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# California's ECE Workforce: What We Know Now and the Data Deficit That Remains

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## I. Introduction

In 2006, to provide an in-depth portrait of the center-based and licensed family child care workforce across the state and regionally, the Center for the Study of Child Care Employment (CSCCE) and the California Child Care Resource and Referral Network conducted the California Early Care and Education Workforce Study. This study built on California's long history of leadership in early childhood workforce research, which reaches back to the late 1970s. Yet, 12 years after this study, California lags behind a majority of other states when it comes to the status of its workforce data.

The absence of an updated statewide survey or a statewide workforce registry creates numerous challenges to the implementation of evidence-based decision making. Too often, determinations about the workforce are made with scant information, which can lead to deciding that a policy does not work and moving on to developing new initiatives without sufficient or accurate information to assess impact and effectiveness or guide new approaches.<sup>1</sup> Without better data, there is a risk of replicating the very same undetected or undocumented problems that led a previous approach to be deemed ineffective or failing. Additionally, numerous changes in the political, economic, and cultural environment in the past 12 years render the 2006 study severely out of date and underscore the urgency for current and ongoing data to accurately assess the consequences of policy approaches and interventions.

Insufficient workforce data leave numerous unanswered questions related to major policy changes over the last decade. These include:

- What percentage of the early care and education (ECE) workforce earns below the increased state and/or local **minimum wages** scheduled to go into effect periodically over the next several years?
- What impact are minimum wage increases having with regard to **wage compression** for those early educators earning above the minimum wage?
- How do **transitional kindergarten (TK)** teachers compare demographically, educationally, and in terms of compensation and turnover with other ECE teachers with equivalent qualifications, and to what extent are these ECE teachers leaving current jobs for TK positions?
- What are the differences in the preparation, support, compensation levels, and staff stability among early educators working in programs participating in the **California Quality Rating and Improvement System (QRIS)** programs?
- To what extent has the discontinuation of the **CARES Plus program** influenced workforce pursuit of higher education or increased student loan debt?<sup>2</sup>

A new [California Early Care and Education Workforce Study](#) will be carried out in 2019 and is intended to answer these and other critical questions (see **Box 2**, p. 12). The 2019 study will be conducted by CSCCE in partnership with the California Resource and Referral Network, with support from the California Department of Education, First 5 California, the Heising-Simons Foundation, and the David and Lucile Packard Foundation.

Results from the 2019 study will provide a statewide, regional, and — to the extent possible — local picture of the workforce across the state. It will also establish baseline data that can serve as the cornerstone for an ongoing, comprehensive data system about the early childhood workforce in California. However, a study of this magnitude takes time to complete, and findings will not be immediately available. Additionally, the ECE Workforce Registry for all staff in licensed and publicly funded programs is unlikely to be fully operational before 2021, even if legislation and dedicated public funds are soon committed to its expansion. In the interim, advocates, policymakers, and other stakeholders continue to demand data on these workers.

This brief directs stakeholders to three more recent, though not comprehensive, sources of information about the California early childhood workforce: 1) local workforce data sources from three counties; 2) annual federal data collected by the U.S. Bureau of Labor Statistics; and 3) California-specific data drawn from the 2012 National Survey of Early Care and Education. Findings from the latter two sources are detailed below.

We caution readers that moving among various datasets on the early childhood workforce can be challenging due to differences in how the population is determined, terminology used to describe members of the workforce, and phrasing of questions. A common challenge that arises is divergent numbers in the estimated size of the early childhood workforce, as we detail in **Box 1**, p. 5.

# II. Sources of California ECE Workforce Data

## Local Workforce Data Sources

Examples of publicly available data describing the workforce in specific counties or educators participating in a specific local initiative are listed below. Local studies vary with regard to the type of information collected and the representativeness of their samples but nonetheless can offer critical information for local policy and advocacy efforts. The usefulness of these studies may extend beyond the targeted community and can be informative for stakeholders in similar or adjacent communities. Examples include:

- [San Mateo County Early Childhood Education Teacher Compensation Study](#) — This 2017 study examined compensation and turnover rates of the licensed, center-based workforce in San Mateo county.<sup>3</sup>
- [The State of Early Care and Education in Los Angeles County: Los Angeles County Child Care Planning Committee 2017 Needs Assessment](#) — This report looked at access to early care and education, quality in early care and education, and the early care and education workforce across Los Angeles county.<sup>4</sup>
- [2016 Alameda County Early Care and Education Workforce Study](#) — This study examined characteristics of teaching staff employed in center-based ECE programs in Alameda County.<sup>5</sup>
- [Teachers’ Voices: Work Environment Conditions That Impact Teacher Practice and Program Quality](#) — This report presented the findings from the [SEQUAL](#) study focused on Alameda County teaching staff employed in center-based programs participating in QRIS in the spring of 2016.<sup>6</sup>
- [Stability of Teaching Staff in Los Angeles Universal Preschool \(LAUP\) Programs](#) — Published in 2015, this study explored turnover and retention rates among LAUP center- and home-based programs in Los Angeles county.<sup>7</sup>



# The Occupational Employment Statistics From the Bureau of Labor Statistics

The most current, albeit limited, data on the size and earnings of the workforce come from the U.S. Bureau of Labor Statistics' Occupational Employment Statistics (OES), which provides annual reports of worker earnings across occupations each year.<sup>8</sup> The OES defines the following occupations: child care workers, preschool teachers (excluding special education), preschool teachers (special education), and education administrators in preschool/child care center programs. These data do not include the self-employed, although home-based child care assistants, who are employees, are likely included in the "child care worker" category.

