaborated with representatives from each college as a part of Workgroup 4 to develop a regional definition for work-based learning. This definition has been a guiding point for all discussion related to SG21 and the work-based learning continuum.

Definition:

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning. (See Addendum 1- WBL Infographic)

This agreed upon regional definition has helped to institute the guidance needed to establish student and employer centered processes across the region. The definition will be evaluated annually to ensure alignment to new developments in WBL.

## III. Work-Based Learning Glossary

The Work-Based Learning Glossary (see Addendum 2) provides the region a consistent reference point to categorize experiences along the continuum of work-based learning. The glossary was designed with the MIS data element SG21 as the core driver in determining how activities could be grouped. These activities are grouped into three categories, based on the SG21 reporting requirements, based on students participating in work-based learning:

- **A- Preparing the student for employment** in a specific range of occupations. Examples: internships, work experience, capstone projects
- **B- Allowing the student to apply learning through practical experience and interaction with professionals from industry and the community** outside of school Examples: job shadows, service learning, class projects or challenges, mentorships
- **C- Allowing the student to build awareness of the variety of careers available**, begin identifying areas of interest, and explore career options. Examples: guest speakers, company tours, field trips, career fairs, mock interviews

#### IV. Process for Adding WBL Experiences to the Glossary and Amending the WBL Definition

Additions to the WBL Glossary and/or changes to the WBL definition will be evaluated every June. If a college identifies an activity that it believes should be included in the glossary or believes the WBL definition should be amended, they will:

1. Coordinate with the local CE Dean or Associate Dean to propose changes or additions to the glossary or WBL definition
2. Dean or Associate Dean will email the Regional SG21/WBL Sub-group, including a brief description of the activity or change and the rationale for the addition.
3. The Regional SG21/WBL Sub-group will review the submission, with the specific intent of comparing the activity to the regionally approved WBL definition.
4. There are three possible actions once a submission is reviewed:
  - a. Consistent with WBL definition - the Regional SG21/WBL Sub-group will present the WBL activity or change to the WBL definition for Regional Dean's approval, and if approved, the activity or amendment will be added
  - b. Inconsistent with WBL definition - Regional SG21/WBL Sub-group will notify the college that the activity is inconsistent with the WBL definition and will not be added
  - c. Incomplete/insufficient information to evaluate - Regional SG21/WBL Sub-group will seek further clarification from the submitter

The Regional SG21/WBL Sub-group consists of: Regional Chair, Workgroup 4 Chairs, Data and Research Workgroup representative, and two WBL Practitioners. The purpose of this group is to preserve the consistency of the Work-Based Learning Glossary while keeping up with industry, student and reporting needs and changes. Submissions may be directed to Kevin McMackin, [kevin.mcmackin@gcccd.edu](mailto:kevin.mcmackin@gcccd.edu).

#### V. Recommended Research Questions to Consider Ahead of Data Collection/Reporting

- How do we increase the number of work-based learning experiences in our courses?
- How do we better understand student experiences along the continuum of work-based learning?
- How do we test the assumption that the more work-based learning experiences a student has the more likely they are to be employed?

#### VI. Framework for WBL/SG21 Data Tracking and Reporting at the Sub-Category Level

Regional acceptance and consistency to the definitions and categories outlined in the Work-Based Learning Glossary are vital to ensure accurate and usable data for aggregated reporting in the future. It is critical for colleges to utilize the agreed upon definitions and categories outlined in this document and the attached work-based learning resources. Accurate data collection and reporting will positively impact our colleges and the region as SG21 is implemented and beyond.

It is proposed that SG21 data be tracked and reported in the following manner:

- Regional Reporting/Tracking
  - Reporting/tracking will focus on adherence to the Work-Based Learning Glossary and will emphasize the required category level(s) following MIS SG21 reporting

categories A, B, and C. The Regional Consortium will collect and aggregate data from the colleges to inform future professional development and investments.

