Early Childhood Workforce Index 2024

# Appendix 1: Data Sources & Methodology

Since 2016, the *Early Childhood Workforce Index* has tracked the status of the early care and education (ECE) workforce and related state policies in order to identify promising practices for improving early educator jobs. The *Index* is the only comprehensive report that documents these conditions and changes over time in all 50 states and the District of Columbia. The 2024 edition also includes a profile of the U.S. territories, as well as a profile of Tribes.

To view previous editions of the *Early Childhood Workforce Index*, see:

- *Early Childhood Workforce Index - 2020*[1]
- *Early Childhood Workforce Index - 2018*[2]
- *Early Childhood Workforce Index - 2016*[3]

## Defining the Early Childhood Workforce

In this report, when we speak to policies, programs, and financing for the early childhood workforce, we generally align our boundaries of the workforce with those articulated by the International Labour Office (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the International Standard Classification of Education (ISCED). The ISCED defines early educators as those who are "responsible for learning, education, and care activities of young children" and working in programs that are "usually school-based or otherwise institutionalized for a group of children (for example, center-, community-, or home-based), excluding purely private family-based arrangements that may be purposeful but are not organized in a program (for example, care and informal learning provided by parents, relatives, friends, or domestic workers)."[4]

Available U.S. data on the ECE workforce do not neatly align with the ISCED definition, but we have generally aligned our reporting on the size and characteristics of the ECE workforce with the ISCED definition where possible. One notable exception is that we include paid in-home care providers, such as nannies, in our estimates of the ECE workforce.

Throughout the report, we focus primarily on those who work in teaching and administrative roles in early care and education settings serving children prior to kindergarten. We also compare the status of early educators to those teaching older children in order to highlight disparities in working conditions for educators across the birth-to-age-eight spectrum of early childhood development.[5]

A wide variety of terms are used to refer to the early care and education sector and its workforce depending on the age of children served (e.g., infants and toddlers, preschool-age children), the location of the service (centers, schools, or homes), auspice and funding streams, job roles, and data sources. We use "early childhood workforce," "early care and education (ECE) workforce," or "early educators" to encompass all those who work directly with young children for pay in early care and education settings in roles focused on teaching and caregiving. We use more

specific labels, such as "Head Start teacher" or "home-based provider" when we are referring to a particular type of setting. In some cases, we are limited by the labels used in a particular data source. For example, we may refer to "childcare workers" and "preschool teachers" because we relied on data specific to subcategories of the workforce as defined and labeled by the Standard Occupational Classification of the U.S. Bureau of Labor Statistics.

## Educator Quotes

Throughout the report are direct quotes from early educators. These quotes were collected during the virtual convenings, "Elevating Early Educator Voices in the 2024 Early Childhood Workforce Index," hosted by CSCCE on May 20 and June 10, 2023.

# Data & Methods for Chapter 2: The Early Childhood Workforce

Two major national surveys inform **Chapter 2** of the *Early Childhood Workforce Index*: the National Survey of Early Care and Education (NSECE) and the American Community Survey (ACS). Each survey has its own strengths and limitations, necessitating use of one or another for specific purposes. The 2024 *Index* also introduces a new methodology for defining the ECE workforce using the American Community Survey (see **Defining the ECE Workforce Using the ACS**, below).

## National Survey of Early Care and Education (NSECE)

The *Early Childhood Workforce Index* provides a snapshot of the size and demographics of the early childhood workforce using the latest data from the National Survey of Early Care and Education. A nationally representative survey, the 2019 NSECE provides the most up-to-date information on the early care and education workforce in the United States that can be broken down by setting and job role. The NSECE represents teaching staff employed in center-based programs, including programs sponsored by public school districts or funded with Head Start dollars. The study also covers providers in home-based settings serving children under age 13, distinguishing between "home-based listed" and "home-based unlisted" providers. The "listed" providers are defined as individuals appearing on state or national lists of early care and education services, such as licensed, regulated, license-exempt, or registered home-based providers. "Unlisted" providers are individuals who regularly care for one or more children who are not their own for five or more hours per week in a home-based setting. While NSECE also collects data from unlisted providers who are unpaid, we dropped this segment of the workforce in our analysis, focusing only on those who are paid to care for and educate young children. We recognize, however, that unpaid individuals fulfill an important role in the lives of children and families and provide an essential service to our nation.

We also only keep home-based providers who serve children from birth to age five. We provide comparisons between 2012 and 2019 NSECE data when differences are notable.

## American Community Survey (ACS)

The *Index* supplements our 2019 NSECE snapshot of the ECE workforce with additional national and state-level data from the Census Bureau's American Community Survey, a nationally representative dataset of U.S. households that can be used to identify early educators according to the industry and occupation in which they are classified.

### Defining the ECE Workforce Using the ACS

U.S. Census Bureau datasets provide a massive representative source of information on people living in the United States, but their classification of occupations and industries of workers do not clearly identify members of the early care and education workforce. For instance, it is not feasible to separate educators by job role within child care centers, nor is it feasible to distinguish licensed or registered home-based providers. Some researchers use self-employment status as a proxy for family child care, but we are unable to vet the accuracy of this assumption using publicly available data. Instead, analyzing data on the ECE workforce requires identifying pairings of **occupation** and **industry** codes, which are consistent across core Census datasets such as the American Community Survey (ACS) and the Current Population Survey (CPS).

