

# Labor Market Analysis for Program Recommendation: 0802.00/Educational Aide (Teacher Assistant) (Paraeducator Certificate)

Orange County Center of Excellence, June 2023



## Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input type="checkbox"/>	Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
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### Program LMI Endorsement Criteria

	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Supply Gap:		
	<i>Comments:</i> there is projected to be <b>6,348 annual job openings</b> throughout Los Angeles and Orange counties for <i>teaching assistants, except postsecondary</i> , which is <b>slightly less than the 6,444 awards conferred by educational institutions</b> . However, supply is overstated because the related educational programs train for five other occupations that are not included in this report and account for 20,060 annual job openings.	
Living Wage: (Entry-Level, 25 <sup>th</sup> )		
	<i>Comments:</i> <b>Entry-level wages for teaching assistants, except postsecondary are \$17.41, which is significantly below the OC living wage of \$20.63.</b>	
Education:		
	<i>Comments:</i> The typical entry-level education for <i>teaching assistants, except postsecondary</i> is <b>some college, no degree. Additionally, over one-third of workers in the field have completed some college or an associate degree as their highest level of education.</b>	

### Emerging Occupation(s)

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i>Comments:</i> N/A	

The Orange County Center of Excellence for Labor Market Research (OC COE) prepared this report to determine whether there is a supply gap in the Los Angeles/Orange County regional labor market related to one middle-skill occupation:

- Teaching Assistants, Except Postsecondary (25-9045)

Based on the available data there does not appear to be a supply gap for *teaching assistants, except postsecondary*. However, supply is overstated because the related educational programs train for an additional five occupations not included in this report; these occupations account for over 20,000 job openings. Though typical education requirements for this occupation align with a community college education, entry-level wages are significantly below the living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

### Exhibit 1: Occupational Demand and Supply in Los Angeles/Orange Counties

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Teaching Assistants, Except Postsecondary (25-9045)	LA: 4,914 OC: 1,434	LA: 4,887 OC: 1,557	OC: \$17.41	Some college, no degree	39%
<b>LA/OC Total</b>	<b>6,348</b>	<b>620</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

#### Demand:

- The number of jobs related to *teaching assistants, except postsecondary* is projected to increase 7% through 2026, equating to 6,348 annual job openings.
- Hourly entry-level wages for *teaching assistants, except postsecondary* are \$17.41 in Orange County, which is significantly below the living wage of \$20.63.
- There were 4,431 online job postings for *teaching assistants, except postsecondary* over the past 12 months. The highest number of postings were for teacher assistants, instructional aides, and paraprofessionals.
- The typical entry-level education for *teaching assistants, except postsecondary* is some college, no degree.
- Approximately 39% of workers in the field have completed some college or an associate degree as their highest level of educational attainment.

#### Supply:

- There was an average of 4,850 awards conferred by all community colleges and one noncredit institution in Los Angeles and Orange Counties from 2018 to 2021.
- Non-community college institutions conferred an average of 1,594 awards from 2017-2020.
- Orange County community college students that exited educational aide (teacher assistant) programs in the 2019-2020 academic year had a median annual wage of \$28,384 after exiting the program.
- There was insufficient data to determine the percentage of students that attained the living wage and the percentage of students that exited their program in 2018-19 that reported they are working in a job closely related to their field of study.

## Demand

### Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for teaching assistants, except postsecondary from 2016 through 2026. Employment for *teaching assistants, except postsecondary* in Orange County decreased 10% from 2019 to 2020 due to the COVID-19 pandemic, which is higher than the 6% decline across all occupations during the same period. Employment for *teaching assistants, except postsecondary* is projected to grow at a similar rate to all occupations through 2026.

