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Labor Market Analysis Child Development

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Prepared by the Central Valley/Mother Lode Center of Excellence

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COVID-19 Statement: This report includes employment projection data by Emsi. Emsi’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email seronellon@mjc.edu.

Summary

Please note the COVID-19 statement on page 2 when considering this report's findings.

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for child development. Five occupations related to child development were identified for Merced College:

- 11-9031, Education and Childcare Administrators, Preschool and Daycare
- 25-2011, Preschool Teachers, Except Special Education
- 25-2051, Special Education Teachers, Preschool
- 25-9045, Teaching Assistants, Except Postsecondary
- 39-9011, Childcare Workers

Key findings:

- **Occupational demand** — Nearly 14,510 workers were employed in jobs related to child development in 2020 in the North Central Valley/Northern Mother Lode (NCV/NML) subregion. The largest occupation is teaching assistants, except postsecondary with 8,117 workers in 2020, a projected to contract by 1% over the next five years, while still having 764 annual openings.
- **Wages** — Special education teachers, preschool earn the highest entry-level wage, \$18.80/hour in the subregion. Education and childcare administrators, preschool and daycare earn the highest median wage, \$45.99/hour in the subregion.
- **Employers** — Employers with the most job postings in the subregion are KinderCare, Acelero, and Childtime Learning Centers.
- **Occupational titles** — The most common occupational title in job postings in the subregion is preschool teachers, except special education. The most common job title is pre-school teacher.
- **Skills and certifications** — The top baseline skill is creativity, the top specialized skill is teaching, and the top software skill is Microsoft Excel. The most in-demand certification is a first aid cpr aed.
- **Education** — A high school diploma or equivalent is typically required for childcare workers. Some college, no degree is typically required for teaching assistants, except postsecondary. An associate degree is typically required for preschool teachers, except special education. A bachelor's degree is typically degree is typically required for the remaining two occupations.
- **Supply** — Analysis of postsecondary completions shows that on average 2,269 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 1,052 trained workers in the subregion and 2,471 workers in the region. The Center of Excellence recommends that Merced College work with the regional directors, the college's advisory board, and local industry in the expansion or development of programs to address the shortage of child development workers in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Merced College to provide labor market information for child development. The geographical focus for this report is the North Central Valley/Northern Mother Lode (NCV/NML) subregion, but regional demand and supply data has been included for broader applicability and use. The average living wage for a single adult in the NCV/NML subregion is \$12.65/hour.¹ Analysis of the program and occupational data related to child development resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 11-9031, Education and Childcare Administrators, Preschool and Daycare
- 25-2011, Preschool Teachers, Except Special Education
- 25-2051, Special Education Teachers, Preschool
- 25-9045, Teaching Assistants, Except Postsecondary
- 39-9011, Childcare Workers

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below. There was no O*NET data available for Teaching Assistants, Except Postsecondary

Education and Childcare Administrators, Preschool and Daycare

Job Description: Plan, direct, or coordinate academic or nonacademic activities of preschools or childcare centers and programs, including before- and after-school care.

Knowledge: Customer and Personal Service, Education and Training, Administration and Management, English Language, Psychology

Skills: Active listening, Coordination, Critical Thinking, Monitoring, Reading Comprehension

Preschool Teachers, Except Special Education

Job Description: Instruct preschool-aged students, following curricula or lesson plans, in activities designed to promote social, physical, and intellectual growth.

Knowledge: Education and Training, English Language, Public Safety and Security, Customer and Personal Service, Psychology

Skills: Instructing, Speaking, Active Listening, Learning Strategies, Coordination

Special Education Teachers, Preschool

Job Description: Teach academic, social, and life skills to preschool-aged students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.

Knowledge: English Language, Education and Training, Psychology, Public Safety and Security, Therapy and Counseling

Skills: Speaking, Active Listening, Critical Thinking, Reading Comprehension, Social Perceptiveness

Childcare Workers

Job Description: Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play.