**Chapter 2** includes national and state-level estimates using the ACS five-year sample from 2022, which we analyzed using public use microdata accessed via IPUMS.[6] Based on a careful examination of occupation and industry pairings, their prevalence, and their coding schema, CSCCE defines the ECE workforce as the set of pairings in **Appendix Table 1.1** below. To assess the ACS occupation coding schema, we analyzed the Public-Use Sample of Occupation and Industry Write-ins from ACS 2019.[7] This file provides a snapshot of the original data collected in the ACS via open-text fields, which Census Bureau analysts review and classify under occupation and industry codes for analysis.

APPENDIX TABLE 1.1

## American Community Survey Occupation-Industry Pairings Describing the ECE Workforce

| ACS Occupation | ACS Industry | Common Write-in Occupations, 2019 |
|---|---|---|
| **4600 Childcare Workers** | 8740 Child Day Care Services | "CHILDCARE PROVIDER," "HOME DAYCARE OWNER/OPERATOR," "DAYCARE AIDE" |
| **4600 Childcare Workers** | 9290 Private Households | "NANNY" |
| **4600 Childcare Workers** | 7860 Elementary and Secondary Schools | "CHILDCARE WORKER," "AFTER SCHOOL DAYCARE ASST" |
| **4600 Childcare Workers** | 9160 Religious Organizations | "CHURCH NURSERY," "AFTER SCHOOL CARE" |
| **2300 Preschool and Kindergarten Teachers** | 8740 Child Day Care Services | "PRESCHOOL TEACHER," "EARLY CHILDHOOD TEACHER," "INFANT TEACHER" |
| **2545 Teaching Assistants** | 8740 Child Day Care Services | "PRESCHOOL TEACHING ASSISTANT," "3-YEAR-OLD INSTRUCTIONAL AIDE" |
| **230 Education and Childcare Administrators** | 8740 Child Day Care Services | "PRESCHOOL DIRECTOR," "DAYCARE DIRECTOR" |

*Table: Center for the Study of Child Care Employment, University of California, Berkeley*

*Data: Authors' analysis of American Community Survey public use microdata, retrieved from IPUMS USA* (https://doi.org/10.18128/D010.V14.0).

The Census classification makes it easier to identify early educators by job role using a single occupation–industry pairing. For instance, when we evaluated occupation "2300 Preschool and kindergarten teachers," our analysis suggested that limiting this occupation code to industry "8740 Child Day Care Services" was a good proxy for identifying preschool teachers alone. However, it is not feasible to identify all assistant teachers through a single pairing, since write-in data suggest they are coded to multiple pairings. Moreover, some write-in data refer to care for school-age children (e.g., occupation "AFTER SCHOOL DAYCARE ASST"). Because these descriptions are only available in the 2019 write-in sample data, we are not able to exclude child care workers in aftercare for school-age children. For national analysis by job role or by age of children served, the NSECE remains a more reliable source of data.

In order to provide an inclusive summary of the ECE workforce as a whole, we use the ACS (which can support both national and state-level analysis) to pool all individuals covered by the occupation–industry pairings in **Appendix Table 1.1**. We hold that these pairings most likely correspond to individuals employed to provide early care and education to a consistent group of young children. We also recommend analysts continue to use these pairings to avoid capturing kindergarten teachers or elementary school assistant teachers alongside early educators.

In the *Index*, we make use of both the individual occupation groups and our pooled ECE workforce group. **Appendix Figure 1.1** provides a breakdown of the pooled workforce by occupation–industry pairing.

APPENDIX FIGURE 1.1

**American Community Survey Occupation-Industry Pairings Describing the ECE Workforce**

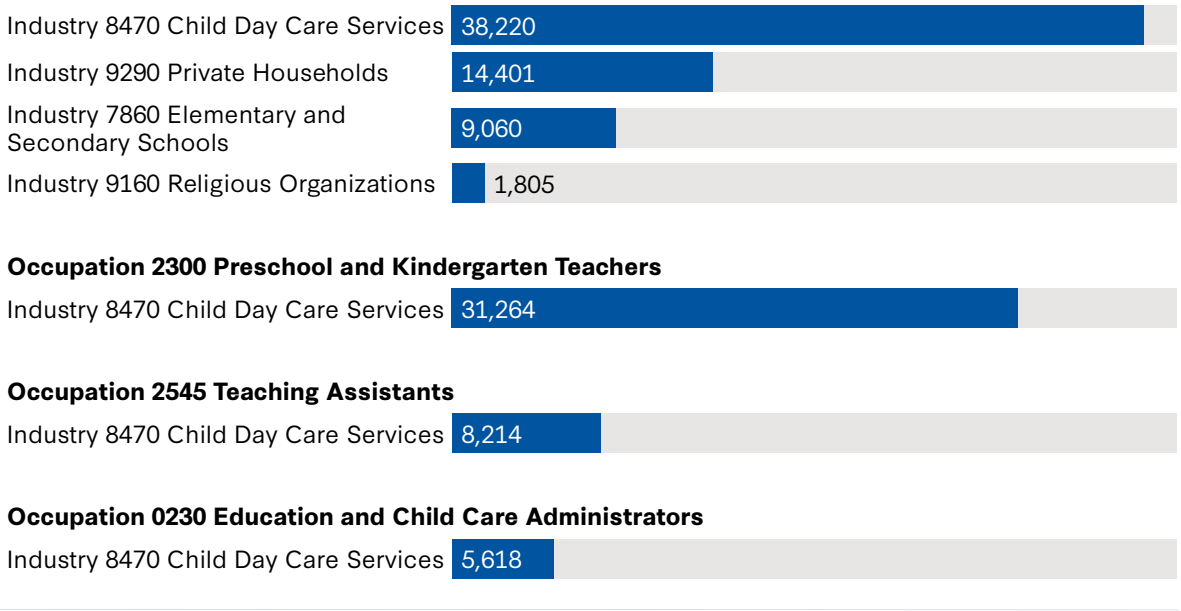


*Chart: Center for the Study of Child Care Employment, University of California, Berkeley*