The current median wages reported by the OES — \$12.29 per hour for child care workers and \$16.19 per hour for preschool teachers in California — reflect a small uptick in wages between 2015 and 2017, but ECE wages continue to lag behind other occupations. During this same period, ECE center-based directors experienced a 6-percent decrease in wages. Across all three categories of ECE staff, wages were substantially lower than those of kindergarten and elementary school teachers (see **Figure 1**).

OES data can be accessed for select metropolitan areas. However, due to the limited data available through the OES, it is difficult to provide a more nuanced picture of the ECE workforce using only this data source.

**Figure 1. ECE Workforce Earnings in California, by Occupation, 2018**

Occupation	Median Wage
Child care worker	\$12.29 per hour
Preschool teacher	\$16.19 per hour
Center director	\$23.91 per hour
Kindergarten teacher	\$38.33 per hour
Elementary teacher	\$45.17 per hour
All workers	\$19.70 per hour

**Earnings by Occupation**

- In 2017, the median hourly wage for child care workers was \$12.29, a **3% increase since 2015**.
- For preschool teachers, the median hourly wage was \$16.19, a **3% increase since 2015**.
- For preschool or child care center directors, the median hourly wage was \$23.91, a **6% decrease since 2015**.

Source: Early Childhood Workforce Index 2018, California Profile. Retrieved from <http://cscce.berkeley.edu/files/2018/06/2018-Index-California.pdf>.

# The 2012 National Survey of Early Care and Education

The National Survey of Early Care and Education (NSECE) is the most current comprehensive source of national data that differentiates the early childhood workforce by job role and setting.<sup>9</sup> The 2012 NSECE gathered information about approximately one million members of teaching staff employed in center-based programs nationwide, as well as approximately one million paid home-based providers.<sup>10</sup> Due to the sampling methodology used in the study, representative state-level data are available for several large states, such as California. There are, however, a number of limitations with the NSECE. Some questions regarding the workforce that can be answered with NSECE data at the national level cannot be answered at the state level due to insufficient sample sizes. Additionally, NSECE data cannot be reported in any detail at the regional or county level. Another limitation with the NSECE is that the data were collected in 2012. Although more recent than the 2006 California Early Care and Education Workforce Study, various public policy reforms — such as minimum wage increases and widespread implementation of QRIS — were not in place when NSECE data were collected.

Nonetheless, the NSECE offers the most comprehensive dataset available on California’s early education workforce and is therefore helpful in responding to some questions regarding the early childhood workforce as we await more recent and more comprehensive state and local information.

## Box 1. What We Know About the Size of the Early Childhood Workforce in California

The OES and NSECE utilize different definitions of the early childhood workforce, and the data were collected in different years, resulting in different counts of the size of the early childhood workforce in California.

The NSECE identified approximately **205,000** members of California’s paid ECE workforce, though based on their categorization, it is likely that nearly half of the workforce (49 percent) identified as home-based unlisted are individual family, friend, and neighbor (FFN) providers. NSECE further identified 94,200 individuals who worked as teaching staff in center-based programs (46 percent), while the remaining 9,710 members of the workforce (5 percent) worked as home-based listed providers.

The OES, which offers the most recent count, identified nearly **120,000** paid members of the ECE workforce, but this tally likely excludes those who are FFN providers or self-employed licensed family child care providers.

Relying on NSECE and OES counts of those likely to work in group settings places the size of this workforce at between **103,000** and **120,000** paid members of the workforce, excluding FFN providers. A more accurate estimate of the number of providers and a more precise report of workplace settings is hampered by California’s data deficit on the ECE workforce.

# III. A Snapshot of California’s Early Childhood Education Workforce

The following information on select characteristics of California’s early education workforce is based on CSCCE’s analysis of the NSECE California subset. We present data on each of the three groups identified in the NSECE when possible, but the sample size limitations and variations in the surveys limit our ability to do so consistently.

What do we know about the **demographic characteristics** of the early childhood workforce in California?