Knowledge: Customer and Personal Service, English Language, Education and Training, Public Safety and Security, Psychology

¹ The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

Skills: Monitoring, Service Orientation, Social Perceptiveness, Active Listening, Coordination

Occupational Demand

The NCV/NML subregion employed 14,505 workers in child development occupations in 2020 (Exhibit 1). The largest occupation is teaching assistants, except postsecondary with 8,117 workers in 2020. This occupation is projected to contract by 1% over the next five years, while still having 764 annual openings.

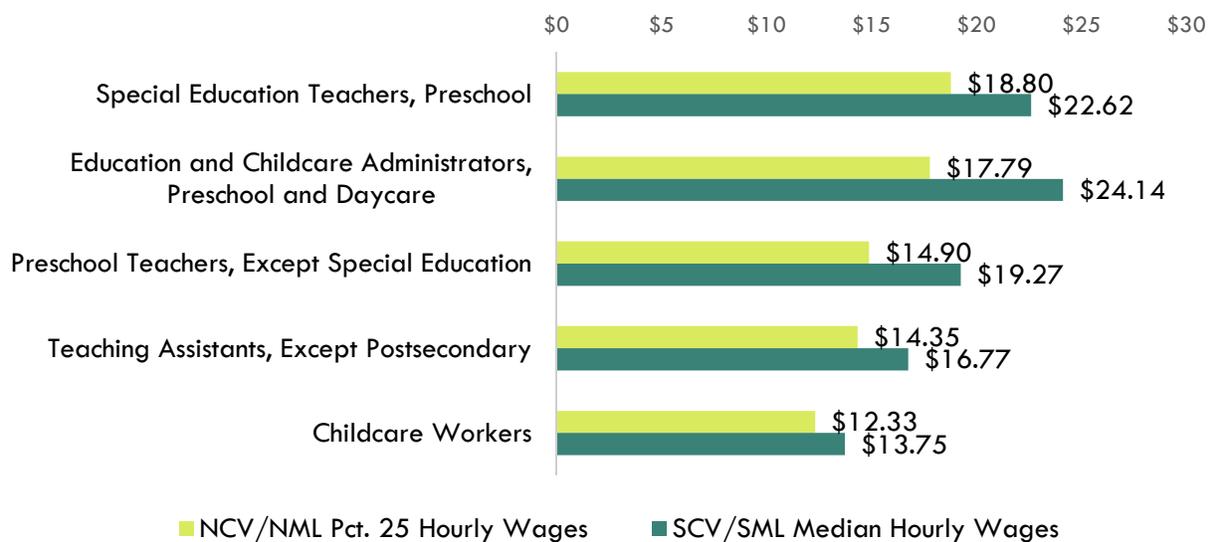
Exhibit 1. Child development employment and occupational projections in the NCV/NML subregion

Occupation	2020 Jobs	2025 Jobs	5-Year Change	5-Year % Change	Annual Openings
Teaching Assistants, Except Postsecondary	8,117	8,056	(61)	(1%)	764
Childcare Workers	4,483	3,913	(570)	(13%)	583
Preschool Teachers, Except Special Education	1,673	1,622	(52)	(3%)	174
Education and Childcare Administrators, Preschool and Daycare	156	139	(17)	(11%)	11
Special Education Teachers, Preschool	76	80	5	6%	7
TOTAL	14,505	13,809	(696)	(5%)	1,539

Wages

Exhibit 2 shows the entry-level hourly wages of the child development occupations. Special education teachers, preschool earn the highest entry-level wage, \$18.80/hour in the subregion. Education and childcare administrators, preschool and daycare earn the highest median wage, \$45.99/hour in the subregion. Entry-level wages are derived from the 25th percentile.

