

Labor Market Analysis: 0860.00 – Educational Technology AI, ED Tech, and Pedagogy in Community College Teaching – Certificate requiring 8 to fewer than 16 semester units Los Angeles Center of Excellence, May 2024

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Living Wage: (Entry-Level, 25th)	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Emerging Occupation(s)			
	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified middle-skill occupation¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

Based on the available data, there appears to be a supply gap for the one identified middle-skill occupation in the region. Furthermore, entry-level wages exceed the self-sufficiency standard wage in both Los Angeles and Orange counties, and approximately one-third of current workers in the field have completed some college or an associate degree as their highest level of education. The proposed certificate also provides an upskilling opportunity for incumbent teachers, professors, and community college professors to stay current with the latest trends in educational technology and pedagogical practices.

Recommendation: Due to all three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

Key Findings

Supply Gap

- 1,223 annual job openings are projected in the region through 2027. This number is less than the three-year average of 2 sub-baccalaureate awards conferred by educational institutions in the region.

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree. The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- There were 219 online job postings for training and development specialists in the educational services industry (NAICS 61) listed in the past 12 months in Los Angeles and Orange counties.

Living Wage

- \$23.39 is the typical entry-level hourly wages for training and development specialists, which is higher than Los Angeles County’s self-sufficiency standard hourly (\$18.10/hour).²

Educational Attainment

- A bachelor’s award is the typical entry-level education for training and development specialists, according to the Bureau of Labor Statistics (BLS).
- 30% of workers in the field have completed some college or an associate degree, according to national educational attainment data.

Community college supply

- 1 community college issued awards related to educational technology in the greater LA/OC region.
- 2 awards (degrees and certificates) were conferred on average each year between 2020 and 2023.

Other postsecondary supply

- No educational institutions in the LA/OC region have issued awards from sub-baccalaureate programs related to educational technology in the last three years.

TARGET OCCUPATION

LA COE prepared this report to provide regional labor market and postsecondary supply data related to one middle-skill occupation. Although the occupation in this report typically requires a bachelor’s degree, it is considered middle-skill because approximately one-third of workers in the field have completed some college or an associate degree.

- **Training and Development Specialists (13-1151)** Design or conduct work-related training and development programs to improve individual skills or organizational performance. May analyze organizational training needs or evaluate training effectiveness.³

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for training and development specialists. In the greater Los Angeles/Orange County region, the number of jobs related to this occupation is projected to increase by 7% through 2027. There will be more than 1,200 job openings per year through 2027 due to job growth and replacements. The majority of jobs in 2022 for training and development specialists (72%) were located in Los Angeles County.

² Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

³ [Training and Development Specialists \(bls.gov\)](https://www.bls.gov/occupations/training-and-development-specialists)

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁴

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	8,851	9,452	600	7%	876
Orange	3,511	3,750	239	7%	347
Total	12,363	13,202	839	7%	1,223

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for the target occupation in Los Angeles County. The percentage of workers aged 55+ and automation index is included in order to visualize upcoming replacement demand for these occupations. The occupation in this report has a lower-than-average risk of automation, as well as a smaller share of older workers in the field.

Exhibit 2: Current employment, projected occupational demand, percentage of workers aged 55+, Los Angeles County⁵

Occupation	2022 Jobs	2027 Jobs	5-Yr % Change	Annual Openings	% Aged 55 and older*	Automation Index**	% Full Time Workers***
Training and Development Specialists	8,851	9,452	7%	876	25%	88.0	100%

*The average percentage of workers aged 55 and older across all occupations in the greater LA/OC region is 27%. This occupation has a smaller share of older workers, which typically indicates fewer replacements needs to offset the amount of impending retirements.

**The automation index captures an occupation's risk of being affected by automation with a base of 100. An automation index greater than 100 indicates a higher-than average risk of automation; less than 100 indicates a lower-than-average risk.

***In California, 81% of workers are employed full-time.

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for training and development specialists in Los Angeles County as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

Los Angeles County

The typical entry-level hourly wages for training and development specialists are \$23.39, which is above the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn wages of \$45.08.

⁴ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁵ Ibid.

Exhibit 3: Earnings for occupations in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Training and Development Specialists	\$23.39	\$33.38	\$45.08	\$69,400

*Rounded to the nearest \$100

Orange County

The typical entry-level hourly wages for training and development specialists are \$22.96, which is above the self-sufficiency standard wage for one adult (\$20.63 in Orange County).

Experienced workers can expect to earn wages of \$44.24.