## » Workplace Setting

The NSECE classifies those who are paid to work with children in one of three groups: center-based teaching staff, home-based listed providers, or home-based unlisted providers. “Listed” providers are defined as individuals appearing on state or national lists of ECE services, such as licensed, regulated, license-exempt, or registered home-based providers. The home-based definitions utilized by NSECE do not allow us to definitively distinguish which providers are licensed family child care providers from those who are license-exempt family, friend, or neighbor (FFN) providers. However, in mapping the way the question was formulated with California’s regulatory requirements and additional NSECE data about the number of children and their relationship to those who care for them, we infer that most of the home-based listed providers in the California NSECE sample are licensed family child care providers and most home-based unlisted are individual FNN providers.

	Size of the Workforce	Child Enrollment		
		<i>Under 3 Years Old</i>	<i>Ages 3-5 (not in K)</i>	<i>Total</i>
Center-Based Settings	94,200	154,000	538,000	692,000
Home-Based Listed Settings	9,710	36,100	41,200	77,300
Home-Based Unlisted Settings	101,000	126,000	97,700	223,700

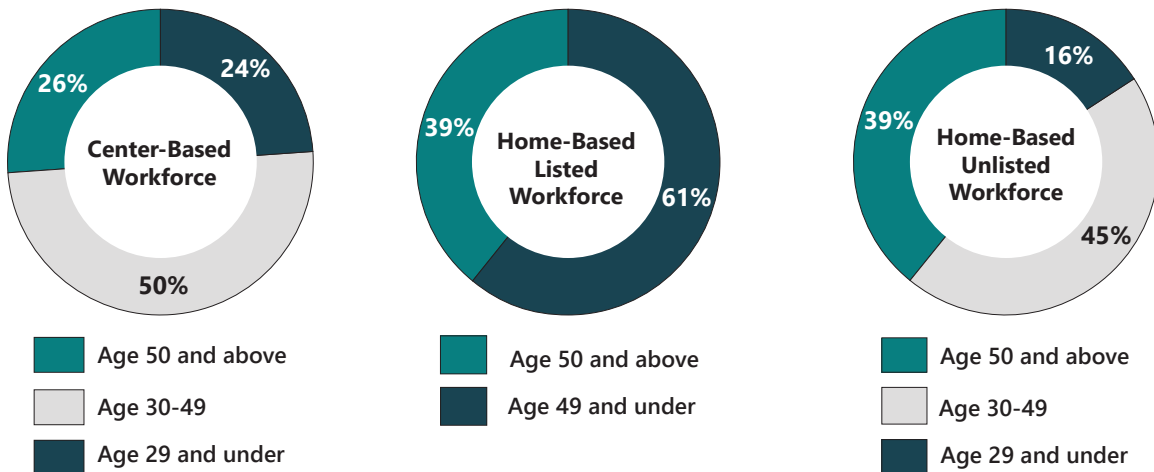
## » Gender

In California, 97 percent of center-based teachers in 2012 were women. Data on gender were not available for those working in home-based settings.

## Age

The early childhood workforce spans a wide age range, with home-based providers notably older than those working in centers at the time of data collection.

**Figure 2. Age of Early Childhood Workforce in California, 2012**

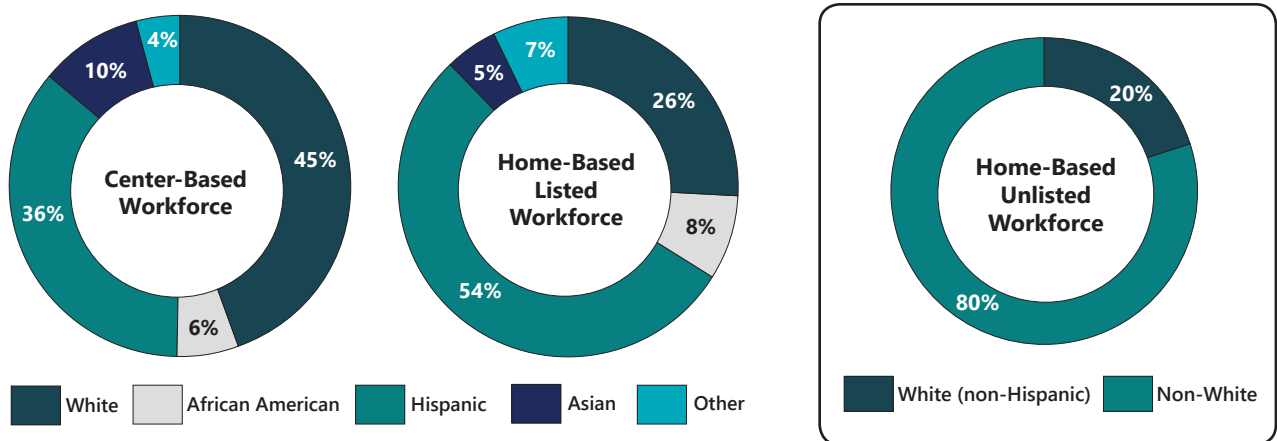


*Note: Because the sample size of home-based listed providers was too small to report the three age categories reported for the center-based workforce and the home-based unlisted workforce, age was collapsed into two categories for this segment of the workforce.*

## Race/Ethnicity

In 2012, nearly one-half of the center-based workforce identified as white; in contrast, less than one-third of the listed and unlisted home-based workforce identified as white.<sup>11</sup> Across settings, the racial and ethnic composition of the workforce stands in stark contrast to California's K-12 teaching workforce, in which more than 65 percent of teachers identified as white in 2012.<sup>12</sup> However, the center-based early childhood workforce remains much less diverse than California's children; in 2012, only 25 percent of the child population under age five in California was white.<sup>13</sup> The home-based early childhood workforce more closely reflects the child population in California.