- College/Institutional Level Reporting/Tracking
  - Given the limitations with the SG21 data element, colleges are encouraged to collect data at the sub-category level. This will more accurately represent their work-based learning efforts and provide the college with valuable data to improve student success related to work-based learning (For more information about College/Institutional Level Reporting and Tracking at the sub-category level see Addendum 3). It is important to note that students and colleges stand to benefit greatly from sub-category reporting. This approach will help to supplement some of the flaws in SG21 reporting and provide colleges with a more accurate representation when analyzing WBL activities. Further, it is requested that colleges provide the Region with sub-category level data so it can be aggregated and analyzed to benefit students, colleges and employers in the Region.

VII. Regional Consistency in Sub-categories

To ensure consistency and provide the region with the ability to aggregate data from each of the colleges, it is proposed that colleges maintain and utilize the sub-categories that are outlined in the WBL Glossary. As such, it is requested that colleges not adjust the sub-categories in the glossary.

If colleges determine it is necessary to adjust the glossary or classifications locally and not adopt the regional framework, they will be asked to provide the region with an outline mapping their data to the regional framework.

While colleges are asked to preserve the subcategories outlined in the WBL Glossary, they are encouraged to identify additional data points they deem important, like pre-employment services (i.e. resume support/workshops). This can be accomplished by adding additional subcategories beyond or outside the scope of the WBL glossary (See below example).

For example, if a college wanted to track resume support as a part of category C, they could do this by adding additional C-level sub-categories (see table below). This process provides colleges with flexibility and preserves the regional WBL Glossary and Framework.

C	C1	Career fair	C1- C6 "Frozen" Subcategories from the WBL Glossary
	C2	Field trips	
	C3	Guest speakers	
	C4	Mock interviews	
	C5	Industry speakers/ presentations	
	C6	Workplace/company tours	
	C7	Resume Workshop	Open/Additional Subcategories added by college
	C8	Open	
	C9	Open	
	C10	Open	

Addendum 1

Work-based Learning Infographic



# Applied and WORK-BASED LEARNING

Preparing students to succeed academically and thrive in their future careers

## WHAT is applied and work-based learning? ?

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning.



"In the 21st century, the majority of entry-level jobs require a rich mix of formal postsecondary education along with high-quality work experience."

(Carnegie & Smith, 2018)

## HOW does it help students? ?

Applied and work-based learning can provide students a deeper, more engaging and relevant learning experience in a number of ways:

- Connects academic learning with real-world experiences, making learning relevant
- Enhances student motivation, retention, and academic success
- Supports students in defining career goals
- Gives students practical experience and helps them develop in-demand technical skills, 21st century skills, and career competencies

## WHY is WBL important? ?

### WBL fosters deeper engagement

Enables students to:

- learn by doing
- learn skills and concepts in context
- see direct links between what they learn in the classroom and problems in applied settings\*

### WBL offers students better outcomes

- persistence
- graduation rates
- employment rates
- better outcomes for underserved populations\*\*

\* California Department of Education, 2010; Holzer & Lerman, (2014)

\*\* Rodriguez, J., Fox, H., & McCambly, H. (2016). *Work-Based Learning as a Pathway to Postsecondary and Career Success*. Champaign, IL: Office of Community College Research and Leadership. University of Illinois at Urbana-Champaign.

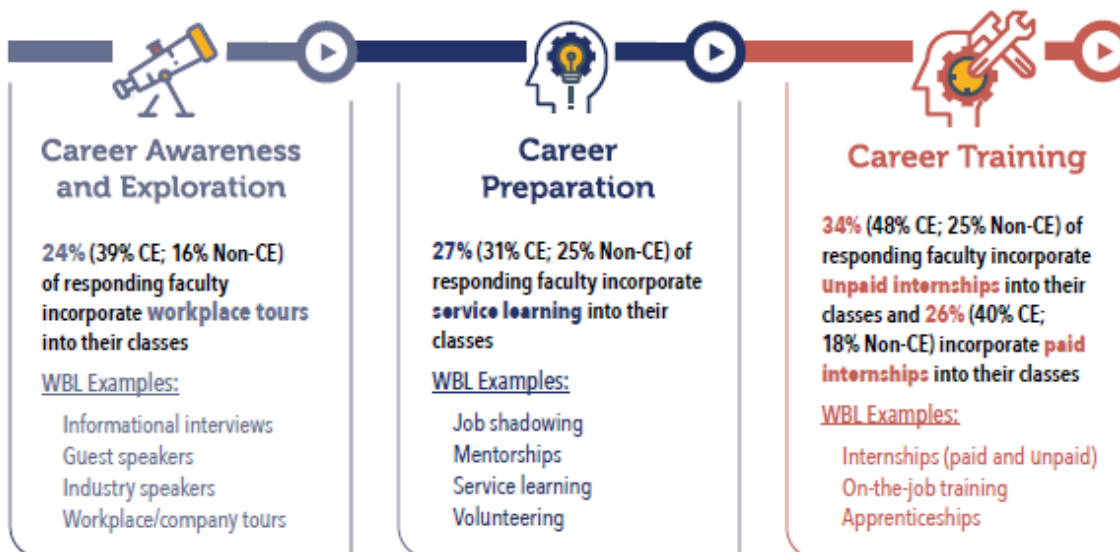
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## What are faculty saying about applied and work-based learning?