## Exhibit 2: Annual Percent Change in Jobs for Teaching Assistants, Except Postsecondary, 2016-2026

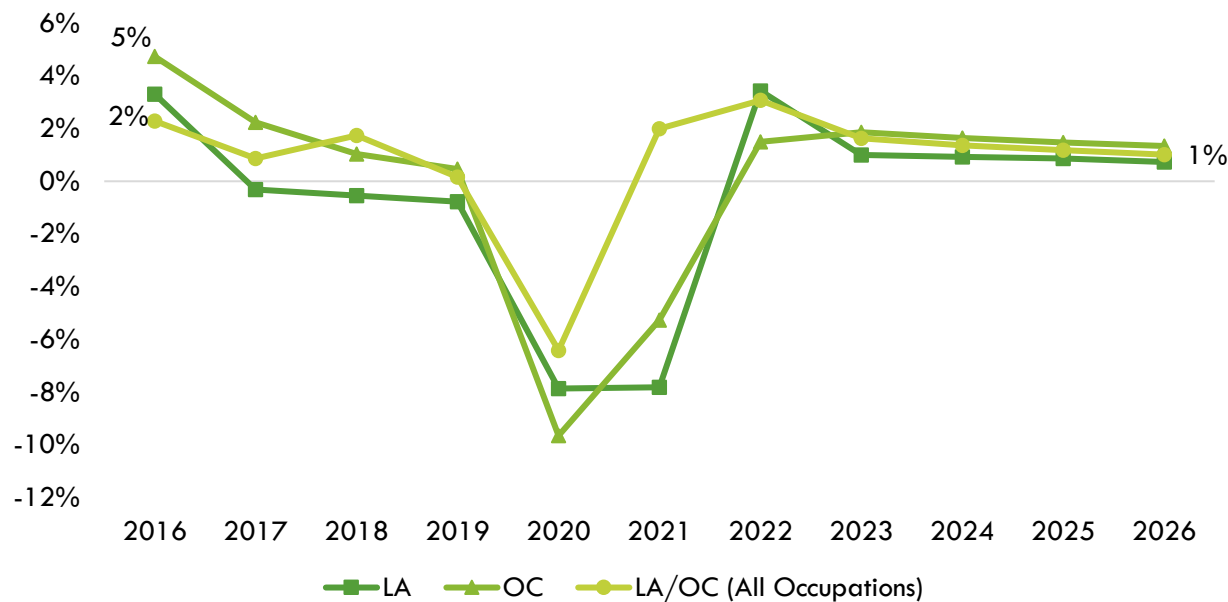


Exhibit 3 shows the five-year occupational demand projections for *teaching assistants, except postsecondary*. In Los Angeles/Orange County, the number of jobs for *teaching assistants, except postsecondary* is projected to increase by 7% through 2026. There is projected to be 6,348 jobs available annually.

### Exhibit 3: Occupational Demand in Los Angeles and Orange Counties<sup>1</sup>

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	36,175	38,751	2,576	7%	4,914
Orange	10,465	11,308	844	8%	1,434
<b>Total</b>	<b>46,640</b>	<b>50,060</b>	<b>3,420</b>	<b>7%</b>	<b>6,348</b>

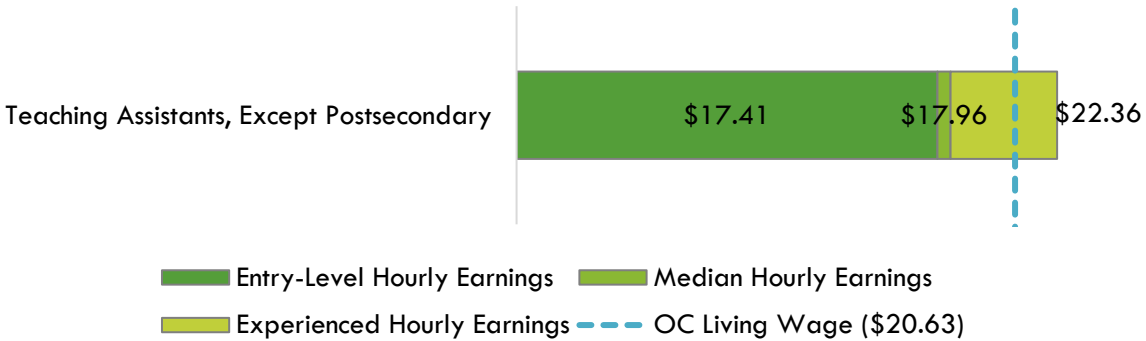
## Wages:

The labor market endorsement in this report considers the entry-level hourly wages for *teaching assistants, except postsecondary* in Orange County as they relate to the county's living wage. Los Angeles County wages are included below in order to provide a complete analysis of the LA/OC region.

The typical entry-level hourly wages for *teaching assistants, except postsecondary* are \$17.41, which is significantly below the living wage for one adult (\$20.63 in Orange County). Median wages are \$17.96, which is only slightly higher than entry-level wages. Experienced wages are \$22.36, which is above the living wage. Orange County's average wages are similar to the average statewide wage of \$19.08 for *teaching assistants, except postsecondary*. Exhibit 4 shows the wage range for *teaching assistants, except postsecondary* in Orange County and how it compares to the regional living wage.

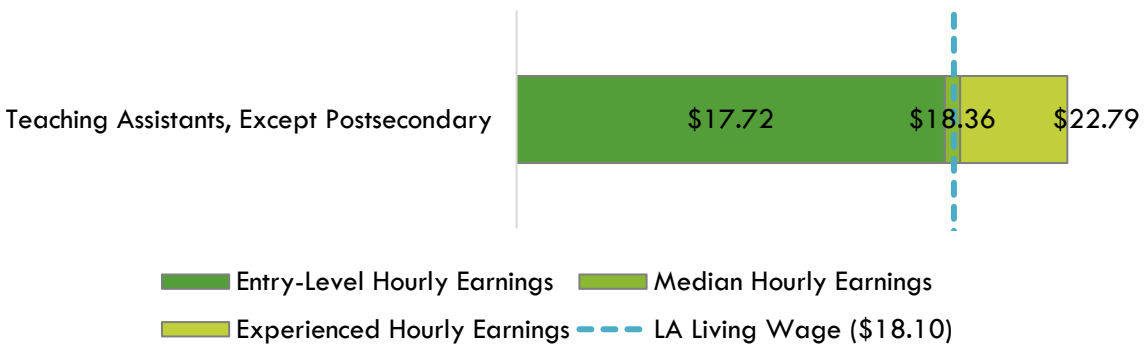
<sup>1</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

## Exhibit 4: Wages by Occupation in Orange County



The typical entry-level hourly wages for *teaching assistants, except postsecondary* are \$17.72, which is below the living wage for one adult (\$18.10 in Los Angeles County). Median (\$18.36) and experienced (\$22.79) wages are above the living wage. Los Angeles County’s average wages are slightly higher than the average statewide wage of \$19.08 for *teaching assistants, except postsecondary*. Exhibit 5 shows the wage range for *teaching assistants, except postsecondary* in Los Angeles County and how it compares to the regional living wage.