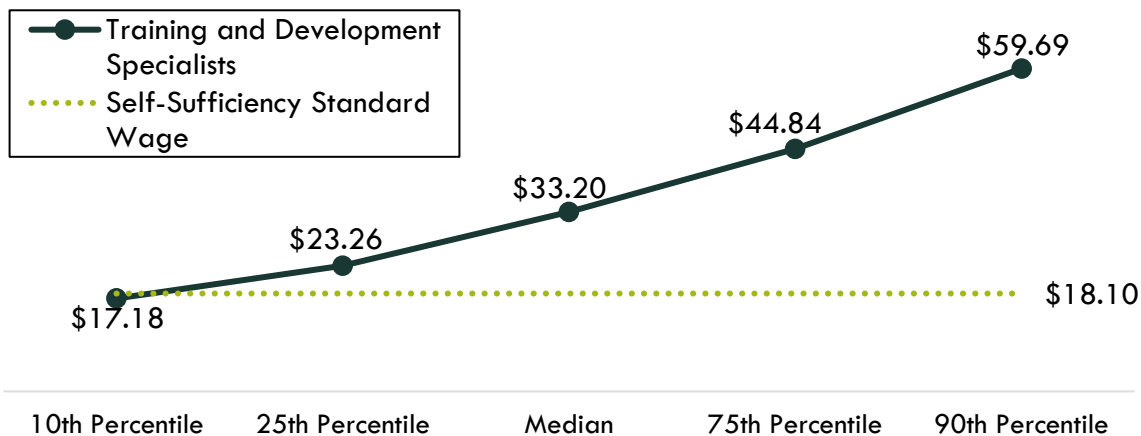
Exhibit 4: Earnings for occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Training and Development Specialists	\$22.96	\$32.76	\$44.24	\$68,100

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for training and development specialists are \$23.26; this is above the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 5 shows the average hourly wage for the occupations in this report, for entry-level to experienced workers.

Exhibit 5: Average hourly earnings for training and development specialists, Los Angeles and Orange counties



JOB POSTINGS BY OCCUPATION

There were **219** online job postings for training and development specialists in the educational services industry (NAICS 61) listed in the past 12 months in Los Angeles and Orange counties. Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 6).

Exhibit 6: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Learning facilitators • Learning and development specialists • Administrative analysts/specialists • Development coordinators • Professional experts • Program development coordinators 	<ul style="list-style-type: none"> • Marketing • Talent management • Student services • Curriculum development • Product management • Adult education • Instructing • Instructional design • Learning management systems 	<ul style="list-style-type: none"> • University of California • California State University • Coast Community College District • University of Southern California • Management & Training Corporation

In the greater Los Angeles/Orange County region, 68% of the training and development specialist job postings listed a minimum educational requirement. The number and percentage of job postings by educational level appear in exhibit 7.

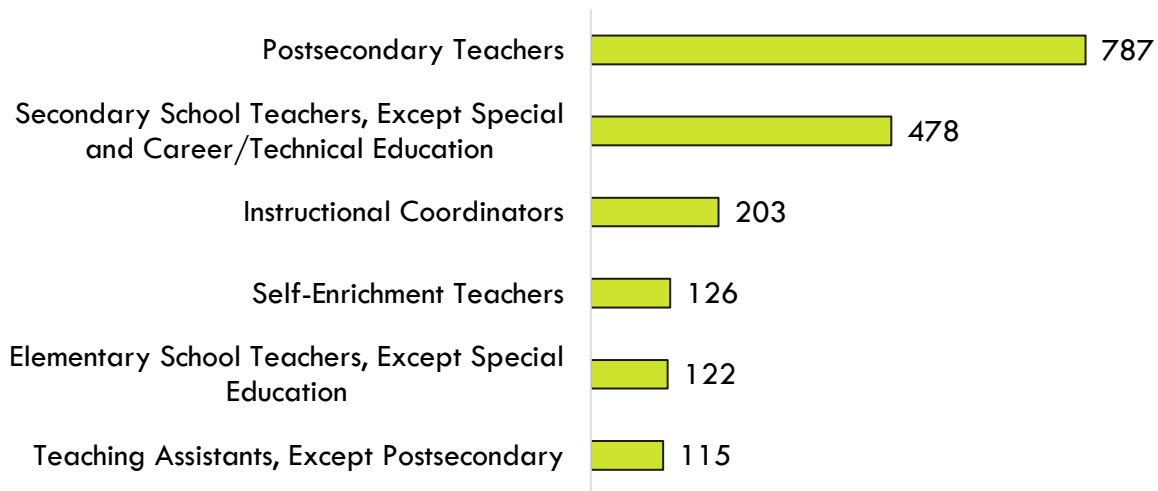
Exhibit 7: Education levels requested in job postings for training and development specialists, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	105	70%
Associate degree	18	12%
High school diploma or vocational training	26	17%

JOB POSTINGS BY SKILL

Over the past 12 months, there were 3,491 online job postings that mentioned “pedagogy” and/or “educational technology” as a specialized skill in Los Angeles and Orange counties. Exhibit 8 displays the number of job postings by occupation. The majority of job postings (43%) were for postsecondary teachers, followed by secondary school teachers, except special and career/technical education (26%) and instructional coordinators (11%).