**Figure 3. Race/Ethnicity of Early Childhood Workforce in California, 2012**



*Note: Because the sample size of home-based unlisted providers was too small to report the five race/ethnicity categories reported for the center-based workforce and the home-based listed workforce, these five race/ethnicity categories were collapsed into two categories for this segment of the workforce.*



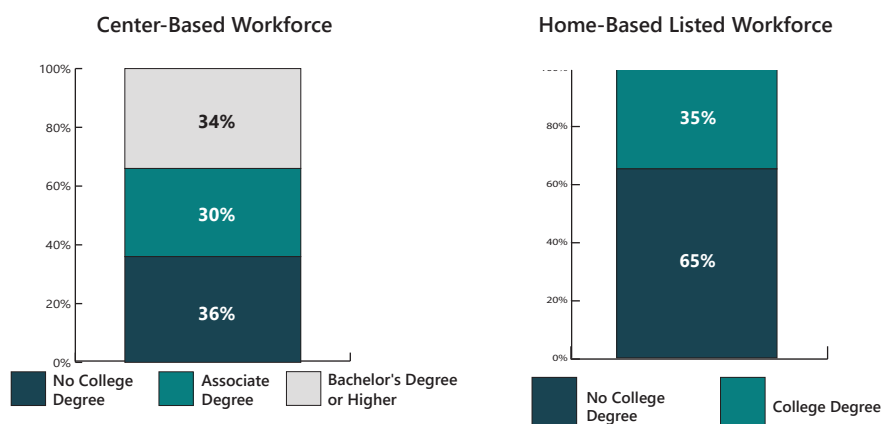
# What do we know about the **educational attainment** of the early childhood workforce in California?

Educational backgrounds vary widely among the early childhood workforce. However, despite the low and uneven educational requirements for most teaching staff working in licensed settings in 2012, a substantial number of early educators held a college degree.

## » Educational Attainment of the Center-Based Workforce by Setting

Sixty-four percent of the center-based workforce and 35 percent of the home-based listed workforce held an associate degree or higher, though it should be noted the data do not specify if these degrees are in an early childhood education-related field.

**Figure 4. Educational Attainment of Early Childhood Workforce in California, 2012**

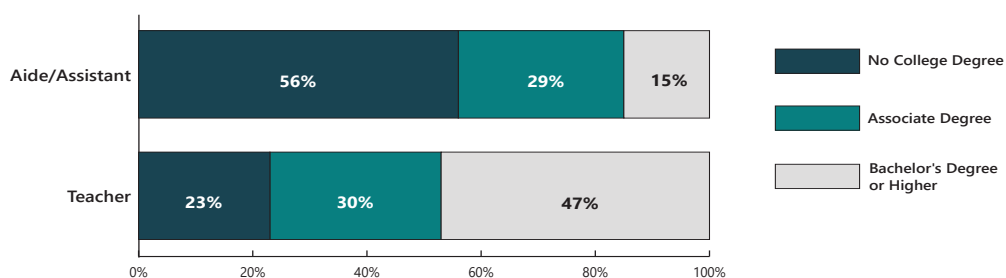


*Note: Because the sample size of home-based listed providers was too small to report the three educational attainment categories reported for the center-based workforce, these three educational attainment categories were collapsed into two categories for this segment of the workforce. Data on the educational attainment of the home-based unlisted workforce is unavailable.*

## » Educational Attainment of the Center-Based Workforce by Job Role

Sixty percent of center-based teaching staff were employed in the role of teacher or lead teacher (referred to hereafter as teacher), and 40 percent in the role of assistant teacher or aide.<sup>14</sup> Unsurprisingly, teachers were more likely than aides or assistant teachers to hold a college degree. Seventy-seven percent of teachers held a college degree; they were more likely to hold a bachelor's degree or higher, rather than an associate degree. Forty-four percent of aides and assistants held a degree; they were more likely to hold an associate degree, rather than a bachelor's degree or higher.