Exhibit 2. Child development entry-level wages in the NCV/NML subregion



Job Postings

There were 439 job postings for the five occupations in the NCV/NML subregion from August 2021 to January 2022.² The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of child development by number of job postings

Employer	Job Postings	% Job Postings
Kindercare	10	3%
Acelero	7	2%
Childtime Learning Centers	7	2%
Learning Care	7	2%
Right At Home Modesto	7	2%
Give Every Child Chance	6	2%
The Resource Connection Of Amador & Calaveras Counties, Inc	6	2%
The Table Community Foundation	6	2%
Creative Child Care	5	2%
Family Resource Referral Center	5	2%

Exhibit 4 shows how job postings for the targeted occupations in the NCV/NML subregion are distributed across five O*NET OnLine occupations. The occupational title preschool teachers, except special education is listed in 222 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Pre-School Teacher in 48 job postings, In Home Care in 15 job postings, and Nanny in 15 job postings.

Exhibit 4. Top occupational titles in job postings for child development

Occupational Title	Job Postings	% of Job Postings
Preschool Teachers, Except Special Education	222	51%
Childcare Workers	125	28%
Nannies	59	13%
Education Administrators, Preschool and Childcare Center/Program	17	4%
Special Education Teachers, Preschool	16	4%

Salaries

Exhibit 5 shows the “Market Salaries” for child development occupations that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

² Other than occupation titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

Exhibit 5. Salaries for child development occupations

Market Salary Percentile	Salary Amount
10th Percentile	\$24,968
25th Percentile	\$27,185
50th Percentile	\$30,424
75th Percentile	\$37,759
90th Percentile	\$53,520

Education

Of the 439 job postings, 237 listed an education level preferred for the positions being filled. Among those, 57% requested high school or vocational training, 55% requested an associate degree, and 25% requested a bachelor’s degree (Exhibit 6). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below may total more than 100%.

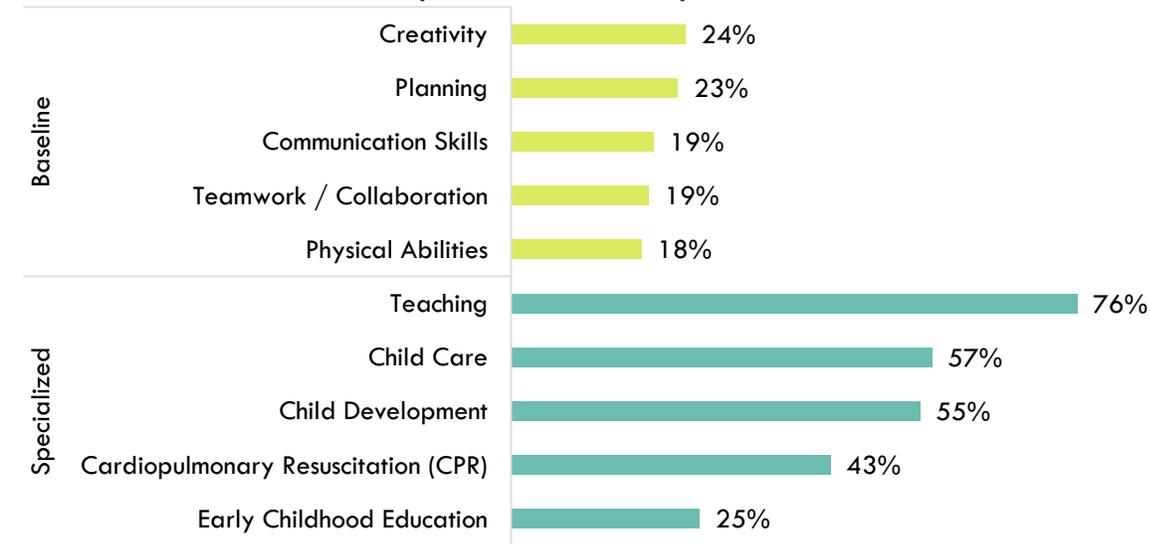
Exhibit 6. Education levels requested in job postings for child development

Education Level	Job Postings	% of Job Postings
High school or vocational training	136	57%
Associate's degree	130	55%
Bachelor's degree	60	25%
Doctoral degree	3	1%
Master's degree	2	1%

Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are creativity, 24% of job postings, planning, 23%, and communication skills, 19%. The top three specialized skills are teaching, 76% of job postings, child care, 57%, and child development, 55%.