## Exhibit 5: Wages by Occupation in Los Angeles County



## Job Postings:

**Important Online Job Postings Data Note:** Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more. Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words of phrases; determining differences in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors.<sup>2</sup> For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast’s database.

Additionally, there are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

<sup>2</sup> K. R. Chowdhary, *Fundamentals of Artificial Intelligence* (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

There were 4,431 online job postings related to *teaching assistants, except postsecondary* listed in the past 12 months.

### Exhibit 6: Number of Job Postings by Occupation (n=4,431)

Occupation	Job Postings	Percentage of Job Postings
Teaching Assistants, Except Postsecondary	4,431	100%

The top employers in the region, by number of job postings, are shown in Exhibit 7.

### Exhibit 7: Top Employers by Number of Job Postings (n=4,431)

Employer	Job Postings	Percentage of Job Postings
Center For Autism & Related Disorders	214	5%
Pasadena High School	185	4%
Stepping Stones	162	4%
Heytutor	83	2%
Maxim Healthcare Staffing	62	1%
Soliant Health	61	1%
Strategic Kids	54	1%
Learning Care Group	49	1%
Catalyst Family	48	1%
Zsn Solutions	47	1%

The top specialized, soft, and software/computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 8.

### Exhibit 8: Top Skills by Number of Job Postings (n=4,431)

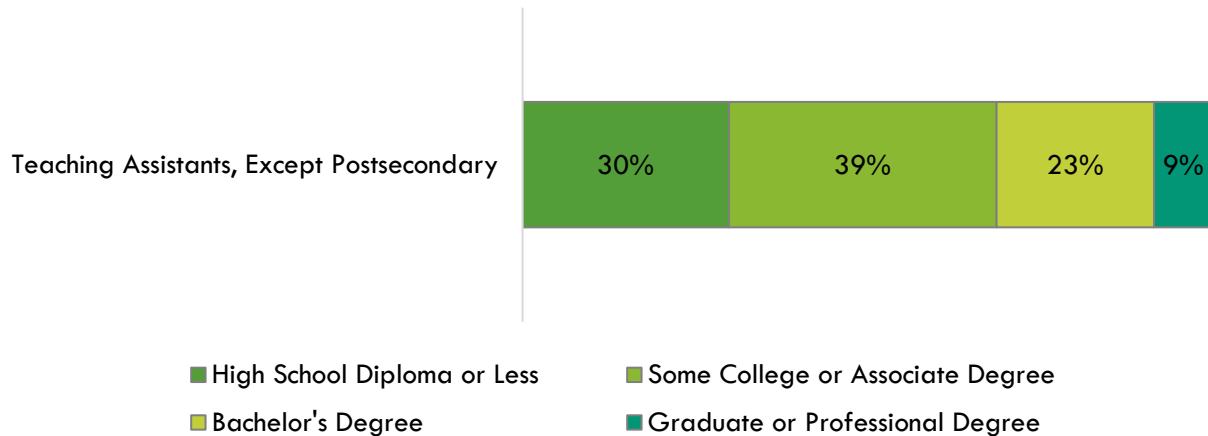
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Special Education (867)	Teaching (1,467)	Microsoft Excel (180)
Child Development (616)	Communications (1,291)	Microsoft Office (126)
Working With Children (601)	Mathematics (524)	Microsoft Outlook (115)
Autism Spectrum Disorders (582)	Lifting Ability (444)	Microsoft Word (85)
Individualized Education Programs (IEP) (503)	Clerical Works (441)	Microsoft PowerPoint (83)
Behavior Management (414)	Writing (406)	Student Information Systems (47)
Lesson Planning (360)	Planning (397)	Zoom (Video Conferencing Tool) (37)
Preschool Education (360)	Multilingualism (352)	Google Workspace (32)
Treatment Planning (344)	English Language (329)	Productivity Software (30)
Toileting (336)	Management (318)	Virtual Learning Environments (16)

## Educational Attainment:

The Bureau of Labor Statistics (BLS) lists some college, no degree as the typical entry-level education for *teaching assistants, except postsecondary*. Additionally, the national-level educational attainment data indicates 39% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 9 shows the educational attainment for *teaching assistants, except postsecondary*.

Of the 70% of the cumulative job postings for *teaching assistants, except postsecondary* that listed a minimum education requirement in Los Angeles/Orange County, 86% (2,663) requested a high school diploma or an associate degree and 14% (444) requested a bachelor's, master's, or doctoral degree.