**Figure 5. Educational Attainment of Center-Based Workforce in California, by Job Role, 2012**

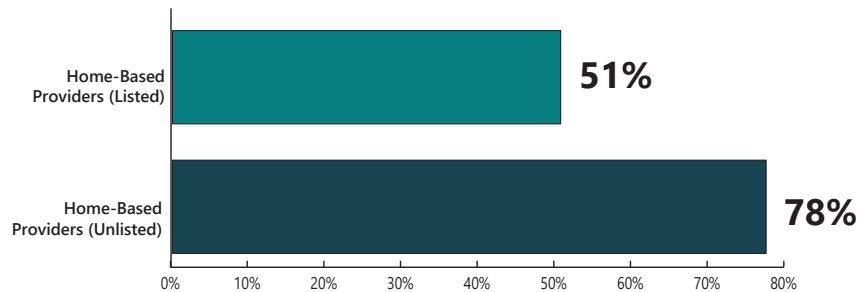


# What do we know about the **compensation** of the early childhood workforce in California?

Wages for most all early childhood workers remain low (see **Figure 1** on page 4). Yet, even within this ubiquitously underpaid field, disparities exist.

The scarcity of data regarding the home-based workforce prevents an in-depth analysis of factors influencing the earnings of this sector of the workforce. However, we do know that approximately one-half (51 percent) of the home-based listed workforce and more than three-quarters (78 percent) of the home-based unlisted workforce reported that they lived in a household that earned less than the state median income.<sup>15</sup>

**Figure 6. Percent of Home-Based Workers in California Living in a Household That Earned Less Than the State Median Income in 2011**



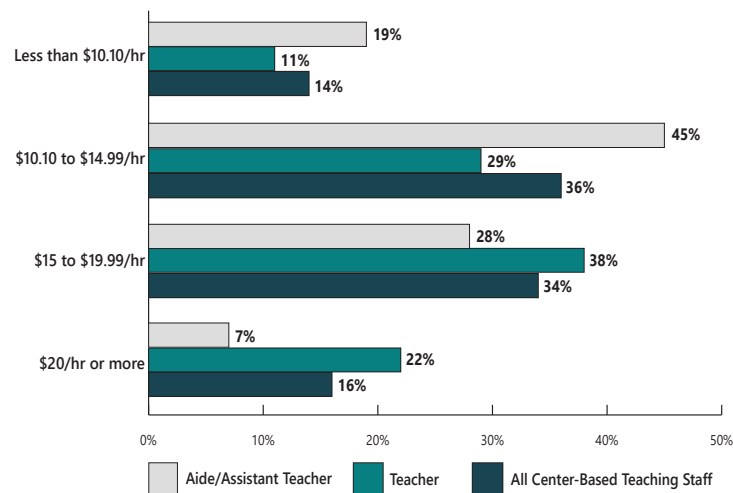
Note: The California median income in 2011 was \$57,287.

More information is available concerning the center-based workforce. The remainder of this report will examine some of the various factors contributing to the inequitable distribution of wages among center-based early educators.

## » Wages of Center-Based Staff by Job Role

One-half of center-based teaching staff in 2012 earned less than \$15 per hour; when adjusted for inflation, this wage equates to just \$16.69 per hour in 2018 dollars.<sup>16</sup> The wages of center-based early educators are related to many factors, including their job role and educational attainment, as well as the center's sponsorship and the age of children that it serves. Center-based early educators in the role of teacher earned higher wages on average than those in the roles of aide or assistant teacher.

**Figure 7. Hourly Wages of Center-Based Workforce in California, by Job Role, 2012**



## Wages of Center-Based Staff by Age of Children

Early educators working with infants and toddlers face a sizeable wage penalty compared to educators working only with children age three to five, not yet in kindergarten. Although the most sensitive period of children’s brain development occurs during the first three years of life<sup>17</sup> and teaching the youngest children stands to be of most lasting value, the current pay structure renders jobs working with infants and toddlers the least financially attractive.

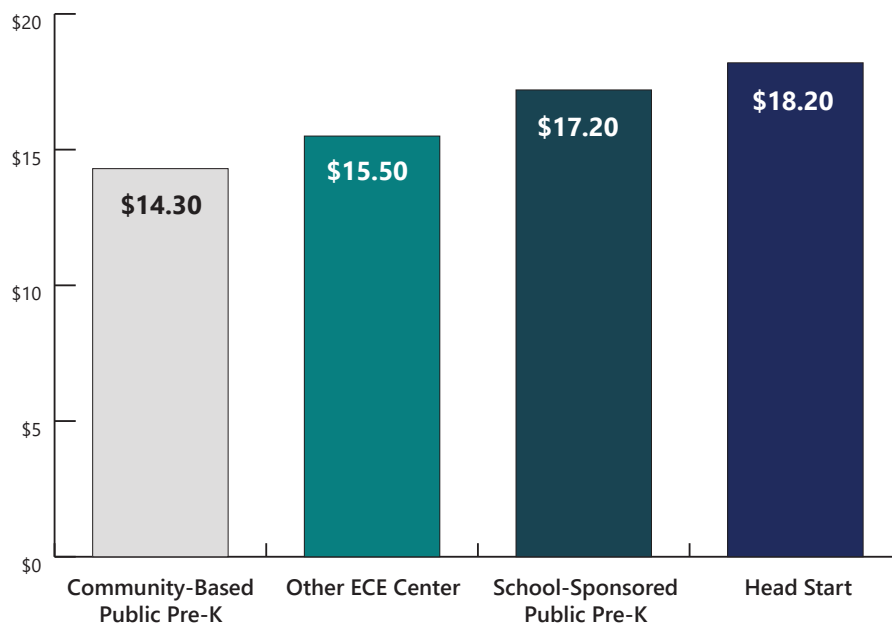
Overall, early educators in California earned \$16.00 per hour in 2012 (\$17.80 in 2018 dollars). However, this pay rate varies based on the age group of children served. On average, teachers working with infants and toddlers in California in 2012 earned \$14.20 per hour (\$15.80 in 2018 dollars), while those working exclusively with children age three to five earned \$16.90 per hour (\$18.80 in 2018 dollars). For an early educator working full-time, this difference amounted to \$5,616 per year (\$6,240 in 2018 dollars).<sup>18</sup>