Faculty from 10 community colleges in San Diego and Imperial Counties were surveyed about their involvement with and attitudes about applied and work-based learning.\*



- 71% of responding faculty who use applied and work-based learning strategies do so because it "brings relevance to curriculum – helps students understand why they need to learn something"
- "[There's] a cultural shift at the colleges that it's every faculty member's responsibility to prepare every student for success in their career."
- "My wish would be that career education programs collaborated with GE courses (and vice versa) to build 21st century skills in focused, reinforced, relevant ways."
- "Theories alone, without application to students' lives, are quickly forgotten. When their relevance to student experience can be demonstrated, then students remember concepts and can integrate them into their daily lives."

## How do I get involved?



### Partner with your campus Career Center and Work-Based Learning Coordinator!

Help students explore career options and teach them the professional skills needed to be successful in today's labor market. Contact your campus WBL Coordinator or Career Center for support in integrating WBL activities into your classes to connect your students' academic learning with real-world experiences.

\* Surveys were sent to faculty across 10 community colleges in San Diego and Imperial Counties. A total of 376 faculty responded – 140 of those were career-education faculty and the other 236 were academic faculty.

Addendum 2

Strong Workforce Program – Work-Based Learning and Job Placement Workgroup

Glossary of Applied and Work-Based Learning Opportunities

CCC MIS Data Element	Opportunities	Definitions
<p><b>A</b></p> <p>Student participated in work-based learning preparing the student for employment in a specific range of occupations, such as:</p> <ul style="list-style-type: none"> <li>• internships</li> <li>• work experience</li> <li>• capstone projects</li> </ul> <p><b>(Continuum: Career Training and Preparation)</b></p>	<p><b>Apprenticeships</b></p>	<p>Experiences for students in one or more crafts or trades that combine classroom and on-the-job training. Students learn and practice all phases of the trade or occupation in real-world applications. “Registered Apprenticeship” is a training strategy that pays wages to apprentices during the term of their apprenticeship. These wages are a portion of the skilled wage rate that increases throughout the training program in accordance with a predetermined union negotiated wage scale. (<i>California Apprenticeship Coordinators Association</i>)</p>
	<p><b>Capstone projects</b></p>	<p>Projects involving a process in which students pursue independent research or work on a question or problem of their choice, engage with the scholarly debates in the relevant disciplines, and — with the guidance of faculty and industry mentors — produce a substantial paper or product that reflects a deep understanding of the topic.</p>
	<p><b>Clinical experiences</b></p>	<p>Experiences that combine classroom learning with supervised hands-on immersion experiences in specific fields, mostly in industries that involve human services. In health fields, clinical training is founded on actual observation and lab instruction and/or treatment of patients, as distinguished from theoretical or experimental training. The training is usually highly specialized and includes coursework specific to performing functions and tasks in an actual workplace. (<i>Siemens Clinical Training &amp; Continuing Education; Clinical Training Institute as cited by National Network in Successful Strategies for Employers</i>)</p>