**Exhibit 9: National-level Educational Attainment for Occupations**



## Educational Supply

### Community College Supply:

Exhibit 10 shows the three-year average number of awards conferred by community colleges in the related TOP code: Educational Aide (Teacher Assistant) (0802.00), Special Education (0809.00), Child Development/Early Care and Education (1305.00), Child and Adolescent Development (1305.10), Children with Special Needs (1305.20), Preschool Age Children (1305.40), The School Age Child (1305.50), and Infants and Toddlers (1305.90). The colleges with the most completions in the region are East LA, Santa Monica, and Santa Ana. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

**Exhibit 10: Regional Community College Awards (Certificates and Degrees), 2018-2021**

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
0802.00	Educational Aide (Teacher Assistant)	Mt San Antonio	23	21	21	22
		<b>LA Subtotal</b>	<b>23</b>	<b>21</b>	<b>21</b>	<b>22</b>
		Coastline	3	2	6	3
		Fullerton	7	0	0	2
		Santa Ana	30	11	80	40
		Santiago Canyon	6	7	20	11
		<b>OC Subtotal</b>	<b>46</b>	<b>20</b>	<b>106</b>	<b>56</b>
<b>Supply Subtotal/Average</b>			<b>69</b>	<b>41</b>	<b>127</b>	<b>78</b>

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average		
0809.00	Special Education	Compton	0	0	2	1		
		Long Beach	2	1	1	1		
		<b>LA Subtotal</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>2</b>		
		Santa Ana	27	16	31	25		
		Santiago Canyon	0	2	6	3		
		<b>OC Subtotal</b>	<b>27</b>	<b>18</b>	<b>37</b>	<b>28</b>		
<b>Supply Subtotal/Average</b>			<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>		
1305.00	Child Development/ Early Care and Education	Cerritos	140	132	128	133		
		Citrus	313	164	193	224		
		Compton	64	21	32	39		
		East LA	335	690	568	532		
		El Camino	161	187	192	179		
		Glendale	32	34	28	31		
		LA City	163	190	200	183		
		LA Harbor	35	26	43	35		
		LA Mission	259	227	206	229		
		LA Pierce	92	107	128	109		
		LA Swest	50	51	88	63		
		LA Trade	164	132	169	154		
		LA Valley	98	148	161	136		
		Long Beach	183	169	151	167		
		Mt San Antonio	111	106	219	145		
		Pasadena	105	114	129	116		
		Rio Hondo	245	288	296	277		
		Santa Monica	174	554	425	384		
		West LA	51	60	66	59		
		<b>LA Subtotal</b>	<b>2,775</b>	<b>3,400</b>	<b>3,422</b>	<b>3,195</b>		
		Fullerton	47	39	53	46		
		Irvine	96	99	61	86		
		North Orange Adult	75	59	63	66		
		Orange Coast	20	41	16	25		
		Saddleback	179	181	126	162		
		Santa Ana	30	62	59	50		
		Santiago Canyon	3	1	1	2		
		<b>OC Subtotal</b>	<b>450</b>	<b>482</b>	<b>379</b>	<b>437</b>		
		<b>Supply Subtotal/Average</b>			<b>3,225</b>	<b>3,882</b>	<b>3,801</b>	<b>3,632</b>