*Data: Authors' analysis of American Community Survey public-use microdata, retrieved from IPUMS USA (https://doi.org/10.18128/D010.V14.0).*

## Including Nannies in the ECE Workforce

An estimated 13,586 "4600 Childcare workers" fall within industry "9290 Private Households" in the 2021 ACS. Write-in data from the 2019 ACS reveal these are virtually all individuals who described themselves as a nanny. These individuals operate under a different employment arrangement than educators who run an in-home program or teach in a child care center. Despite their unique situation, CSCCE includes nannies within the definition of the ECE workforce. Like teachers in group settings, nannies are professional workers providing care and education for young children.

## Excluded Industry Pairings for Child Care Workers

The approach described in **Appendix Table 1.1** filters out child care workers found in other industries. The remaining workers—about 10 percent of respondents in occupation 4600—are scattered across industries such as "8590 Other Amusement, Gambling, and Recreation Industries," "8290 Residential Care Facilities," and "8570

Museums, Art Galleries, Historical Sites, and Similar Institutions." Because each remaining pairing covers only a few thousand individuals nationwide, the Census provides sample write-in data for very few of them. As such, we are unable to evaluate the nature of their work.

### Preschool Teachers, Teaching Assistants, and Directors

For the other three occupations included in **Appendix Table 1.1**, we omit all industries apart from "8740 Child Day Care Services." Individuals classified in these occupations in other industries likely refer to individuals who do not work in early care and education. ACS write-in data support this interpretation: for instance, "2300 Preschool and kindergarten teachers" (found in "7860 Elementary and Secondary Schools") nearly all self-described as kindergarten teachers. Similarly, of the 35 individuals under "0230 Education and childcare administrators" in the 2019 write-in sample data, only one person wrote that they acted as a principal in a preschool; the rest acted as a principal or administrator of an elementary school or equivalent.[8] While omitting these pairings may screen out a small but significant group of workers who do belong in the ECE workforce group, we are unable to parse them from the overwhelming majority of other individuals who belong to the K-12 sector.

### Self-Employed Child Care Workers

The role of a home-based or family child care (FCC) provider does not currently appear in any Census schema. Between 1992 and 1999, Census data included a separate industry for "Family child care homes," but the classification was discontinued.[9] Despite this limitation of Census data, CSCCE holds that many self-employed members of the 4600 occupation code are likely FCC providers. Other researchers have sometimes estimated characteristics of the FCC provider workforce using self-employment status as an indicator.[10] However, publicly available write-in data for the ACS do not provide a flag for self-employed individuals, so we are unable to vet this strategy. While this approach may provide a reasonable means for identifying likely FCC providers, it may also be capturing owners and operators of child care centers and even license-exempt providers like nannies.

### Using the ACS to Estimate ECE Workforce Size

In the **State Profiles**, we include an estimated size of the early care and education workforce. We produced these estimates using the occupation–industry pairings described in **Appendix Table 1.1**, above. In other words, we aggregate child care workers, preschool teachers, child care directors, and child care assistants found in the "8740 Child Day Care Services" industry, along with child care workers found in three other industries—"7860 Elementary and Secondary Schools," "9160 Religious Organizations," and "9290 Private Households"—in our estimate of the workforce size.

### Minimum Sample Size for Reporting

In the maps and tables using ACS data in the *Index*, we annotate state-level data with sample sizes below 200 with warning: "Interpret with caution; Census ECE sample n<200." This sample size refers to the number of individuals in the ACS microdata, not the number of actual workers.

In **Chapter 2**, we report educator enrollment in public assistance programs in only 22 states. This selection reflects output from the public cost model developed by the UC Berkeley Labor Center, which requires a minimum sample of 1,000 individuals for reporting. For more information on the methodology, see **Public Safety Net Data**, below.

### Comparing ACS Estimates to Bureau of Labor Statistics Data

In previous versions of the *Index*, we used wage data from the U.S. Bureau of Labor Statistics provided through the annual Occupational Employment and Wage Statistics (OEWS). However, because self-employed individuals are not counted in OEWS data, we have shifted to ACS estimates for the 2024 edition of the *Index*. Continuing to rely solely on OEWS data would cause us to overlook the profoundly low wages that home-based providers earn. Additionally, our estimated workforce size in the 2020 *Index* used OEWS data to estimate the size of the workforce, thus undercounting home-based providers.

## Demographic Data in the NSECE and ACS

The five categories of race and ethnicity used throughout the *Index* are derived from two separate items that inquire about Latino or Hispanic origin and racial identity in both the 2022 ACS and the 2019 NSECE. In the 2019 NSECE, one item inquires about racial identity (e.g., Asian, Black, White) and another item asks about Hispanic or Latino identity. Educators who only selected Asian, Black, or White and chose "Not Hispanic or Latino" were categorized as Asian, Black, and White, respectively. Educators who reported being Hispanic or Latino and selected any racial categories were categorized as "Latina." Because the ECE workforce is overwhelmingly composed of individuals who identify as women, we use the gender-specific term "Latina" to describe members of the workforce who identify as part of the Latin American diaspora. Educators who selected only American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or two or more of the response categories, and chose "Not Hispanic or Latino," were categorized as "Other." It should be noted that these categorizations may not fully reflect how people identify themselves.