	<p><b>Cooperative work experience education</b></p>	<p>The employment of students in part-time jobs selected and approved as having educational value for the students employed therein and coordinated by college employees. (Title 5 § 55250.3)</p> <p>(a) General Work Experience Education is supervised employment which is intended to assist students in acquiring desirable work habits, attitudes and career awareness. The work experience need not be related to the students' educational goals. Student's jobs need not be directly related to their educational goals. (Title 5 §55252)</p> <p>(b) Occupational Work Experience Education is supervised employment extending classroom based occupational learning at an on-the-job learning station relating to the students' educational or occupational goal. (Title 5 §55252)</p> <p><a href="https://extranet.cccco.edu/Portals/1/AA/Credit/2015/2015_07CL_CoopWorkExperience.pdf">https://extranet.cccco.edu/Portals/1/AA/Credit/2015/2015_07CL_CoopWorkExperience.pdf</a></p>
	<p><b>Internships (Unpaid)</b></p>	<p>Sustained work-based learning experiences designed to enrich and expand classroom learning, showing students how their learning is applied in the world outside of school, and offering access to tools, equipment, facilities, and expertise that are generally not available at school. Learning objectives are specified and student performance is assessed. In unpaid internships, learning takes precedence over production. (<i>WestEd, Work-Based Learning in California</i>)</p>
	<p><b>Internships (Paid)</b></p>	<p>Sustained work-based learning experiences designed to enrich and expand classroom learning, showing students how their learning is applied in the world outside of school, and offering access to tools, equipment, facilities, and expertise that are generally not available at school. Learning objectives are specified and student performance is assessed. In paid internships students are required to meet the employers' expectations for productive work; these expectations, however, unlike in regular jobs, are discussed in advance with the employer and crafted to ensure that they also address the students' learning goals. (<i>WestEd, Work-Based Learning in California</i>)</p>
	<p><b>On-the-job training</b></p>	<p>Training by an employer that is provided to a paid participant while engaged in productive work in a job that provides knowledge or skills essential to the full and adequate performance of the job. On-the-job training is generally of limited duration. (<i>Code of Federal Regulations and Workforce Investment Act</i>)</p>
	<p><b>Research-based and field experiences</b></p>	<p>Opportunities for students to participate in unpaid and paid research projects (e.g., in sciences, social sciences, media studies) and field experiences (e.g., in environmental sciences) that extend classroom learning. Research-based and field experiences teach skills that are difficult to teach or learn in classrooms (e.g., the importance of calibrating instruments or the importance of safety procedures), demystify and enhance motivation for learning research skills or exploring the natural world, support critical thinking in the collection and use of data, and provide opportunities to apply knowledge learned in the classroom to the real world outside of school.</p>