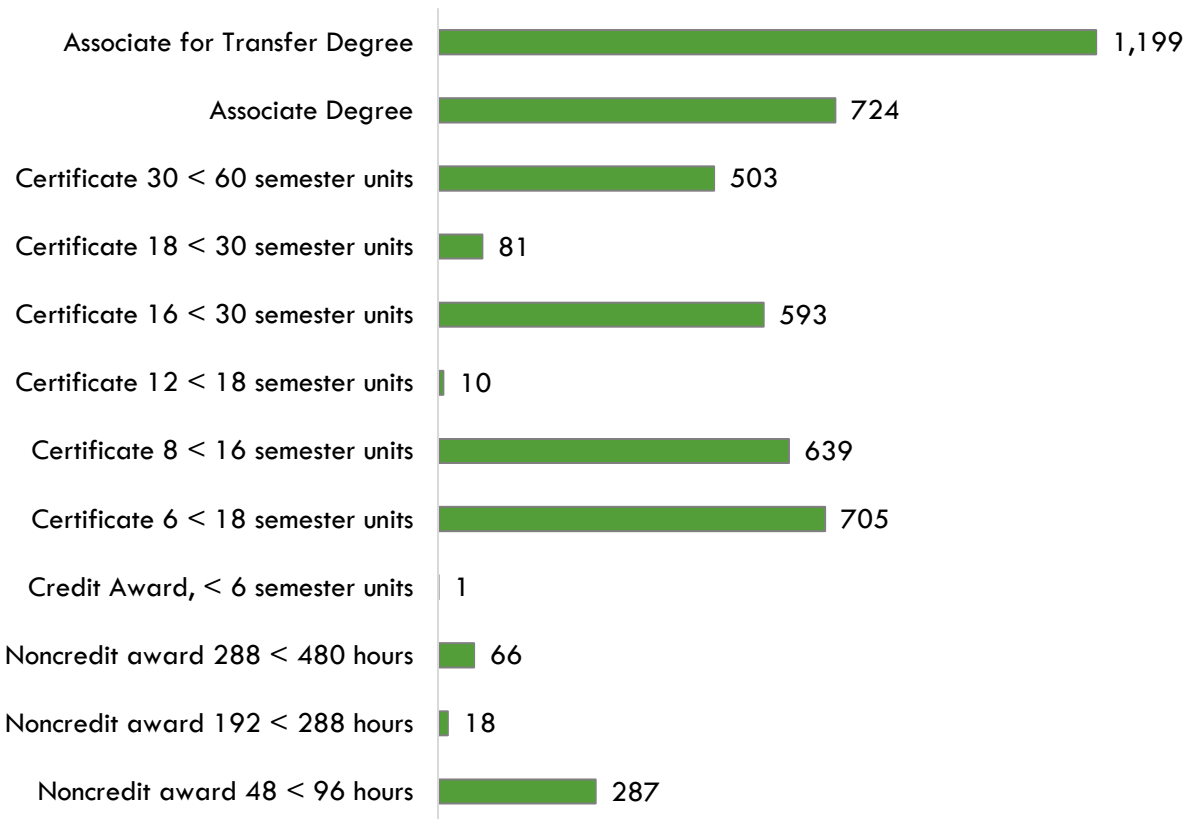
TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average		
1305.10	Child and Adolescent Development	East LA	12	5	0	6		
		LA Trade	0	5	35	13		
		Pasadena	0	0	170	57		
		Santa Monica	0	4	24	9		
		<b>LA Subtotal</b>	<b>12</b>	<b>14</b>	<b>229</b>	<b>85</b>		
		Coastline	0	1	1	1		
		Fullerton	15	66	107	63		
		Golden West	0	31	47	26		
		Saddleback	0	14	41	18		
		Santiago Canyon	8	0	12	7		
		<b>OC Subtotal</b>	<b>23</b>	<b>112</b>	<b>208</b>	<b>115</b>		
		<b>Supply Subtotal/Average</b>			<b>35</b>	<b>126</b>	<b>437</b>	<b>200</b>
1305.20	Children with Special Needs	Orange Coast	0	0	13	4		
		Santiago Canyon	0	0	2	1		
		Compton	0	0	1	0		
		East LA	109	51	38	66		
		LA City	12	6	16	11		
		LA Valley	51	55	52	52		
		Long Beach	6	2	3	4		
		Mt San Antonio	0	2	3	2		
		Pasadena	0	0	2	0		
		Rio Hondo	0	15	15	10		
		Santa Monica	11	8	15	11		
		<b>LA Subtotal</b>	<b>190</b>	<b>141</b>	<b>146</b>	<b>158</b>		
		Orange Coast	0	0	13	4		
		Santiago Canyon	0	0	2	1		
		<b>OC Subtotal</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>5</b>		
		<b>Supply Subtotal/Average</b>			<b>190</b>	<b>141</b>	<b>161</b>	<b>163</b>
		1305.40	Preschool Age Children	LA Mission	29	32	16	26
LA Pierce	152			165	161	160		
LA Valley	91			88	80	86		
Pasadena	1			0	0	0		
<b>LA Subtotal</b>	<b>273</b>			<b>285</b>	<b>257</b>	<b>272</b>		
Fullerton	9			14	11	11		
Orange Coast	34			34	16	28		
Santa Ana	45			52	53	50		
Santiago Canyon	0			6	17	8		



TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		<b>OC Subtotal</b>	<b>88</b>	<b>106</b>	<b>97</b>	<b>97</b>
		<b>Supply Subtotal/Average</b>	<b>361</b>	<b>391</b>	<b>354</b>	<b>369</b>
1305.50	The School Age Child	Compton	2	0	0	1
		El Camino	7	4	12	7
		Glendale	0	0	2	0
		LA Mission	3	4	4	3
		LA Pierce	10	6	20	12
		LA Valley	16	10	13	13
		Long Beach	0	1	0	0
		<b>LA Subtotal</b>	<b>38</b>	<b>25</b>	<b>51</b>	<b>36</b>
		Irvine	3	1	0	1
		Saddleback	2	0	0	1
		<b>OC Subtotal</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>2</b>
				<b>Supply Subtotal/Average</b>	<b>26</b>	<b>8</b>
1305.90	Infants and Toddlers	Cerritos	0	2	0	0
		East LA	45	3	13	20
		Glendale	3	1	5	3
		LA City	0	41	29	23
		LA Mission	13	8	10	10
		LA Pierce	35	45	34	38
		LA Valley	6	1	0	2
		Mt San Antonio	2	1	0	1
		Pasadena	2	1	5	2
		Rio Hondo	0	5	7	4
		<b>LA Subtotal</b>	<b>106</b>	<b>108</b>	<b>103</b>	<b>103</b>
		Irvine	1	0	3	2
		Orange Coast	5	6	2	4
		Saddleback	17	13	18	16
		Santa Ana	356	142	142	214
		Santiago Canyon	0	1	2	1
		<b>OC Subtotal</b>	<b>379</b>	<b>162</b>	<b>167</b>	<b>237</b>
		<b>Supply Subtotal/Average</b>	<b>485</b>	<b>270</b>	<b>270</b>	<b>340</b>
		<b>Supply Subtotal/Average</b>	<b>4,437</b>	<b>4,896</b>	<b>5,241</b>	<b>4,850</b>

Exhibit 11 shows the annual average community college awards by type from 2018-19 through 2020-21. The plurality of the awards are for associate for transfer degrees, followed by associate degrees, and certificates between 6 and less than 18 semester units.