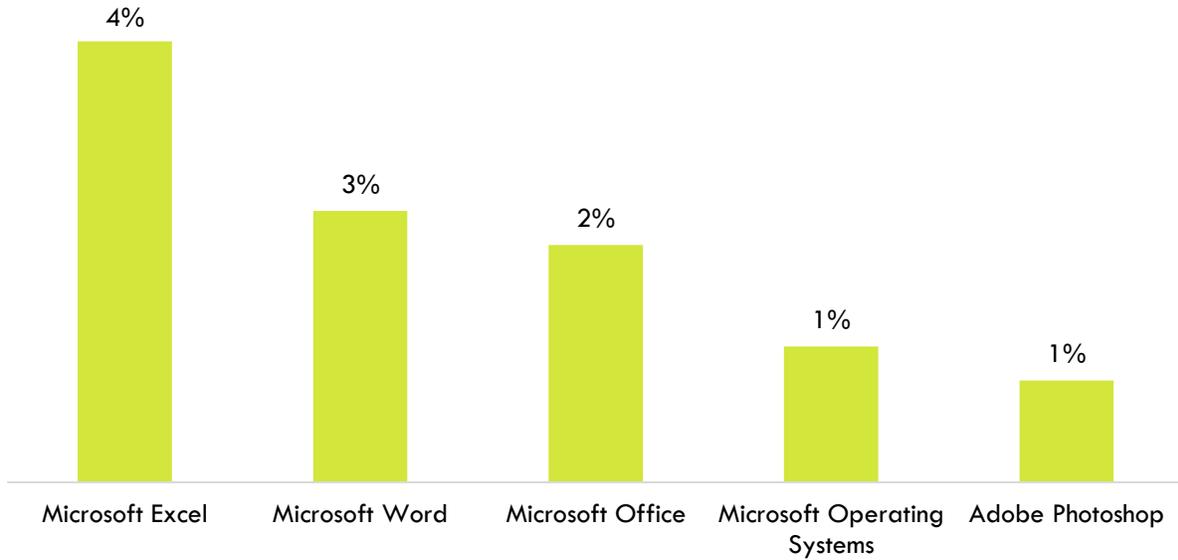
Exhibit 7. In-demand child development baseline and specialized skills



Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Excel and Word were the top two software skills identified in job postings (Exhibit 8).

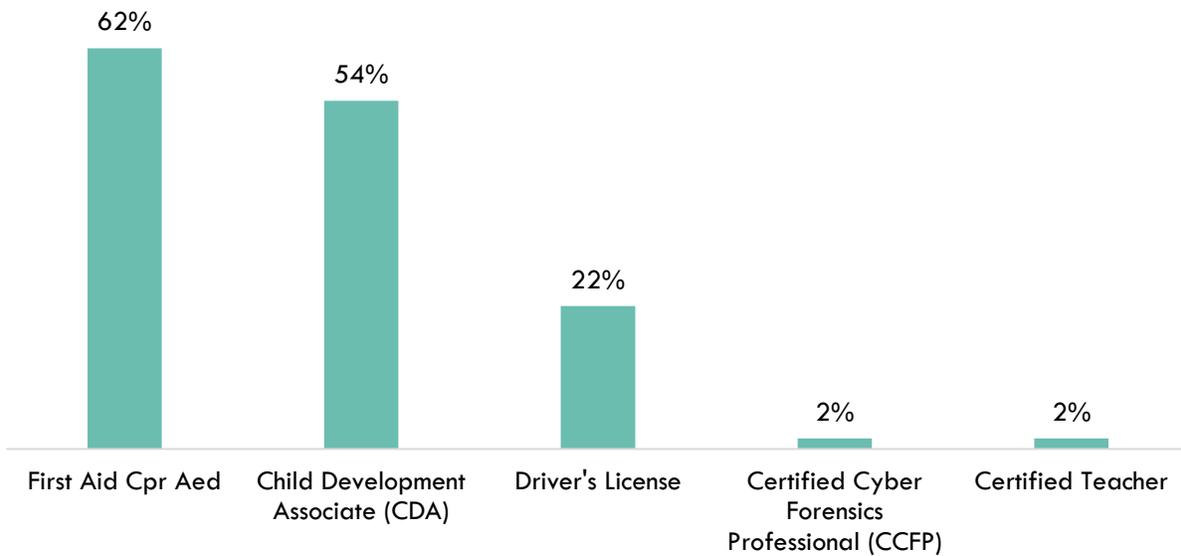
Exhibit 8. In-demand child development software skills