CCC MIS Data Element	Opportunities	Definitions
<p><b>B</b></p> <p>Student participated in work-based learning allowing the student to <b>apply learning through practical experience and interaction</b> with professionals from <b>industry and the community</b> outside of school, such as:</p> <ul style="list-style-type: none"> <li>• job shadows</li> <li>• service learning</li> <li>• class projects or challenges</li> <li>• mentorships</li> </ul> <p><b>(Continuum: Career Preparation and Exploration)</b></p>	<p><b>Classroom projects or challenges with industry involvement</b></p>	<p>Substantial classroom projects or challenges in which industry representatives provide guidance in design and implementation as well as assessment or feedback. Examples include robotics projects supported by local engineers or construction projects supported by local union representatives. Industry-informed projects can be useful when logistics or other constraints make workplace placements difficult. Classroom challenges, sometimes used for formative assessment purposes, may include problems to solve or student competitions juried by employers.</p>
	<p><b>Job shadowing (individual)</b></p>	<p>Opportunities for students to spend time with a worker on the job, observing actual workplace tasks in order to explore a potential career interest. <i>(ERIC Thesaurus)</i> Job shadows may involve applied learning if there is sufficient time and advance preparation with the employer and instructor.</p>
	<p><b>Mentorships with industry professionals</b></p>	<p>One-to-one relationships between students and more experienced professionals in chosen fields of interest to explore career and related issues. Career mentors foster the student's development by providing challenges, encouragement, guidance, and resources. <i>(U.S. Congress, Office of Technology Assessment)</i></p>
	<p><b>Simulated workplace experience</b></p>	<p>Work-based learning activities that simulate work environments. Examples include automotive or culinary programs in which sustained industry involvement allows students to develop and apply their skills in the context of industry standards and expectations. Simulated experiences may be valuable when experiences in real work settings are not possible, due to logistical or other constraints. <i>(WestEd, Work-Based Learning in California)</i></p>
	<p><b>Service learning</b></p>	<p>A teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. <i>(Learn and Serve America National Service Learning Clearinghouse and Mesa College)</i></p>
	<p><b>Student-run commercial or social enterprises</b></p>	<p>Enterprises that 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 generate revenue. Social enterprises focus on social rather than commercial activity. Examples include community planning projects or energy auditing for local residents. <i>(WestEd, Work-Based Learning in California)</i></p>
	<p><b>Volunteering/ community service</b></p>	<p>Voluntary service activities that may or may not be connected to classroom curriculum, but which offer opportunities for exploring careers and learning by doing real work.</p>
<p><b>C</b></p> <p>Student participated in work-based learning allowing the student to <b>build awareness of the variety of careers</b> available, begin <b>identifying areas of interest</b>, and <b>explore career options</b>, such as:</p> <ul style="list-style-type: none"> <li>• guest speakers</li> <li>• company tours</li> <li>• field trips</li> <li>• career fairs</li> <li>• mock interviews</li> </ul> <p><b>(Continuum: Career)</b></p>	<p><b>Career fair</b></p>	<p>Events in which employers, recruiters, and schools provide information about job and internship opportunities in their companies or organizations. Students may interact informally with employers; in some cases, job interviews are also conducted. <i>(UC Berkeley Career Fairs)</i></p>
	<p><b>Field trips</b></p>	<p>Excursions by groups of students to a place away from their school or college environment or an on-campus visit for exposure to an industry-related experience (e.g., culinary students visiting a campus kitchen). Field trips can help spark career interest and provide students with first-hand exposure to relevant industries, workplaces, careers, or specific issues and topics (e.g., industrial design or use of technology), as well as the opportunity to ask questions of personal interest and to interact with field trip hosts.</p>
	<p><b>Guest speakers and industry presentations</b></p>	<p>Opportunities for industry representatives to discuss careers and trends in their fields, skills required, education required, and their own career paths. Guest speakers and industry presentations provide an opportunity for students to hear firsthand about a particular occupation, the necessary preparation and required knowledge the occupation requires, and other interesting information from current practitioners in a field. <i>(www.ode.state.or.us/teachlearn/certificates/diploma/guest-speaker.pdf)</i></p>
	<p><b>Mock interviews</b></p>	<p>Simulations of actual job interviews, which provide opportunities to practice for interviews and receive feedback from employers. Mock interviews provide exposure to the interview process with employers and chances to learn about industry hiring expectations.</p>
	<p><b>Informational interviews with industry professionals</b></p>	<p>Opportunities for students to make contact with business/industry representatives for telephone or in-person interviews, lasting approximately 15 minutes to an hour, to explore opportunities in a given career area or occupation, the skills and education required for entry and success, the long-term growth potential, and, often, the career path taken by the representative in arriving at his/her current position.</p>



CCC MIS Data Element	Opportunities	Definitions
Awareness and Exploration)	Workplace/company tours	Visits to real workplaces that provide opportunities for students to learn first-hand about the skills required in various industries or career areas; the career paths taken by those in the field; the tools, materials and equipment used; and the work environment and expectations for performance in various industries.

Revised 11/12/20; this glossary was developed by the SWP Work-Based Learning and Job Placement Workgroup with the understanding that other definitions may be available. Glossary is organized according to the WBL categories listed in the California Community Colleges Management Information Systems (MIS) Data Element SG21 (DED# SG21) - <https://webdata.cccco.edu/ded/sg/sg21.pdf>.