## Exhibit 11: Annual Average Community College Awards by Type, 2018-2021



## Community College Student Outcomes:

Exhibit 12 shows the Strong Workforce Program (SWP) metrics for Educational Aide (Teacher Assistant) programs at Coast Community College District (CCCD) the Orange County Region, and California. Of the 592 Educational Aide (Teacher Assistant) students in the 2020-21 academic year, 36% (213) attended a CCCD college.

CCCD students that exited educational aide (teacher assistant) programs in the 2019-20 academic year had lower median annual earnings (\$25,288) compared to all educational aide (teacher assistant) students in Orange County (\$28,384). However, both figures are significantly below the living wage.

### Exhibit 12: Educational Aide (Teacher Assistant) (0802.00) Strong Workforce Program Metrics, 2020-21<sup>3</sup>

SWP Metric	CCCD	OC Region	California
SWP Students	213	592	2,084
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	5%	17%	14%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	94%	94%	91%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	0	74	147

<sup>3</sup> All SWP metrics are for 2019-20 unless otherwise noted.

SWP Metric	CCCD	OC Region	California
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	38	56	404
SWP Students with a Job Closely Related to Their Field of Study (2018-19)	Insufficient Data	Insufficient Data	67%
Median Annual Earnings for SWP Exiting Students (2019-20)	\$25,288 (\$12.16)	\$28,384 (\$13.65)	\$25,288 (\$12.16)
Median Change in Earnings for SWP Exiting Students (2019-20)	6%	27%	24%
SWP Exiting Students Who Attained the Living Wage (2019-20)	Insufficient Data	Insufficient Data	39%

### Non-Community College Supply:

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for *teaching assistants, except postsecondary*. Exhibit 13 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Special Education and Teaching, General (13.1001), Early Childhood Education and Training (13.1210), and Child Development (19.0706). Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community college institutions in the region conferred an average of 1,594 awards annually in related training programs.

**Exhibit 13: Regional Non-Community College Awards, 2017-2020**

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
13.1001	Special Education and Teaching, General	Mount Saint Mary's University	0	6	2	3
<b>Supply Total/Average</b>			<b>0</b>	<b>6</b>	<b>2</b>	<b>3</b>
13.1210	Early Childhood Education and Training	American Jewish University	0	0	0	0
		Bethesda University	8	5	2	5
		Brandman University	58	46	51	52
		California State University-Dominguez Hills	178	180	194	184
		California State University-Fullerton	477	531	518	509
		California State University-Los Angeles	238	298	385	307
		California State University-Northridge	322	349	352	341
		East San Gabriel Valley Regional Occupational Program	58	35	0	31
		Mount Saint Mary's University	4	4	3	4

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
		Pacific Oaks College	53	31	61	48
		Vanguard University of Southern California	21	15	7	14
<b>Supply Total/Average</b>			<b>1,417</b>	<b>1,494</b>	<b>1,573</b>	<b>1,495</b>
19.0706	Child Development	Mount Saint Mary's University	24	17	27	23
		University of La Verne	53	53	40	49
		Whittier College	18	27	28	24
<b>Supply Total/Average</b>			<b>95</b>	<b>97</b>	<b>95</b>	<b>96</b>
<b>Supply Total/Average</b>			<b>1,512</b>	<b>1,597</b>	<b>1,670</b>	<b>1,594</b>