Certifications

Of the 439 job postings, 186 contained certification data. Among those, 62% indicated a need for a first aid cpr aed. The next top certifications are child development associate (CDA) and a driver's license (Exhibit 9).

Exhibit 9. Top child development certifications requested in job postings



Education, Work Experience & Training

A high school diploma or equivalent is typically required for childcare workers. Some college, no degree is typically required for teaching assistants, except postsecondary. An associate degree is typically required for preschool teachers, except special education. A bachelor's degree is typically degree is typically required for the remaining two occupations (Exhibit 10).

Exhibit 10. Education, work experience, training, and Current Population Survey results for child development occupations³

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Teaching Assistants, Except Postsecondary	Some college, no degree	None	None	38.6%
Childcare Workers	High school diploma or equivalent	None	Short-term on-the-job training	35.1%
Preschool Teachers, Except Special Education	Associate's degree	None	None	31.6%
Education and Childcare Administrators, Preschool and Daycare	Bachelor's degree	Less than 5 years	None	11.4%
Special Education Teachers, Preschool	Bachelor's degree	None	None	7.2%

³ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Supply

Analysis of program data from the California Community Colleges Chancellor’s Office Data Mart included the TOP and CIP codes and titles: 095650 - Welding Technology and 48.0508 - Welding Technology/Welder. Analysis of the last three years of data shows that, on average, 2269 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

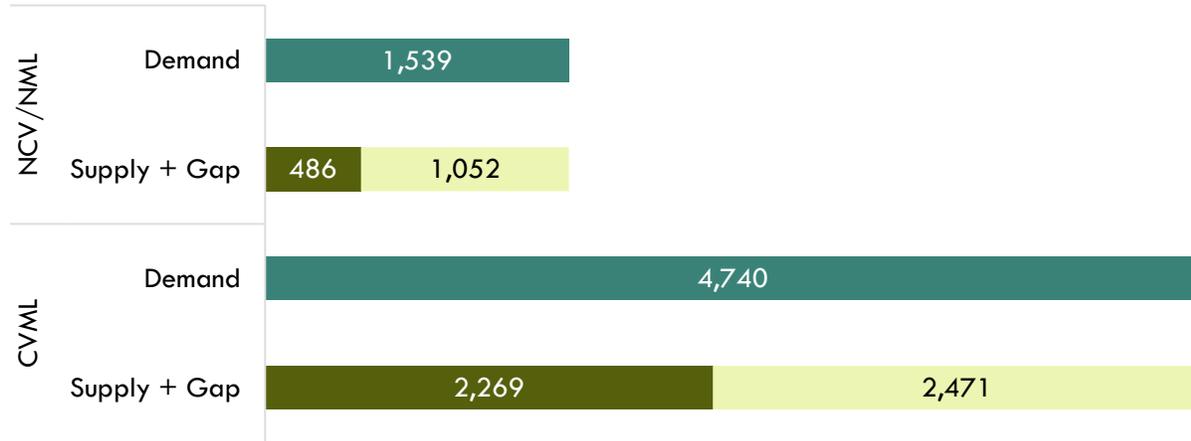
Exhibit 11. Postsecondary supply for child development occupations in the region