Additionally, we know that data collection has not always accounted for gender diversity beyond a male/female binary, and the NSECE and ACS data are no exception. We gratefully acknowledge the contributions of early educators who identify as men, nonbinary, or another gender identity and recognize that the gendered oppression of women in the ECE workforce is related to the gender-based oppression of nonbinary, trans, and genderqueer educators.

# Public Safety Net Data

The *Index* reports enrollments and expenditures for early educators and their families using public safety net programs. These estimates derive from the public cost model, an analysis developed and produced by the UC Berkeley Labor Center. The model quantifies the public cost of low-wage work by examining enrollment and expenditures for five of the largest means-tested safety net programs for which administrative data are available: Medicaid; the Children's Health Insurance Program (CHIP); basic household income assistance under Temporary Assistance for Needy Families (TANF); the Earned Income Tax Credit (EITC); and the Supplemental Nutrition Assistance Program (SNAP). To estimate enrollment in one or more of these public programs—and the costs associated with that enrollment—the Labor Center combines Census data from ACS and CPS with administrative data.[11]

## Administrative Data Included in the Public Cost Model

Summative administrative data on actual enrollments and expenditures for each public safety net program are reported by federal agencies and released periodically to the public, typically on an 18- to 24-month delay. With the pandemic, some releases have been delayed further. As such, the model relies on data from the most recent two- to five-year period available. Refer to **Appendix Table 1.2** for the specific years of data used as inputs for the public cost analysis in the *Index*.

**APPENDIX TABLE 1.2**

**Administrative Data Included in the Public Cost Model**

| Safety Net Program | Fiscal Years |
|---|---|
| **Medicaid** | 2018-2020 |
| **Children's Health Insurance Program (CHIP)** | 2017-2021 |
| **Temporary Assistance for Needy Families (TANF)** | 2017-2021 |
| **Federal Earned Income Tax Credit (EITC)** | 2017-2021 |
| **Supplemental Nutrition Assistance Program (SNAP)** | 2017-2021 |

*Table: Center for the Study of Child Care Employment, University of California, Berkeley*

*Data: Authors' analysis of American Community Survey public use microdata, retrieved from IPUMS USA (https://doi.org/10.18128/D010.V14.0).*

Because more recent data were not available during the development of the 2023 *Index*, we describe these estimates based on the 2021 population and represent costs in 2021 dollars.

### Comparison Groups

The *Index* compares public safety net enrollment for the ECE workforce to two other groups: first, teachers in elementary and middle schools, and second, all occupations. For the teacher comparison group, the Labor Center used occupation code "2310 Elementary/Middle school teachers" in combination with three possible industry codes: "7860 Elementary and Secondary Schools," "9160 Religious Organizations," and "9290 Private Households."[12] For both comparison groups, the model includes workers who: a) worked at least 27 weeks per year and at least 10 hours per week; b) were in the labor force (not unemployed or out of the labor force); c) were not unpaid family workers; d) were age 16 or older; and e) had a non-zero income.

### State-Level Analysis

The *Index* includes local public cost estimates for the ECE workforce and comparison groups in 22 states in **Appendix 2** and in certain state profiles. The reporting criteria for states derives from a minimum unweighted sample size requirement of 1,000 workers in early care and education found in ACS data.

### Context: National Trends in Public Assistance Programs

The ECE workforce and their family members frequently benefit from public safety net programs. Nationally, these programs have seen substantial fluctuation in enrollment over time. **Appendix Figure 1.2** provides a snapshot comparing enrollment trends to a 2014 baseline. Medicaid enrollment for adults increased by 43 percent from 2014 to 2020, and CHIP increased 12 percent over the same period. In 2021, some program data were not yet available during the development of the *Index*. For SNAP and children's Medicaid, however, enrollment trends reversed, and participation began to climb as families faced increased hardship during the pandemic. While not depicted on this chart, the Expanded Child Tax Credit served as an additional bulwark against economic hardship for many of these same families.