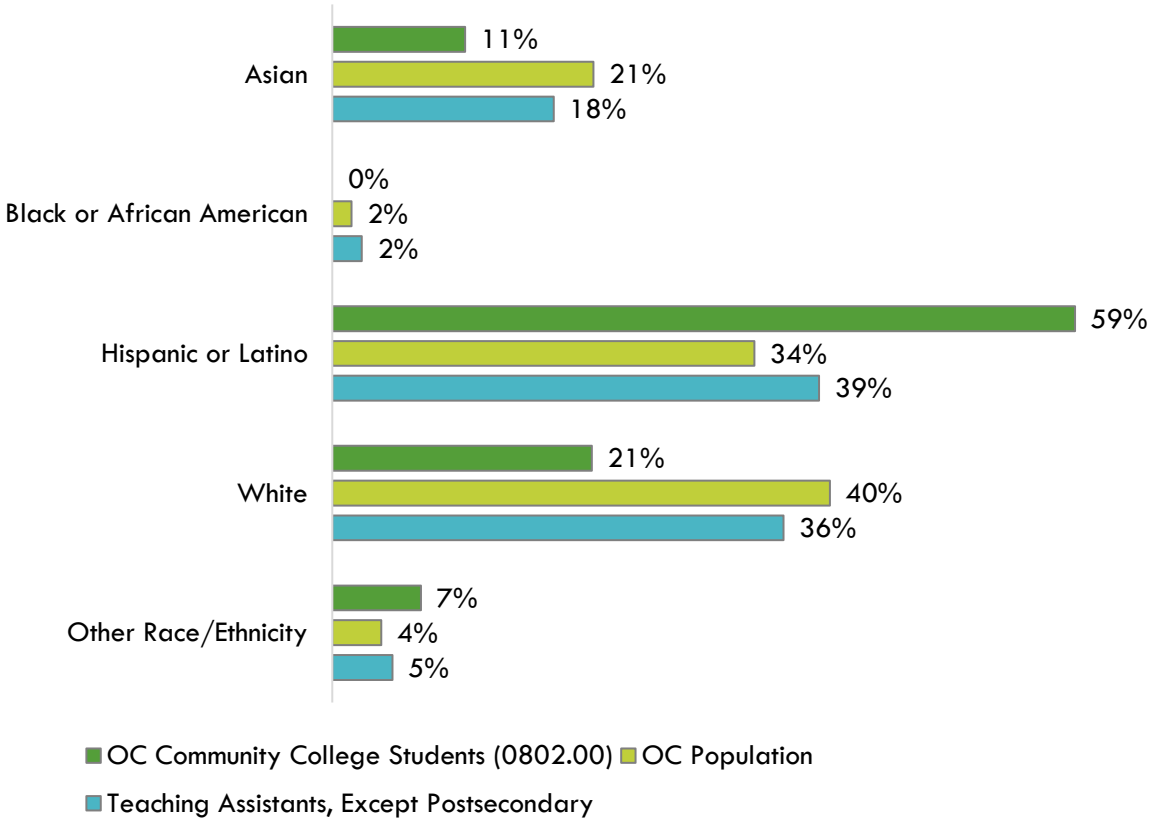
# Regional Demographics

This section analyzes demographic data for Orange County community college students enrolled in educational aide (teacher assistant) compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

## Ethnicity:

Exhibit 14 shows the ethnicity of Orange County community college students enrolled in educational aide (teacher assistant) programs compared to the overall Orange County population, as well as *teaching assistants, except postsecondary*. Notably, 59% of educational aide (teacher assistant) students are Hispanic or Latino, which is significantly higher than *teaching assistants, except postsecondary* (39%), and the population (34%). Conversely, 36% of *teaching assistants, except postsecondary* are White, which is similar to the population (40%), but significantly higher than educational aide (teacher assistant) students (21%).

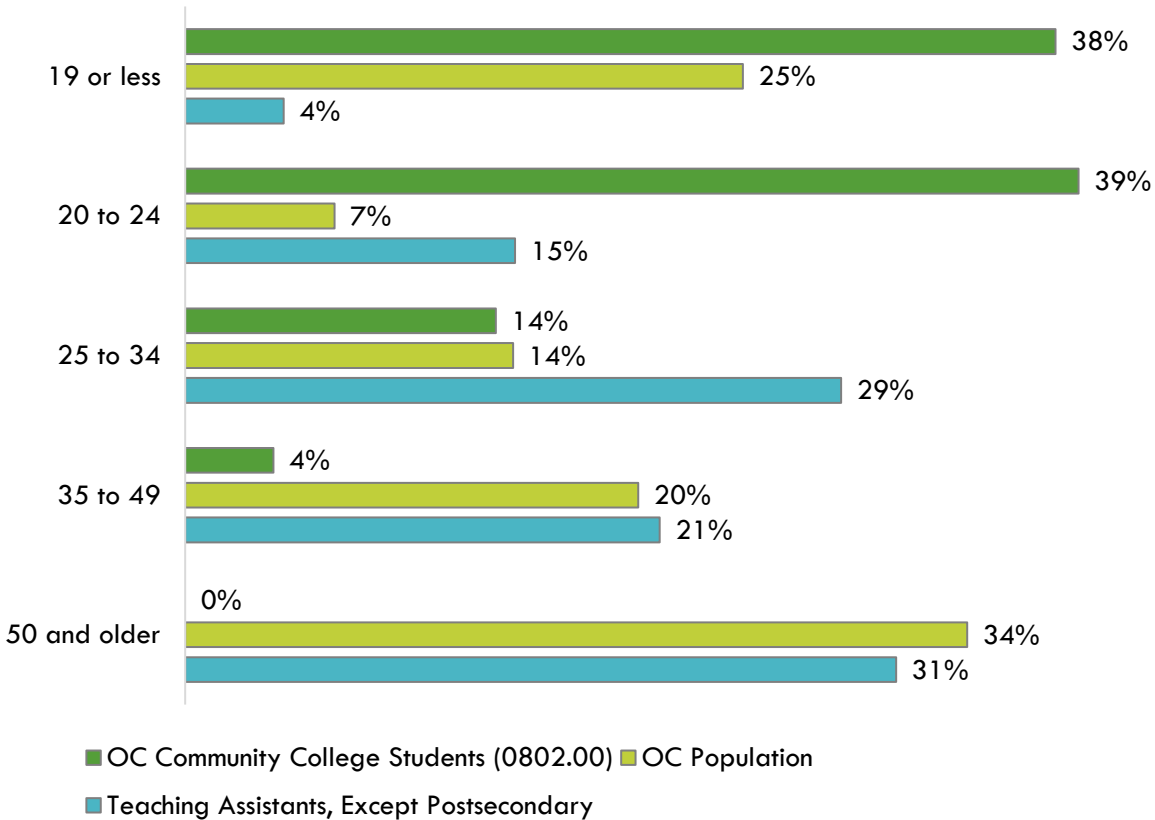
Exhibit 14: Program and County Demographics by Ethnicity