## Wages and Program Sponsorship

California’s center-based programs rely on a variety of funding sources and sponsorships to serve children. In 2012, according to the NSECE, less than one-third of all early educators in California were employed in Head Start or school-sponsored public pre-K programs (18 and 12 percent, respectively), while approximately one-fifth (21 percent) were employed in community-based public pre-K and one-half (49 percent) were employed in other ECE centers.<sup>19</sup>

On average, those working in California Head Start programs earned the highest wage, and those working in community-based public pre-K earned the lowest wage. This circumstance differed substantially from the national picture, in which publicly funded pre-K offered among the highest wages.<sup>20</sup> The majority of ECE teaching jobs in California are found in centers providing the lowest wages, where teachers earn an average of between \$14.30 to \$15.50 per hour.

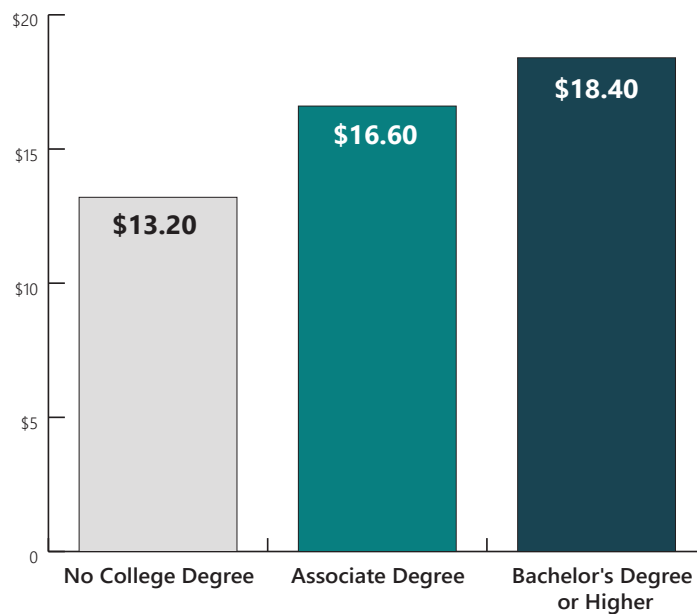
**Figure 8. Average Hourly Wage of Center-Based Workforce in California, by Funding Source and Sponsorship, 2012**



## » Wages of Center-Based Staff by Educational Attainment

Nationally, a bachelor's degree in early childhood education has the dubious distinction of having the lowest lifetime earnings projection of all college majors.<sup>21</sup> On average, women in California across occupations who held a bachelor's degree earned \$22.03 per hour in 2012, while the average hourly wage of early educators with a bachelor's degree or higher was \$18.40.<sup>22</sup> Nonetheless, educational attainment does provide a pathway to improve pay for those who work with young children. Center-based teaching staff in California in 2012 who held an associate degree earned approximately \$3.40 per hour more than those who did not have a college degree. The wage bump between an associate degree and a higher degree was smaller, as teaching staff with a bachelor's degree or higher only earned approximately \$1.80 per hour more than those who held an associate degree.

**Figure 9. Average Wage of Center-Based Workforce in California, by Educational Attainment, 2012**



## IV. Better Information Leads to Better Policy

Comprehensive and ongoing data about the early childhood workforce are essential in efforts to inform policy and resource decisions and to track impact. They are the starting point for making headway on higher qualifications, educational supports, and better pay and working conditions for the ECE workforce. Notwithstanding the data presented in this brief, shortcomings persist in our efforts to understand the current status of the ECE workforce in California and to track progress toward improving early childhood jobs. In an ideal world, core data on the size and key characteristics of the entire early care and education workforce would be collected regularly, be comparable across regions, states, and localities, and could be linked to data at the program level as well as the child and family levels. As noted in the [2018 Early Childhood Workforce Index](#), every state and community should be able to answer — at a minimum — the questions about their early educator workforce qualifications, working conditions, and pay detailed below in **Box 2**.