TOP/CIP Code- Title	College	Associate Degree	Associate for Transfer Degree	Certificate 12 < 18 semester units	Certificate 16 < 30 semester units	Certificate 18 < 30 semester units	Certificate 30 < 60 semester units	Certificate 6 < 18 semester units	Certificate 60+ semester units	Certificate 8 < 16 semester units	Subtotal
13.1210 - Early Childhood Education and Teaching	Humphreys University-Stockton and Modesto Campuses	9									9
	Bakersfield	30	89				38	272			428
130500 - Child Development/Early Care and Education	Cerro Coso	1	11		16	24	18				71
	Clovis	5	18		4	10					38
	Columbia	6	2	4	2	1				2	16
	Fresno City	16	44	10	15	71				5	162
	Merced	25	34					10			69
	Modesto	47	36	104	13	23	16			46	284
	Porterville	31	12					22			65
	Reedley College	24	38	36	52	71				8	230
	San Joaquin Delta		4		0	41	12				57
	Sequoias	38	52		18	39		292			440
	Taft	21	17	21	8	8	1	20		11	106
	West Hills Coalinga	5	4			4		71			84
	West Hills Lemoore	19	9		2	10		95			134
	Fresno City	2						3			5
	130520 - Children with Special Needs	Modesto				2	6	0			
Reedley College					1	1					2
Sequoias						5					5

TOP/CIP Code- Title	College	Associate Degree	Associate for Transfer Degree	Certificate 12 < 18 semester units	Certificate 16 < 30 semester units	Certificate 18 < 30 semester units	Certificate 30 < 60 semester units	Certificate 6 < 18 semester units	Certificate 60+ semester units	Certificate 8 < 16 semester units	Subtotal
	Taft				0	0					1
130540 - Preschool Age Children	San Joaquin Delta	37									37
130580 - Child Development Administration and Management	Cerro Coso						3				3
	Modesto						6				6
	San Joaquin Delta				0				1		1
130590 - Infants and Toddlers	Fresno City			6	2						8
TOTAL		315	369	181	137	314	130	750	1	72	2,269

There is an undersupply of 1,052 child development workers in the NCV/NML subregion and 2,471 workers in the region (Exhibit 12).

Exhibit 12. Child development workforce demand (annual job openings), postsecondary supply of students (awards), and additional students needed to fill gap in the NCV/NML subregion and region



Student Outcomes

Exhibit 13 summarizes employment and wage outcomes from the California Community College Chancellor’s Cal-PASS Plus LaunchBoard for the TOP code related to child development. Of note, 333 child development/early care and education students received a degree or certificate or attained apprenticeship journey status; 367 students transferred; 73% of students obtained a job closely related to their field of study; 41% had a median change in earnings; and 47% of students attained a living wage.

Exhibit 13. Subregion metrics for the TOP code related to child development

Metric	Child Development Administration and Management 130580	Children with Special Needs 130520	Child Development/Early Care and Education 130500	Preschool Age Children 130540	Infants and Toddlers 130590
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	*	11	333	24	*
Number of Students Who Transferred	*	13	367	20	19
Job Closely Related to Field of Study	*	100%	73%	57%	*
Median Change in Earnings	29%	*	41%	17%	9%
Attained a Living Wage	83%	50%	47%	34%	55%

* denotes data not available.

Conclusion

The entry-level wages of the five occupations exceed the NCV/NML subregion's average living wage. There were 439 job postings in the past six months for occupations related to child development in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is creativity, and the top specialized skill is teaching.
- The top software skill is Microsoft Excel.
- The top certification is a first aid cpr aed.

There is an undersupply of trained workers, a shortage of 1,052 in the NCV/NML subregion and 2,471 in the region.

Recommendation

Based on these findings, it is recommended that Merced College work with the regional directors, the college's advisory board, and local industry in the expansion or development of programs to address the shortage of child development workers in the region.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor's Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: economicmodeling.com .
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov .
Job Posting and Skills Data	Burning Glass: burning-glass.com/ .
Additional Education Requirements/Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: onetonline.org .

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.