APPENDIX FIGURE 1.2

**National Trends in Public Assistance Participation**

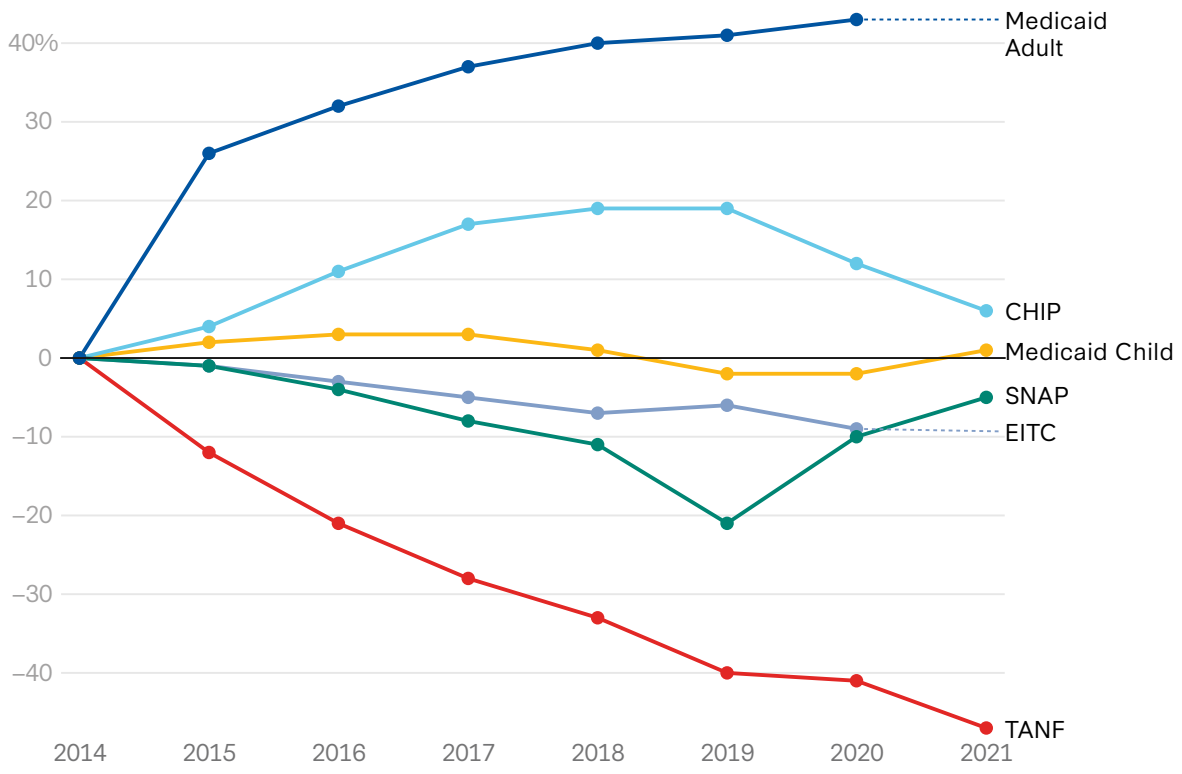


*Chart: Center for the Study of Child Care Employment, University of California, Berkeley*

*Data: Authors' analysis of data from the Labor Center public cost model for the* Early Childhood Workforce Index.

## Public Cost Model Changes From the 2018 *Index*

The Labor Center completed a similar analysis for the 2018 edition of the *Index*. Because our methodology differs from the 2018 *Index*, a direct comparison is not possible between editions. Most critically, the inclusion criteria for the model has shifted since 2018, when the model was limited to "child care workers" in Census data (ACS occupation code 4600). The 2023 *Index* analyzes the full population described in **Appendix Table 1.1**.

# Data & Methods for Chapter 3: State Policies to Improve Early Childhood Educator Jobs

The *Index* is organized around five essential areas of policy to support early educators:

1. **Qualifications and educational supports:** Policies and pathways that provide consistent standards and support for educators to achieve higher education.
2. **Work environment standards:** Standards to hold ECE programs accountable for providing safe and supportive work environments for early educators.
3. **Compensation and financial relief strategies:** Initiatives and investments to ensure compensation equal to the value of early educators' work.
4. **Workforce data:** State-level collection of important data on the size, characteristics, and working conditions of the ECE workforce.
5. **Public funding:** Public investment in the ECE workforce and broader ECE system.

In each of the five policy areas, the *Early Childhood Workforce Index* assesses states based on measurable policy indicators that represent state-level opportunities to enhance the lives of the many children and adults affected by ECE employment conditions. To summarize overall state action in each policy area, states are assigned to one of three tiers, based on their performance on the indicators:

- **Stalled:** The state is making limited or no progress;
- **Edging Forward:** The state is making partial progress; or
- **Making Headway:** The state is taking action and advancing promising policies.

| Assessment Key for Policy Indicators | |
|---|---|
| 0-4 points per category | Stalled |
| 5-8 points per category | Edging Forward |
| 9-12 points per category | Making Headway |

For each policy area, up to 12 points can be assigned across the indicators for that area; the policy areas are intentionally equal in order to convey that progress in each policy area is essential. Indicators within individual policy areas may be assigned different point levels in order to convey importance. For example, in Workforce Data, points are heavily weighted toward the indicator on inclusiveness across settings in order to convey the critical importance of gaining a better picture of the overall size of the ECE workforce. For a list of indicators within each policy area, their associated points, and data sources, see **State Profile Data Sources** at the end of this appendix.

In all areas, indicators within each policy area focus on select supports and policies and are not exhaustive of all relevant state action within a policy area. Individual states may be engaging in other innovative practices that could not be assessed comprehensively across the nation. Additionally, other areas of policy that could not be included in the *Index*, such as affordable housing, are also important for educator well-being. Similarly, we have focused on whether states have an active policy in the categories selected, but we could not assess all details of these policies, such as eligibility or exclusions, level or amount of benefits, and other information that is nevertheless important for understanding the impact on early educators.

## Early Childhood Workforce Policies: Data Sources

There is no single source of comprehensive information about early childhood workforce policies across all 50 states and the District of Columbia. For some indicators, CSCCE was able to use existing data available from nationwide databases and reports, such as the NIEER Preschool Yearbook[13] or the Quality Rating and Improvement Systems Compendium.[14] For this 2024 edition, CSCCE also partnered with the National Workforce Registry Alliance to analyze data on workforce registries across the country.