## Age:

Exhibit 14 shows the age of Orange County community college students enrolled in educational aide (teacher assistant) programs compared to the overall Orange County population, as well as *teaching assistants, except postsecondary*. Notably, 78% of community college educational aide (teacher assistant) students are 24 or less, which is significantly higher than the population (32%), and *teaching assistants, except postsecondary* (19%). Additionally, though the plurality of *teaching assistants, except postsecondary* are 50 and older, there are no educational aide (teacher assistant) students in the same age group.

Exhibit 14: Program and County Demographics by Age

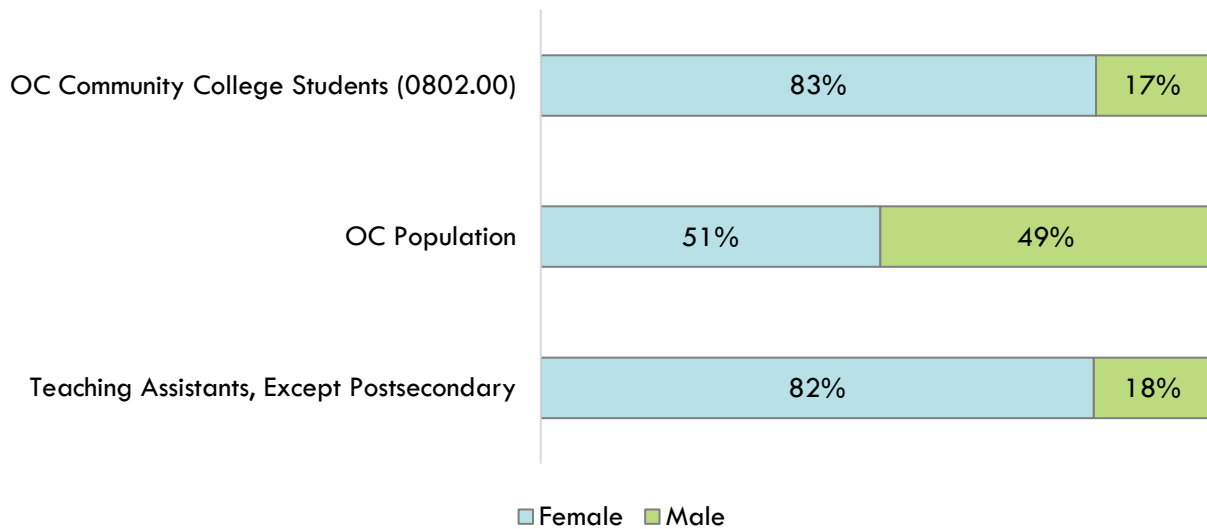


## Sex:

Exhibit 15 shows the sex of Orange County community college students enrolled in educational aide (teacher assistant) programs compared to the overall Orange County population as well as *teaching assistants, except postsecondary*.

Though the Orange County population is split nearly evenly between men and women, there is a significantly higher percentage of female *teaching assistants, except postsecondary* (82%) and educational aide (teacher assistant) community college students (83%).

Exhibit 15: Program and County Demographics by Sex



## Appendix A: Methodology A

The OC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies. Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the OC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- 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.

The OC COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a “supply table” with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart ([datamart.cccco.edu](http://datamart.cccco.edu)) and CIP code data comes from the Integrated Postsecondary Education Data System ([nces.ed.gov/ipeds/use-the-data](http://nces.ed.gov/ipeds/use-the-data)), also known as IPEDS. TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Data included in this analysis represent the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the OC COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.



## Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	<p>Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics and the American Community Survey. For more information, see <a href="https://lightcast.io/">https://lightcast.io/</a></p>
Living Wage	<p>The living wage is derived from the Insight Center’s California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, child care, health care, transportation, and taxes. For more information, see: <a href="https://insightccd.org/family-needs-calculator/">https://insightccd.org/family-needs-calculator/</a></p> <p>The living wage for one adult in Orange County is \$20.63 per hour (\$42,910.40 annually). This figure is used by the CCCCCO to calculate the percentage of students that attained the regional living wage.</p>
Typical Education and Training Requirements, and Educational Attainment	<p>The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a></p>
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	<p>The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see <a href="https://www.onetonline.org/help/online/">https://www.onetonline.org/help/online/</a></p>
Educational Supply	<p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: <a href="https://datamart.cccco.edu">https://datamart.cccco.edu</a></p> <p>The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see <a href="https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions">https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</a></p>
Student Metrics and Demographics	<p>LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: <a href="https://www.calpassplus.org/LaunchBoard/Home.aspx">https://www.calpassplus.org/LaunchBoard/Home.aspx</a></p>

Data Type	Source
Population and Occupation Demographics	<p>The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: <a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a></p> <p>Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: <a href="https://usa.ipums.org/usa/about.shtml">https://usa.ipums.org/usa/about.shtml</a></p>

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