Addendum 3

**Proposed Classifications of Sub-Categories**

State Reporting	Local/Practitioner Reporting		Generally Recognized Definitions for Reporting
Required SG21 Categories	Recommended Sub-Categories		
A A1- A8 "Frozen" A9- A12 "Open"	A1	Apprenticeships	Experiences for students in one or more crafts or trades that combine classroom and on-the-job training. Students learn and practice all phases of the trade or occupation in real-world applications. "Registered Apprenticeship" is a training strategy that pays wages to apprentices during the term of their apprenticeship. These wages are a portion of the skilled wage rate that increases throughout the training program in accordance with a predetermined union negotiated wage scale. <i>(California Apprenticeship Coordinators Association)</i>
	A2	Capstone projects	Projects involving a process in which students pursue independent research or work on a question or problem of their choice, engage with the scholarly debates in the relevant disciplines, and — with the guidance of faculty and industry mentors — produce a substantial paper or product that reflects a deep understanding of the topic.
	A3	Clinical experiences	Clinical training combines classroom learning with supervised hands-on immersion experiences in specific fields, mostly in industries that involve human services. In health fields, clinical training is founded on actual observation and lab instruction and/or treatment of patients, as distinguished from theoretical or experimental training. The training is usually highly specialized and includes coursework specific to performing functions and tasks in an actual workplace. <i>(Sources: Siemens Clinical Training &amp; Continuing Education; Clinical Training Institute as cited by National Network in Successful Strategies for Employers)</i>
	A4	Cooperative work experience education	The employment of students in part-time jobs selected and approved as having educational value for the students employed therein and coordinated by college employees. <i>(Title 5 § 55250.3)</i>  a) General Work Experience Education is supervised employment which is intended to assist students in acquiring desirable work habits, attitudes and career awareness. The work experience need not be related to the students' educational goals. Student's jobs need not be directly related to their educational goals. <i>(Title 5 §55252)</i>

			b) Occupational Work Experience Education is supervised employment extending classroom based occupational learning at an on-the-job learning station relating to the students' educational or occupational goal. (Title 5 §55252)
<b>A5</b>	<b>Internships (Unpaid)</b>		Sustained work-based learning experiences designed to enrich and expand classroom learning, showing students how their learning is applied in the world outside of school, and offering access to tools, equipment, facilities, and expertise that are generally not available at school. Learning objectives are specified and student performance is assessed. In unpaid internships, learning takes precedence over production. ( <i>WestEd, Work-Based Learning in California</i> )
<b>A6</b>	<b>Internships (Paid)</b>		Sustained work-based learning experiences designed to enrich and expand classroom learning, showing students how their learning is applied in the world outside of school, and offering access to tools, equipment, facilities, and expertise that are generally not available at school. Learning objectives are specified and student performance is assessed. In paid internships students are required to meet the employers' expectations for productive work; these expectations, however, unlike in regular jobs, are discussed in advance with the employer and crafted to ensure that they also address the students' learning goals. ( <i>WestEd, Work-Based Learning in California</i> )
<b>A7</b>	<b>On-the-job training</b>		Training by an employer that is provided to a paid participant while engaged in productive work in a job that provides knowledge or skills essential to the full and adequate performance of the job. OJT is generally of limited duration. ( <i>Code of Federal Regulations and Workforce Investment Act</i> )
<b>A8</b>	<b>Research-based and field experiences</b>		Opportunities for students to participate in unpaid and paid research projects (e.g. in sciences, social sciences, media studies) and field experiences (e.g. in environmental sciences) that extend classroom learning. Research-based and field experiences teach skills that are difficult to teach or learn in classrooms (e.g. the importance of calibrating instruments or the importance of safety procedures), demystify and enhance motivation for learning research skills or exploring the natural world, support critical thinking in the collection and use of data, and provide opportunities to apply knowledge learned in the classroom to the real world outside of school.
<b>A9</b>	<b>Open to college</b>		
<b>A10</b>	<b>Open to college</b>		
<b>A11</b>	<b>Open to college</b>		
<b>A12</b>	<b>Open to college</b>		
<b>B</b> <b>B1- B8</b> <b>"Frozen"</b>  <b>B9- B12</b> <b>"Open"</b>	<b>B1</b>	<b>Classroom projects or challenges with industry involvement</b>	Substantial classroom projects or challenges in which industry representatives provide guidance in design and implementation as well as assessment or feedback. Examples include robotics projects supported by local engineers or construction projects supported by local union representatives. Industry-informed projects can be useful when logistics or other constraints make workplace placements difficult. Classroom challenges, sometimes use for formative assessment purposes, may include problems to solve or student competitions juried by employers.