Data for the majority of the policy indicators for each state and the District of Columbia come from CSCCE's original data collection processes, which involve two stages. During the first stage (April-July 2023), state ECE agency websites were reviewed to update and supplement information gathered for the 2024 *Index*. In the second stage (August 2023 to January 2024), a comprehensive *Index* state survey to collect state policy information was developed and fielded. The *Index* state survey was sent to one or more representatives from each state (child care licensing/ subsidy administrators, QRIS administrators, registry administrators, etc.) to verify and supplement previously collected information.

We received completed state surveys from at least one representative in all but four states (Florida, Montana, New Hampshire, Tennessee). For any states in which we did not receive a response for a particular indicator, we reported publicly available information from state agency websites or information reported by other ECE organizations, such as the T.E.A.C.H. Early Childhood® National Center. When data for a particular indicator could not be verified by any of these sources, the indicator is classified as "Not Available."

The U.S. territories and Tribes were also included in CSCCE's scan of ECE agency websites and other background research, but were not included in CSCCE's survey of states and the District of Columbia. Please refer to the **U.S. Territories Profile** and the **Tribal Profile** for information about data sources.

# State Profile Data Sources

**APPENDIX TABLE 1.3**

### Context, Pay, and Economic Security Indicators

| Indicators | Data Sources | Notes |
|---|---|---|
| Total child population under age 6 | American Community Survey (ACS), 2022 5-Year Sample[15] | |
| Workforce Size | American Community Survey (ACS), 2022 5-Year Sample[16] | Our workforce estimate includes child care workers in home- and center-based settings, including nannies, self-employed child care workers, preschool teachers, teaching assistants, and administrators. For more details, see **Data & Methods for Chapter 2: The Early Childhood Workforce**. |
| Median wages, 2022 | American Community Survey (ACS), 2022 5-Year Sample[17] | For more details, see **Data & Methods for Chapter 2: The Early Childhood Workforce**. |
| % change in median wage, all occupations, 2019 vs. 2022 | American Community Survey (ACS), 2017-2019 and 2020-2022 | Data from single-year ACS are adjusted for inflation to 2022 using the Bureau of Labor Statistics' Consumer Price Index for All Urban Consumers (CPI-U). |
| Living wage gap, 2022 | American Community Survey (ACS), 2022 5-Year Sample[18] and MIT Living Wage data, 2023 | For more details, see **Data & Methods for Chapter 2: The Early Childhood Workforce**.<br>MIT Living Wage does not provide prior-year data, so we adjust the 2023 data to 2022 using the CPI-U. |
| Poverty rates | American Community Survey (ACS), 2022 5-Year Sample[19] | For more details, see **Data & Methods for Chapter 2: The Early Childhood Workforce**. |
| ECE workforce members and their households participating in public safety net programs, 2021 | Public cost model analysis by the UC Berkeley Labor Center.[20] | For more details, see **Data & Methods for Chapter 2: The Early Childhood Workforce**. |

# Early Childhood Workforce Policy Indicators

APPENDIX TABLE 1.4

## Qualifications & Educational Supports

CSCCE

| Indicators | Values & Partial Points | | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|---|
| **Minimum qualification level (pre-K)?** | Lead Teacher – BA: Yes/No | 1 | 2 | NIEER State of Preschool Yearbook, 2024[21] | State requires a bachelor's degree for all lead teachers in publicly funded pre-K programs. |
| | Assistant Teacher – CDA/ Equivalent or higher: Yes/ No | 1 | | | State requires at least a Child Development Associate® Credential (CDA) or equivalent for assistant teachers in publicly funded pre-K programs. We include both the CDA or its functional equivalent.<br><br>There is no established consensus on an equivalent to a CDA. Eight semester college credits or 120 clock hours of training were used as the standard for comparing whether other minimum qualification requirements were equivalent to, less than, or exceed the CDA, in line with the Council for Professional Recognition standards, see Council for Professional Recognition. (2020). *CDA® Credentialing Program FAQs*.[22] |
| **Minimum qualification levels (licensed centers)?** | Center Director – BA: Yes/No | 1 | 3 | CSCCE analysis of state licensing requirements, 2023-2024 | State requires a bachelor's degree for directors of licensed child care centers. |
| | Lead Teacher – BA: Yes/No | 1 | | | State requires a bachelor's degree for teachers who may lead groups of children in licensed child care centers. |
| | Assistant Teacher – CDA/ Equivalent or higher: Yes/No | 1 | | | State requires at least a Child Development Associate® Credential (CDA) or equivalent for assistant teachers in licensed child care settings. |
| **Minimum qualification levels (licensed home-based)?** | Lead Teacher – BA: Yes/No | 1 | 2 | | State requires a bachelor's degree for teachers who may lead groups of children in licensed child care homes. |
| | Assistant Teacher – CDA/ Equivalent or higher: Yes/ No | 1 | | | State requires at least a Child Development Associate® Credential (CDA) or equivalent for assistant teachers in licensed child care homes. |