## Box 2. Data Needed by ECE Policymakers and Advocates

Responses to the following questions about early educator qualifications, workplace supports, and compensation are essential to inform, design, and assess policy reforms and progress, for each county and for California as a whole.

Can you answer these questions about **early educators** in your county? In the state?

- What number and percentage of lead teachers currently hold an associate degree or lower? A bachelor's degree or higher?
- What percentage of early educators lack foundational training, such as a CDA?
- What percentage of the workforce has participated in scholarship initiatives? How do scholarship recipients differ from those who have not received a scholarship?
- How do the answers to these questions vary by job role? By geographical location? By program sponsorship? By demographic characteristics?

Can you answer these questions about early educators' **work environments** in your county? In the state?

- What percentage of early educators have paid non-child-contact time for planning and professional development?
- What percentage of early educators say they do not have access to paid breaks (possibly in violation of the labor law)?
- How do answers to these questions vary by job role? By geographical location? By program sponsorship? By demographic characteristics?

Can you answer these questions about ECE workforce **compensation** in your county? In the state?

- What percentage of early educators earn at or above your state's minimum wage?
- What is the median wage of early educators by qualification level? For teachers with a bachelor's degree or higher, what is the difference in wages/salaries compared to kindergarten and transitional kindergarten (TK) teachers?
- What percentage of early educators have access to health insurance? Paid sick days? Paid vacation time?
- How do the answers to these questions vary by job role? By geographical region? By program sponsorship? By demographic characteristics?

Questions adapted from the *Early Childhood Workforce Index 2018*.

# Policy Recommendations

To ensure that the forthcoming California Early Care and Education Workforce Study does not stand as the sole source of comprehensive statewide data for another decade, policymakers and state leaders are urged to undertake the following:

- Commit to and enact a workforce data plan that: 1) requires participation in state workforce data systems by all members of the ECE workforce employed in licensed settings and in settings that receive public funding; and 2) ensures appropriate processes for data collection, management, and regular analysis.
- Establish an ongoing ECE Workforce Commission to generate and guide the implementation of equitable opportunities for preparation and continuing education, supportive working conditions, and appropriate compensation of the current and incoming early childhood workforce. This commission should be further charged with producing an annual report to the legislature about the supply, demand, distribution, diversity, and skill needs of the ECE workforce as well as progress toward more equitable and appropriate compensation and work environments across sponsorship and settings.

Building a better data system is not a pipe dream, but it does require raising the bar — and the resources — to move beyond current data collection efforts. The forthcoming California Early Care and Education Workforce Study provides the opportunity to establish statewide and regional baseline data from which to build upon, but it is imperative that this study serve as the baseline and not the sole source of data for another decade.

For more information on addressing the [Data Deficit](#) and to stay updated on the status of the [California Early Care and Education Workforce Study](#), visit our website, <http://cscce.berkeley.edu/>.

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<sup>1</sup> Whitebook, M., McLean, C., & Austin, L.J.E. (2018). *The Workforce Data Deficit: Who it Harms and How it Can Be Overcome*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. Retrieved from <http://cscce.berkeley.edu/files/2018/04/The-Workforce-Data-Deficit.pdf>.

<sup>2</sup> Comprehensive Approaches to Raising Educational Standards (CARES) Plus was a First 5 California statewide professional development program for early educators. The program ended June 30, 2016, when workforce development efforts were integrated into First 5 IMPACT and the California Quality Rating and Improvement System (CA-QRIS).

<sup>3</sup> San Mateo County Child Care Partnership Council (2017). *San Mateo County Early Childhood Education Teacher Compensation Study*. Retrieved from [http://www.smcoe.org/assets/files/learning-and-leadership/child-care-partnership-council/Committees/San%20Mateo%20ECE%20Teacher%20Compensation%20Study%20wAppendices\\_11.21.17.pdf](http://www.smcoe.org/assets/files/learning-and-leadership/child-care-partnership-council/Committees/San%20Mateo%20ECE%20Teacher%20Compensation%20Study%20wAppendices_11.21.17.pdf).

<sup>4</sup> Austin, L.J.E., Sakai, L., & Dhamija, D. (2016). *Alameda County Early Care and Education Workforce Study*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

<sup>5</sup> Whitebook, M., King, E., Philipp, G., & Sakai, L. (2016). *Teachers' Voices: Work Environment Conditions That Impact Teacher Practice and Program Quality*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. Retrieved from <http://cscce.berkeley.edu/files/2016/2016-Alameda-SEQUAL-Report-FINAL-for-Dissemination-v2.pdf>.

<sup>6</sup> Zepeda, Alex (2015). *Stability of Teaching Staff in LAUP Programs*. Retrieved from [http://child360.org/wp-content/uploads/2017/01/LAUP\\_WD\\_FULLREPORT\\_STABILITY\\_rev20160330.pdf](http://child360.org/wp-content/uploads/2017/01/LAUP_WD_FULLREPORT_STABILITY_rev20160330.pdf).