Exhibit 8: Job postings by occupation (last 12 months), Los Angeles and Orange counties



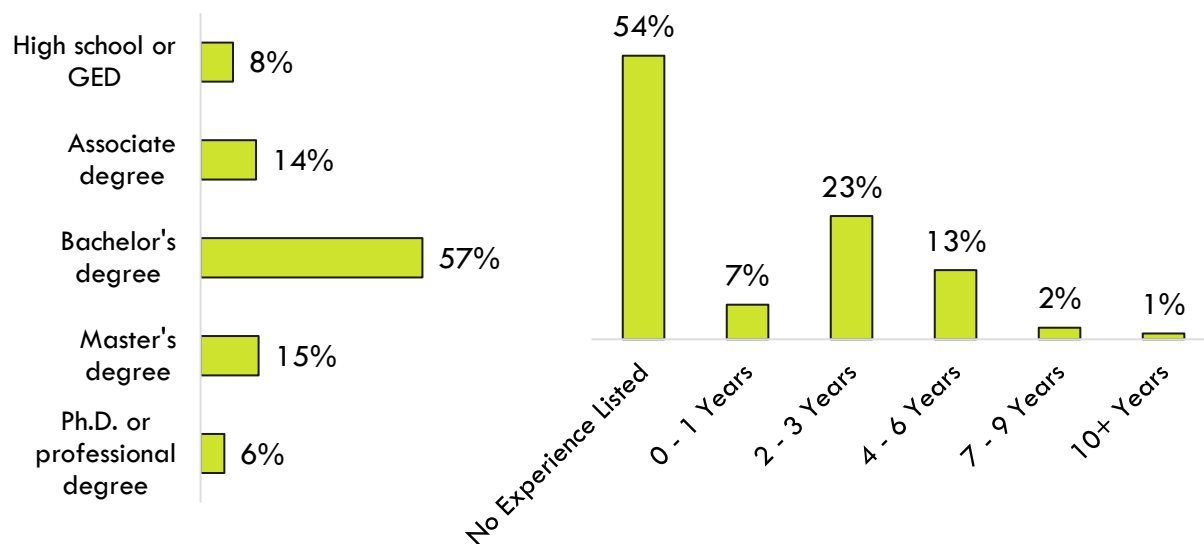
Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 9).

Exhibit 9: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Instructional designers • Elementary school teachers • Art faculties • Academic coordinators • Mathematics teachers • Tutors • Educational training specialist • Middle school math teachers 	<ul style="list-style-type: none"> • Pedagogy • Educational technologies • Curriculum development • Student services • Educational assessment • Student engagement • Lesson planning • Learning management systems 	<ul style="list-style-type: none"> • California State University • University of California • Long Beach Community College District • California State Polytechnic University Pomona • College of the Canyons

Exhibit 10 shows the minimum education breakdown for these skills-focused job postings, as well as the experience breakdown. The majority of job postings that included “pedagogy” and/or “educational technology” required a bachelor’s degree as the minimum education level (57%), followed by a master’s degree (15%) as the minimum education level for job seekers. Nearly one-third of job postings were searching for candidate in the early stages of his or her career, with 3 years of experience or less (30%). However, more than half of these job postings (54%) did not specify an experience level for candidates.

Exhibit 10: Minimum education and experience breakdowns in job postings, Los Angeles and Orange counties



EDUCATIONAL ATTAINMENT

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for training and development specialists (Exhibit 11). However, the national-level data indicates 30% of workers in the field have completed some college or an associate degree as their highest level of educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupation in this report:

Exhibit 11: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Training and Development Specialists	Bachelor’s degree

EDUCATIONAL SUPPLY

Community College Supply

Exhibit 12 shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Educational Technology (0860.00). The only college with completions in the region is Cerritos.

Exhibit 12: Regional community college awards (certificates and degrees), 2020-2023

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0860.00	Educational Technology	Cerritos	2	2	1	2
		LA Subtotal	2	2	1	2
Supply Total/Average			2	2	1	2

Other Postsecondary Supply

For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for training and development specialists. While there are a plethora of baccalaureate teacher preparation programs in the region, there are no other postsecondary institutions in the region that have conferred sub-baccalaureate awards under the Educational/Instruction Technology CIP Code (13.0501). Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete. While there are Educational/Instructional Technology (13.0501) programs in the region, these programs all are master's or doctorate-level programs.

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DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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