CSCCE

## Qualifications & Educational Supports

| Indicators | Values & Partial Points | | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|---|
| **Scholarship to support educational pathways?** | BA | 1 | 3 | CSCCE review of state agency websites and verification by state representatives, 2023-2024; T.E.A.C.H Early Childhood® National Center administrative data, 2022[23] | Scholarship funds can be applied to fees and/or tuition for coursework for a Child Development Associate® Credential (CDA) or equivalent, associate degree, or bachelor's degree. Eight semester college credits or 120 clock hours of training were used as the standard for establishing equivalence with the CDA. Books, paid release time, travel reimbursement, supplies, and other supports may or may not be included. Some states have more than one scholarship program. |
| | AA | 1 | | | |
| | CDA or equivalent | 1 | | | |
| **Collects data on scholarship recipients?** | Yes/No | | 2 | | Scholarship program collects basic data on recipients that may include total number of recipients, as well as information on demographics, geographical area, etc. |
| **Total** | | | **12** | | |

APPENDIX TABLE 1.5

## Work Environments

| Indicators | Values & Partial Points | | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|---|
| **In QRIS standards: Paid professional development time?** | Centers: Yes/No | 2 | 4 | QRIS Compendium, 2024[24] | State's Quality Rating and Improvement System includes this marker of quality for center- or home-based providers. |
| | Homes: Yes/No | 2 | | | |
| **In QRIS standards: Paid planning/ preparation time?** | Centers: Yes/No | 2 | 4 | | |
| | Homes: Yes/No | 2 | | | |
| **In QRIS standards: Salary scale/ benefits?** | Centers: Yes/No | 2 | 4 | | |
| | Homes: Yes/No | 2 | | | |
| **Total** | | | **12** | | |

APPENDIX TABLE 1.6

## Compensation & Financial Relief

| Indicators | Values & Partial Points | | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|---|
| **Compensation: Salary parity for publicly funded pre-K teachers?** | Parity (all) | 3 | 3 | NIEER State of Preschool Yearbook, 2024[25] | State requires the same starting salary and salary schedule for teachers in state-funded pre-K programs as for teachers in K-12, including pro-rating for differences in working time. |
| | Parity (some) | 2 | | | State requires the same starting salary and salary schedule for some, but not all, publicly funded pre-K teachers, including pro-rating for differences in working time. |
| | Partial parity or sub-parity (all) | 1 | | | Partial Parity: State requires the same starting salary, but not the same salary schedule.<br><br>Sub-Parity: Pro-rating to take account of differences in working time is either not included or not reported. |
| **Compensation: Required standards (outside pre-K)?** | Yes/No | | 3 | CSCCE review of state agency websites and verification by state representatives, 2023-2024; T.E.A.C.H Early Childhood® National Center administrative data (WAGE$), 2022[26] | State requires compensation standards outside of pre-K programs as a condition of public funding. |
| **Compensation: Standards guidelines or plans (outside pre-K)?** | Guidelines: Yes/No | 2 | 2 | | State has articulated compensation standards or guidelines for programs outside of publicly funded pre-K. |
| | Plans only: Yes/No | 1 | | | State has plans to develop guidelines for compensation standards or guidelines outside of publicly funded pre-K. |
| **Compensation: Dedicated public funding for compensation (outside pre-K)?** | Yes/No | | 1 | | State dedicates funding to be used for compensation specifically, outside of publicly funded pre-K. |
| **Financial Relief: Stipend or tax credit?** | Yes/No | | 2 | | State offers a stipend or tax credit to supplement early educator pay.[27] |
| **Financial Relief: Bonus?** | Yes/No | | 1 | | State offers a bonus, typically a one-time award, linked to educational attainment. |
| **Total** | | | **12** | | |

APPENDIX TABLE 1.7

## Workforce Data

| Indicators | Values & Partial Points | | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|---|
| **Inclusive across settings?** | Licensed + | 7 | 7 | National Workforce Registry Alliance Registry Landscape, 2023;[28] CSCCE review of state agency websites and verification by state representatives, 2023-2024; | State workforce registry[29] requires participation for directors and teaching staff in licensed settings and one or more additional settings (public pre-K programs, Head Start, and/or license-exempt child care); OR state survey[30] samples all licensed settings and one or more additional settings (public pre-K programs, Head Start, and/or license-exempt child care). |
| | Licensed Only | 5 | | | State registry requires participation for directors and teaching staff in licensed settings; OR state survey samples all licensed settings. |
| | All Other: Defined, Voluntary, Not Applicable | 0 | | | States that do not fulfill the criteria of either the "licensed" or "licensed +" categories receive no points, in order to convey the importance of collecting data across the ECE workforce, regardless of setting or program funding. In practice, these are states that do not have one of these data collection mechanisms; states that have workforce registries with voluntary rather than required participation for the "licensed" or "licensed +" settings described in the text; or states with either workforce registries or surveys that include some defined subset of the ECE workforce (e.g., registries that require membership for all early educators participating in state-funded professional development initiatives or surveys of public pre-K teachers). |
| **Collects compensation data?** | Wages: Yes/ No | 1 | 2 | | State registry OR survey collects data on wages and/or benefits. |
| | Benefits: Yes/ No | 1 | | | |
| **Collects data on race and ethnicity?** | Yes/No | | 2 | | State registry OR survey collects data on race/ethnicity of the workforce. |
| **Summary data reported online?** | Yes/No | | 1 | | State reports online information on the early childhood workforce from their registry OR survey. |
| **Total** | | | **12** | | |