<sup>7</sup> Los Angeles County Child Care Planning Committee, Los Angeles County Office for the Advancement of Early Care and Education, & First 5 Los Angeles (2017). *The State of Early Care and Education in Los Angeles County: Los Angeles County Child Care Planning Committee 2017 Needs Assessment*. Retrieved from <https://www.first5la.org/index.php?r=site/article&id=3845>.

<sup>8</sup> Occupational Employment Statistics (OES) Survey, Bureau of Labor Statistics, Department of Labor. Retrieved from <http://stats.bls.gov/oes/>.

<sup>9</sup> Additional information about the National Survey of Early Care and Education (NSECE) can be found at <https://www.acf.hhs.gov/opre/research/project/national-survey-of-early-care-and-education-nsece-2010-2014>.

<sup>10</sup> See the *Early Childhood Workforce Index – 2018* for a description of the national ECE workforce utilizing NSECE data.

<sup>11</sup> The Asian category does not include Native Hawaiian or Other Pacific Islander.

<sup>12</sup> The California Department of Education, Certificated Staff by Ethnicity for 2011-12. Retrieved from <https://dq.cde.ca.gov/dataquest/Staff/StaffByEth.aspx?cYear=2011-12&cChoice=StateNum&cType=T&cGender=&Submit=1>.

<sup>13</sup> United States Census Bureau, National Population by Characteristics, 2010-2017. Retrieved from <https://www.census.gov/data/datasets/2017/demo/pepest/nation-detail.html>.

<sup>14</sup> The categories of “aide” and “assistant teacher,” as well as those of “teacher” and “lead teacher,” reported by the NSECE have been combined due to a lack of clear distinction between them. Also, please note that this variable captures the role of the worker as reported by the center administrator, not the worker’s self-reported role.

<sup>15</sup> The NSECE asked home-based providers to report their 2011 household income. The California median income was retrieved from <https://www2.census.gov/library/publications/2012/acs/acsbr11-02.pdf>.

<sup>16</sup> Figures were adjusted for inflation from January 2012 to August 2018 using the CPI Inflation Calculator of the Bureau of Labor Statistics.

<sup>17</sup> Thompson, R., & Nelson, C. (2001). Developmental Science and the Media. *Early Brain Development. American Psychologist* 56 (1): 5-15. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/11242988>.

<sup>18</sup> Annual wages were calculated by multiplying the hourly wage by 40 hours per week, 52 weeks per year. Figures were adjusted for inflation from January 2012 to August 2018 using the CPI Inflation Calculator of the Bureau of Labor Statistics.

<sup>19</sup> As center-based programs often receive funding from multiple sources, the four sponsorship categories shown are not mutually exclusive. In order to identify programs’ sponsorship, the NSECE followed a strategy of sequential categorization: 1) center-based programs that were school-sponsored were identified and categorized as “school-sponsored public pre-K”; these may include Head Start and public pre-K; 2) among those not sponsored by schools, those reporting Head Start funding (but not school sponsorship) were categorized as “Head Start” centers; 3) those reporting public pre-K funding (but not Head Start funding or public school sponsorship) were categorized as “community-based public pre-k” centers; and 4) the remaining programs were not sponsored by school systems and did not report Head Start or public pre-K funding and were broadly categorized as “other ECE.” In California, “other ECE” is likely to include nonprofit and for-profit centers that rely on any combination of family fees, individual child care voucher subsidies, and employer or philanthropic sponsorship.

<sup>20</sup> See the *Early Childhood Workforce Index – 2018* for how wage rates change based on early educators’ educational attainment.

<sup>21</sup> Hershbein, B., & Kearney, M.S. (2014). *Major Decisions: What Graduates Earn Over Their Lifetimes*. Washington, DC: The Hamilton Project, Brookings Institution. Retrieved from [http://www.hamiltonproject.org/papers/major\\_decisions\\_what\\_graduates\\_earn\\_over\\_their\\_lifetimes/](http://www.hamiltonproject.org/papers/major_decisions_what_graduates_earn_over_their_lifetimes/).

<sup>22</sup> Hourly wages were calculated by dividing the annual wage by 40 hours per week, 52 weeks per year. Data on wages across occupations came from the U.S. Census Bureau, 2012 American Community Survey.

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### **About the Center for the Study of Child Care Employment**

Established in 1999, the Center for the Study of Child Care Employment (CSCCE) is focused on achieving comprehensive public investments that enable the early childhood workforce to deliver high-quality care and education for all children. To achieve this goal, CSCCE conducts research and policy analysis about the characteristics of those who care for and educate young children and examines policy solutions aimed at improving how our nation prepares, supports, and rewards these early educators to ensure young children's optimal development. CSCCE also works directly with policymakers and a range of national, state, and local organizations to assess policy proposals and provide technical assistance on implementing sound early care and education workforce policy.

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