	<b>B2</b>	<b>Informational interviews with industry professionals</b>	Opportunities for students to make contact with business/industry representatives for telephone or in-person interviews, lasting approximately 15 minutes to an hour, to explore opportunities in a given career area or occupation, the skills and education required for entry and success, the long-term growth potential, and, often, the career path taken by the representative in arriving at his/her current position.
	<b>B3</b>	<b>Job shadowing (individual)</b>	Opportunities for students to spend time with a worker on the job, observing actual workplace tasks in order to explore a potential career interest. ( <i>ERIC Thesaurus</i> ) Job shadows may involve applied learning if there is sufficient time and advance preparation with the employer and instructor.
	<b>B4</b>	<b>Mentorships with industry professionals</b>	One-to-one relationships between students and more experienced professionals in chosen fields of interest to explore career and related issues. Career mentors foster the student's development by providing challenges, encouragement, guidance, and resources. ( <i>U.S. Congress, Office of Technology Assessment</i> )
	<b>B5</b>	<b>Simulated workplace experience</b>	Work-based learning activities that simulate work environments. Examples include automotive or culinary programs in which sustained industry involvement allows student to develop and apply their skills in the context of industry standards and expectations. Simulated experiences may be valuable when experiences in real work settings are not possible, due to logistical or other constraints. ( <i>WestEd, Work-Based Learning in California</i> )
	<b>B6</b>	<b>Service learning</b>	A teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. ( <i>Learn and Serve America National Service Learning Clearinghouse</i> )
	<b>B7</b>	<b>Student-run commercial or social enterprises</b>	Enterprises that 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 generate revenue. Social enterprises focus on social rather than commercial activity. Examples include community planning projects or energy auditing for local residents
	<b>B8</b>	<b>Volunteering / Community Service</b>	Voluntary service activities that may or may not be connected to classroom curriculum, but which offer opportunities for exploring careers and learning by doing real work.
	<b>B9</b>	<b>Open to college</b>	
	<b>B10</b>	<b>Open to college</b>	
	<b>B11</b>	<b>Open to college</b>	
	<b>B12</b>	<b>Open to college</b>	
	<b>C</b>  <b>C1- C6</b> <b>"Frozen"</b>  <b>C7- C10</b> <b>"Open"</b>	<b>C1</b>	<b>Career fair</b>
<b>C2</b>		<b>Field trips</b>	An excursion by a group of students to a place away from their school or college environment or an on-campus visit for exposure to an industry-related experience (e.g., culinary students visiting a campus kitchen). A field trip can help spark career interest and provide students with first-hand exposure to relevant industries, workplaces, careers, or specific issues and topics (e.g. industrial design or use of technology), as well as the opportunity to ask questions of personal interest and to interact with field trip hosts.

	<b>C3</b>	<b>Guest speakers</b>	A person invited to a gathering to give a presentation. Guest speakers provide an opportunity for students to hear firsthand about a particular occupation, the necessary preparation and required knowledge the occupation requires, and other interesting information from a current practitioner in that field. ( <a href="http://www.ode.state.or.us/teachlearn/certificates/diploma/guest-speaker.pdf">www.ode.state.or.us/teachlearn/certificates/diploma/guest-speaker.pdf</a> )
	<b>C4</b>	<b>Mock interviews</b>	A simulation of an actual job interview, which provides an opportunity to practice for an interview and receive feedback. A mock interview provides exposure to the interview process and a chance to learn about industry hiring expectations when feedback is provided.
	<b>C5</b>	<b>Industry speakers/ presentations</b>	Opportunities for representatives from industry to discuss careers and trends in their fields, skills required, education required, and their own career paths.
	<b>C6</b>	<b>Workplace/ company tours</b>	Visits to real workplaces that provide opportunities for students to learn first-hand about the skills required in various industries or career areas; the career paths taken by those in the field; the tools, materials and equipment used; and the work environment and expectations for performance in various industries
	C7	Open to college	
	C8	Open to college	
	C9	Open to college	
	C10	Open to college	