APPENDIX TABLE 1.8

## Public Funding

| Indicators | Values & Partial Points | Maximum Points per Indicator | Data Sources | Notes |
|---|---|---|---|---|
| **Pre-K per-child spending as % of K-12: Greater than 50%?** | Yes/No | 6 | NIEER State of Preschool Yearbook, 2024[31] | State per-child spending on pre-K is more than 50% of state per-child spending on K-12. The NIEER Yearbooks are the most comprehensive source on pre-K spending by state but may underestimate sources of federal and local funding. Furthermore, they do not include special education funding, which may represent a not-insignificant proportion of total K-12 spending, depending on the state. However, there is no recent state-by-state data on K-12 special education funding, which could be used to adjust these totals to more adequately assess differences in pre-K and K-12 spending, excluding special education funding. |
| **State reports extra CCDBG spending?** | Yes/No | 6 | Communication with Center for Law and Social Policy (CLASP), 2024[32] | State reported spending additional matching or Maintenance of Effort (MOE) funds for the federal Child Care Development Block Grant (CCDBG). |
| **Total** | | **12** | | |

# Endnotes


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2. Whitebook, M., McLean, C., Austin, L.J.E., & Edwards, B. (2018). *Early Childhood Workforce Index – 2018*. Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/.
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10. RegionTrack. (2024). *Child Care in State Economies: 2024 Update*. The Conference Board. https://education.ced.org/child-care-in-state-economies.
11. For a detailed description of the model and its design, see Jacobs, K., Huang, K., MacGillivray, J., & Lopezlira, E. (2022). *The Public Cost of Low-Wage Jobs in the US Construction Industry*. UC Berkeley Labor Center, University of California, Berkeley. https://laborcenter.berkeley.edu/the-public-cost-of-low-wage-jobs-in-the-US-construction-industry/. The analysis in the *Index* differs slightly from the model applied to the construction industry: the UC Berkeley Labor Center no longer adjusts Census data using the Occupational Employment and Wage Statistics figures due to the lack of significant difference in outputs.
12. Technical note: The UC Berkeley Labor Center uses the occ_2010 variable rather than occ.
13. Friedman-Krauss, A.H., Barnett, W.S., Hodges, K.S., Garver, K.A., Jost, T.M., Weisenfeld, G., & Duer, J. (2024). *The State of Preschool 2023: State Preschool Yearbook*. National Institute for Early Education Research. https://nieer.org/yearbook/2023.
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15. Authors' analysis of American Community Survey public use microdata, retrieved from IPUMS USA (https://doi.org/10.18128/D010.V14.0).
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**20.** Authors' analysis of American Community Survey public use microdata, retrieved from IPUMS USA (https://doi.org/10.18128/D010.V14.0).

**21.** Public safety net data are calculated using the public cost model developed by the Labor Center at the University of California, Berkeley. To read more about the model, see Jacobs, K., Huang, K., MacGillvary, J., & Lopezlira, E. (2022). *The Public Cost of Low-Wage Jobs in the US Construction Industry.* The Labor Center, University of California, Berkeley. https://laborcenter.berkeley.edu/the-public-cost-of-low-wage-jobs-in-the-US-construction-industry/.

**22.** Friedman-Krauss, A.H., Barnett, W.S., Hodges, K.S., Garver, K.A., Jost, T.M., Weisenfeld, G., & Duer, J. (2024). *The State of Preschool 2023: State Preschool Yearbook*. National Institute for Early Education Research. https://nieer.org/yearbook/2023.

**23.** Council for Professional Recognition. (2020). *CDA® Credentialing Program FAQs*. https://www.cdacouncil.org/credentials/faqs/apply-for-cda-faqs.

**24.** Personal communication with Julie Rogers, T.E.A.C.H. Early Childhood® National Center, April 2023.

**25.** Build Initiative & Child Trends. (2024). *Quality Compendium*: *A Catalog and Comparison of Quality Improvement Systems (QIS)*. https://qualitycompendium.org/.

**26.** Friedman-Krauss, A.H., Barnett, W.S., Hodges, K.S., Garver, K.A., Jost, T.M., Weisenfeld, G., & Duer, J. (2024). *The State of Preschool 2023: State Preschool Yearbook*. National Institute for Early Education Research. https://nieer.org/yearbook/2023.

**27.** Personal communication with Julie Rogers, T.E.A.C.H. Early Childhood® National Center, April 2023.

**28.** A stipend refers to a supplemental or nonwage cash award that an educator may receive more than once (e.g., every six months, every year), often intended to support retention.

**29.** We collaborated with the National Workforce Registry Alliance to provide the most up-to-date data on registries around the country. To read more about their data, see Belcher, K. (2024). *2023 Registry Landscape Report*. The National Workforce Registry Alliance. https://www.registryalliance.org/2023-registry-landscape-report/.

**30.** An ECE workforce registry is a data and professional development system designed to track demographic, employment, training, education and professional development information for the ECE workforce, see The National Workforce Registry Alliance. (2024). *Professional Registries*. https://www.registryalliance.org/about-us/workforce-registries/.

**31.** State workforce surveys were included in the 2024 *Index* only if they were conducted within the past five years (2019-2024).

**32.** Friedman-Krauss, A.H., Barnett, W.S., Hodges, K.S., Garver, K.A., Jost, T.M., Weisenfeld, G., & Duer, J. (2024). *The State of Preschool 2023: State Preschool Yearbook*. National Institute for Early Education Research. https://nieer.org/yearbook/2023.

**33.** Excess spending 2018-2020 determinations were made using data provided by CLASP based on the U.S. Department of Health & Human Services, Administration for Children & Families, Office of Child Care. (2024). *Child Care and Development Fund Statistics*. https://www.acf.hhs.gov/occ/data/child-care-and-development-fund-statistics.